

UNITED STATES DEPARTMENT OF COMMERCE

JESSE H. JONES, Secretary

BUREAU OF THE CENSUS

J. C. CAPT, Director (Appointed May 22, 1941)

WILLIAM LANE AUSTIN, Director (Retired January 31, 1941)

PHILIP M. HAUSER, Assistant Director

HOWARD H. McCLURE, Assistant Director



SIXTEENTH CENSUS OF THE UNITED STATES: 1940

**IRRIGATION OF
AGRICULTURAL LANDS**

**Irrigation Enterprises, Areas, Irrigation Works,
Investment, Indebtedness, Maintenance and
Operation, Water Used, Pay Roll and Employees,
and Irrigated Crops, With Detailed Statistics for
Drainage Basins and Counties, and Summaries
for States and the United States**

Prepared under the supervision of

ZELLMER R. PETTET

Chief Statistician for Agriculture

**UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1942**

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Vital Statistics—HALBERT L. DUNN, *Chief Statistician.*

LETTER OF TRANSMITTAL

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
Washington, D. C., November 5, 1942

SIR:

I transmit herewith the volume on Irrigation of Agricultural Lands of the Sixteenth Decennial Census. This report contains detailed statistics for drainage basins and counties with summaries for the States and the United States. State reports, contained in this volume, were first published as separate bulletins.

Provision for the 1940 Census of Irrigation was made in the Act providing for the Fifteenth Decennial Census which was approved on June 18, 1929. Through the medium of mail and field canvasses, returns were obtained from all types of irrigation enterprises, except enterprises of the United States Government which were reported directly to the Bureau of the Census.

The collection and compilation of these statistics and the preparation of this volume were made under the supervision of Z. R. Pettet, Chief Statistician for Agriculture, with the assistance of Sherman S. Slick, Assistant Chief Statistician, and Milo B. Williams, Principal Irrigation Engineer. Much helpful aid was furnished by other members of the Division of Agriculture. The graphic material was prepared under the supervision of Clarence E. Batschelet, Geographer of the Census.

Acknowledgment is made also of the assistance and cooperation of Paul A. Ewing, Irrigation Economist, U. S. Department of Agriculture, who acted in a consultant capacity; Wells A. Hutchins, Senior Irrigation Economist, Soil Conservation Service, U. S. Department of Agriculture; G. W. Lineweaver, Chief of Research Section, Bureau of Reclamation; Department of the Interior; and of the Division of Statistical Standards, Bureau of the Budget.

Respectfully,

J. C. CAPT,
Director of the Census .

Hon. JESSE H. JONES,
Secretary of Commerce

III

SIXTEENTH CENSUS OF THE UNITED STATES: 1940

REPORTS ON AGRICULTURE, IRRIGATION, AND DRAINAGE

Volume I.—Statistics by Counties for Farms, and Farm Property, with Related Information for Farms and Farm Operators; Livestock and Livestock Products; and Crops.

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| Part 1.—New England, Middle Atlantic, and
East North Central States | Part 4.—East South Central States |
| 2.—West North Central States | 5.—West South Central States |
| 3.—South Atlantic States | 6.—Mountain and Pacific States |

Volume II.—Statistics by Counties for Value of Farm Products, Farms Classified by Major Source of Income, and Farms Classified by Total Value of Products.

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| Part 1.—Northern States | Part 2.—Southern States | Part 3.—Western States |
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Volume III.—General Report—Statistics by Subjects for the United States, Geographic Divisions, and States.

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| Chapter I.—Farms and Farm Property | Chapter VI.—Cooperation, Labor, Expenditures,
Machinery, Facilities, and
Residence |
| II.—Size of Farms | VII.—Livestock and Livestock Products |
| III.—Color, Tenure, and Race of
Farm Operators | VIII.—Field Crops and Vegetables |
| IV.—Farm Mortgages and Farm
Taxes | IX.—Fruits and Nuts and
Horticultural Specialties |
| V.—Work Off Farm, Age, and
Years on Farm | X.—Value of Farm Products |

United States Summary Bulletins.—Statistics for the United States, Geographic Divisions, and States in condensed form as follows:

- First Series Summary—Number of Farms, Uses of Land, Values, Principal Classes of Livestock and Livestock Products; and Specified Crops Harvested.
- Second Series Summary—Farm Mortgages, Taxes, Labor, Expenditures, and Miscellaneous Farm Information; Goats and Mohair; and Fruits, Vegetables, and Minor Crops.
- Third Series Summary—Value of Farm Products, Farms Classified by Major Source of Income, and Farms Classified by Total Value of Products.

Special Poultry Report.—Statistics by Geographic Divisions and States for Poultry of All Kinds on Hand and Raised; by Counties for Chickens and Chicken Egg Production by Number of Chickens on Hand; and by Counties for Farms Reporting Chickens and Turkeys Raised by Numbers Raised (one volume).

Cows Milked and Dairy Products—Number of Cows Milked, Milk Produced, Disposition of Dairy Products, and Number of Cows Kept Mainly for Milk Production, Classified by Number of Cows Milked, by Counties; with Related Data for Other Classes of Livestock and Livestock Products for the States and also for the United States.

Territories and Outlying Possessions.—Farms and Farm Property, Livestock and Livestock Products, and Crops (one volume). (Separate agricultural bulletins are available for Hawaii and Puerto Rico).

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|--------------|-------------------------------------|
| Territories: | Outlying Possessions: |
| Alaska | American Samoa |
| Hawaii | Guam |
| Puerto Rico | Virgin Islands of the United States |

Irrigation of Agricultural Lands.—Statistics by Drainage Basins and by Counties for 20 Irrigation States and a Summary for the United States (one volume).

- Twenty Separate State Maps Showing Irrigation by Drainage Basins.
A Separate Composite Map Showing Irrigation by Drainage Basins.

Drainage of Agricultural Lands.—Statistics for 38 Drainage States with County Data for 38 States and a summary for the United States (one volume).

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	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	Page	
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Census of Agriculture—Number of farms, farm acreage according to use, and specified farm values for irrigated and nonirrigated farms, by tenure of operator, 1940-----	92	116	132	184	668	232	270	292	312	354	384	414	444	458	474	510	528	568	600	630	
Number of enterprises, irrigable area, area works were capable of supplying with water, 1940; irrigated area, 1939, 1929, and 1919; water delivered to irrigators, 1939; by source of water supply-----	93	117	133	185	669	233	271	293	313	355	385	415	445	459	475	511	529	567	601	631	
Investment, 1940 and 1930; and cost of maintenance and operation, 1939, 1929, and 1919; by source of water supply-----	93	117	133	185	669	233	271	293	313	355	385	415	445	459	475	511	529	567	601	631	
Areas, by type of enterprise: 1940, 1930, and 1920-----	94	118	134	186	669	234	272	294	314	356	386	416	446	460	476	512	530	568	602	632	
Enterprises, areas, average costs, 1940; and area irrigated, 1939; by type of enterprise-----	94	118	134	186	669	234	272	294	314	356	386	416	446	460	476	512	530	568	602	632	
Investment in irrigation enterprises, by type of enterprise: 1940, 1930, and 1920-----	94	118	134	186	669	234	272	294	314	356	386	416	446	460	476	512	530	568	602	632	
Indebtedness, arrearage, and charges, by type of enterprise, Census of 1940-----	95	118	135	187	669	235	273	295	315	357	387	417	447	461	477	513	531	569	603	633	
Cost of maintenance and operation, and pay roll and number of employees, 1939; by type of enterprise-----	95	119	135	187	669	235	273	295	315	357	387	417	447	461	477	513	531	569	603	633	
Irrigation works, by type of enterprise, 1940-----	95	119	135	187	670	235	273	295	315	357	387	417	447	461	477	513	531	569	603	633	
Dams, by material: 1940 and 1930-----	96	119	136	188	671	236	274	295	316	358	388	418	448	461	478	514	532	570	604	634	
Pumping plants, by kind of motive power and type of pump, 1940; and total number and capacity, 1930-----	96	119	136	188	670	236	274	296	316	358	388	418	448	462	478	514	532	570	604	634	
Pipe lines, by material, size, and length: 1940 and 1930-----	96	120	136	188	671	236	274	296	316	358	388	418	448	462	478	514	532	570	604	634	
Area within irrigation enterprises for which drains have been installed, and additional area in need of drainage: 1940, 1930, and 1920-----	96	120	136	189	671	236	275	296	316	358	388	418	448	462	478	515	533	570	604	635	
Water used, by source of supply: 1939, 1929, and 1919-----	97	120	137	189	671	237	275	297	317	359	389	419	449	463	479	515	533	571	605	635	
Area irrigated, by type of rights under which water was delivered: 1939, 1929, and 1919-----	97	---	137	189	---	237	275	---	317	359	389	419	449	463	479	515	533	571	605	635	
Enterprises, area irrigated, capital invested, maintenance and operation, charges, indebtedness and arrearage, type of enterprise, pay roll, number of employees, and source of water supply; by specified groups of irrigated farms, areas irrigated, and cost of works: Census of 1940-----	98	121	138	190	672	238	276	298	318	360	390	420	450	464	480	516	534	572	606	636	
Climatological influence on water supplies, 1939-----	100	123	140	192	672	240	278	297	320	362	392	422	450	464	482	519	536	574	608	638	
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Enterprises and irrigation works, 1940, 1930, and 1920-----	107	126	160	207	675	252	282	303	332	368	402	430	453	468	494	522	542	585	616	652	
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Irrigated farms and tenure of farm operators, 1940 and 1930; irrigated area, 1939, 1929, and 1919; irrigable area and capital invested, 1940, 1930, and 1920; maintenance and operation, charges, and indebtedness, 1939 and 1929; land in irrigated farms, 1940; water delivered to irrigators and drainage of irrigated land, 1939-----	111	128	170	216	676	259	284	306	340	370	408	436	454	470	502	524	544	592	620	680	
Farm values, 1940; enterprises and irrigation works, 1940, 1930, and 1920; and pay roll and number of employees, 1939-----	114	130	178	226	679	266	288	309	348	378	411	440	458	472	506	526	556	597	625	685	

¹The Census of Irrigation included Florida for the first time in 1940. The table titles herewith are not always applicable.

INTRODUCTION

(Section A)

SUMMARY FOR THE UNITED STATES

Milo B. Williams, *Principal Irrigation Engineer*
Paul A. Ewing, *Consultant*

INTRODUCTION

History of the Census of Irrigation.—Inquiries relating to irrigation were first made for the Eleventh Decennial Census taken in 1890 by the Bureau of the Census in 16 western States. These statistics were published in a separate report, "Agriculture by Irrigation in the Western Part of the United States." The Twelfth Decennial Census taken in 1900 included, as a part of the Census of Agriculture, irrigation inquiries in the same 16 States and these statistics were included in the State reports of the Census of Agriculture. A special Census of Irrigation was taken in 1902 and the statistics were published in Bulletin No. 16, of the Bureau of the Census, 1904. An irrigation census was taken as a part of the Census of Agriculture in the years of 1910, 1920, 1930, and 1940 and the data published for each Irrigation Census as separate reports. An inquiry relating to irrigated cropland harvested was also included in the middecennial Census of Agriculture in 1935, but these data were published in the Agriculture Reports for that year.

Presentation of statistics.—This volume presents statistics for irrigation in the United States collected by the Bureau of the Census in 1940 and shows some comparable data from the Irrigation Censuses of 1890, 1900, and 1910 and to a greater degree for 1920 and 1930.

Included are a summary for the United States and reprints of statistics for the 20 States where an Irrigation Census was taken on special schedules in 1940. These State reports were first presented in 18 separate bulletins (data for the States of Arkansas and Oklahoma were combined in one bulletin and those for North Dakota and South Dakota in another) entitled "Irrigation of Agricultural Lands." In addition to the statistics obtained on the special irrigation schedules, data are also shown for all States as obtained on the Farm and Ranch Schedule in the Agricultural Census.

Statistics for 17 western States and Arkansas and Louisiana are summarized as one group, and the less extensive statistics for the remaining 29 States are presented as a second group to represent the more humid portion of the United States. Although a special schedule was used for the 1940 Irrigation Census in Florida, the statistics for this State are summarized with the humid group as there are no historic data to present, comparable to the data for the 19 States in the western portion of the United States.

The following textual matter relates to the tabulations presented in this volume.

Method of collecting information.—The plan followed in both the Fifteenth and Sixteenth Decennial Censuses for the canvass of irrigation enterprises involved the use of two schedules designated as Irrigation-1 and Irrigation-2. The simpler of these schedules, or Irrigation-1, was used by the enumerators engaged in the canvass of population and agriculture to obtain reports of individual, partnership, and cooperative enterprises serving 1 to 4 farms. The more elaborate, or Irrigation-2, schedule was used in a preliminary canvass by mail, which was followed by a field canvass by special irrigation technicians. Through the medium of the mail and field canvasses reports were obtained from all types of irrigation enterprises serving 5 or more farms, except Government enterprises which were reported direct to the Bureau of the Census by the Commissioner of the Bureau of Reclamation and the Commissioner of the Office of Indian Affairs, the separate reports being prepared by local division or project engineers under the supervision of these officials.

Census dates.—The dates of the Sixteenth and Fifteenth Decennial Censuses were as of April 1, 1940 and 1930, respectively, while the date of the Fourteenth Decennial Census was as of January 1, 1920. The change of date did not affect the comparison interval of 10 years used in this report because, in general, the statistics of farms, areas irrigated, crops grown under irrigation, and amounts and costs of water related to the calendar years preceding the years of enumeration. The statistics of acreages to which existing works were capable of supplying water related to the year in which the enumeration was made, and the statistics of capital investment were as of December 31 of the preceding year, thus also retaining the comparative interval of exactly 10 years. Enterprises which began to operate after January 1, 1940 were not included in the Sixteenth Decennial Census enumeration.

Scope of the Census of Irrigation.—The basic inquiries in the irrigation census of 1940 were similar to those made in previous censuses; namely, (1) the type of the irrigation enterprises as indicated by the character of their organizations, (2) the areas of irrigable lands in enterprises and under irrigation, (3) the physical structures used in diverting, lifting, storing, and distributing irrigation water to farms, and (4) the capital investment of irrigation enterprises. Supplemental inquiries were also made regarding other phases of irrigation, such as source of water supply, number of farms irrigated in 1939, type of water rights, drainage of irrigated lands, capacity of irrigation works and the annual cost of their maintenance and operation, quantity of water diverted and delivered, indebtedness of irrigation enterprises, pay roll, and employees. Inquiries made in connection with the Census of Agriculture made it possible to show the value of irrigated farms, and the tenure of the operators of these farms.

The 1940 separate Census of Irrigation was confined to 20 States, 19 of which comprise that portion of the United States in which irrigation is a recognized feature of agricultural practice; the other State, included for the first time, being Florida. The 19 States which comprised the areas covered in the 1930 and 1920 Irrigation Censuses are Arizona, Arkansas, California, Colorado, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. In the remaining 28 States, irrigation is practiced to a limited, though increasing, extent to supplement uncertain rainfall. Therefore, some irrigation statistics have been obtained for these States in the 1940 and several prior Censuses of Agriculture. These data are presented in this summary together with more comprehensive 1940 figures for the State of Florida.

RELATIVE COMPLETENESS AND ACCURACY

The 1940 Census of Agriculture included questions as to the 1939 acreage of irrigated crops harvested and of irrigated pasture in all States. A duplication of inquiries relating to numbers of farms and areas irrigated was thus involved in the 1940 Farm and Ranch Schedule and the schedules used in the irrigation census. Since the larger irrigation enterprises were canvassed independently, complete harmony between the results of the two enumerations could not be expected. Although the questions on the Irrigation Schedules calling for number of farms were accompanied with the Census definition of a farm, quoted later, and specific instructions were given to base answers on that definition, it is apparent that many enterprises were unable to furnish the exact number of farms conforming to the Census definition. Instead, they gave the numbers of ownerships on their assessment rolls, or estimates,

which in some cases may have included small plots, town lots, or other irrigated units not properly considered as farms under the definition. The units reported on the Irrigation Schedules were shown as "Irrigated farms" in the 1940 Census of Irrigation State bulletins; however, that designation has been changed to "Irrigated units" in the summary tables to more clearly define the statistics and impress upon the users of the data that the figures presented may or may not represent actual farms in the meaning of that term as defined for the 1940 Census of Agriculture.

In some instances where large irrigation enterprises were known by the enumerators to have reported their irrigation operations on the Irrigation Schedules, they failed to answer the irrigated-acreage and irrigated-crop questions on the Farm and Ranch Schedules. When filling out the Farm and Ranch Schedule, some enumerators indicated irrigation by individual or other small systems, but failed to obtain Irrigation Schedules. Efforts were made to obtain missing data by correspondence or other means but not always with success.

The irrigation questions on the Farm and Ranch Schedule asked for acreages of irrigated cropland harvested and irrigated pasture, while the question on the Irrigation Schedules asked for the total irrigated area broken down into irrigated cropland harvested, irrigated pasture, and irrigated area upon which crops failed. In numerous cases the total irrigated land reported on the Irrigation Schedules included irrigated land fallowed in preparation for fall planting, land in young alfalfa, and land irrigated for erosion control, from all of which no crops were harvested, failed, or were used for pasture. These lands were not to be included in the answers to the irrigation questions on the Farm and Ranch Schedule; however, they were retained in the irrigation census statistics to show a more nearly complete use of land and water.

Farms or units and areas.—As with previous census figures, it is apparent that while the owners of the small individual and partnership irrigation enterprises were likely to have accurate knowledge of the areas irrigated in 1939 because they were also the users of the water, the officials of many large enterprises were not so likely to know the exact areas irrigated since their records show, generally, only the areas for which the water users were entitled to receive or did receive water, and not what was done with the water delivered. In the larger enterprises farmers usually obtain rights to water for their entire farms, but it was by no means universally the case that a farmer actually applied the allotted quantity to his whole farm, even though he was assessed and paid for water on that basis. Again, some enterprises, where water was not appurtenant to the lands served, kept records only of the quantity of water delivered to users and had no means of knowing the exact number of farms or acreages irrigated; therefore, the reports of these enterprises were approximations which may not always harmonize with the Farm Census reports. However, increasing numbers of the larger enterprises conduct annual crop surveys, which has tended to make their statements of areas irrigated in 1939 more accurate than those made in previous censuses.

In irrigation census enumerations, several types of duplication have to be guarded against. Many farms receive water from more than one enterprise and may be included in the areas reported by all the enterprises from which they receive water; some enterprises extend across county lines and may be reported completely more than once; and some enterprises may be known by more than one name and may be reported under each. Many differences appearing in the comparison of 1940 and 1930 statistics reflect a corrected distribution of the statistics of 1940 for extensive interstate, interdrainage basin, and inter-county projects.

The likelihood of omissions was indicated by the occasional absence of Irrigation Schedules for Farm and Ranch Schedules reporting irrigation. The two sets of schedules were carefully compared, and when irrigation reports appeared to be missing they were requested. Replies in some cases showed service by extensive enterprises for which reports had been received, and many farmers returned schedules describing small systems not previously reported. Of those who did not reply at all, it is impossible to estimate the proportion who operated

unreported systems. Relative to the total, however, the unreported enterprises did not involve large numbers, acreages, works, or investments.

The irrigable area in enterprises is probably greater, in many cases, than the area to which the reporting enterprises will ultimately be able to supply water. However, since 1920, many of the larger enterprises, especially those which have undergone financial reorganization, have carefully surveyed and scrutinized their lands, in order to ascertain the practical extent of their irrigability, considering topography, quality of soils, and quantity of water normally available or expected to be made available.

The figures for the area enterprises were capable of supplying with water in 1940 are based on the extent and condition of the physical works as they existed on December 31, 1939.

Investment in irrigation enterprises.—The amounts reported for the individual and partnership enterprises are largely estimates. The greater part of the works of such enterprises was built by the owners or their predecessors who kept no records of money or time expended. This is true also of many of the cooperative enterprises. A substantial proportion of these systems was built decades ago. Many have changed ownership within recent years, some repeatedly, with greatly changed capitalization and indebtedness resulting. Thus, investment of present owners may correctly be reported as more or less than the investment of the original or previously reporting owners.

In the 1940 census of interstate, interdrainage basin, or intercounty irrigation enterprises, the investment, indebtedness, assessments, and other charges were allocated to the various subdivisions, in proportion to the lands in each for which the works were capable of supplying water in 1940. However, the items of physical works were tabulated in the county or other subdivision in which they existed. In some instances this procedure distorted the comparisons of 1940 statistics with those of previous censuses.

Amount expended for water rights.—The question on the schedule sought any actual purchase price of water rights and also filing fees, legal fees, and court costs, but the statistics obtained, although carefully edited and checked by correspondence, can only be considered approximations of actual water-right expenditures.

Cost of maintenance and operation.—For many enterprises this cost was not reported, and no attempts were made to estimate it. It is probable, therefore, that the cost reported is based on records or on good memory and is substantially correct. In tables showing this item the irrigated areas reporting are also shown, in order to provide a gauge of the value of the averages.

Quantity of water used.—Reports on this item were obtained from the more extensive projects and from all but a few of the pumping enterprises. No figures were supplied for enterprises if the question was not answered. The data for enterprises reporting estimates and those reporting measurements are shown separately. In every case the irrigated area reporting is given to indicate the value of the averages.

Area for which drains have been installed.—The figures shown for this item are probably more accurate than those for the additional areas in need of drainage, the latter necessarily being largely estimates based on the opinion of the persons supplying the information.

Irrigation works and equipment.—The reported inventory of physical works sometimes indicated a lack of exact knowledge regarding the lengths and capacities of canals, the sizes and lengths of pipe lines, and the capacities of small reservoirs, pumps, prime movers, and wells. In some cases farm ditches may have been included and in other cases community laterals excluded, contrary to instructions. A complete inventory of quantities was not obtained for all farm pipe lines located in the large enterprises; however, the pipes reported were well grouped according to materials and types. Some confusion appeared in the designations of certain kinds of pumps, especially, in the 1940 irrigation census, between centrifugal and turbine types, and in the 1930 census, between centrifugals and rotaries. Owners of pumps and engines are presumed to know the capacities at which the pumps and engines were rated

by their manufacturers, but these ratings often vary widely and usually exceed the discharges produced in actual use. Most wells have never been tested beyond the capacities of the pumps used in them, and it is probable that in only a minority of cases have the most economic yields been determined. Therefore, in most instances the reported yields of pumped wells represent the owners' estimates of what has been pumped, based on the rated capacities of the pumps used, and not on the amounts of water which the wells could produce economically as determined by tests or measurements. Similarly, the exact lifts, including drawdown, for many pumping plants have not been ascertained accurately by farmers, although in most sections where pumping from wells is widespread, close approximations to correct figures are increasingly obtainable. Many farm tractors, pumping irrigation water, reported power much in excess of that necessary for the work performed. When such cases were revealed the horsepower was adjusted to correspond to a reasonable efficiency representative of that obtained from stationary types of internal-combustion engines, and the investment in such farm tractors was deleted from the irrigation investment. The 1940 census made inquiry as to the number of hours pumping plants were operated in 1939. This time-factor was used with the reported capacity of the pump to obtain more accurately the amounts of water pumped and applied to the land.

Finances, pay roll, and employees.—The 1940 Census of Irrigation inquired as to the "Amount expended for construction, etc. (capital expenditures), in 1939," the "Total amount of wages and salaries paid and payable for 1939," and the "Total number employed during the week ending April 29, 1939," of irrigation enterprises serving 5 or more farms. Statistics obtained from these inquiries are shown by type of enterprise and size of enterprise, and in various detailed tabulations.

Employment during the period of one week was requested in order to eliminate the effect of turn-over—so that the number of employees can be taken to correspond to the number of jobs in that period. The last week in April 1939 was selected to harmonize with the period covered by inquiries of the Bureau of the Census, on State and local governmental employment. This was desirable because many irrigation enterprises are themselves governmental units.

Wages and salaries paid and payable were requested for the year 1939 because pay-roll figures are not distorted by turn-over of personnel. The annual total thus provides a reliable indication of the volume of employment throughout the year, including both year-round and seasonal work.

The amount of wages shown should not be divided by the total number employed to arrive at average earnings per employee during the year, because turn-over and seasonal variations in employment would result in a much larger number being employed during the year than during any one week in the year.

DEFINITION OF TERMS AND EXPLANATION OF TABLES

Irrigation Census statistics are presented for 20 States, according to source of water supply, type of irrigation enterprise, type of equipment, and size of enterprise. Similar statistics are given in more detail for drainage basins and counties in each State, and in a summary, for drainage basins and individual States. The summary includes the 17 western States and Arkansas and Louisiana. In the summary, data are shown for Florida only in tables 20 and 21 (section C).

Farms.—A "farm," irrigated or nonirrigated as considered in tabulations referring to "all farms," was defined on the 1940 Farm and Ranch Schedule as:

***all the land on which some agricultural operations are performed by one person, either by his own labor alone or with the assistance of members of his household, or hired employees. The land operated by a partnership is likewise considered a farm. A 'farm' may consist of a single tract of land, or a number of separate tracts, and the several tracts may be held under different tenures, as when one tract is owned by the farmer and another tract is rented by him. When a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a farm. Thus, on a plantation the land operated by each cropper, renter, or tenant

should be reported as a separate farm, and the land operated by the owner or manager by means of wage hands should likewise be reported as a separate farm.

The enumerators were instructed not to report as a farm any tract of land of less than 3 acres, unless its agricultural products in the year preceding the enumeration were valued at \$250 or more. (See also discussion under "Relative Completeness and Accuracy.")

"Irrigated farms" are those reporting irrigation in the year preceding the date of enumeration. "Wholly irrigated" farms are those reporting the irrigation of all cropland harvested. "Partly irrigated" farms are all other farms reporting irrigation, including those farms on which the irrigation was confined to pasture.

Land in all farms.—The acreage designated as "Land in all farms" includes considerable areas of land not actually under cultivation and some not even used for pasture, since each farmer was asked to report as a unit all the land under his control, or rather all the land which he thought of as a part of his farm. Isolated tracts of timberland and other areas not connected with the farm were not included.

Land in irrigated farms.—This is the area of those farms which were wholly or partly irrigated in the year preceding the enumeration.

Farm values.—The operator of the farm was asked to report, first, the total value of his farm (land and buildings), including all the land which he operated, both owned and hired, whether operated for himself or managed for others. He was asked to give the current market value—that is, the amount for which the farm would sell under normal conditions, not at forced sale. The tabulated results of this inquiry are shown as "Value of land and buildings" and represents the total value of farm real estate. The values of irrigated farms are thus the values of farms which were wholly or partly irrigated.

The value of farm implements and machinery shown is that reported on the Farm and Ranch Schedule. Enumerators were instructed to exclude the value of commercial mills and factories and "permanently installed irrigation and drainage equipment."

Tenure of farm operator.—A "farm operator," according to the Census definition, is a person who operates a farm, either performing the labor himself or directly supervising it.

Owners, as used in the term "Owners and managers", include part owners as well as full owners, as classified in the Census of Agriculture.

Irrigated land.—The following instruction was given to enumerators in 1940, 1930, and 1920:

Land should be classed as irrigated which has water supplied to it for agricultural purposes by artificial means or by seepage from canals, reservoirs, or irrigated lands, but land which has natural ground water sufficiently near the surface to support plant life should not be classed as irrigated. Land which is flooded during high-water periods should be classed as irrigated if water is caused to flow over it by dams, canals, or other works, but should not be classed as irrigated if the overflow is due to natural causes alone.

"Area irrigated" is, therefore, the acreage to which water was actually applied in the seasons (1939, 1929, and 1919) preceding the enumeration years of the sixteenth, fifteenth, and the fourteenth censuses, respectively. It is not necessarily the area for which water was available or the area entitled to water; hence it does not include land under canals and sometimes irrigated but which was not watered in 1939, 1929, or 1919. Moreover, it takes no account of the degree of sufficiency of the irrigation.

Area works were capable of supplying with water.—This item relates to the year of the census (1940, 1930, or 1920). It is based on reports made by those controlling the enterprises, and represents the area which the constructed works, as they existed on January 1 of the census year, could serve, regardless of whether or not the land was farmed.

Irrigable area in enterprises (1940 and 1930) and total area in enterprises (1920).—These items represent the extent of the plans of those controlling the enterprises. Possible extensions of projects not definitely planned in 1940 or 1930 were not included in the area reported as irrigable.

Irrigated areas (1939, 1929, and 1919), irrigable areas (1940 and 1930), and areas works were capable of supplying (1940, 1930, and 1920) are net; i. e., they do not include known duplications representing areas served or susceptible of being served by more than one primary enterprise. Acreages shown for supplemental enterprises (1940 Census) constitute the portions of the areas shown for primary enterprises that received or could receive additional water.

Irrigation enterprise.—An "enterprise" is an independent irrigation establishment owning or operating works for supplying water to agricultural land. An enterprise may represent a short canal or a pumping plant watering a single small farm, or a great system of canals and reservoirs operated under one management supplying thousands of farms. Only such enterprises as supplied water for irrigation in 1939 and 1929, or were capable of supplying water for irrigation in 1940 and 1930, or were in advanced stages of construction January 1, 1940 or 1930, were included in the sixteenth and fifteenth censuses. The 1940 totals take into account various consolidations made since 1930.

Presentation of the statistics by States, drainage basins, and counties, requires that for an enterprise comprising land in more than one State, basin, or county, the part in each be considered a separate enterprise. However, the actual number of enterprises, eliminating such duplications, is shown in summary tables showing areas and investment by character of enterprise.

Type of enterprise.—The types of enterprises under which all data are classified are as follows:

Individual and partnership enterprises belong to individual farmers or to neighboring farmers who control them without formal organization. These are largely enterprises using small gravity diversions from streams, springs, or water from pumped wells.

Cooperative or mutual enterprises are controlled by the water users, under some form of cooperation, either incorporated or unincorporated. The most common form of organization is the stock company, in some sections known as the mutual water company; the shares of stock are owned by the water users and represent proportionate amounts of the available water. The stock may or may not be appurtenant to the land irrigated.

In the Southwest, where irrigation was practiced before the region became a part of the United States, part of the land is still watered by "community ditches," or public "acequias," organized and operated in accordance with old Mexican customs providing for the election of officials by the landowners and for forced labor on repairs and cleaning. These enterprises are classified as cooperative. Included also in the cooperative classification are a number of "lateral" companies, the chief function of which is to handle the distribution of water to their members beyond the places where the responsibility of their parent enterprises terminates; various storage companies controlled on a cooperative basis by groups of other enterprises; and a few mutual companies, especially in southern California, which expect eventually to supply their members with water for domestic purposes only, but meanwhile use their surplus supplies for irrigation.

Not included in the tabulations were various water-user organizations, essentially cooperative, which have administrative, managerial, protective, or sometimes promotional functions but own and operate no physical works although perhaps assessing their members for various costs and expenses. (See, also, United States Bureau of Reclamation enterprises.) Usually such omitted enterprises operated within the year to safeguard the existing or prospective rights of their members but did not own or distribute water.

Irrigation districts are public corporations established under State laws empowering them to issue bonds to obtain funds for the purchase or construction of irrigation works and to levy and collect taxes or assessments for the payment of bonds and interest on them, and the cost of maintenance and operation of the works. The term "irrigation districts" also covers water-improvement districts, water-conservation districts, and water-storage districts, which in some States are in addition to irrigation districts and in other States are in lieu of them.

Irrigation districts are controlled by the owners of the lands comprising them through boards of directors elected by the landowners. A few districts which have the sole function of storing water for other enterprises are included in the classification. (See, also, United States Bureau of Reclamation enterprises.)

Commercial enterprises, incorporated or otherwise, supply water for compensation to farmers who own no interest in the works. Such enterprises may be organized in any form, but their operations are subject to some degree of public control in most States. This was the earliest type of enterprise for the construction of large irrigation systems. Such enterprises built irrigation works and sold rights entitling the purchasers to receive water carried by them upon the payment of annual charges, but conveyed no interest in the works. Some States have enacted laws prohibiting the sale of such rights, and commercial enterprises organized since the passage of these laws usually sell stock representing part ownership in the works, to become effective upon the payment of specified portions of the purchase

price. These enterprises eventually become cooperative. There are some commercial enterprises that sell no rights but supply water to the public upon payment of charges based, in some instances, on acreage served and in other instances on the quantity of water delivered. In most States rates charged by commercial enterprises are subject to public control; they are, therefore, considered public utilities.

United States Office of Indian Affairs enterprises operate under various Acts of Congress providing for the construction of works for the irrigation of land in Indian reservations.

United States Bureau of Reclamation enterprises were established in the Department of the Interior under the Federal law of June 17, 1902, which provided for the construction of irrigation works with the receipts from the sale of public lands or other sources, and subsequent legislation which provided other funds. In addition to serving land within its own projects, the Bureau of Reclamation supplies supplemental water to land within other enterprises. Statistics relating to "primary" acreages classified as "United States Bureau of Reclamation" do not include acreages served with supplemental water, since the latter areas are represented in other classifications, but the construction costs of facilities under contract to provide such supplemental water are included in the investment credited to the Bureau of Reclamation. Drainage construction costs, which are an integral part of the cost of most Bureau of Reclamation projects, are excluded from the investment credited to the Bureau of Reclamation. In many instances construction costs which will be repaid by power revenues from works operated in conjunction with Bureau of Reclamation enterprises are included in the investment so credited, as specifically noted in the appropriate tables. Statistics apply only to Bureau of Reclamation enterprises in operation and not to projects under construction which are not yet irrigating land.

Amendments to the Reclamation Act provide that on the request of any water-user organization or irrigation district the Secretary of the Interior, at his discretion, may transfer to such local organization the operation and maintenance of all or any part of the project works. Under this provision the operation and maintenance of 41 projects or divisions of projects have been turned over to water-user organizations or irrigation districts. As the construction cost of no project has been paid in full, title to the works remains with the Federal Government and all projects in this status are classified as Bureau of Reclamation enterprises.

State enterprises are undertakings by the States themselves to effect irrigation development under special legislation. Some projects originally in this status have been reorganized and their statistics appear in other classifications. Also, "State" enterprises include various State institutions having independent irrigation systems serving their own lands exclusively.

City water and city sewage-disposal enterprises include those established by a few cities to dispose of sewage by utilizing the effluent for irrigation. Others, notably in Utah and California, maintain substantial irrigation service in conjunction with their domestic and industrial deliveries on an irrigation rate schedule. Statistics for both such types of enterprise are classified as "city."

Other enterprises include several projects still operated by companies established under the Federal law of August 18, 1894 (usually referred to as the Carey Act), granting each of the States in the arid region 1,000,000 acres of land on condition that the State provide for its irrigation, and under amendments to that law granting additional areas to several of these States, if applied for. The conditions in this law necessitate State legislation before the law becomes operative; thus Carey Act enterprises operate under both Federal and State laws. Practically all enterprises which were originally Carey Act projects have been reorganized and were enumerated as cooperatives or other types in the 1940 Irrigation Census. Also among the enterprises classified as "Other" are a few "drainage" districts which operate irrigation as well as drainage systems, and a number of "reclamation" districts (largely in California). Most of the reclamation districts have flood control or drainage as their principal function, irrigation being of varying importance but subordinate to flood control. Reclamation districts have no connection with United States Bureau of Reclamation enterprises.

Data were obtained from various Government agencies not referred to above which use water on areas devoted to refuges for wild life. Since these enterprises appeared to be outside the scope of both the Census of Agriculture and the Census of Irrigation the data reported were not retained. Forest nurseries operated by the United States Department of Agriculture were likewise omitted.

Multiple-purpose enterprises.—The number of multiple-purpose enterprises which render irrigation service in connection with other services has increased during recent years. In the 1940 census, cities and public utility enterprises which supply irrigation water from domestic water systems or extensions thereof and/or from the effluent of sewage disposal plants, were recorded as irrigation enterprises, provided the revenues received from irrigation were segregated from other receipts and represented substantial amounts. Cities supplying water to only a few irrigators at domestic water rates were not considered irrigation enterprises; however, each farmer receiving such water was counted as an individual enterprise with a "City water" supply. Large multiple-purpose enterprises involving water storage, power development, flood protection, channel betterment, ground water recharge, and other

functions in addition to irrigation, were enumerated as irrigation enterprises. In each case, however, unless otherwise indicated, only such construction statistics were included in the 1940 Irrigation Census tabulations as could reasonably be allocated to the irrigation phase or purpose. Thus, the allotment was determined from varying factors such as capital chargeable to the irrigated land, works used wholly for irrigation, actual or anticipated irrigation revenues, etc. Drainage, reclamation, irrigation, and other types of districts which in 1939 rendered an irrigation service with one or more additional services were classed as irrigation enterprises and the works and costs in each case were allocated as closely as possible to each purpose. For instance, in the case of enterprises operating pumping plants primarily installed for drainage purposes but using the pumped water for irrigation, the capital costs were allocated to drainage and the cost of maintenance and operation to irrigation.

Primary and supplemental enterprises.—Each irrigation enterprise, regardless of type, was classified in the 1940 Census as "primary," "supplemental," or a combination of both, according to the water service it rendered to irrigators.

A primary enterprise is one which furnishes to the irrigators all, or the major portion, of the irrigation water used. A stream diversion or pumping plant which one or more farmers consider a principal source of water and which is used first in preference to other available sources because of ownership of works or water rights, or lower costs of water, is a typical primary enterprise regardless of the proportion of water obtained from such other available sources. All irrigated land must receive water from one primary enterprise, and the area statistics for primary enterprises are totals.

A supplemental enterprise is one which, directly or indirectly, furnishes a user with water from a source either like or different from the primary source, in addition to the water he receives from a primary enterprise. Notable supplemental enterprises are upstream or offstream storage projects established for the conservation of winter run-off and floodwater and to augment the insufficient primary supplies of downstream users. Likewise, many supplemental pumping plants have been installed either by individuals or groups for lifting ground water or water from streams to provide for areas served inadequately from primary sources alone.

Drainage basins.—The drainage basin of a stream is the geographic area drained by that stream and its tributaries. Large river systems drain major basins, each of which for the purpose of the Irrigation Census has been divided into tributary or minor drainage basins. Each basin, major or minor, is usually designated by the name of its arterial stream. Waters from most major basins ultimately reach the sea through surface or underground channels. However, the areas of the "Great Basin" comprising portions of Wyoming, Utah, Nevada, Oregon, and California, and similar smaller areas in other western States, drain into landlocked lakes or sinks and are considered as closed or independent basins. The drainage basin tables for a State set forth the portions of the major basins and their principal tributaries or minor basins located within the State, while the summary tables for the 17 western States and Arkansas and Louisiana set forth totals for all interstate basins and for groups of intrastate basins. Because a drainage basin is the natural geographic planning unit for the efficient utilization and administration of waters of the drainage basin streams and the included lands, irrigation statistics are shown in detail for drainage basins similar to those shown for States and counties.

Twenty State maps and a key map of the western portion of the United States, with Florida inserted, are published separately to show the boundaries of the specific drainage basins enumerated in the 1940 Census of Irrigation with symbols which represent the acreages irrigated in 1939. These maps, "Irrigation—By Drainage Basins—1939", may be purchased for 15 cents each, except for California and Texas which are printed in two sections and each section is 15 cents, from the Superintendent of Documents, Government Printing Office, Washington, D. C.

Areas irrigated from springs, flowing wells, or pumped ground waters are credited to the drainage basin in which they are located.

In the 1940 Census, irrigation from or along a tributary stream, not mapped in an individual basin, was considered a part of the irrigation "Direct" from the arterial stream into which the tributary flows. In the Irrigation Censuses of 1902,

1920, and 1930, when irrigation statistics were also tabulated by drainage basins, the boundary lines of the basins were not mapped and although data were shown for the arterial streams "Direct" and for tributary basins in a manner similar to that used in the 1940 Irrigation Census, many minor basins were grouped under "Other tributaries," a grouping not used or carried forward in the 1940 Irrigation Census Reports. Since it was not always possible to identify and separate the statistics of basins included in "Other tributaries," some tributaries so included in this item in prior censuses may be included under "Direct" in 1940. Therefore, the data presented under "Direct" for these earlier censuses should be considered as only approximately comparable to those shown for 1940. Also, wherever comparable data are not shown in the 1940 drainage basin tables, it is reasonable to assume that the statistics for the basins involved were probably included in "Other tributaries" in the reports of prior censuses.

Sources of water supply.—The water supplies named in the tabulations are self-explanatory with the possible exception of "Stored storm water," which refers to storm water collected from channels that carry water only during storms and are not classed as streams, or by run-off from local lands usually owned or controlled by the irrigators and stored in small reservoirs. Storm water reservoirs are usually owned by individual farmers and have recently been increased in number to provide irrigation and stock water, or to retard surface waters until they percolate into underground storage from which irrigation water is pumped.

In the 1940 Census, the classification of sources of water supplies was expanded somewhat to group those enterprises which have like combinations of primary sources and those which receive supplemental water from streams by gravity, from storage, or by pumping. Where these supplemental sources appear, no comparison can be made with the statistics of previous Censuses. All areas shown as receiving water from supplemental sources are also included in the areas shown as receiving water from primary sources; however, duplication of area statistics is avoided in the tables showing sources of supply by omitting from the totals land served from supplemental sources. The amounts of water delivered, and investment and cost statistics are shown separately for each source classification.

Water rights.—The 1940 irrigation census made inquiry regarding the type of water rights held by the reporting enterprise with three questions calling for indication of "Riparian," "Appropriation," and "All other" rights, with instruction accompanying the questions directing that rights other than riparian or appropriative be reported under "All other," and that definite designation of the "Other" type be made. More specific questions or instructions might have resulted in the reporting of a greater number of "Other" types, as in many instances the enterprises failed to identify such other rights. The water-right tabulations present acreage figures according to the predominating types of rights reported, but owing to the lack of knowledge of the distinctions between the various types on the part of many irrigators and enumerators, the tabulations can only be considered to disclose approximately the actual situation.

For the sake of such comparisons as may be significant, the water-right tabulations of the 1930 Irrigation Census are shown. However, present interest in water-right statistics appears to lie principally in the relative status of appropriative to riparian rights in States which recognize both, and in rights to ground water, rather than to the various stages in which appropriative rights exist.

Cost of irrigation works and equipment.—The census instruction was as follows:

Include the original cost of the irrigation works plus the cost of extensions and improvements; also the cost of equipment, buildings, and land used for maintenance and operation, but not water rights. If works are not completed, give investment to December 31, 1939. If there are no records of cost, or if the owners have done all or part of the construction, the best estimate of cost obtainable should be reported, including the estimated value of the work done by the owners. Only such costs for drainage works as are chargeable to irrigation should be included.

Cost of water rights.—Instructions specified that this item should "include filing and legal fees paid by the enterprise in acquiring them; and, if they were purchased by the enterprise, give the purchase price."

The 1940 Census tabulations show the reported cost of water rights separately, while in previous censuses this item was added to the cost of irrigation works and presented as "capital investment." However, the cost of irrigation works and equipment and the cost of water rights were added together in 1940, as in previous censuses, to produce figures representing total investments and these totals were related to acreages the works were capable of supplying with water in 1940, as previously, to produce comparable average investments per acre.

Financing.—The 1940 Irrigation Census made inquiry for the first time regarding the financial status of those enterprises designed to serve 5 or more farms. The total indebtedness and the arrears in payment of principal or interest on bonds or other funded obligations, were reported as of December 31, 1939. Inquiry was also made as to the amount of arrearage, December 31, 1938, the amount of water taxes, including special assessments, and the amount expended for construction in 1939, as capital expenditure. In the tabulations shown the financing items have been related to the areas, capital investment, and charges and assessments of enterprises reporting indebtedness, as far as the replies permit.

Cost of maintenance and operation.—Instructions were to "report only the costs of maintenance, including ordinary cleaning and repairs, and operations, including fuel, electric energy, and attendance." Also to be included were the amounts of operating and maintenance costs of the drainage pumps or systems which are chargeable to irrigation. In tables showing these costs, they are related to the acreages irrigated in 1939 by the enterprises reporting.

Main canals and laterals.—A main canal is any open conduit conveying water from the source of supply to the tract of land to be irrigated or to a storage reservoir. A lateral canal is a branch of a main canal conveying water from a main canal to one or more farms. Main canals and laterals are tabulated as "canals." Farm ditches which distribute water to fields within the boundaries of the individual farm are not reported. Lengths of earth canals and lined canals, including flumes, appear separately in the tabulations. The material used, for most lined canals, was reported as concrete.

Diversion dams.—A diversion dam is a structure placed across the channel of a natural stream for the purpose of diverting all or a portion of the stream flow into a canal or other water conduit. Many of the diversion dams reported are temporary structures built of sand, rock, brush, or other accessible materials. Tables classifying diversion dams by material include these temporary structures as "other and mixed" because of the variety of materials used. Most such dams are destroyed during periods of high water and have to be replaced annually or even more frequently.

Storage dams and reservoirs.—A storage dam is a structure built for the purpose of storing water in a stream channel, ravine, or other natural depression. These dams are tabulated according to the materials of construction. Dams were not reported for all reservoirs as many small reservoirs are built by excavation and embankments on level ground in connection with pumping plants for overnight storage. Tanks and other small structures capable of storing less than 1/2 acre-foot of water were not included in the tabulations.

Pumping plants.—The census of pumping plants was confined to those used for lifting irrigation water and were enumerated and tabulated according to the kind of motive power, i.e., "electric motors," "internal-combustion engines," and "other power"; and by type of pump, i.e., "centrifugal," "turbine," "plunger," and "other pumps." Steam, water, and wind were classed in "other power." Rotary, hydraulic ram, air lift, and home-made pumps were classed as "other pumps." The inquiry regarding the average lift of pumping plants called for the vertical distance, in feet, between the average elevation of the water in the source of supply when the pump is running at usual capacity and the average elevation to which the water is lifted. It does not take into account friction and velocity heads. The lift statistics show separately the lifts from wells and from surface sources to indicate the lifts of ground water in areas irrigated from wells.

Units of measure.—The following units of measure are used in this report:

Capacity of a canal at main heading is given in second-feet ("sec.-ft." or "c.f.s."), abbreviations for "cubic feet

per second." A second-foot is the rate of discharge of water flowing in a channel when the cross-sectional area is 1 square foot and the average velocity is 1 foot per second.

Capacity of a pump and yield of a well is given in gallons per minute ("g.p.m."). Approximately 450 g.p.m. equals 1 sec.-ft.

Capacity of a reservoir is given in acre-feet ("ac.-ft."). An acre-foot of water is the quantity that will cover 1 acre to a depth of 1 foot, and equals approximately 43,560 cubic feet or 325,851 gallons.

Capacity of a motor and an engine is given in horsepower ("hp."). One horsepower is the energy required to lift 33,000 pounds through a vertical distance of 1 foot in 1 minute.

Irrigated crops.—Table 22 (section C) carries data for specified crops grown on irrigated and nonirrigated lands in the 17 western States and Arkansas and Louisiana in 1939, with comparable acreages for 1929, where available. The average yields shown in this table for irrigated crops are based on the farms reporting the entire crop irrigated, while the yields for nonirrigated crops are based on farms reporting no irrigation for such crops. The 1939 basic data for these crops appear in volumes I and III of the Reports for the 1940 Census of Agriculture. The 1929 basic data for the irrigated crops appear in the 1930 report "Irrigation of Agricultural Lands" and totals for all crops in volumes II and IV of the Reports for the 1930 Census of Agriculture. In the 1940 Census, a farm reporting both irrigated and nonirrigated acreages of a given crop was recorded as a farm in each group. Therefore, the total of the farms reporting irrigated and nonirrigated acreages for a crop exceed the actual number of farms harvesting that crop to the extent of the number of farms which used both irrigated and nonirrigated culture in the census year.

Farm mortgage debt and taxes on irrigated farms.—In the 1940 Census of Agriculture, mortgage and tax information was obtained only for farms of full owners and for the owned portions of farms of part owners. The mortgage inquiries called for the mortgage status (the amount of mortgage debt) and the rate of interest on the first mortgage. The tax inquiries called for taxes levied on the real estate in the farm as well as those levied on personal property on the farm. The statistics are shown separately for full owners and for part owners. In presenting the mortgage statistics, farms are classified by mortgage status and the amount of debt is related to the acreage and value of the farms reporting these items. The number of farms, acreage, and value are also shown by mortgage status.

In presenting the statistics for farm taxes, the real-estate taxes are related to the acreage and value of the farms reporting these items. A more detailed discussion of mortgage and tax statistics for all owner-operated farms are presented by States in chapter IV, of volume III, of the Reports of the 1940 Census of Agriculture. The statistics relating to mortgages and taxes presented in that volume are restricted to farms of owner operators where all of the cropland harvested in 1939 was irrigated.

In comparing the mortgage and tax statistics for irrigated farms with those for all farms it cannot be assumed that the differences in the totals represent nonirrigated farms only. Such differences include not only nonirrigated farms, but also farms where irrigation was restricted to pasture lands, fallow land, and to partly irrigated farms where only a portion of the crops harvested were irrigated.

Separate figures for mortgage debt and real-estate taxes are presented for owner operators owning no additional land. The mortgage and tax data for these farms are not distorted by any debt or taxes which might relate to other land.

The interest rate reported was the annual rate as specified in the first mortgage. Figures given for this item are presented under "Average of the rates." They do not represent weighted averages as they are simply the sum of the rates reported divided by the number of reports.

The real-estate taxes were to relate to the taxes levied in 1939 on the real estate of the farm owned by the operator on April 1, 1940, including buildings and other improvements. Taxes levied by drainage or irrigation districts were not to be included.

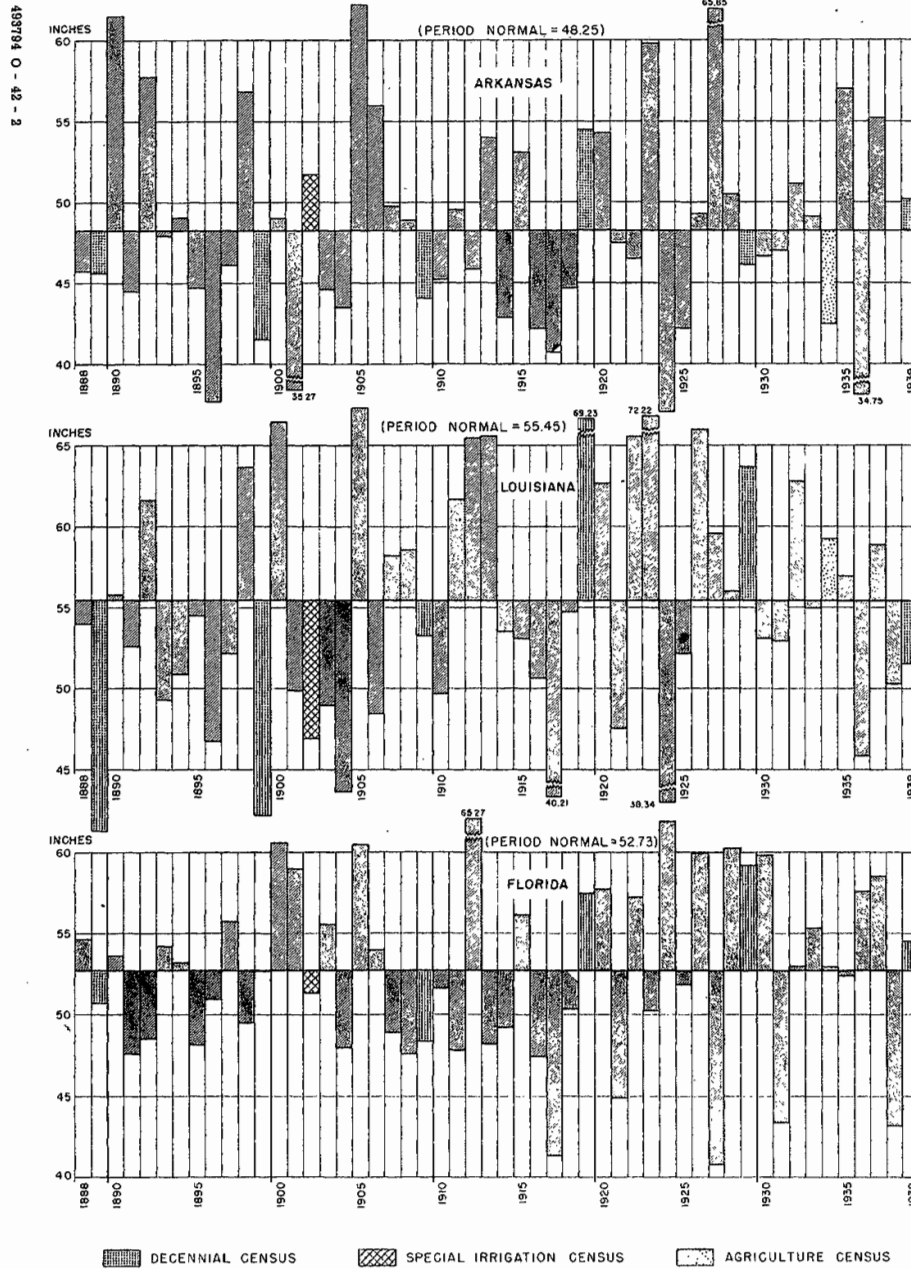
The personal-property taxes were to relate to taxes on personal property such as livestock, machinery, etc. owned by the operator and on the farm operated. Automobile taxes, fees, and licenses were to be excluded.

GENERAL DISCUSSION

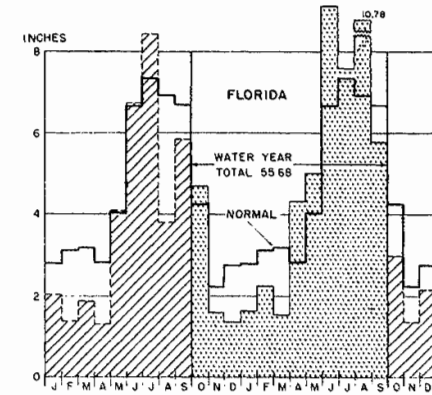
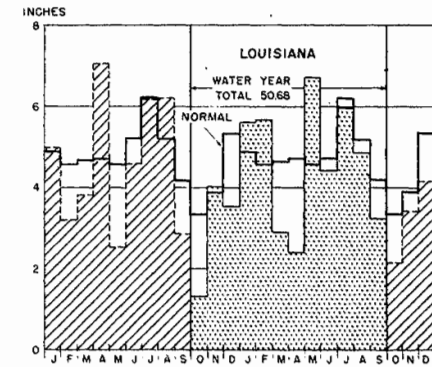
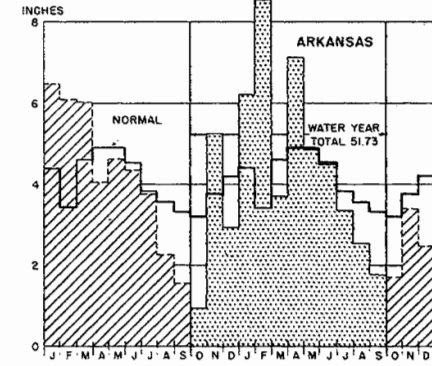
(Section B)

CHART I- ARKANSAS, LOUISIANA, AND FLORIDA

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



AVERAGE MONTHLY PRECIPITATION 1938 AND 1939

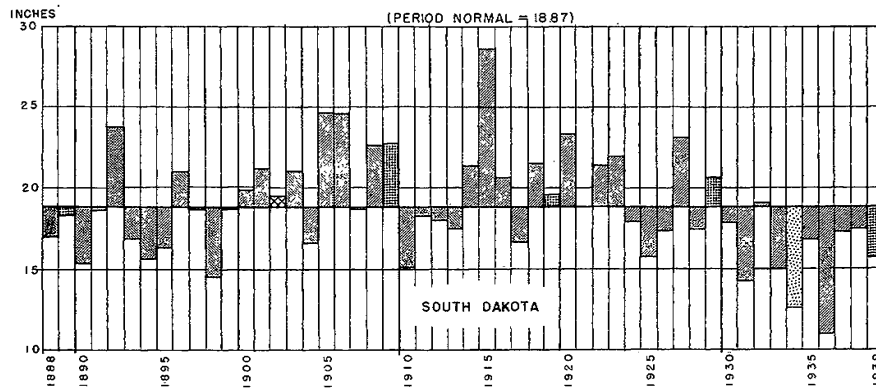
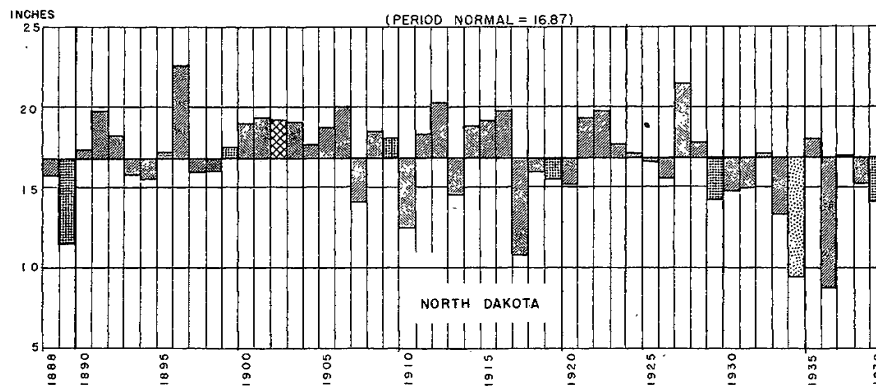
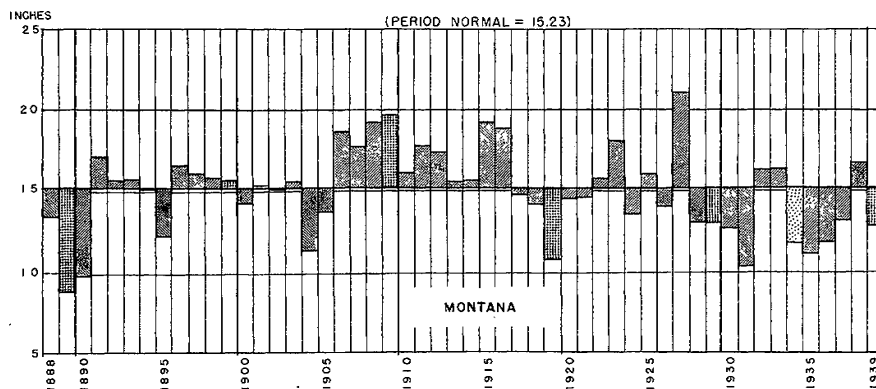


GENERAL DISCUSSION

XVII

CHART II - MONTANA, NORTH DAKOTA, AND SOUTH DAKOTA

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



DECENNIAL CENSUS SPECIAL IRRIGATION CENSUS AGRICULTURE CENSUS

AVERAGE MONTHLY PRECIPITATION 1938 AND 1939

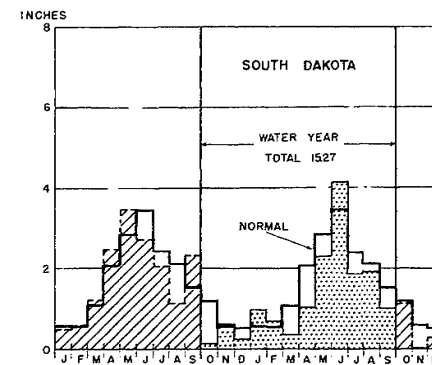
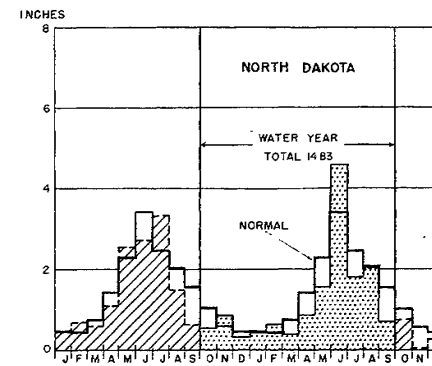
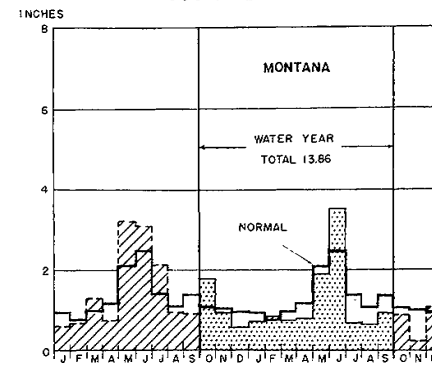
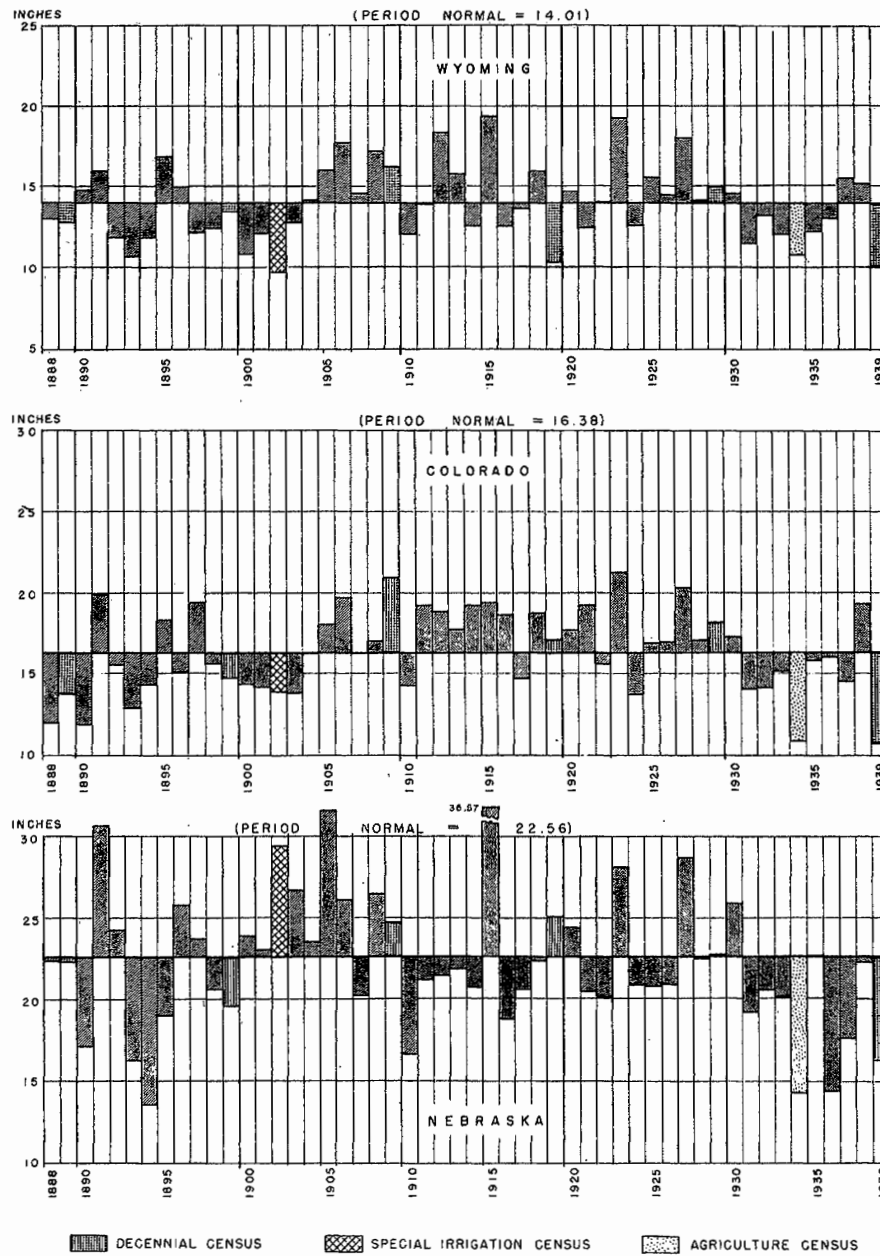
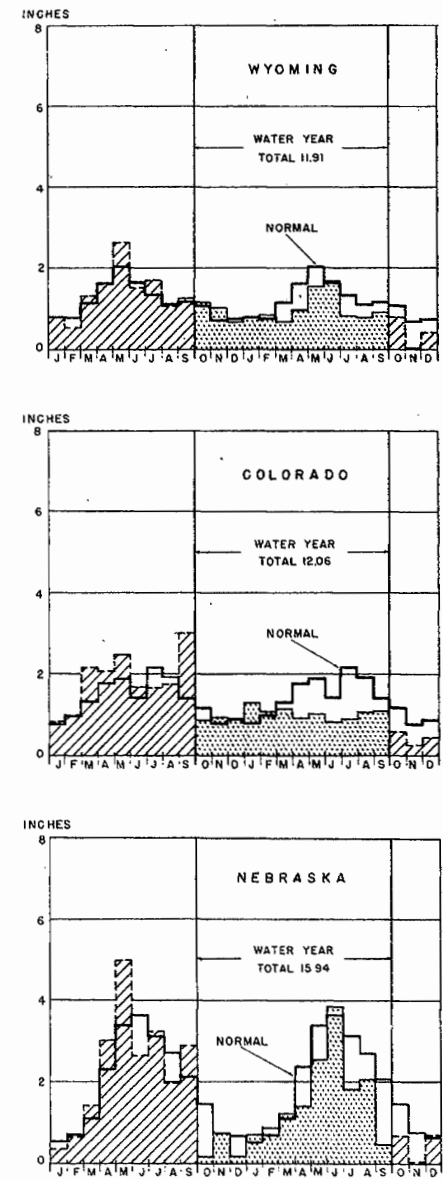


CHART III - WYOMING, COLORADO, AND NEBRASKA

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



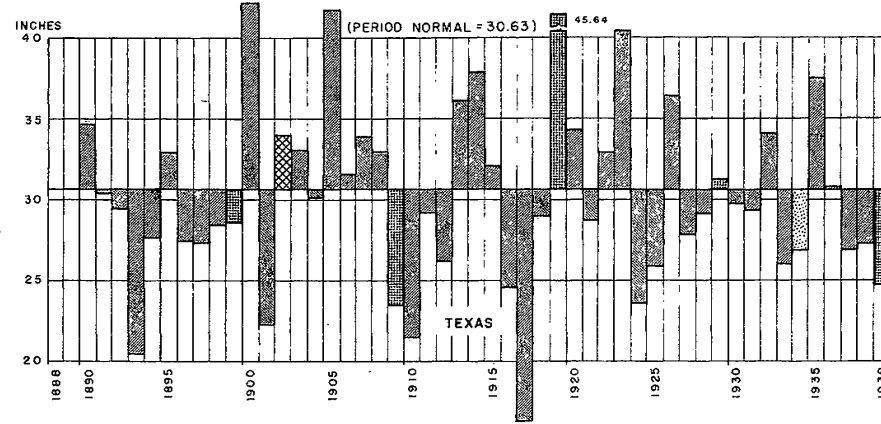
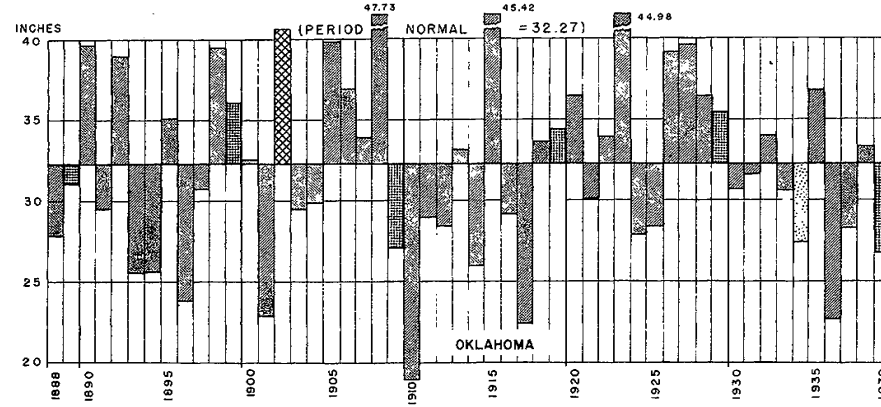
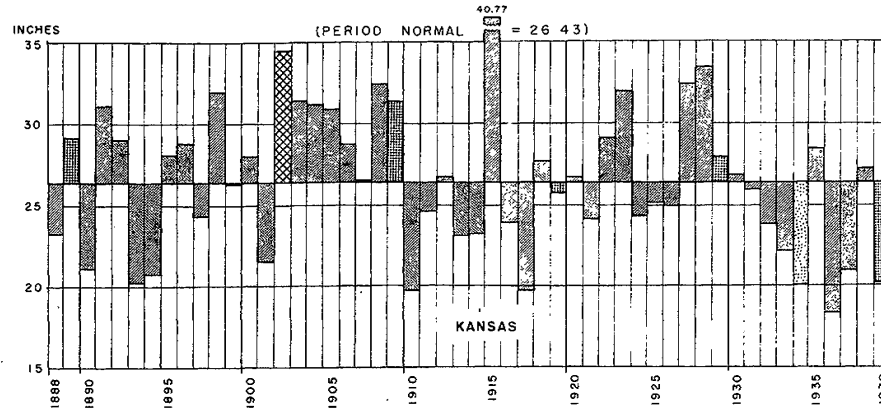
AVERAGE MONTHLY PRECIPITATION 1938 AND 1939



GENERAL DISCUSSION

CHART IV - KANSAS, OKLAHOMA, AND TEXAS

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



■ DECADE CENSUS ▨ SPECIAL IRRIGATION CENSUS ▩ AGRICULTURE CENSUS

AVERAGE MONTHLY PRECIPITATION 1938 AND 1939

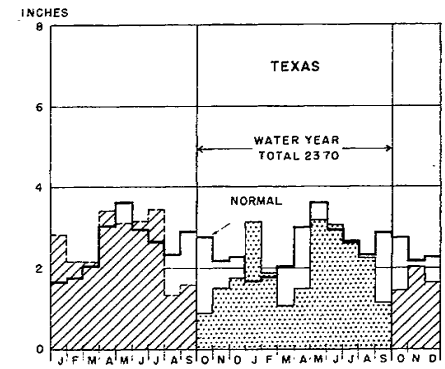
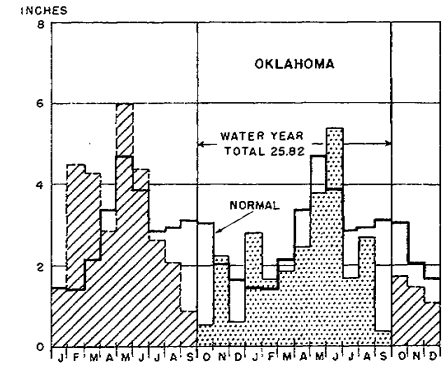
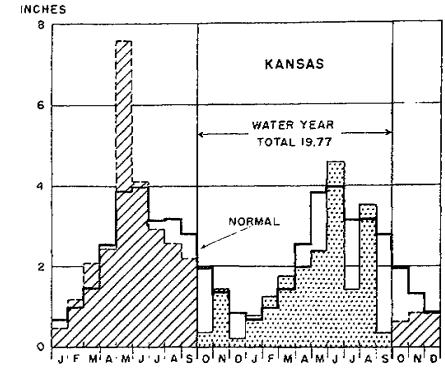
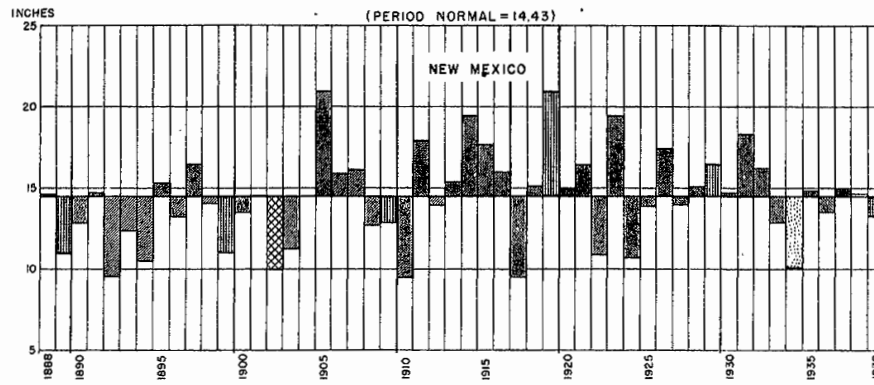
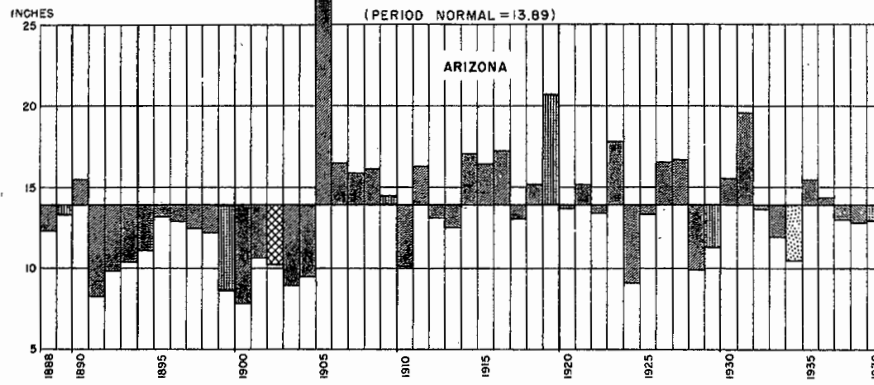
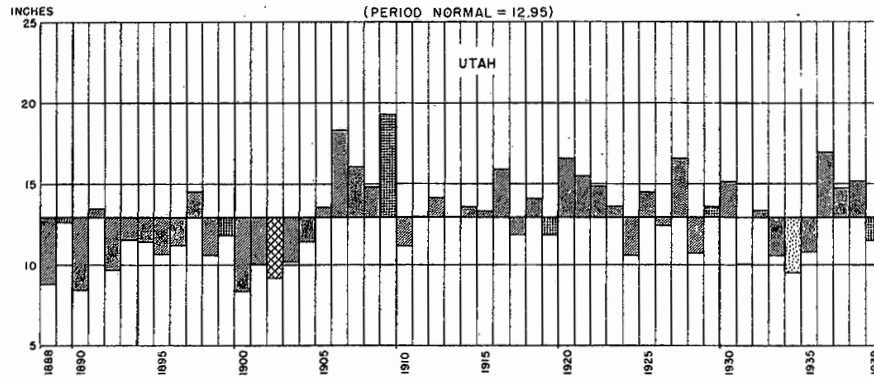


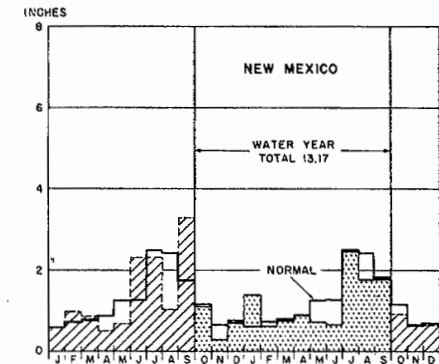
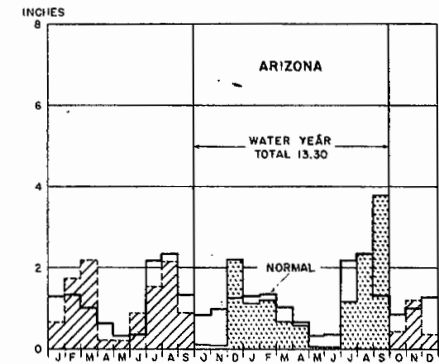
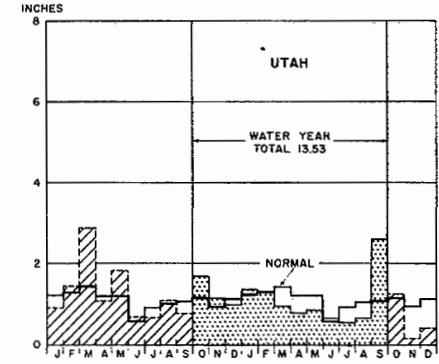
CHART V- UTAH, ARIZONA, AND NEW MEXICO

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



DECENNIAL CENSUS
 SPECIAL IRRIGATION CENSUS
 AGRICULTURE CENSUS

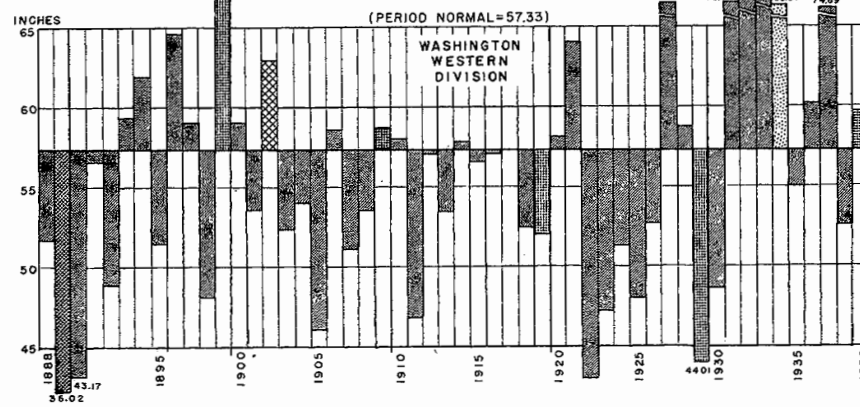
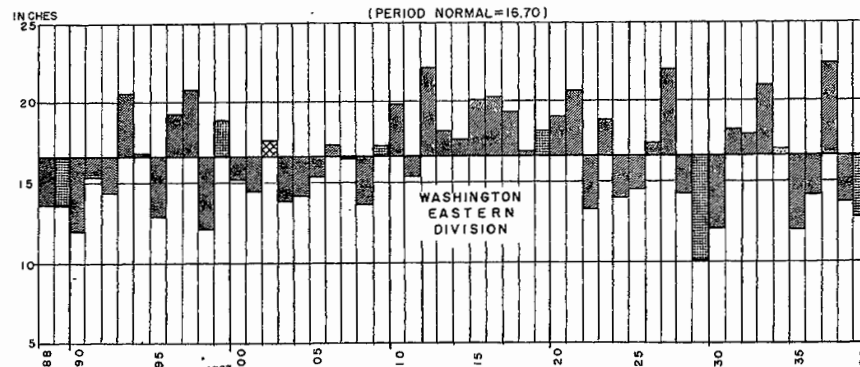
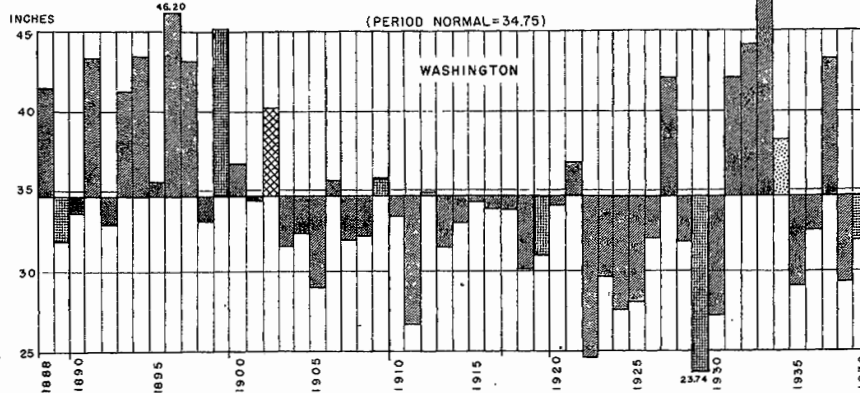
AVERAGE MONTHLY PRECIPITATION 1938 AND 1939



GENERAL DISCUSSION

CHART VI - WASHINGTON

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



DECENNIAL CENSUS SPECIAL IRRIGATION CENSUS AGRICULTURE CENSUS

AVERAGE MONTHLY PRECIPITATION 1938 AND 1939

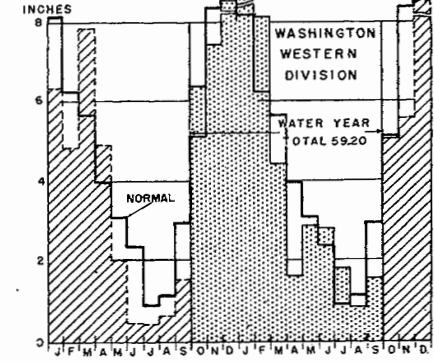
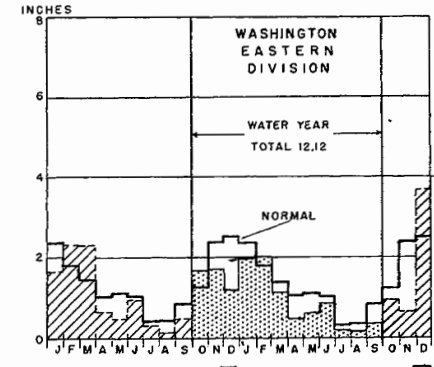
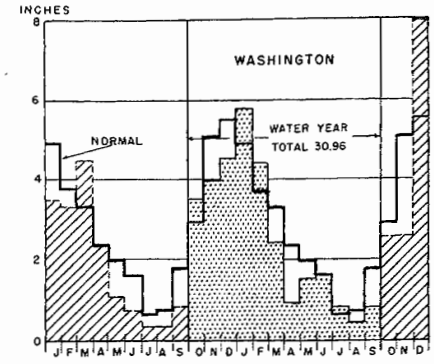
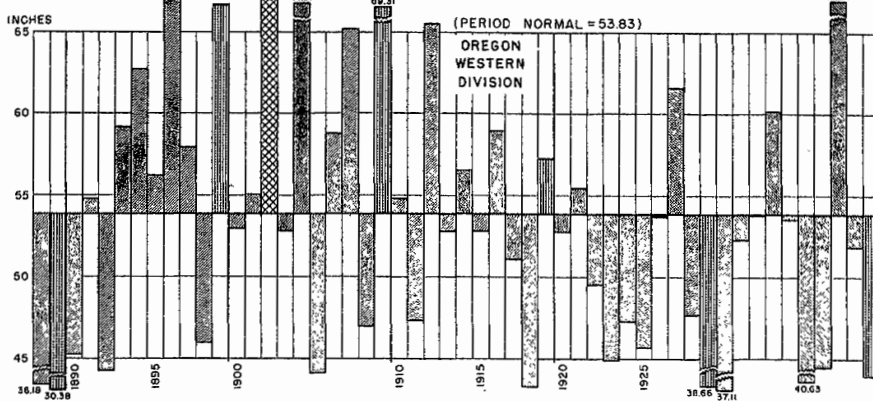
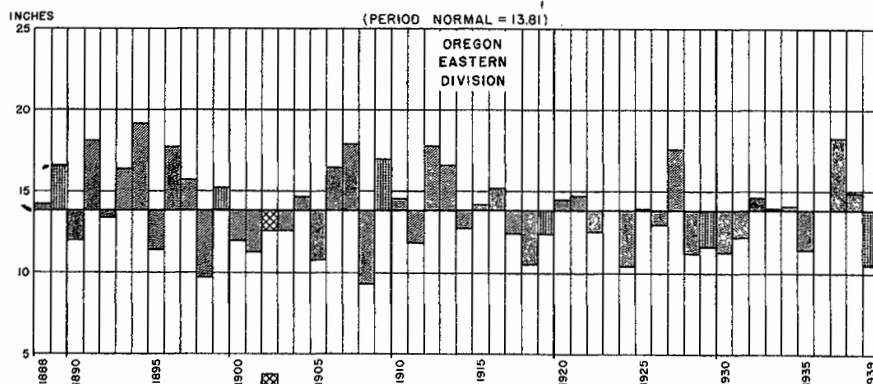
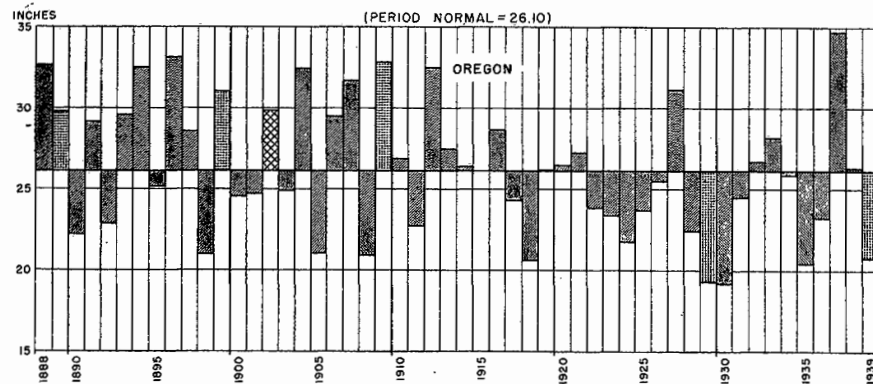


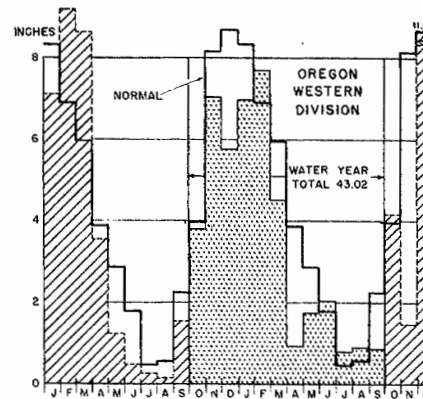
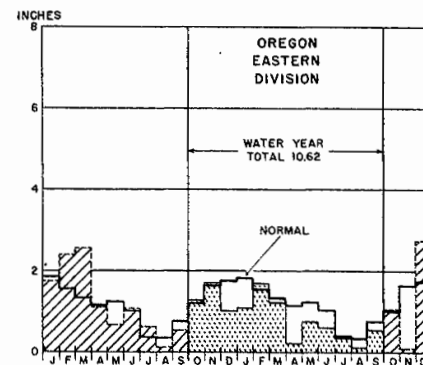
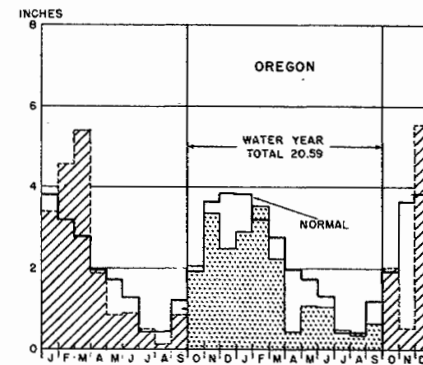
CHART VII- OREGON

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



DECENNIAL CENSUS
 SPECIAL IRRIGATION CENSUS
 AGRICULTURE CENSUS

AVERAGE MONTHLY PRECIPITATION 1938 AND 1939

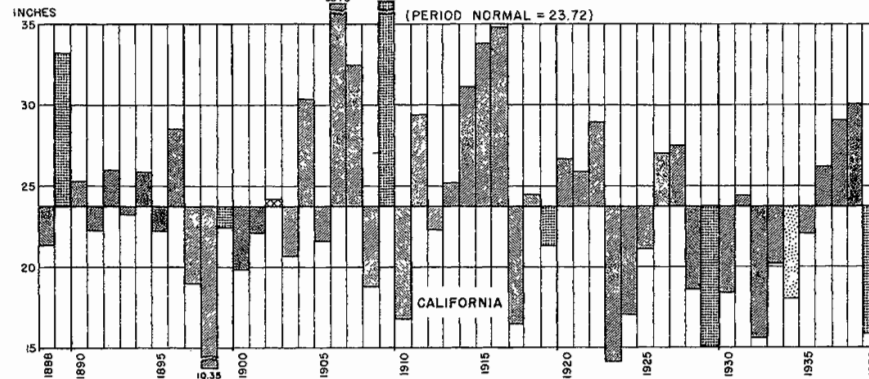
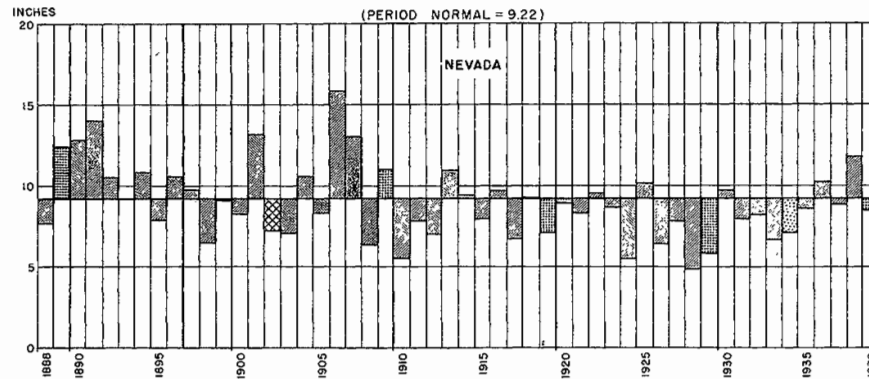
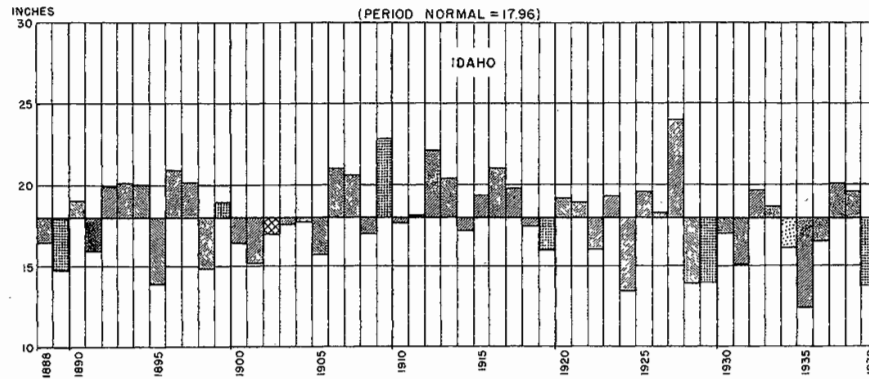


GENERAL DISCUSSION

XXIII

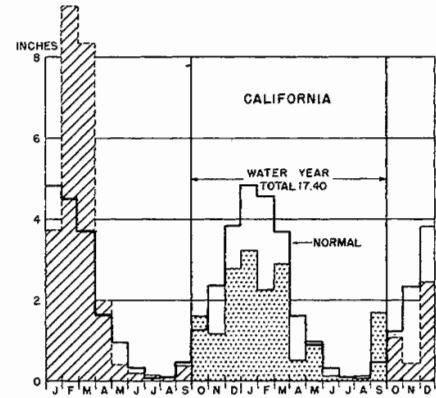
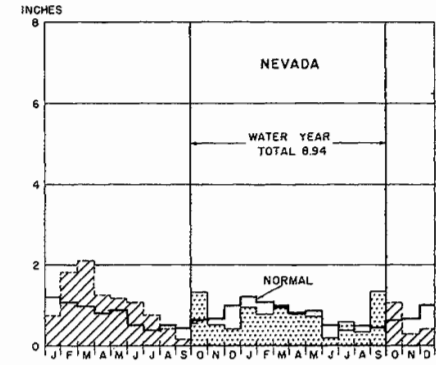
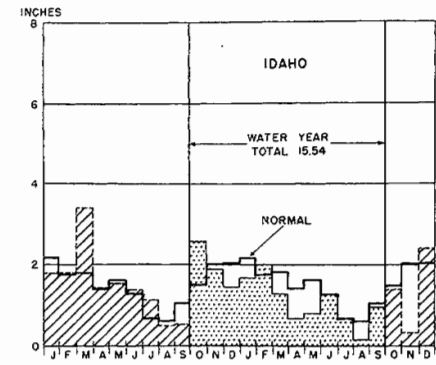
CHART VIII - IDAHO, NEVADA, AND CALIFORNIA

AVERAGE ANNUAL PRECIPITATION AND DEPARTURE FROM NORMAL 1888-1939



■ DECENNIAL CENSUS ▨ SPECIAL IRRIGATION CENSUS ▩ AGRICULTURE CENSUS

AVERAGE MONTHLY PRECIPITATION 1938 AND 1939



Areas Irrigated

The total area irrigated in 1939 in the 17 western States and Arkansas and Louisiana, reported by the Census of Irrigation (table 3), was 21,003,739 acres, an increase of 1,456,195 acres, or 7.4 percent since 1929. This is a greater rate of increase than the 1.9 percent increase during the preceding decade, yet much less than that for the decade 1909-1919 when an increase of 33.0 percent was shown. In the 1929-1939 period, increases were shown in 15 States, and decreases were recorded for Colorado of 5.1 percent, Louisiana of 0.8 percent, South Dakota of 10.3 percent, and Utah of 11.2 percent. The 1939 irrigated areas by principal drainage basins show increases in all basins, with the exception of the Rio Grande which shows a decrease of 2.8 percent, since 1929.

The distribution of 1939 irrigated areas by type of irrigation enterprise (table 4) shows increases for all types with the exception of "Commercial," -17.3 percent; and "All other," -2.4 percent. The transferring, during the past decade, of "Commercial" and "All other" (miscellaneous) types of enterprises into water-user organizations such as "Cooperatives," "Irrigation districts," and "Government projects" probably accounts for most of these area changes by type of organization. The greatest decade increases of area irrigated, by type of enterprise, were reported by Individual and partnership, 903,571 acres, Cooperatives, 331,154 acres, and Bureau of Reclamation, 338,976.

Charts IX and X show graphically the historic trends of areas by type of enterprise related to investment. For the Census of 1940, the areas and investment involved in developments for supplemental water are graphically presented with the supplemental investment shown in a side column; this is also added to the top of the primary investment column. Investment columns for earlier census years represent total expenditures for primary and supplemental projects unsegregated. Therefore, the total investment column (primary plus supplemental) in 1940 is comparable with the investment columns of previous years. Likewise, the average investment per acre is based on totals for all years except 1940 when separate averages for primary and supplemental enterprises are shown. In the graph for "All Types" an average based on totals for 1940 is also shown because the total investment applies to the total primary acreage. In the graphs for the individual type of enterprise an average investment per acre based on total investment is not shown because the supplemental investment usually applies to areas administered under one or more types other than the one credited with the investment.

Areas irrigated in 1939 in the 29 humid States (exclusive of Arkansas and Louisiana) are shown in table 5. These States are arranged in order of number of farms irrigated in 1939. All historic irrigation statistics (obtained by the Bureau of the Census) for the period of 1899 to 1939, inclusive, are shown. It is noted that the area irrigated in Florida in 1939 exceeded the area irrigated in the individual semihumid States of Oklahoma, North Dakota, South Dakota, or Kansas; and, also, the irrigated area in New Jersey, New York, or Ohio was greater than that irrigated in Oklahoma.

Capital Invested

The total investment of \$1,052,049,201 in irrigation works and water rights reported by enterprises in the 1940 Irrigation Census for the 17 western States and Arkansas and Louisiana (table 3) continued the upward trend from \$892,755,790 in

1930 an increase of \$159,293,411, or 17.8 percent. The change in investment per acre, based on the area irrigation works were capable of supplying with water, was from \$34.20 in 1930 to \$37.50 in 1940, indicating that the costs of additional irrigation works and betterments per unit irrigated also continued to increase, as has been true from the beginning of Census Records. Likewise, the estimated cost to complete the irrigation works in existing enterprises based on the irrigable lands in these projects changed from \$33.17 per acre in 1930, to \$35.99 per acre in 1940, an increase of \$2.82 per irrigable acre in the projects. Charts IX and X show graphically the historic trends of capital invested, related to project areas.

California ranks first in the 19 Irrigation States in capital invested in irrigation enterprises with \$318,889,218, or 30.3 percent of the total, the decade increase being 2.5 percent; Colorado second with \$106,849,343, or 10.2 percent of the total, with a decade increase of 22.0 percent; and Idaho third with \$102,585,798, or 9.8 percent of the total, a decade increase of 21.4 percent. Investment increases for the decade were reported in each of the 17 western States. However, the States of Arkansas and Louisiana, where irrigation is principally pumping water for rice, showed capital decreases of 15.6 percent and 26.5 percent, respectively, although the irrigated areas increased in Arkansas 6.5 percent and the number of irrigation enterprises increased in both States. Some of the factors causing these decreases are revealed by the statistics showing losses and gains in capital invested by counties and parishes in Arkansas and Louisiana, respectively, which indicate considerable shifts of location of irrigation practice within these States since 1930. Such shifts require the abandonment of old wells and pumping plants, many of which were installed prior to 1920 at high costs, and the installation of new wells and/or pumping equipment. Irrigation statistics of the Census of 1940 compared with 1930 also indicate a change from steam and internal-combustion engines to more efficient electric motors at less cost per horsepower. There are indications that new engines and wells installed during the decade 1930-40 cost less than those they have replaced which were of the earlier installations.

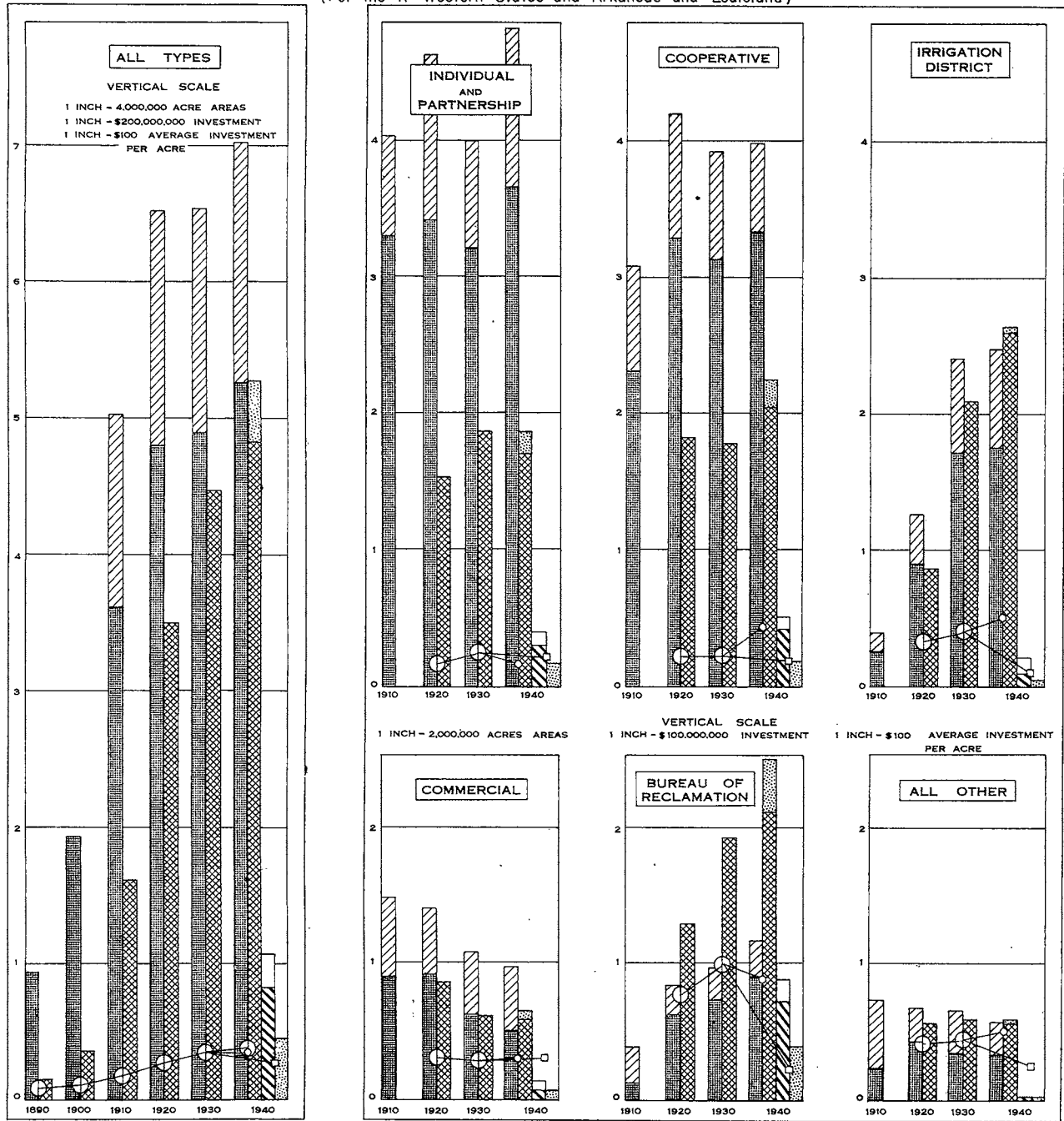
The Columbia River Drainage Basin ranks first in the 12 principal drainage basins in capital invested in irrigation enterprises (\$206,523,302 or 19.6 percent of the total) and also reported the greatest decade increase (\$49,168,188 or 31.2 percent). The Missouri River Drainage Basin ranks second (\$179,750,238 invested or 17.1 percent of the total, with a decade increase of \$43,243,517 or 31.7 percent), and the Sacramento-San Joaquin Delta and tributaries third (\$171,004,939 or 16.2 percent of the total, with a decade increase of \$6,376,846 or 3.9 percent).

Irrigation districts continue to lead in total investment by type of organization with \$265,737,810, or 25.3 percent of the total, an increase within the decade of 26.1 percent (charts IX and X). The United States Bureau of Reclamation ranks second with \$250,245,359, or 23.8 percent of the total, a decade increase of 29.0 percent; and cooperatives rank third with \$224,140,876, or 21.3 percent of the total, a decade increase of 25.0 percent. State enterprises (summary table 7, section C) lead in percentage increase of investment with 57.7 percent; the United States Office of Indian Affairs second, 53.3 percent; and the United States Bureau of Reclamation third, 29.0 percent. Decreases in investment are shown by City and/or sewage enterprises, with 63.7 percent, and Individual and partnership, 0.3 percent.

CENSUS OF IRRIGATION: 1940

CHART IX-- AREAS, CAPITAL INVESTED, AND AVERAGE INVESTMENT PER ACRE, 1890-1940; AND BY TYPE OF IRRIGATION ENTERPRISE, 1910-1940

(For the 17 Western States and Arkansas and Louisiana)



PRIMARY ENTERPRISES

AREA IRRIGATED
 CAPABILITY OF WORKS
 CAPITAL INVESTED

SUPPLEMENTAL ENTERPRISES

AREA IRRIGATED
 CAPABILITY OF WORKS
 CAPITAL INVESTED

AVERAGE INVESTMENT PER ACRE, BASED ON:—

TOTAL INVESTMENT AND PRIMARY AREA WORKS WERE CAPABLE OF IRRIGATING

 PRIMARY INVESTMENT AND PRIMARY AREA WORKS WERE CAPABLE OF IRRIGATING

 SUPPLEMENTAL INVESTMENT AND SUPPLEMENTAL AREA WORKS WERE CAPABLE OF IRRIGATING

GENERAL DISCUSSION

CHART X — PROPORTION OF TOTAL.—AREA IRRIGATED AND AREA WORKS WERE CAPABLE OF SUPPLYING WATER, 1910—1940; AND CAPITAL INVESTED, 1920—1940; BY TYPE OF IRRIGATION ENTERPRISE
(For the 17 Western States and Arkansas and Louisiana)

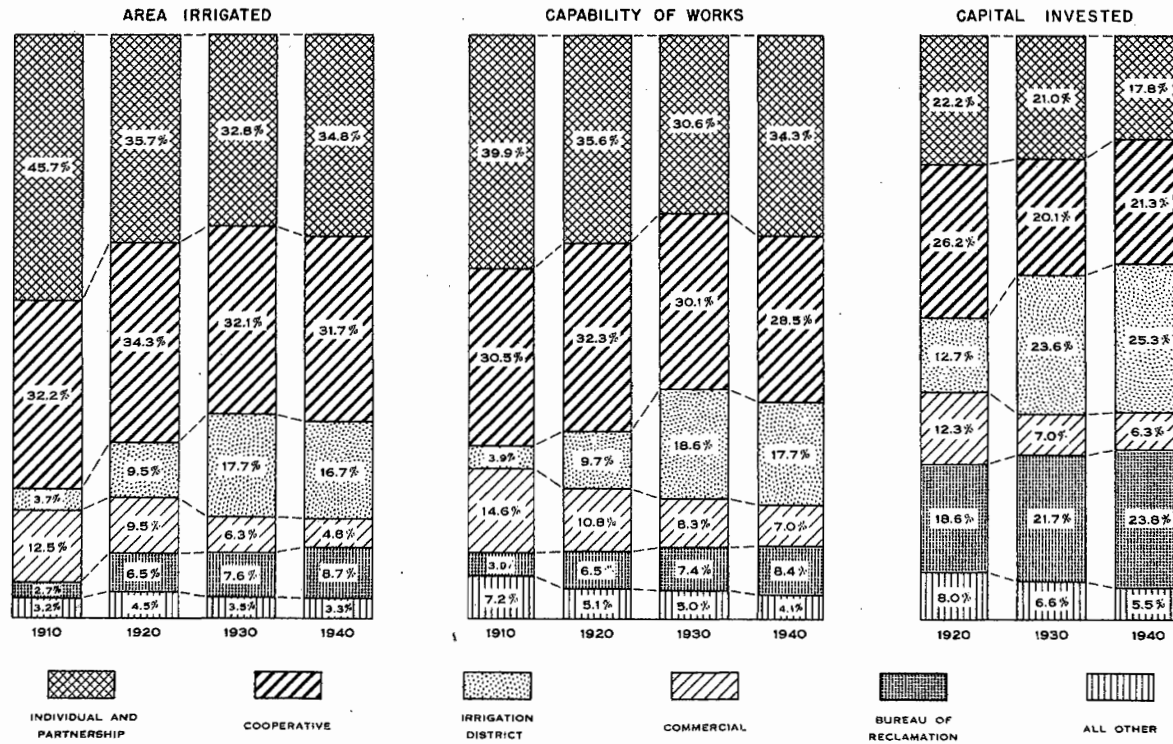


TABLE 3.—AREA IRRIGATED, 1939, 1929, AND 1919; AREA IRRIGATION WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940 AND 1930; CAPITAL INVESTED, 1940, 1930, AND 1920; AND AVERAGE INVESTMENT PER ACRE, 1940 AND 1930; BY STATES AND BY PRINCIPAL DRAINAGE BASINS

(For the 17 western States and Arkansas and Louisiana)

ITEM	AREA IRRIGATED					AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER		CAPITAL INVESTED							
	1939 ¹		1929	1919	Increase or decrease (-) 1929-1939	1940 ¹	1930	1940 ¹		1930	1920	Increase or decrease (-) 1930-1940	Average per acre works were capable of supplying water		Increase or decrease (-) per acre 1930-1940
	Area	Proportion of total						Total	Proportion of total				1940 ²	1930 ²	
			Acres	Percent	Acres	Acres	Dollars			Percent	Dollars	Dollars			Percent	Dollars	Dollars
Total (19 States)	21,003,739	100.0	19,547,544	19,191,716	7.4	28,055,248	26,101,890	1,052,049,201	100.0	892,755,790	697,657,328	17.8	37.50	34.20	3.30
STATE	BY STATES														
Arizona	655,265	3.1	575,590	467,565	13.5	844,212	824,152	85,526,608	7.9	73,328,197	53,498,094	13.9	99.94	88.97	9.97
Arkansas	161,601	0.8	151,787	143,946	6.5	287,765	209,942	5,768,895	0.5	6,856,648	7,183,322	-15.6	20.04	32.56	-12.52
California	5,069,568	24.3	4,746,652	4,219,040	6.8	7,398,576	6,815,250	318,889,218	30.3	310,937,979	194,866,568	2.5	45.10	45.65	-2.55
Colorado	5,220,685	15.8	5,885,619	5,348,385	-5.1	3,915,542	4,078,712	106,849,345	10.2	87,603,240	88,502,442	22.0	27.50	21.48	5.62
Idaho	2,277,857	10.8	2,181,250	2,468,806	4.4	2,595,554	2,617,021	102,585,798	9.8	84,500,354	91,501,009	21.4	39.55	52.29	7.26
Kansas	99,980	0.5	71,290	47,532	40.2	142,408	85,583	2,153,886	0.2	1,685,652	2,067,581	27.8	15.12	20.17	-5.05
Louisiana	447,095	2.1	450,901	454,882	-0.8	759,915	795,165	11,565,513	1.1	15,744,743	14,063,161	-26.5	15.22	19.80	-4.58
Montana	1,711,409	8.1	1,594,912	1,681,729	7.3	2,344,390	2,276,000	67,352,505	6.4	50,519,204	52,143,563	33.9	28.73	22.11	6.62
Nebraska	610,379	2.9	532,617	442,690	14.6	992,957	703,641	39,056,207	3.7	21,586,519	13,909,185	82.6	39.33	30.59	8.94
Nevada	739,863	3.5	486,648	581,447	52.0	841,504	736,249	16,906,790	1.6	15,457,951	14,754,280	9.4	20.10	21.00	-0.90
New Mexico	554,039	2.6	527,035	538,377	5.1	731,990	658,869	32,735,997	3.1	19,854,380	18,210,412	65.0	44.72	30.20	14.52
North Dakota	21,615	0.1	9,592	12,072	150.1	36,522	24,006	1,755,489	0.2	1,267,514	1,857,118	38.5	48.07	52.79	-4.72
Oklahoma	4,160	(*)	1,575	2,969	164.5	8,624	7,331	272,186	(*)	160,099	151,325	70.0	31.56	21.84	9.72
Oregon	1,049,176	5.0	898,713	986,162	16.7	1,261,081	1,158,210	50,961,251	4.8	38,754,548	28,929,151	31.5	40.41	35.46	6.95
South Dakota	60,198	0.3	67,107	100,682	-10.3	121,847	109,550	5,395,610	0.5	4,502,117	5,465,248	19.8	44.28	41.10	3.18
Texas	1,045,224	5.0	798,917	586,120	30.8	1,775,812	1,177,415	66,441,376	6.3	49,022,164	55,072,739	35.5	37.46	41.64	-4.18
Utah	1,176,116	5.6	1,324,125	1,371,651	-11.2	1,357,714	1,542,475	41,896,532	4.0	35,669,819	52,037,351	17.5	30.86	23.13	7.75
Washington	615,015	2.9	499,283	529,899	23.2	731,527	631,511	56,415,196	5.4	40,561,895	29,299,011	39.1	77.12	64.23	12.89
Wyoming	1,486,498	7.1	1,236,155	1,207,982	20.3	1,913,527	1,655,008	41,522,801	3.9	35,153,187	34,326,328	16.1	21.70	21.24	0.46
DRAINAGE BASIN	BY PRINCIPAL DRAINAGE BASINS														
Red River (of the North)	4,495	(*)	2,099	-----	114.1	7,980	2,099	130,566	(*)	20,925	-----	524.0	16.36	9.97	6.39
Missouri River	4,410,385	21.0	4,185,180	4,147,278	5.4	5,942,958	5,472,012	179,750,238	17.1	136,506,721	131,533,106	31.7	30.25	24.95	5.30
Mississippi River, exclusive of Missouri River	927,594	4.4	802,560	958,495	2.8	1,350,911	1,170,583	37,101,932	3.5	31,831,673	35,183,789	16.6	27.46	27.19	0.27
Gulf of Mexico streams other than Mississippi River and Rio Grande	902,392	4.3	662,958	698,077	36.1	1,520,796	1,221,997	30,498,361	2.9	28,578,193	29,439,808	6.7	20.05	23.39	-3.34
Rio Grande	1,521,578	7.2	1,564,725	1,312,855	-2.8	2,177,705	1,914,781	80,563,998	7.6	53,748,608	34,824,111	49.9	36.99	28.07	8.92
Colorado River	2,658,120	12.6	2,537,124	2,326,690	4.0	3,367,744	3,355,914	155,800,882	14.8	132,350,247	88,939,804	17.7	46.26	39.67	6.59
Whitewater Draw and Vamori Wash ⁵	8,498	(*)	3,301	5,871	157.4	13,462	4,753	226,627	(*)	230,606	299,368	-1.7	16.83	48.52	-31.69
Great Basin	2,073,727	9.9	2,086,033	2,277,651	1.9	2,381,171	2,536,492	59,698,865	5.7	367,579,074	62,207,175	-11.7	25.07	26.64	-1.57
Columbia River	3,819,738	18.2	3,393,640	3,873,245	12.6	4,426,367	4,241,244	206,523,302	19.7	157,355,114	145,872,382	31.2	46.66	37.10	9.56
Klamath River	271,058	1.3	187,991	153,105	44.2	310,560	264,949	10,430,941	1.0	9,430,566	5,502,890	10.6	33.59	35.59	-2.00
Sacramento-San Joaquin Delta and tributary streams	3,593,882	16.2	3,157,132	2,744,644	7.5	5,132,597	4,795,856	171,004,939	16.2	316,628,095	100,527,759	3.9	33.32	34.33	-1.01
Pacific Ocean streams, excl. of Gulf of California streams, Columbia and Klamath Rivers, and Sacramento-San Joaquin Delta and tributary streams	1,032,294	4.9	914,801	693,807	12.8	1,422,997	1,141,230	120,318,650	11.4	311,049,970	63,507,056	8.9	84.55	96.82	-12.27

¹Data for primary and supplemental enterprises in table 4.

²Based on primary acreage and total capital invested.

³Revised.

⁴Less than one-tenth of 1 percent.

⁵Data for Censuses of 1930 and 1920 are for Whitewater Draw and unidentified tributaries, and do not include the independent basin, Vamori, Wash.

CENSUS OF IRRIGATION: 1940

TABLE 6.—COST OF MAINTENANCE AND OPERATION, 1929 AND 1929; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY STATES
(For the 17 western States and Arkansas and Louisiana)

STATE	COST OF MAINTENANCE AND OPERATION								PAY ROLL AND EMPLOYEES, 1939 ¹		
	Irrigated area in enterprises reporting maintenance and operation				Reported cost, 1929		Average per acre irrigated		Enterprises reporting pay roll ²	Wages and salaries paid and payable	Employees during week ending Apr. 29
	1929		1939	Primary	Supplemental	1929		1939			
	Primary	Supplemental				Primary	Supplemental		Primary	Supplemental	
Total (19 States)-----	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Number	Dollars	Number
	20,193,761	2,983,963	18,690,184	43,172,526	2,828,094	2.14	0.95	2.77	4,034	16,071,522	24,006
Arizona-----	650,942	14,465	561,605	3,101,467	50,715	4.92	3.51	4.57	67	1,444,641	1,546
Arkansas-----	153,346	251	147,921	855,891	1,201	5.45	5.20	7.05	6	12,823	44
California-----	4,831,550	459,235	4,538,579	21,229,685	1,620,218	4.39	3.69	6.10	851	4,801,580	4,425
Colorado-----	3,128,787	608,498	3,235,629	2,055,680	498,440	0.65	0.82	0.85	700	1,167,624	3,068
Idaho-----	2,219,486	889,254	2,109,087	2,258,798	202,690	1.02	0.23	1.44	404	1,316,975	2,275
Kansas-----	99,053	13,628	64,985	227,076	29,689	2.29	2.18	1.55	9	16,255	75
Louisiana-----	436,931	2,454	431,337	1,589,007	3,685	3.64	1.51	4.09	91	502,320	802
Montana-----	1,650,373	168,762	1,476,854	1,180,189	20,908	0.72	0.12	0.87	248	1,501,148	1,904
Nebraska-----	602,582	171,448	524,260	839,682	119,770	1.39	0.70	1.54	56	308,746	688
Nevada-----	688,722	84,722	474,422	293,859	38,705	0.43	0.46	0.91	65	180,642	275
New Mexico-----	516,916	5,083	495,229	1,082,768	10,142	2.09	2.00	2.15	205	718,210	1,773
North Dakota-----	21,290	---	8,773	30,072	---	1.41	---	1.97	6	14,611	21
Oklahoma-----	3,869	---	955	12,973	---	3.35	---	7.82	---	---	---
Oregon-----	982,940	97,643	863,685	1,157,018	71,049	1.18	0.73	1.41	185	621,247	1,094
South Dakota-----	56,428	---	65,783	71,986	---	1.28	---	1.33	17	60,964	114
Texas-----	1,002,202	51,197	772,160	3,865,224	32,666	3.86	0.64	4.74	82	1,628,188	1,698
Utah-----	1,144,100	322,055	1,301,098	881,814	64,981	0.77	0.26	1.00	666	518,607	2,689
Washington-----	602,414	22,286	487,977	1,673,992	11,314	2.78	0.51	4.14	201	764,904	937
Wyoming-----	1,421,852	93,014	1,151,867	807,345	31,923	0.57	0.34	0.84	175	392,047	578

¹ Only for enterprises serving 5 or more units.
² Includes interstate enterprises.

TABLE 7.—INDEBTEDNESS, 1939; ARREARAGE, 1939 AND 1938; AND ANNUAL CHARGES, 1939 AND 1929; BY STATES¹
(For the 17 western States and Arkansas and Louisiana)

STATE	INDEBTEDNESS REPORTED DEC. 31, 1939					ARREARAGE REPORTED ²				ANNUAL CHARGES REPORTED			
	Total	Average per acre				Total		Average per acre assessed, 1939		Total 1939	Average per acre assessed		
		Assessed		Works were capable of supplying with water		Dec. 31, 1939	Dec. 31, 1938	Primary	Supplemental		1939		1929
		Primary	Supplemental	Primary	Supplemental						Primary	Supplemental	
Total (19 States)-----	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
	386,640,274	32.90	11.63	29.94	10.01	31,080,285	29,352,985	11.29	0.93	34,284,667	1.98	0.54	3.42
Arizona-----	42,592,133	70.03	(3)	69.67	(3)	990,222	923,519	43.87	-----	2,826,685	4.31	1.80	4.82
Arkansas-----	153,346	251	147,921	855,891	1,201	34,409	7.05	---	---	---	---	---	---
California-----	95,694,893	32.40	27.25	30.45	22.57	19,651,711	18,668,245	16.53	16.78	13,041,764	3.04	2.61	5.42
Colorado-----	22,810,607	13.12	6.31	12.88	5.60	1,689,096	1,837,538	5.61	3.73	2,491,161	0.86	0.46	1.62
Idaho-----	26,418,138	18.94	3.36	18.15	2.91	1,259,945	1,283,975	8.95	-----	2,646,004	1.15	0.21	1.95
Kansas-----	43,775	1.10	-----	1.08	-----	(3)	(3)	(3)	---	43,186	0.76	-----	0.81
Louisiana-----	2,748,768	18.87	-----	12.11	-----	1,137,646	1,078,511	18.85	-----	1,259,711	5.12	-----	7.87
Montana-----	44,542,281	52.72	15.98	39.97	12.13	1,820,069	1,853,066	5.64	1.33	1,150,790	0.99	0.53	1.79
Nebraska-----	21,727,369	52.08	22.42	31.48	7.24	178,738	57,871	2.44	-----	770,745	1.29	0.63	1.76
Nevada-----	3,934,315	14.79	16.73	14.12	22.63	---	---	---	---	391,703	1.39	0.86	1.57
New Mexico-----	16,715,813	48.68	---	45.60	---	580,392	520,067	30.40	---	966,787	2.00	---	3.97
North Dakota-----	1,337,648	57.36	---	41.98	---	25,854	13,167	1.58	---	18,909	0.81	---	1.50
Oklahoma-----	15,850	106.79	---	396.25	---	---	---	---	---	580	0.74	---	---
Oregon-----	14,329,768	36.06	34.82	33.43	31.72	1,800,973	1,598,681	22.64	-----	994,245	1.57	0.73	5.51
South Dakota-----	4,600,023	66.82	---	65.21	---	66,992	57,507	1.27	---	131,490	1.80	---	1.54
Texas-----	36,041,588	34.02	8.32	33.98	11.26	780,703	647,425	2.45	(3)	4,086,704	3.55	1.39	5.83
Utah-----	13,766,417	7.53	35.33	9.73	35.70	466,221	476,698	28.34	0.85	1,221,591	0.96	0.40	1.26
Washington-----	22,621,604	43.52	1.96	41.69	4.20	605,398	494,978	2.73	---	1,545,582	2.89	0.35	6.17
Wyoming-----	16,699,485	41.01	3.47	31.84	10.85	87,800	69,898	1.93	0.46	662,711	0.74	0.38	1.31

¹ Only for enterprises serving 5 or more units.
² In payment of principal, interest, and/or other funded obligations.
³ Data are included only in total because less than 3 enterprises reported in the 1940 Census.

GENERAL DISCUSSION

Sources of Water Supply

The Irrigation Census of 1940 grouped the various sources of water supply into (a) primary sources, i.e., sources from which the principal part or all of the water is obtained for irrigation of the land involved, and (b) supplemental sources, i.e., sources from which a part of the supply of water is obtained to supplement an inadequate "primary" supply. These two groups are, in turn, segregated into the various surface and underground sources.

Water diverted from streams by gravity and/or pumped, and used alone or in connection with water from wells, continues to be the major supply of irrigation water. For detailed breakdown of sources of water supply related to areas, costs, etc., see tables 8 to 11.

The total area reported entirely irrigated from streams was 16,054,903 acres in 1939, comparable to 14,952,049 acres in 1929, or an increase of 7.4 percent. The area reported as irrigated entirely from wells, either pumped or flowing, was 2,570,392 acres in 1939, comparable to 2,117,012 acres in 1929, or an increase of 21.4 percent. However, areas irrigated entirely from flowing wells decreased 14.4 percent, and that from wells, pumped and flowing increased 24.0 percent, indicating additional wells originally flowing are being pumped. This transition is particularly apparent in the States of Utah, New Mexico, and Louisiana. The area reported as irrigated from all sources other than entirely from streams or entirely from wells was 2,378,444 acres in 1939, comparable to 2,478,483 acres in 1929, or a decrease of 4.0 percent.

Areas irrigated entirely from stream diversions increased from 1929 to 1939 in 13 States, and decreased in 6 States. The greatest increases were reported in Wyoming, 267,163 acres, or 22.6 percent; Oregon, 223,880 acres, or 30.3 percent; California, 208,597 acres, or 9.3 percent; Nevada, 186,359 acres, or 47.2 percent; and Montana, 169,747 acres, or 11.4 percent.

The greatest decreases were reported in Colorado, 130,362 acres, or 4.1 percent; and Arizona, 51,053, or 29.9 percent. Areas irrigated entirely from wells, increased in 15 States and decreased in 4 States. The greatest increases were reported in Texas, 204,240 acres, or 326.1 percent; Nebraska, 57,582 acres, or 245.5 percent; and California, 54,342 acres, or 3.7 percent. The greatest decreases were reported in Louisiana, 39,009 acres, or 22.2 percent; and Utah, 3,717 acres, or 18.9 percent.

Areas irrigated entirely from streams, gravity and wells, pumped, 1,252,329 acres in 1939, increased in 14 States and decreased in Idaho, 32,859 acres, or 45.0 percent; and Montana, 1,198 acres, or 44.5 percent. In 1939, the States of North Dakota, Oklahoma, and South Dakota reported no lands irrigated from this source. The net increase for 16 States reporting was 87,980 acres, or 7.6 percent; areas irrigated entirely from springs, 210,373 acres in 1939, decreased 3.2 percent in the 10 years. Of the total acreage irrigated from springs in 1939, Nevada irrigated 54,945 acres; Utah, 35,898 acres; and California, 28,538 acres; representing changes of -11.4 percent, -27.6 percent, and +18.9 percent, respectively.

The 1940 Census of Irrigation segregated the statistics of all enterprises delivering supplemental water to primary enterprises and related the areas served to sources of water supply, i.e., from streams, pumped; wells, pumped or flowing; and streams, gravity or storage, a summary of which is shown in table 3, section C, of this volume.

The 1930 Census of Irrigation segregated statistics only for those enterprises delivering supplemental water from pumped streams, pumped wells, and flowing wells. Therefore, since the major portion of supplemental water is supplied from streams, gravity and storage facilities which were not included in the 1930 Census, the figures shown in table 11 under supplemental water should not be considered comparable between the two Census periods.

TABLE 8.—AREA RECEIVING ENTIRE WATER SUPPLY FROM STREAMS, BY TYPE OF DIVERSION, BY STATES: 1939, 1929, AND 1919

(For the 17 western States and Arkansas and Louisiana)

STATE	TOTAL				STREAMS, GRAVITY				STREAMS, PUMPED				STREAMS, GRAVITY AND PUMPED			
	1939	1929	1919	In-crease or de-crease 1929-1939	1939	1929	1919	In-crease or de-crease 1929-1939	1939	1929	1919	In-crease or de-crease 1929-1939	1939	1929	1919	In-crease or de-crease 1929-1939
	Acres	Acres	Acres		Percent	Acres	Acres		Acres	Percent	Acres		Acres	Acres	Percent	
Total (19 States)	16,054,903	14,952,049	15,955,165	7.4	13,063,955	12,980,575	14,527,060	0.6	1,724,800	1,715,380	1,226,510	0.7	1,266,148	258,094	199,595	390.6
Arizona	119,744	170,797	196,455	-29.9	71,075	162,621	189,782	-56.3	1,055	8,123	6,671	-87.0	47,614	53	-----	(1)
Arkansas	6,960	1,502	6,129	363.4	-----	-----	120	-----	6,733	1,502	6,009	348.3	227	-----	-----	-----
California	2,463,809	2,254,712	2,920,396	9.3	1,741,575	1,699,599	2,564,445	2.5	470,538	469,944	295,673	0.1	251,196	85,169	60,278	194.9
Colorado	3,039,197	3,169,559	3,050,964	-4.1	3,010,172	3,138,986	3,028,787	-4.1	4,691	27,765	12,747	-83.1	24,334	2,828	9,430	760.5
Idaho	2,087,857	2,029,016	2,384,010	3.4	1,628,663	1,848,760	2,274,959	-11.9	294,402	105,362	107,181	184.8	174,792	76,894	1,870	127.3
Kansas	49,194	56,412	32,137	-12.8	40,902	53,196	30,807	-23.1	8,279	3,216	730	157.4	13	-----	600	-----
Louisiana	249,514	259,001	271,152	-3.7	494	1,611	10,226	-89.3	247,190	257,390	248,306	-4.0	1,930	-----	12,620	-----
Montana	1,657,498	1,487,751	1,550,827	11.4	1,475,894	1,392,161	1,515,212	6.0	55,925	38,620	15,743	-7.0	145,679	56,970	19,872	155.7
Nebraska	511,489	503,655	437,532	1.6	488,499	501,195	435,567	-2.5	10,176	2,458	1,115	314.0	12,814	-----	850	-----
Nevada	581,595	395,236	470,179	47.2	578,163	394,415	466,812	46.6	652	821	2,647	-20.6	2,780	-----	720	-----
New Mexico	417,700	456,955	454,368	-4.4	343,684	430,099	432,478	-20.1	3,887	6,856	1,890	-43.3	70,129	-----	-----	-----
North Dakota	21,432	8,253	11,499	159.7	18,573	6,584	9,030	182.1	2,359	1,669	2,469	41.3	500	-----	-----	-----
Oklahoma	2,794	675	2,710	315.9	1,631	355	2,522	359.4	1,165	320	188	265.4	-----	-----	-----	-----
Oregon	965,449	739,589	851,183	30.3	786,058	674,396	786,354	16.6	45,008	50,537	64,576	-10.9	132,382	14,656	253	804.5
South Dakota	57,061	65,916	95,360	-13.4	20,445	65,855	92,491	-69.0	1,723	61	869	(1)	34,913	-----	-----	-----
Texas	728,678	699,146	495,670	4.2	191,124	168,246	75,982	13.6	525,547	527,700	421,538	-0.4	12,007	3,200	350	275.2
Utah	1,071,609	1,040,577	1,116,130	3.0	906,968	962,568	1,105,691	-5.8	13,445	63,809	10,389	-78.9	151,206	14,200	50	964.8
Washington	585,388	450,067	471,145	25.6	329,397	306,185	352,199	7.6	44,167	139,738	26,244	-68.4	191,824	4,144	92,702	(1)
Wyoming	1,450,415	1,185,252	1,157,121	22.6	1,450,647	1,173,763	1,155,596	21.9	7,860	9,489	1,525	-17.2	11,908	-----	-----	-----

¹Percent not shown when more than 1,000.

CENSUS OF IRRIGATION: 1940

TABLE 9.—AREA RECEIVING ENTIRE WATER SUPPLY FROM WELLS, BY TYPE OF DIVERSION, BY STATES: 1939, 1929, AND 1919 (For the 17 western States and Arkansas and Louisiana)

Table with columns: STATE, TOTAL (Acres, Increase or decrease), WELLS, PUMPED (Acres, Increase or decrease), WELLS, FLOWING (Acres, Increase or decrease), WELLS, PUMPED AND FLOWING (Acres, Increase or decrease). Rows include Total (19 States) and 17 states: Arizona, Arkansas, California, Colorado, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming.

1 Percent not shown when more than 1,000.

TABLE 10.—AREA RECEIVING ENTIRE WATER SUPPLY FROM MIXED SOURCES, BY TYPE OF DIVERSION, BY STATES: 1939, 1929 AND 1919 (For the 17 western States and Arkansas and Louisiana)

Table with columns: STATE, TOTAL (Acres, Increase or decrease), STREAMS, GRAVITY AND WELLS, PUMPED (Acres, Increase or decrease), STREAMS, GRAVITY AND WELLS, FLOWING (Acres, Increase or decrease), OTHER MIXED (Acres, Increase or decrease). Rows include Total (19 States) and 17 states: Arizona, Arkansas, California, Colorado, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming.

1 Percent not shown when more than 1,000.

TABLE 11.—AREA RECEIVING ENTIRE WATER SUPPLY FROM MISCELLANEOUS SOURCES, 1939, 1929, AND 1919; AND AREA RECEIVING SUPPLEMENTAL WATER FROM STREAMS, STORAGE, AND WELLS, 1939 AND 1929; BY STATES (For the 17 western States and Arkansas and Louisiana)

Table with columns: STATE, TOTAL (Acres, Increase or decrease), SPRINGS (Acres, Increase or decrease), ALL OTHER (Acres, Increase or decrease), SUPPLEMENTAL SOURCES (Acres). Rows include Total (19 States) and 17 states: Arizona, Arkansas, California, Colorado, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming.

1 Data for 1939 includes streams pumped; wells, pumped or flowing; streams, gravity or storage. Data for 1929 do not include streams, gravity or storage.

2 Percent not shown when more than 1,000.

GENERAL DISCUSSION

XXXIII

Irrigation Works

Tables 12 to 15 present an inventory of irrigation works, by States, and principal drainage basins for the Censuses of 1940, 1930, and 1920. The marked increase in the number of practically all physical structures during the last decade indicates the installations of betterments and increased efforts to conserve water and develop additional water supplies. Storage dams increased from 2,949 in 1930 to 4,607 in 1940, or 56.2 percent. The number of storage reservoirs increased from 5,122 in 1930 to 7,709 in 1940, or 50.5 percent. The total storage capacity of reservoirs increased from 24,508,590 acre-feet in 1930 to 33,787,362 acre-feet in 1940, or 37.9 percent. Although the number of reservoirs reported decreased in a few States, each irrigation State, except Kansas, shows increased storage capacity. The statistics presented on storage dams and reservoirs for the Census of 1920 include some developments installed for other purposes besides irrigation. Therefore,

in several States, the data are not comparable with those of later censuses when only structures installed primarily for irrigation purposes were included.

Judging from increases in storage capacity, the most important developments in the conservation of water by storage in the decade 1930 to 1940 took place in the States of Arizona, Nebraska, and Utah and in the principal drainage basins of the Missouri, Colorado, and Columbia Rivers and in the Great Basin.

The lengths and capacities of canals show only slight increases, while the lengths of reported pipe lines of all kinds increased from 17,363.1 miles in 1930 to 28,584.9 miles in 1940, or 64.6 percent. The major portion of this increase was concrete pipe lines installed in California, Arizona, and Texas.

The number of flowing wells decreased from 4,811 in 1930 to 4,641 in 1940 and their capacities decreased from 609,367 gallons per minute to 555,073 gallons per minute, or 8.9 percent.

TABLE 12.—NUMBER OF DIVERSION AND STORAGE DAMS, 1940, 1930, AND 1920, BY MATERIALS, 1940; AND NUMBER OF RESERVOIRS WITH CAPACITY, 1940, 1930, AND 1920; BY STATES AND BY PRINCIPAL DRAINAGE BASINS

(For the 17 western States and Arkansas and Louisiana)

ITEM	DIVERSION DAMS							STORAGE DAMS						RESERVOIRS					
	Total			Materials, 1940				Total			Materials, 1940			Total			Capacity		
	1940	1930	1920	Con-crete or ma-sonry	Tim-ber	Earth and rock	All other ¹	1940	1930	1920	Con-crete or ma-sonry	Earth and rock	All other	1940	1930	1920	1940	1930	1920
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Acre-ft.	Acre-ft.	Acre-ft.
Total (19 States)	34,544	21,947	23,894	3,666	4,595	18,032	8,251	4,607	2,949	3,931	409	3,795	403	7,709	5,122	7,538	33,787,362	24,508,590	21,246,436
STATE	BY STATES																		
Arizona	602	267	248	84	5	321	192	199	78	99	17	167	15	333	378	340	4,860,898	3,410,975	1,510,856
Arkansas	6	1	63	—	1	4	1	27	6	17	—	21	6	24	10	16	31,992	7,342	20
California	2,714	1,654	2,070	527	477	1,111	599	709	421	455	126	531	52	2,652	1,769	3,030	3,581,621	3,225,675	1,091,394
Colorado	4,792	3,672	5,647	367	427	2,858	1,160	1,015	706	803	19	951	45	1,071	765	979	2,071,522	1,924,982	2,406,372
Idaho	3,209	2,305	2,872	536	290	1,964	619	260	152	288	44	185	31	290	155	249	3,795,272	3,645,373	3,493,511
Kansas	102	27	10	16	4	65	17	40	7	13	8	22	10	80	19	36	32,584	66,293	391
Louisiana	105	56	419	3	15	45	42	114	61	63	1	91	22	75	85	74	34,199	13,909	7,632
Montana	6,136	2,856	3,545	254	1,067	3,217	1,598	468	326	523	19	385	64	517	282	468	1,301,422	857,067	1,571,720
Nebraska	351	185	260	76	24	165	86	156	28	73	4	146	6	164	40	59	2,306,159	199,185	197,890
Nevada	1,896	1,640	1,523	95	84	1,077	640	122	118	82	8	110	4	200	209	134	696,005	529,369	504,428
New Mexico	1,072	665	1,423	121	102	475	374	141	69	153	7	124	10	502	240	328	3,280,550	2,945,220	2,960,718
North Dakota	19	9	26	—	1	14	4	14	10	11	—	14	—	14	8	9	3,946	1,466	1,110
Oklahoma	8	4	7	—	1	6	1	21	3	5	—	2	18	1	20	7	900	293	52
Oregon	5,097	3,806	3,285	663	877	2,220	1,337	247	167	309	35	156	58	257	120	266	2,212,315	1,698,426	1,905,037
South Dakota	258	91	207	13	19	198	28	74	10	182	2	69	3	62	5	119	209,785	203,124	212,264
Texas	244	107	165	76	4	136	28	194	168	134	47	134	13	542	325	368	1,406,024	935,088	392,999
Utah	1,973	1,717	1,479	611	217	778	367	362	287	307	39	513	10	438	413	476	3,417,704	1,093,252	1,600,505
Washington	1,755	499	579	166	453	725	411	125	100	115	21	81	23	114	78	205	1,165,527	699,807	477,789
Wyoming	4,205	2,406	2,066	257	528	2,673	747	319	212	301	12	277	30	334	214	374	3,379,957	3,051,745	2,911,748
DRAINAGE BASIN	BY PRINCIPAL DRAINAGE BASINS																		
Red River (of the North)	5	—	—	—	—	5	—	2	—	—	—	2	—	2	—	—	720	—	—
Missouri River	8,897	5,006	5,973	673	1,046	5,351	1,827	1,237	734	1,246	33	1,119	85	1,332	743	1,220	6,715,271	4,043,135	4,860,616
Mississippi River, exclu- sive of Missouri River	959	814	1,704	88	58	472	341	360	180	259	17	300	43	425	209	381	1,608,164	1,523,856	1,163,306
Gulf of Mexico streams, other than Mississippi River and Rio Grande	196	99	148	42	11	85	58	204	195	162	45	140	21	436	321	360	334,176	296,264	305,415
Rio Grande	1,450	922	1,639	198	158	670	424	162	99	125	14	137	11	567	306	351	3,664,857	3,120,623	3,233,164
Colorado River	4,391	3,155	2,468	318	469	2,614	970	840	494	565	25	772	45	1,030	734	639	5,717,080	3,748,284	1,676,038
Whitewater Draw and Vamori Wash ²	158	7	6	1	—	67	90	6	4	51	—	6	—	18	90	76	74	140	85,071
Great Basin	4,263	3,806	5,234	756	441	1,953	1,133	462	409	449	53	395	14	766	787	800	3,781,538	1,922,757	2,289,641
Columbia River	11,208	6,247	6,494	1,066	1,748	5,698	2,696	590	414	603	65	388	117	614	353	646	7,517,123	6,316,670	5,711,783
Klamath River	670	472	505	29	155	292	194	52	20	41	5	40	7	60	32	90	1,165,143	1,110,562	1,022,365
Sacramento-San Joaquin Delta and tributary streams	1,497	781	1,128	555	313	478	371	358	218	285	47	287	24	1,310	949	1,639	2,681,435	2,100,255	677,957
Pacific Ocean streams, excl. of Gulf of California streams, Columbia and Klamath Rivers, and Sacramento-San Joaquin Delta and tributary streams	850	638	595	160	176	367	147	334	182	145	87	209	38	1,149	598	1,136	401,801	326,244	221,080

¹Other and mixed, and not reported. Other and mixed are principally temporary dams, replaced annually.

²Data for Censuses of 1930 and 1920 are for Whitewater Draw and unidentified tributaries, and do not include the independent basin, Vamori Wash.

CENSUS OF IRRIGATION: 1940

TABLE 13.—LENGTH OF CANALS WITH CAPACITY AT MAIN HEADING, LENGTH OF PIPE LINES, AND NUMBER OF FLOWING WELLS, WITH CAPACITY, 1940, 1930, AND 1920; AND PIPE LINES BY KIND OF MATERIAL, 1940; BY STATES AND BY PRINCIPAL DRAINAGE BASINS

(For the 17 western States and Arkansas and Louisiana)

ITEM	CANALS						PIPE LINES ¹								WELLS, FLOWING					
	Length			Capacity ²			Length			Materials, 1940					Total			Capacity		
	1940	1930	1920	1940	1930	1920	1940	1930	1920	Con-crete	Metal	Wood-stave	Clay and other	1940	1930	1920	1940	1930	1920	
	Miles	Miles	Miles	Sec.-ft.	Sec.-ft.	Sec.-ft.	Miles	Miles	Miles	Miles	Miles	Miles	Miles	No.	No.	No.	G.p.m.	G.p.m.	G.p.m.	
Total (19 States)	127,533.7	128,802	159,964	612,021	547,314	631,079	28,584.9	17,363.1	8,878.3	18,692.2	6,027.5	1,236.5	628.7	4,641	4,811	4,608	555,075	609,567	955,057	
STATE	BY STATES																			
Arizona	4,178.2	3,974	3,368	13,258	13,697	11,707	344.3	189.3	104.5	265.8	65.7	3.0	9.8	268	215	310	22,878	13,772	14,547	
Arkansas	77.9	51	86	270	1,845	1,205	13.0	1.0	0.4	---	3.4	---	9.6	---	---	---	---	---	---	
California	19,799.1	18,602	27,384	91,776	84,944	115,237	22,690.2	14,683.0	6,885.9	18,745.0	5,414.1	249.8	281.3	436	449	1,415	34,767	65,768	287,187	
Colorado	19,864.0	21,381	27,593	139,780	123,652	119,558	245.1	131.9	217.3	86.7	93.5	23.7	41.2	866	621	476	54,859	39,644	20,139	
Idaho	13,602.1	14,344	17,298	71,510	76,763	86,273	299.9	263.4	180.6	96.0	58.5	121.0	24.4	375	220	142	40,165	30,108	15,133	
Kansas	292.5	285	418	3,347	2,079	1,667	24.1	16.1	2.8	1.1	21.7	---	1.3	24	1	6	1,455	75	500	
Louisiana	2,421.0	2,226	3,243	10,335	11,386	11,889	63.6	15.1	50.1	15.4	40.7	5.9	1.6	502	807	9	12,695	31,961	6,255	
Montana	15,702.5	15,957	22,496	66,745	53,253	94,429	148.1	64.9	48.0	14.5	78.7	26.1	28.8	44	40	41	9,834	4,106	4,608	
Nebraska	3,331.3	3,465	3,325	14,256	13,108	11,665	126.1	27.5	3.8	21.2	83.2	12.5	9.2	19	---	---	370	---	---	
Nevada	2,897.2	4,155	4,368	22,930	16,986	10,554	104.7	90.6	33.0	8.7	77.7	12.1	6.2	322	274	123	39,855	19,131	21,942	
New Mexico	4,647.9	4,466	5,932	16,821	17,479	23,432	36.5	15.2	60.8	8.7	21.4	3.4	3.0	268	340	556	181,076	223,257	376,222	
North Dakota	159.2	87	151	616	1,072	836	3.8	1.2	0.3	0.3	5.4	---	0.1	---	---	---	---	---	---	
Oklahoma	42.2	24	57	277	77	344	24.4	0.7	4.3	0.6	23.6	0.1	0.1	---	---	---	---	---	100	
Oregon	8,518.0	8,177	9,071	37,290	25,906	28,897	665.2	225.3	159.6	97.8	489.2	67.7	10.5	78	59	65	3,396	6,535	11,968	
South Dakota	1,049.3	1,082	1,258	1,948	1,995	5,427	17.3	8.9	7.2	5.7	11.0	0.5	0.1	19	13	4	5,377	4,825	2,750	
Texas	5,936.1	4,879	4,473	24,813	21,626	23,261	923.1	319.0	157.1	655.4	204.0	22.2	41.5	100	61	135	39,508	36,020	62,364	
Utah	9,004.5	9,237	11,677	34,579	30,648	29,447	172.5	159.0	154.7	40.6	80.7	21.2	30.0	1,216	1,663	1,256	85,838	104,670	96,371	
Washington	4,248.6	3,635	5,615	15,104	14,987	16,242	2,612.7	1,136.9	790.0	614.9	1,239.0	654.3	104.5	50	42	60	21,192	27,290	14,925	
Wyoming	11,762.1	10,775	12,051	46,366	35,811	39,009	70.3	14.1	17.9	13.8	38.0	13.0	5.5	36	6	7	3,330	2,205	46	
DRAINAGE BASIN	BY PRINCIPAL DRAINAGE BASINS																			
Red River (of the North)	23.9	1	---	365	2	---	1.9	1.2	---	0.1	1.8	---	---	---	---	---	---	---	---	
Missouri River	31,131.1	30,612	39,599	146,255	130,173	167,891	400.6	101.1	89.5	71.8	227.6	37.8	63.4	79	21	41	9,915	7,218	4,271	
Mississippi River, exclusive of Missouri River	4,858.6	5,518	8,266	49,658	49,701	41,974	174.5	114.9	148.3	61.9	78.8	14.5	19.3	47	7	27	4,263	995	6,240	
Gulf of Mexico streams, other than Mississippi River and Rio Grande	4,569.8	3,792	4,886	18,860	18,608	20,931	221.0	46.5	158.9	30.5	173.9	7.5	9.1	576	856	127	45,504	52,933	57,009	
Rio Grande	8,702.9	9,381	9,732	43,851	38,609	40,424	774.3	287.9	90.3	648.4	68.5	21.4	36.0	1,136	965	1,016	240,308	276,671	401,156	
Colorado River	20,894.1	20,185	22,586	81,033	68,322	66,306	919.0	216.6	246.0	684.8	181.2	16.3	36.7	463	224	612	48,584	16,803	70,917	
Whitewater Draw and Vamori Wash ³	26.0	7	128	484	10	553	4.9	4.1	5.1	---	4.9	---	---	6	11	10	765	430	503	
Great Basin	10,757.6	12,733	17,665	57,949	50,743	57,409	984.7	1,112.3	723.0	706.1	186.5	35.8	56.3	1,698	2,175	1,610	118,499	153,800	128,522	
Columbia River	27,535.0	26,919	32,799	121,457	115,083	134,536	3,181.4	1,616.2	1,125.2	794.9	1,427.7	821.7	137.1	374	293	176	65,579	62,451	27,135	
Klamath River	1,904.3	1,698	1,726	9,179	5,900	8,878	52.8	21.1	22.1	4.6	43.8	3.4	1.0	3	28	4	42	241	35	
Sacramento-San Joaquin Delta and tributary streams	15,202.8	13,314	19,428	72,735	64,374	79,142	7,437.1	4,819.4	1,757.8	6,487.8	766.6	131.0	51.7	47	72	181	5,403	14,400	51,785	
Pacific Ocean streams, excl. of Gulf of California streams, Columbia and Klamath Rivers, and Sacramento-San Joaquin Delta and tributary streams	1,947.6	2,622	3,049	7,995	5,789	13,035	14,432.7	9,021.8	4,512.1	9,201.3	4,868.2	147.1	218.1	212	159	802	20,211	23,427	187,484	

¹ Includes siphons and farm pipe lines reported.

² Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

³ Data for Censuses of 1930 and 1920 are for Whitewater Draw and unidentified tributaries, and do not include the independent basin, Vamori Wash.

GENERAL DISCUSSION

Number and Yield of Pumped Wells

Table 14 shows the number and yield of wells pumped for irrigation, by States and by principal drainage basins. The total of 68,279 pumped wells reported in 1940 represents a net increase of 11,550 (20.4 percent) for the 19 irrigation States during the decade compared to an increase of 24,635 wells (76.8 percent) during the decade 1920 to 1930.

Yields of pumped wells also increased at the net rate of 33.5 percent in the last decade compared to 98.0 percent increase during the previous decade. The average yield per well was 635 gallons per minute in 1940 as compared to 572 gallons per minute in 1930, which indicates that larger wells are being developed with the more modern drilling and pumping equipment available.

Each of the 19 irrigation States, excepting Utah, shows an increase for 1940 contrasted with 1930 in number of wells

pumped while the reported yields decreased in Louisiana (22.1 percent), Nevada (6.0 percent), and Washington (6.3 percent). The greatest increases in number of pumped wells were reported for Texas (2,294), Colorado (2,224), Nebraska (1,875), and California (1,831). The greatest increases in yields, gallons per minute, were in California with 4,031,802; Colorado with 1,891,895; Nebraska with 1,625,126; and Texas with 1,598,835. These yields raised the average per well in these States as follows: California, from 519 gallons per minute to 583; Colorado, from 364 gallons per minute to 670; Nebraska, from 797 gallons per minute to 851; and Texas, from 558 gallons per minute to 652.

The number of pumped wells increased (1930-40) in all principal drainage basins, excluding Red River of the North, N. Dak.; Whitewater Draw, and Vamori Wash, Ariz.; and the Great Basin which shows a decrease of 1,401 wells, or 51.8 percent, representing a decrease of 50.6 percent in total yield.

TABLE 14.—NUMBER AND YIELD OF PUMPED WELLS, BY STATES AND BY PRINCIPAL DRAINAGE BASINS: 1940, 1930, AND 1920

(For the 17 western States and Arkansas and Louisiana)

ITEM	PUMPED WELLS													
	Number								Yield					
	1940	1930	1920	Increase or decrease (-)				1940	1930	1920	Increase or decrease (-)			
				1930-1940		1920-1930					1930-1940		1920-1930	
				Number	Percent	Number	Percent				G.p.m.	Percent	G.p.m.	Percent
G.p.m.														
Total (19 States)	68,279	56,729	32,094	11,550	20.4	24,635	76.8	43,355,271	32,467,120	16,596,549	10,888,151	33.5	16,070,571	98.0
STATE	BY STATES													
Arizona	1,858	1,398	999	460	32.9	399	39.9	2,508,337	1,832,352	1,042,590	675,965	36.9	789,762	75.8
Arkansas	1,534	1,190	1,089	344	28.9	101	9.3	1,812,647	1,641,448	1,470,147	171,199	10.4	171,301	11.7
California	48,568	46,757	25,401	1,851	3.9	21,556	84.0	28,297,969	24,266,167	10,608,476	4,031,802	16.6	13,657,691	128.8
Colorado	2,878	654	527	2,224	340.1	127	24.1	1,929,798	237,905	210,094	1,691,895	711.2	27,809	13.2
Idaho	309	121	53	188	155.4	68	128.5	225,164	34,601	17,749	190,565	550.7	16,852	94.9
Kansas	1,638	772	710	866	112.2	62	8.7	865,665	323,500	266,797	540,163	167.0	56,703	21.5
Louisiana	1,504	1,389	812	115	8.5	577	71.1	1,528,613	1,958,811	1,607,637	-452,198	-22.1	351,174	21.8
Montana	102	49	22	53	108.2	27	122.7	33,883	18,655	11,085	15,250	81.6	7,568	68.3
Nebraska	2,412	537	54	1,875	349.2	505	(¹)	2,053,184	428,058	24,701	1,625,126	379.7	403,357	(¹)
Nevada	167	147	129	20	13.6	18	14.0	50,958	54,162	6,798	-3,224	-6.0	47,364	696.7
New Mexico	1,487	680	461	807	118.7	219	47.5	1,143,276	481,898	265,618	661,378	137.2	216,280	81.4
North Dakota	11			11				378			378			
Oklahoma	77	18	19	59	327.8	-1	-5.3	15,486	2,715	3,643	12,771	470.4	-928	-25.5
Oregon	901	558	208	343	61.5	350	168.3	209,289	136,669	47,026	72,620	53.1	89,643	190.6
South Dakota	16	1	1	15	(¹)			1,059	375	800	664	177.1	-425	-53.1
Texas	3,396	1,102	901	2,294	208.2	201	22.3	2,213,230	614,395	538,565	1,598,835	260.2	75,830	14.1
Utah	286	346	192	-60	-17.5	154	80.2	122,528	120,333	59,039	2,195	1.8	81,274	208.1
Washington	1,041	1,019	520	22	2.2	499	95.0	287,327	306,800	227,744	-19,473	-6.5	79,056	34.7
Wyoming	94	11	16	83	754.5	-5	-31.3	60,522	8,280	8,020	52,242	650.9	260	3.2
DRAINAGE BASIN	BY PRINCIPAL DRAINAGE BASINS													
Missouri River	4,760	1,071	365	3,689	344.4	686	178.2	3,683,499	613,550	171,464	3,020,149	492.4	441,886	257.7
Mississippi River, exclusive of Missouri River	4,428	2,216	2,085	2,212	99.8	131	6.5	3,493,820	2,104,316	1,876,840	1,589,504	66.0	227,476	12.1
Gulf of Mexico streams, other than Mississippi River and Rio Grande	4,158	2,568	1,615	1,795	76.0	748	46.3	3,210,783	2,495,111	2,072,580	717,672	28.8	420,531	20.3
Rio Grande	1,712	751	505	981	134.2	228	45.3	1,291,071	498,631	286,143	792,440	158.9	212,488	74.3
Colorado River	2,395	1,196	1,128	1,199	100.5	68	6.0	2,758,985	1,772,812	1,095,724	986,171	55.6	677,088	61.8
Whitewater Draw and Vamori Wash ²	142	210	209	-68	-32.4	1	0.5	45,537	62,457	72,787	-16,920	-27.1	-10,330	-14.2
Great Basin	1,306	2,707	870	-1,401	-51.8	1,837	211.1	653,078	1,321,596	275,094	-668,518	-50.6	1,048,302	385.9
Columbia River	1,972	1,653	752	309	18.6	911	121.1	687,639	464,026	277,555	223,613	48.2	186,471	67.2
Klamath River	56	14	16	42	300.0	-2	-12.5	29,509	21,442	5,975	8,067	37.6	15,467	258.9
Sacramento-San Joaquin Delta and tributary streams	52,418	51,744	14,657	674	2.1	17,087	116.6	20,042,293	16,730,369	6,384,682	3,311,924	19.8	10,345,487	162.0
Pacific Ocean streams, excl. of Gulf of California streams, Columbia and Klamath Rivers, and Sacramento-San Joaquin Delta and tributary streams	14,932	12,814	9,874	2,118	16.5	2,940	29.8	7,509,059	6,385,210	3,879,505	1,123,849	17.6	2,505,705	64.6

¹ Percent not shown when more than 1,000.

² Data for Censuses of 1930 and 1920 are for Whitewater Draw and unidentified tributaries, and do not include the independent basin, Vamori Wash.

Pumping Equipment

Table 15 presents comparable statistics on pumping equipment for the Censuses of 1940, 1930, and 1920, by kind of power, kind of pump, and capacities by States and principal drainage basins. The average pumping lift is also shown.

The total installed horsepower for pumping water for irrigation in the 19 States increased from 1,283,419 horsepower to 1,762,687 horsepower, or 37.3 percent during the decade 1930 to 1940. Likewise, the pumps installed increased 27.8 percent

in number and 32.4 percent in capacity. The average pumping lift reported for all pumping plants remains static for the decade at 51 feet.

Since 1930 the use of electric power increased by 241,858 installed horsepower and represents 63.4 percent of the total in 1940. The installed horsepower of internal-combustion engines increased 322,387 horsepower and represents 83.4 percent of the total.

A marked increase (13,370 to 38,204 or 185.7 percent) took place in the installation of turbine pumps during the decade.

Since this type of pump is used almost exclusively for the pumping of water from wells and there was no substantial reduction in the use of other types of pumps, it can be reasoned that the trend is toward turbine pumps and the increased number of turbine pumps is indicative of new developments since 1930 involving pumped wells. Although turbine pumps lead in total number and require 51.1 percent of the total installed motive power, centrifugal pumps exceed in capacity with 55.4 percent of the total. The average lift for centrifugal pumps is 29 feet compared with 70 feet for the turbines. This higher lift largely accounts for the greater horsepower required by the turbine installations. It is notable that the total number of centrifugal pumps decreased slightly. However, the total capacity increased 10.1 percent and the installed horsepower decreased 17.8 percent, indicating replacements of machinery of higher efficiency.

All States show a marked decade increase in the installation of pumping equipment, with the exception of Utah (-11.1 percent). California, with 52,016 pumps or 66.1 percent of the total installations ranks first, followed in order by Texas, 6.1 percent, and Colorado and Nebraska, each with 3.6 percent of the total. Marked increases in reported average lifts are shown in Arizona and Texas.

Pumping plant installations in the principal drainage basins, exclusive of Red River and Whitewater Draw and Vamori Wash, increased, with the exception of the Great Basin (-48.1 percent). The Sacramento-San Joaquin Delta and tributary basins contain 44.3 percent of the total irrigation pumps in the 19 States. Other Pacific Ocean basins exclusive of the Colorado, Columbia, and Klamath Basins, rank second, with 21.1 percent, and the Missouri River Basin ranks third, with 7.6 percent of the total number of pumps installed. However, the Gulf of Mexico streams other than the Mississippi and Rio Grande rank third in installed horsepower and second in capacity of pumps.

TABLE 15.—PUMPING EQUIPMENT—BY KIND OF POWER, BY KIND OF PUMP, BY STATES, AND BY PRINCIPAL DRAINAGE BASINS: 1940, 1930, AND 1920

(For the 17 western States and Arkansas and Louisiana)

ITEM (For definitions and explanations, see text)	CAPACITY OF PRIME MOVERS					PUMPS												
	1940	1930	1920	Pro-portion of total, 1940	In-crease or de-crease (-) 1930-1940	Total					Capacity					Average pumping lift		
						1940	1930	1920	Pro-portion of total, 1940	In-crease or de-crease (-) 1930-1940	1940	1930	1920	Pro-portion of total, 1940	In-crease or de-crease (-) 1930-1940	1940	1930	1920
Hp.	Hp.	Hp.	Percent	Percent	Number	Number	Number	Percent	Percent	G.p.m.	G.p.m.	G.p.m.	Percent	Percent	Feet	Feet	Feet	
Total (19 States)	1,762,687	1,283,419	748,971	100.0	37.3	78,528	61,445	33,804	100.0	27.8	75,802,998	57,244,859	56,275,005	100.0	32.4	51	51	41
BY KIND OF POWER																		
Electric motor	1,118,024	876,166	289,018	63.4	27.6	50,597	44,165	12,743	64.5	14.6	43,527,320	37,365,179	13,311,435	57.4	16.5	55	57	50
Internal-combustion engine	588,123	265,736	259,613	33.4	121.3	21,533	15,012	15,691	27.4	65.5	20,532,240	10,891,855	10,461,857	27.1	98.5	42	37	35
Other	56,540	50,343	125,429	3.2	12.3	1,213	874	2,515	1.5	38.8	1,842,277	3,245,151	7,986,226	2.4	-45.2	63	40	37
Mixed	(1)	91,174	74,911			5,185	3,394	3,055	6.6	52.8	9,901,161	5,742,674	4,515,487	13.1	72.4	50	45	46
BY KIND OF PUMP																		
Centrifugal	597,067	726,301	581,274	33.9	-17.8	34,447	54,803	26,019	43.9	-1.0	42,036,292	58,193,371	29,250,062	55.4	10.1	29	36	33
Turbine	901,137	302,294	24,390	51.1	198.1	38,204	13,370	677	48.6	185.7	30,746,028	8,655,500	525,728	40.6	255.2	70	75	84
Plunger	17,553	17,503	(2)	1.0	0.3	4,887	2,887	(2)	6.2	70.5	299,420	272,174	(2)	0.4	10.0	80	101	(2)
Other and mixed	246,930	237,321	143,307	14.0	121.5	990	10,405	27,108	1.3	-79.6	2,721,158	10,123,805	26,499,215	3.6	-55.8	40	65	268
BY STATES																		
Arizona	102,733	57,633	22,014	5.8	78.3	1,969	1,364	1,001	2.5	44.4	2,992,986	2,125,293	1,048,030	3.9	40.8	60	46	44
Arkansas	76,048	65,980	58,332	4.3	13.5	1,633	1,206	1,121	2.1	35.4	2,013,697	1,775,788	1,654,097	2.7	13.4	61	68	50
California	968,351	820,787	386,200	54.9	18.0	52,016	47,994	24,134	66.1	8.4	59,147,470	35,240,589	16,773,692	51.7	17.8	55	53	41
Colorado	49,157	11,204	8,635	2.8	338.7	2,618	540	435	3.6	421.9	2,263,375	437,250	299,728	3.0	417.6	32	25	23
Idaho	44,537	33,754	28,364	2.5	31.9	675	465	232	0.9	45.2	2,719,905	2,113,513	1,397,681	3.6	28.7	28	32	29
Kansas	26,796	6,221	6,946	1.5	330.7	1,259	312	288	1.6	303.5	1,231,482	393,256	297,975	1.6	212.9	35	26	30
Louisiana	85,574	86,413	85,628	4.9	-1.0	2,403	2,000	1,941	3.1	20.2	6,453,487	5,914,799	4,968,686	8.5	9.1	32	37	32
Montana	29,110	9,095	10,341	1.7	220.1	660	233	299	0.9	191.8	1,309,014	523,494	455,231	1.7	150.1	21	22	20
Nebraska	53,572	10,991	959	3.0	387.4	2,648	636	54	3.6	347.8	2,528,669	536,752	73,686	3.3	371.1	32	29	24
Nevada	2,262	2,671	409	0.1	-15.3	196	173	72	0.2	13.3	141,085	115,648	35,286	0.2	22.0	51	51	22
New Mexico	40,110	14,483	8,488	2.5	178.9	1,559	738	491	2.0	111.2	1,309,005	555,063	304,789	1.7	135.8	44	40	40
North Dakota	1,253	218	2,068	0.1	480.1	83	13	10	0.1	538.5	104,158	24,900	51,250	0.1	318.3	17	24	38
Oklahoma	1,037	229	184	0.1	352.8	116	30	26	0.1	286.7	59,280	8,855	7,688	0.1	589.5	36	33	59
Oregon	29,527	21,257	13,769	1.7	38.8	2,265	1,157	614	2.9	95.8	1,510,958	1,022,213	600,045	2.0	47.8	27	27	28
South Dakota	2,060	92	498	0.1	(3)	127	8	25	0.2	(3)	103,050	4,027	23,320	0.1	(3)	20	27	21
Texas	195,061	95,933	80,511	11.1	103.3	4,754	2,028	1,641	6.1	134.4	9,916,225	6,494,999	6,825,998	13.1	52.7	89	55	45
Utah	14,216	11,361	11,392	0.8	24.9	409	480	291	0.5	-11.1	855,862	877,942	783,588	1.1	-4.8	35	36	25
Washington	37,131	33,187	22,929	2.1	11.9	2,468	2,023	1,059	3.2	23.0	953,751	993,303	656,552	1.3	-4.0	47	59	60
Wyoming	4,152	912	1,304	0.2	355.3	230	65	70	0.3	253.8	209,559	86,905	59,725	0.3	141.1	30	21	31
BY PRINCIPAL DRAINAGE BASINS																		
Red River (of the North)	274	153		(*)	79.1	16	8		(*)	100.0	26,045	20,400		(*)	27.7	21	13	
Missouri River	117,173	25,798	18,329	6.6	354.4	5,994	1,279	689	7.6	368.6	5,733,010	1,343,545	800,218	7.6	328.7	52	28	22
Mississippi River, exclu-sive of Missouri River	145,750	78,378	73,739	8.3	86.0	4,190	1,804	1,715	5.3	132.3	4,275,330	2,418,238	2,237,441	5.6	78.8	57	54	45
Gulf of Mexico streams, other than Mississippi River and Rio Grande	208,930	140,298	136,953	11.9	48.9	5,697	3,525	3,208	7.3	61.6	11,846,141	8,929,951	8,202,748	15.4	30.4	50	46	37
Rio Grande	76,569	52,910	30,941	4.3	44.7	2,355	1,099	709	3.0	114.1	5,486,952	3,981,586	2,716,936	7.2	41.4	42	41	42
Colorado River	117,403	62,050	27,406	6.7	89.2	2,640	1,220	1,128	3.4	116.4	5,616,220	2,367,101	1,195,680	4.8	52.8	54	44	42
Whitewater Draw and Vamori Wash	2,070	2,025	2,403	0.1	2.2	144	215	209	0.2	-33.0	63,344	59,507	73,987	0.1	6.4	57	48	44
Great Basin	39,973	62,344	20,603	2.3	-35.9	1,448	2,788	820	1.8	-48.1	1,514,748	3,205,814	1,033,964	2.0	-52.8	71	67	41
Columbia River	105,911	77,271	62,451	6.0	37.1	4,439	3,434	1,745	5.7	29.3	4,609,882	3,593,854	2,522,910	6.1	28.3	39	47	50
Klamath River	6,854	6,522	3,996	0.4	5.1	224	123	83	0.3	82.1	506,460	508,965	174,184	0.7	-0.5	26	33	25
Sacramento-San Joaquin Delta and tributary streams	552,193	468,661	201,074	31.3	17.8	34,831	33,129	14,849	44.3	5.1	29,694,592	23,856,244	11,584,371	39.1	24.5	42	42	32
Pacific Ocean streams, excl. of Gulf of Cali-fornia streams, Columbia and Klamath Rivers, and Sacramento-San Joaquin Delta and tributary streams	389,587	307,019	171,076	22.1	26.9	16,552	12,821	6,649	21.1	29.1	8,630,296	7,059,634	4,732,586	11.4	22.2	80	79	58

1 For 1940 mixed types of motors were segregated and assigned to the proper types. 1930 and 1920 data include "Not reported." 2 Data for "Plunger" pumps included with "Other and mixed" pumps for 1920. 3 Percent not shown when more than 1,000. 4 Less than one-tenth of 1 percent. 5 Data for Censuses of 1930 and 1920 are for Whitewater Draw and unidentified tributaries, and do not include the independent basin, Vamori Wash.

GENERAL DISCUSSION

Capability of Irrigation Works

Table 16 shows the areas which installed irrigation works were reported capable of supplying with water and irrigable areas reported, together with the excess of these areas over areas irrigated. The expansion possibilities from the standpoint of capacity of irrigation works are thus indicated. Of the 10,302,210 acres of irrigable land now in irrigation projects which were not irrigated in 1939, statistics indicate that 7,051,509 acres could be irrigated with the present systems, leaving 3,250,701 acres of irrigable land in operating enterprises for which works have not been constructed. Cali-

formia with constructed irrigation works capable of supplying water to 2,329,008 acres more than were irrigated in 1939. Texas with 728,588 acres, Colorado with 692,857 acres, and Montana with 632,981 acres, are the States with the greatest acreages under works but not irrigated. Similarly, the Sacramento and San Joaquin Valleys of California with works capable of supplying water to 1,738,715 acres more than were irrigated in 1939, the Missouri River with 1,532,573 acres, the Colorado River with 729,624 acres, and the Rio Grande with 656,129 acres, indicate the locations of largest areas by drainage basins under irrigation works but not irrigated in 1939.

TABLE 16.—AREA IRRIGATION WORKS WERE CAPABLE OF SUPPLYING WITH WATER, AND IRRIGABLE AREA, 1940, 1930, AND 1920; AND THE EXCESS OF THESE AREAS OVER AREAS IRRIGATED, 1939, 1929, AND 1919; BY STATES AND BY PRINCIPAL DRAINAGE BASINS

(For the 17 western States and Arkansas and Louisiana)

ITEM	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER							IRRIGABLE AREA						
	1940		1930		1920		Increase or decrease (-) of excess over area irrigated 1930-1940	1940		1930		1920		Increase or decrease (-) of excess over area irrigated 1930-1940
	Area	Excess over area irrigated in 1939	Area	Excess over area irrigated in 1929	Area	Excess over area irrigated in 1919		Area	Excess over area irrigated in 1939	Area	Excess over area irrigated in 1929	Area	Excess over area irrigated in 1919	
	Acres	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres	Acres	Acres	Percent
Total (19 States)	28,055,248	7,051,509	26,101,890	6,554,346	26,020,477	6,828,761	7.6	31,305,949	10,302,210	30,599,470	11,051,926	55,890,821	16,699,105	-6.8
STATE	BY STATES													
Arizona	844,212	190,949	824,152	248,562	627,303	159,738	-23.2	1,104,645	451,382	1,085,627	510,037	813,153	345,588	-11.5
Arkansas	287,765	126,164	209,942	58,155	179,013	35,087	116.9	314,929	153,328	225,992	74,205	246,480	102,554	106.6
California	7,398,576	2,329,008	6,815,250	2,068,618	5,894,466	1,675,426	12.6	8,039,175	2,969,607	8,075,895	3,329,263	7,805,207	3,586,187	-10.8
Colorado	3,913,544	692,857	4,078,712	685,093	3,855,348	506,963	1.1	4,283,250	1,062,565	4,528,251	1,134,632	5,220,588	1,872,203	-6.4
Idaho	2,593,532	315,677	2,617,021	435,771	3,092,810	604,004	-27.6	2,870,023	592,166	2,814,048	632,798	3,780,048	1,291,242	-6.4
Kansas	142,409	42,429	85,583	12,295	67,853	20,541	245.1	147,226	47,246	95,719	24,429	102,562	55,250	93.4
Louisiana	759,915	312,820	795,165	344,264	728,742	273,860	-9.1	793,674	346,579	850,401	399,500	851,211	396,329	-13.2
Montana	2,344,390	632,981	2,276,000	681,088	2,753,498	1,071,769	-7.1	2,588,214	876,805	2,622,423	1,027,511	4,329,148	2,647,419	-14.7
Nebraska	982,957	382,578	705,641	171,024	562,468	119,778	123.7	1,095,567	495,188	250,422	768,768	324,078	110.6	
Nevada	841,304	101,441	736,249	249,601	704,708	143,261	-59.4	915,689	175,826	983,717	497,069	1,382,056	820,589	-64.6
New Mexico	731,990	177,951	656,689	129,636	696,119	157,742	37.3	807,656	253,617	741,245	214,212	961,979	423,502	18.4
North Dakota	36,522	14,907	24,006	14,614	34,235	22,165	0.2	39,558	17,943	24,860	15,468	57,476	45,404	16.0
Oklahoma	8,624	4,464	7,331	5,758	9,672	6,703	-22.5	13,494	9,334	7,344	5,771	11,742	8,773	61.7
Oregon	1,261,081	211,905	1,158,210	259,497	1,344,046	357,884	-18.3	1,441,417	392,241	1,478,128	579,115	1,925,987	939,825	-32.3
South Dakota	121,847	61,649	109,550	42,443	150,914	50,232	45.3	123,961	63,763	122,510	55,403	188,382	87,700	15.1
Texas	1,773,812	728,588	1,177,415	378,498	1,150,542	564,422	92.5	2,180,796	1,566,876	1,555,572	767,959	1,687,447	1,101,327	47.9
Utah	1,357,714	181,598	1,542,475	218,350	1,700,550	328,899	-16.8	1,432,533	256,417	1,739,869	415,744	2,559,244	987,593	-38.3
Washington	731,527	116,514	631,511	132,228	637,151	107,252	-11.9	837,096	222,083	915,379	416,096	836,795	306,896	-46.6
Wyoming	1,913,527	427,029	1,655,008	418,853	1,831,039	623,057	2.0	2,277,046	790,548	1,958,147	721,992	2,564,668	1,356,686	9.5
DRAINAGE BASIN	BY PRINCIPAL DRAINAGE BASINS													
Red River (of the North)	7,980	3,487	2,099					8,100	3,607	2,409	310			(1)
Missouri River	5,942,958	1,532,573	5,472,012	1,286,832	5,805,630	1,658,352	19.1	6,542,576	2,132,191	6,251,873	2,046,693	8,483,171	4,335,893	4.2
Mississippi River, exclusive of Mississippi River	1,350,911	423,317	1,170,583	268,023	1,152,261	193,768	57.9	1,458,502	530,908	1,280,730	378,170	1,543,064	584,571	40.4
Gulf of Mexico streams, other than Mississippi River and Rio Grande	1,520,796	618,404	1,221,997	559,039	1,157,529	459,452	10.6	1,874,654	972,262	1,536,404	873,446	1,602,169	904,092	11.3
Rio Grande	2,177,705	656,127	1,914,781	550,056	1,914,285	601,430	87.4	2,378,063	856,485	2,177,664	612,939	2,628,153	1,315,298	39.7
Colorado River	3,567,744	729,624	3,335,914	798,790	3,009,219	682,529	-8.7	4,017,757	1,379,637	4,435,529	1,898,405	4,102,096	1,775,406	-27.3
Whitewater Draw and Vamori Wash	13,462	4,964	4,753	1,452	9,950	4,079	241.9	14,261	5,763	5,570	2,269	16,623	10,752	154.0
Great Basin	2,381,171	307,444	2,536,492	500,459	2,825,313	547,662	-38.6	2,504,611	430,884	3,004,651	968,618	4,165,450	1,887,799	-55.5
Columbia River	4,426,367	606,629	4,241,244	847,604	4,968,518	1,095,273	-28.4	5,001,483	1,181,745	4,992,131	1,596,491	6,336,801	2,463,556	-26.1
Klamath River	310,560	39,522	264,949	78,958	205,374	52,269	-46.6	384,003	112,965	316,239	128,248	362,793	209,688	-11.9
Sacramento-San Joaquin Delta and tributary streams	5,132,597	1,738,715	4,795,836	1,638,704	4,113,524	1,368,880	6.1	5,680,337	2,266,455	5,595,666	2,236,534	5,499,735	2,755,091	1.3
Pacific Ocean streams, excl. of Gulf of California streams, Columbia and Klamath Rivers, and Sacramento-San Joaquin Delta and tributary streams	1,422,997	390,705	1,141,250	226,429	858,874	165,067	72.5	1,461,602	429,308	1,222,604	307,803	1,150,766	456,959	39.5

¹ Percent not shown when more than 1,000.

² Data for Censuses of 1930 and 1920 are for Whitewater Draw and unidentified tributaries, and do not include the independent basin, Vamori Wash.

TABLE 17.—DRAINAGE WITHIN IRRIGATION ENTERPRISES WHICH REPORTED LANDS DRAINED OR NEEDING DRAINAGE—AREA IRRIGATED, AREA IRRIGABLE, AREA FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA NEEDING DRAINAGE IN THESE ENTERPRISES, BY STATES, 1940, 1930, AND 1920; AND BY PRINCIPAL DRAINAGE BASINS, 1940

(For the 17 western States and Arkansas and Louisiana)

ITEM	AREA IRRIGATED	AREA IRRIGABLE				AREA FOR WHICH DRAINS HAVE BEEN INSTALLED					ADDITIONAL AREA NEEDING DRAINAGE				
	1939	1940	1930	1920 ¹	1940	1930	1920	Increase or decrease (-)		1940	1930	1920	Increase or decrease (-)		
								1930-1940	1920-1930				1920-1930	1930-1940	
Acres		Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	
Total (19 States) ²	6,224,568	9,553,069	10,611,415	8,860,760	3,861,305	3,707,354	1,519,853	153,951	2,187,501	897,912	1,078,566	1,476,771	-180,654	-398,205	
STATE	BY STATES														
Arizona	271,680	418,539	568,254	362,928	93,803	123,013	25,173	-29,210	97,840	107,651	47,155	71,357	60,496	-24,202	
Arkansas	14,700	34,894	124,799	37,574	26,078	107,601	27,350	-81,523	80,251	2,016	1,873	2,821	143	-948	
California	1,711,027	2,598,196	3,105,549	1,623,330	1,509,832	1,522,338	319,573	-12,506	1,202,765	394,963	235,990	409,933	158,973	-173,943	
Colorado	466,804	687,246	1,018,260	1,526,311	119,286	215,800	113,899	-96,314	101,701	35,792	146,693	220,711	-112,901	-72,018	
Idaho	731,717	943,910	920,314	734,405	238,907	202,575	81,187	36,332	121,388	29,042	48,995	94,934	-19,953	-45,939	
Kansas	2,093	3,507	651	3,610	2,552	336	250	2,216	86	240	157	1,320	85	-1,163	
Louisiana	101,321	214,408	226,510	283,476	174,848	169,577	167,138	5,271	2,439	12,379	18,832	21,202	-6,453	-2,370	
Montana	473,604	822,140	840,007	751,274	147,151	85,189	62,872	61,962	22,317	52,071	59,995	50,901	-7,924	9,094	
Nebraska	284,658	338,461	434,969	376,518	47,960	122,101	10,793	-74,141	111,308	10,305	51,505	26,606	-41,200	24,899	
Nevada	180,044	244,984	353,238	537,417	97,576	126,249	34,175	-28,673	92,074	21,153	26,348	98,249	-5,195	-71,901	
New Mexico	231,795	331,233	225,730	212,353	240,614	60,807	74,783	179,707	-13,876	8,732	49,572	60,277	-40,840	-10,705	
North Dakota	15,277	26,826	20,559	49,581	11,552	3,040	1,613	6,512	1,427	242	2,000	659	-1,758	1,341	
Oklahoma	342	838	189	1,960	429	95	-----	334	95	106	50	1,820	56	-1,770	
Oregon	265,771	338,991	436,425	347,750	126,698	230,413	93,799	-103,715	136,614	18,786	94,866	46,115	-76,080	48,751	
South Dakota	36,072	74,640	79,729	106,129	23,906	4,353	2,109	21,553	2,244	5,509	6,100	4,714	-591	1,386	
Texas	397,227	657,141	814,853	650,822	553,850	345,926	272,437	207,924	73,469	106,857	135,936	154,532	-29,089	-16,596	
Utah	285,314	324,771	388,697	503,212	90,657	68,656	65,448	22,001	-16,792	28,418	88,338	91,976	-59,920	-3,658	
Washington	300,362	448,702	460,861	218,763	178,212	172,059	79,168	6,173	92,871	18,673	28,084	43,461	-9,411	-15,377	
Wyoming	456,760	843,642	592,041	513,347	175,394	147,346	68,086	28,048	79,260	44,997	34,077	75,185	10,920	-41,106	
DRAINAGE BASIN	BY PRINCIPAL DRAINAGE BASINS ²														
Missouri River	1,266,478	1,969,332	-----	-----	431,045	-----	-----	-----	-----	108,165	-----	-----	-----	-----	
Mississippi River, exclusive of Missouri River	116,659	164,985	-----	-----	50,820	-----	-----	-----	-----	6,772	-----	-----	-----	-----	
Gulf of Mexico streams, other than Mississippi River and Rio Grande	160,158	413,034	-----	-----	286,975	-----	-----	-----	-----	52,261	-----	-----	-----	-----	
Rio Grande	639,928	1,121,694	-----	-----	721,017	-----	-----	-----	-----	86,260	-----	-----	-----	-----	
Colorado River	939,690	1,422,474	-----	-----	341,508	-----	-----	-----	-----	458,141	-----	-----	-----	-----	
Great Basin	471,434	562,861	-----	-----	188,450	-----	-----	-----	-----	53,514	-----	-----	-----	-----	
Columbia River	1,240,294	1,705,259	-----	-----	467,652	-----	-----	-----	-----	54,828	-----	-----	-----	-----	
Klamath River	119,455	159,493	-----	-----	111,485	-----	-----	-----	-----	8,292	-----	-----	-----	-----	
Sacramento-San Joaquin Delta and tributary streams	1,181,659	1,697,316	-----	-----	1,213,586	-----	-----	-----	-----	60,237	-----	-----	-----	-----	
Pacific Ocean streams, excl. of Gulf of California streams, Columbia and Klamath Rivers, and Sacramento-San Joaquin Delta and tributary streams	88,813	116,621	-----	-----	48,767	-----	-----	-----	-----	9,442	-----	-----	-----	-----	

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census.

²Data by drainage basins available only for 1940.

GENERAL DISCUSSION

XXXIX

TABLE 18.—WATER USED PER ACRE IRRIGATED FROM SURFACE SOURCES, 1939 AND 1929; AND FROM UNDERGROUND SOURCES, 1939; BY PRIMARY AND SUPPLEMENTAL ENTERPRISES, AND BY STATES
(For the 17 western States and Arkansas and Louisiana)

STATE	QUANTITY OF WATER ENTERING CANALS PER ACRE IRRIGATED			QUANTITY OF WATER DELIVERED TO IRRIGATORS PER ACRE IRRIGATED				
	1939		1929 ¹	1939		1929 ¹		
	Primary enterprises	Supplemental enterprises	Primary enterprises	Primary enterprises		Supplemental enterprises		Primary enterprises
	Surface sources	Surface sources	Surface sources	Surface sources	Underground sources	Surface sources	Underground sources	Surface sources
	Acre-feet	Acre-feet	Acre-feet	Acre-feet	Acre-feet	Acre-feet	Acre-feet	Acre-feet
TOTAL								
Average (19 States)-----	4.5	1.7	4.1	2.8	2.5	1.3	1.9	2.8
Arizona-----	7.6	-----	5.8	3.2	3.4	1.0	1.5	3.1
Arkansas-----	2.0	-----	(2)	2.6	2.8	0.7	2.8	(2)
California-----	4.3	1.4	4.0	2.6	2.7	1.5	1.9	2.8
Colorado-----	2.5	0.8	2.8	2.4	2.2	0.6	1.8	1.8
Idaho-----	7.9	2.6	5.9	4.1	2.9	1.2	1.8	4.1
Kansas-----	1.4	-----	(2)	1.3	1.6	0.2	2.0	(2)
Louisiana-----	3.4	-----	2.8	2.7	2.1	1.6	0.8	1.6
Montana-----	3.4	2.1	4.3	2.1	2.1	1.3	3.0	1.7
Nebraska-----	3.8	4.9	4.1	2.0	1.5	0.5	0.8	3.0
Nevada-----	5.1	3.5	4.0	3.0	4.6	3.5	1.8	3.1
New Mexico-----	6.4	-----	5.8	3.2	2.6	1.1	1.5	2.1
North Dakota-----	4.5	-----	6.1	1.8	0.4	-----	-----	1.6
Oklahoma-----	0.9	-----	(2)	1.2	2.0	-----	-----	(2)
Oregon-----	5.3	1.2	4.8	3.3	2.0	2.1	5.6	3.1
South Dakota-----	2.1	-----	3.8	1.1	0.4	-----	-----	1.3
Texas-----	5.2	4.8	3.3	2.7	1.4	1.4	1.4	1.7
Utah-----	2.9	1.2	3.5	2.5	3.5	1.1	2.0	2.4
Washington-----	5.7	2.0	5.4	4.3	4.2	3.8	2.7	3.6
Wyoming-----	4.4	1.1	3.2	2.1	1.9	0.8	0.2	2.5
MEASURED¹								
Average (19 States)-----	4.5	1.6	4.0	2.8	2.4	2.0	1.3	2.8
Arizona-----	7.9	-----	5.7	3.2	3.0	-----	-----	2.9
Arkansas-----	-----	-----	(2)	-----	-----	-----	-----	(2)
California-----	4.4	2.0	4.0	2.4	1.9	1.8	1.2	2.7
Colorado-----	2.4	0.7	2.4	1.6	1.3	0.7	-----	1.8
Idaho-----	7.4	2.6	5.5	5.1	3.2	6.1	2.2	4.1
Kansas-----	1.2	-----	(2)	1.3	-----	-----	-----	(2)
Louisiana-----	-----	-----	(2)	-----	-----	-----	-----	(2)
Montana-----	3.3	2.1	3.2	1.9	-----	1.3	-----	1.6
Nebraska-----	5.4	4.9	4.2	1.9	-----	0.5	-----	3.1
Nevada-----	5.2	5.4	4.0	4.2	-----	3.3	-----	3.1
New Mexico-----	6.2	-----	6.2	2.8	2.4	-----	-----	2.1
North Dakota-----	5.3	-----	6.1	-----	-----	-----	-----	1.6
Oklahoma-----	0.8	-----	(2)	-----	0.5	-----	-----	(2)
Oregon-----	5.3	1.3	5.2	4.2	0.4	0.7	-----	3.2
South Dakota-----	2.2	-----	3.6	1.0	-----	-----	-----	(2)
Texas-----	5.6	-----	4.8	2.9	1.8	0.9	-----	2.6
Utah-----	3.0	1.1	2.7	2.4	4.3	1.1	-----	2.4
Washington-----	5.6	0.7	5.3	4.1	4.6	1.5	-----	3.6
Wyoming-----	5.4	1.1	2.8	3.6	-----	0.9	-----	2.0
NOT MEASURED								
Average (19 States)-----	4.4	2.0	4.4	2.7	2.6	0.9	1.9	2.6
Arizona-----	5.5	-----	7.8	3.4	4.0	1.0	1.6	5.3
Arkansas-----	2.0	-----	(2)	2.6	2.8	0.7	2.8	(2)
California-----	3.7	1.0	3.6	2.9	2.8	1.1	1.9	3.2
Colorado-----	2.9	0.9	3.8	4.2	2.2	0.6	1.8	2.1
Idaho-----	12.0	2.4	7.2	2.3	2.6	0.2	1.7	4.9
Kansas-----	1.8	-----	(2)	1.2	1.6	0.2	2.0	(2)
Louisiana-----	3.4	-----	2.8	2.7	2.1	1.6	0.8	1.6
Montana-----	3.5	1.8	5.2	2.2	2.1	1.1	3.0	1.8
Nebraska-----	8.0	-----	1.8	2.1	1.5	0.5	0.8	1.8
Nevada-----	4.9	3.1	4.6	2.6	4.6	4.3	1.8	3.2
New Mexico-----	6.5	-----	5.3	3.4	2.6	1.1	1.5	1.4
North Dakota-----	1.9	-----	(2)	1.8	0.4	-----	-----	(2)
Oklahoma-----	-----	-----	(2)	1.2	2.1	-----	-----	(2)
Oregon-----	5.3	0.9	4.1	2.9	2.1	2.2	5.6	2.3
South Dakota-----	1.5	-----	5.9	1.6	0.4	-----	-----	1.3
Texas-----	4.7	4.8	2.5	2.7	1.4	2.1	1.1	1.5
Utah-----	2.6	1.4	4.5	2.6	3.4	1.1	2.0	2.6
Washington-----	5.9	6.7	5.9	4.5	4.1	4.0	2.7	3.5
Wyoming-----	3.4	1.0	3.5	1.7	1.9	0.8	0.2	3.4

¹ Data only for enterprises serving 5 or more units. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated in 1929.
² Not reported.

Areas by Types of Water Rights

Table 19 (p. XLV) presents a proportional table by States based on the areas irrigated by enterprises reporting different types of water rights. The indicated decrease in the proportion of acreages reporting water rights adjudicated by court in 1939 is probably due largely to the fact that a direct question calling for a report on adjudicated rights was not placed on the questionnaire presented to the enterprises. Therefore, in many instances, appropriated, underground, or other rights,

were not specified by the enterprise reporting as rights having been also adjudicated by court decree.

The considerable increase in water rights reported as underground, in the States of Arizona, Kansas, Nebraska, and Texas, harmonizes substantially with the increases of areas irrigated from wells in these States as set forth in table 9. Lands irrigated from wells show a decade increase in Arizona of 40,494 acres; Kansas, 33,407 acres; Nebraska, 57,582 acres; and Texas, 204,240 acres. A further discussion of water rights and laws pertaining to water rights by States is presented on page XL.

Water may be diverted from a natural source of supply for irrigation or other useful purposes only by virtue of a right of use, called a water right. Water rights of various types are defined or recognized by legislation and court decisions in all of the 17 Western States, all of which are included in the irrigation census, and the States have assumed greater or less control over the acquisition and exercise of rights of certain types. In the 3 other States included in the irrigation census of 1940—Arkansas, Florida, and Louisiana—there is as yet no water-right legislation, and rights to the use of water have not yet been defined clearly even by the courts.

Surface sources.—The two types of water right that apply to the use of water of surface streams are the appropriative right and the riparian right. Under the appropriation doctrine, the first user of water acquires a right to continue the use, which right is prior to the right of every subsequent user from the same source of supply, and each one who begins use thereafter is junior in right to all those who preceded him and is senior to all those whose rights are acquired later. Under the riparian doctrine, the owner of land that is contiguous to a stream has certain rights in the flow of water for use on his riparian land, solely by virtue of such land ownership, and no priority over other riparian owners is acquired by the first user.

Appropriation doctrine.—All of the 17 western States have adopted the doctrine of appropriation and have provided by statute for the appropriation of water from specified sources, such as watercourses and springs, under designated procedures. The current procedure in most States includes an application to a State official, and approval thereof, which becomes a permit to make the appropriation, followed by steps that result in perfecting the right upon making proof that the water has been put to beneficial use. The date of filing the application in the State office is the date of priority of the appropriation, provided all subsequent steps are taken in full compliance with the statute and regulations for administering the statute. The value of the priority lies in the fact that the requirements of the appropriator for water covered by his appropriation must be satisfied fully from the available supply before the holder of any subsequent priority is entitled to divert water from the same source.

Prior to the enactment of the present water codes, the usual procedure under the then existing statute of a State or Territory was to post a notice at the proposed point of diversion of water, and to file a copy in the county records. The priority of such an appropriation dated from the initial step, provided that the construction work was completed and the water applied to the land with reasonable diligence, but if the appropriator was not diligent, the priority dated from the completion of the appropriation.

Appropriations now in effect are equally valid, whether made before or after the enactment of the present water codes, provided they were completed in accordance with whatever statute was in effect at the time of the appropriation, and provided that they have not since been abandoned or otherwise lost by prescription or by forfeiture through failure to exercise the right for a definite number of years prescribed by statute.

Riparian doctrine.—Some of the western States recognize the riparian doctrine concurrently with the doctrine of appropriation. The riparian right is inherent in the ownership of riparian land and therefore is not acquired by applying to the State for a permit to make use of the water. Nor is the right lost by failure to use the water, but it can be lost by adverse use on the part of others upstream for a period of years prescribed by the statute of limitations.

The riparian doctrine has been repudiated wholly in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; hence (with minor exceptions in Nevada, as noted below), water rights applicable to surface streams in those States are subject entirely to the appropriation doctrine. In Oregon the riparian doctrine has been so restricted by statute and court decisions as to amount to practical abrogation. In Oklahoma it is assumed that the riparian doctrine is in effect in some degree, but its status is uncertain. In the remaining 7 western States (California, Kansas, Nebraska, North Dakota, South Dakota, Texas, and Washington) the riparian and appropriation doctrines are recognized concurrently, but the limitations upon the riparian right vary considerably from State to State.

Underground sources.—Ground waters commonly are considered by the courts as falling into two classes: (1) water in definite underground streams, and (2) percolating water, which comprises all water in the ground other than that flowing in defined subterranean channels.

Definite underground streams.—Water in definite underground channels or streams is subject to the same rules of law as water in surface watercourses. Hence in each western State the appropriation doctrine applies equally to definite watercourses whether upon or under the surface, and the riparian doctrine in a given State applies to subterranean streams to whatever extent it is applicable to surface streams.

Percolating water.—Percolating waters have been subjected to appropriation by the statutes of some States, as noted in the ensuing discussion of the separate State water-right doctrines. In the other western States percolating waters are considered to belong to the owner of the land in which they are found, subject in some States to an unlimited right of use by the owner of overlying land, and in other States to some measure of reasonableness in the use of the water.

Summaries of State Water-Right Doctrines

Arizona

Surface sources.—The doctrine of appropriation governs rights to the use of water in watercourses, to the exclusion of the riparian doctrine. The Territorial legislature in 1887 repudiated the common-law doctrine of riparian water rights, and the State constitution contains a similar provision (art. XVII, sec. 1). The courts, furthermore, have held specifically that the riparian doctrine has been repudiated (Clough v. Wing, 2 Ariz. 371, 17 Pac. 453 (1888); Pima Farms Co. v. Proctor, 30 Ariz. 96, 245 Pac. 369 (1926)).

The water code provides that the water of all sources, flowing in streams, canyons, ravines, or other natural channels, or in definite underground channels, whether perennial

¹Wells A. Hutchins, Senior Irrigation Economist, Division of Irrigation, Soil Conservation Service, U. S. Department of Agriculture.

or intermittent, flood, waste, or surplus water, and of lakes, ponds, and springs on the surface, belongs to the public and is subject to appropriation. An application to appropriate water must be made to the State Water Commissioner, whose approval constitutes a permit, and on completion of the appropriation the permittee receives a certificate. Determinations of water rights may be made by the State Water Commissioner, and filed in court as the basis of a civil action, or if an action to adjudicate water rights has been brought by private parties, the court may transfer the action to the commissioner for similar determination. Control over the distribution of water, excepting that reserved to water commissioners appointed by courts under existing decrees, is vested in an organization headed by the State Water Commissioner; the commissioner being authorized to create water districts and appoint water superintendents when necessary.

Underground sources.—Water flowing in definite underground channels is subject to appropriation under the water code. However, the existence of a subterranean stream must be proved by clear and convincing evidence, for ground water is presumed to be percolating (Maricopa County Municipal Water Conservation Dist. No. 1 v. Southwest Cotton Co., 39 Ariz. 65, 4 Pac. (2d) 369 (1931)). Percolating water is not subject to appropriation, but belongs to the owner of the land in which it is found (Howard v. Perrin, 8 Ariz. 347, 76 Pac. 460 (1904); Campbell v. Willard, 45 Ariz. 221, 42 Pac. (2d) 403 (1935)).

California

Surface sources.—The appropriation and riparian doctrines are in effect concurrently in California. The appropriation doctrine, as it is now recognized throughout the West originated in this State in the customs of miners on the public domain, and was later extended to irrigation and other uses.

Under the present statute waters flowing in any river, stream, canyon, ravine, or other natural channel, excepting waters needed for use upon riparian lands or otherwise appropriated, are public waters and subject to appropriation. The statute also applies to return flow that has reentered a stream, lake, or other body of water, and to water in subterranean streams flowing through known and definite channels. The statutory procedure involves an application to the State Division of Water Resources, a permit therefrom, and a license from the division upon completion of the appropriation. The division, upon the petition of one or more claimants, may make a determination of both appropriative and riparian rights upon a stream system, which is filed in court, and is heard in the form of a civil action. Any suit for the determination of water rights may be referred, in the discretion of the court, to the division as referee, and the division may accept a reference from a Federal court. The division may create water-master districts and appoint watermasters for the distribution of water.

The riparian doctrine is of outstanding importance in California water law. It was considered fully in an early case (Lux v. Haggin, 69 Calif. 255, 10 Pac. 674 (1886)) and has been reaffirmed in many subsequent decisions. A constitutional amendment in 1928 (art. XIV, sec. 3), which limited riparian and other water rights to reasonable beneficial use under reasonable methods of diversion, has been upheld by the supreme court (Peabody v. Vallejo, 2 Calif. (2d) 351, 40 Pac. (2d) 486 (1935)). The right of a riparian owner to make use of water under such limitation is safeguarded by the amendment, and the excess above his reasonable needs is public water subject to appropriation.

Underground sources.—Water in definite underground streams is subject to appropriation under the present statute. It is likewise subject to riparian rights (Verdugo Canyon Water Co. v. Verdugo, 152 Calif. 655, 93 Pac. 1021 (1908)).

Percolating water is subject to the reasonable use of owners of overlying land under the rule of correlative rights (Katz v. Walkinshaw, 141 Calif. 116, 70 Pac. 663 (1902), 74 Pac. 766 (1903)). Each landowner is entitled, in time of shortage, to a reasonable proportion of the common supply of water that underlies a group of land ownerships. If there is an excess in the common supply, above the reasonable requirements

of overlying lands, such excess may be appropriated for distant use. (Burr v. Maclay Rancho Water Co., 154 Calif. 428, 98 Pac. 260 (1908).) The statutory procedure for appropriating water, however, does not apply to percolating water; one simply takes the water and, if attacked, defends his action in court. Ground water that feeds a surface stream, that which percolates away from a stream, and the water in the stream itself, all are considered one common supply under the rule of reasonable beneficial use (Hudson v. Dailey, 156 Calif. 617, 105 Pac. 748 (1909); Lodi v. East Bay Municipal Utility Dist., 7 Calif. (2d) 316, 60 Pac. (2d) 439 (1936)).

Colorado

Surface sources.—Appropriation is the sole means of acquiring a right to use water from a watercourse in Colorado. The riparian doctrine never has been recognized in this State (Coffin v. Left Hand Ditch Co., 6 Colo. 443 (1882); Wyoming v. Colorado, 259 U. S. 419 (1922)).

The constitution provides that the unappropriated water of every natural stream is the property of the public, subject to appropriation, and that the right of appropriation shall never be denied (art. XVI, secs. 5 and 6). The statutes also provide for the appropriation of waters of natural flowing springs, and of waters that have escaped to natural channels after having been raised from mines. A further statute governs the appropriation of waste, seepage, or spring waters, giving the person on whose land the seepage or spring waters first arise the prior right if capable of use on his lands, but the supreme court has held that the landowner's prior right does not apply to such waters if they are naturally tributary to a stream (Neivius v. Smith, 86 Colo. 178, 279 Pac. 44 (1928, 1929)). Permits to appropriate water are not required in Colorado; the intending appropriator commences his construction work, and then files a claim with the State engineer, a copy of which, if in proper form, is later filed with the county clerk and recorder. The appropriation is completed by diverting the water and applying it to beneficial use, without certificate or license from the State engineer. Adjudications of water rights are made exclusively by the courts. The administration of all decreed appropriations is effected by an organization of irrigation division engineers and district water commissioners, under the supervision of the State engineer.

Underground sources.—Waters in definite underground streams are subject to the same rules as those in streams upon the surface (Medano Ditch Co. v. Adams, 29 Colo. 317, 68 Pac. 431 (1902)). These rules in Colorado are those of the appropriation doctrine.

Percolating waters tributary to a surface stream are a part of that stream and are subject to the same system of appropriative rights (Faden v. Hubbell, 93 Colo. 358, 28 Pac. (2d) 247 (1933)). No supreme court decision yet has been rendered as to the rights of use of percolating waters that are not physically tributary to some watercourse, but the reasonable inference is that such waters likewise are subject to appropriation.

Idaho

Surface sources.—The riparian doctrine is not recognized in Idaho (Jones v. McIntire, 60 Ida. 338, 91 Pac. (2d) 373 (1939)), and even in former times never was acknowledged as conflicting with the rights of appropriators for beneficial use (Schodde v. Twin Falls Land & Water Co., 224 U. S. 107 (1912)).

The constitution provides that the right to appropriate the waters of any natural stream shall never be denied, except that the State may control the use thereof for power purposes (art. XV, sec. 3). The statutes subject to appropriation all waters when flowing in their natural channels, the waters of rivers, streams, lakes, springs, and subterranean waters, and seepage, waste, and spring waters. Either of two methods of appropriation may be followed: (1) application to the State Department of Reclamation for a permit, construction of works under the terms of the permit, completion of construction that results in the issuance of a certificate, and application of

the water to beneficial use, proof of which entitles the appropriator to a license; or (2) construction of works and diversion and application of water to beneficial use, without formalities of any kind. An appropriation made according to either method is equally valid; but the priority of one who complies in all respects with the statutory procedure dates from the time of applying for the permit, while the priority of one who does not follow the statute dates from the completion of the appropriation (Bachman v. Reynolds Irr. Dist., 56 Ida. 507, 55 Pac. (2d) 1314 (1936)). A statute, which authorized State water commissioners to bring suits to adjudicate water rights was held unconstitutional (Bear Lake County v. Budge, 9 Ida. 703, 75 Pac. 614 (1904)). However, whenever suit is brought to adjudicate the waters of a stream, the court in its discretion may request the department to make a hydrographic survey. The department is charged with the responsibility of creating water districts in which adjudications have been made and of controlling the distribution of water according to priorities.

Underground sources.—Ground waters are subject to appropriation under the statute. Court decisions have held that such waters may be appropriated (Hinton v. Little, 50 Ida. 371, 296 Pac. 582 (1931)), and that the appropriation may be made, either by the statutory permit method or simply by diverting and applying the water to beneficial use (Silkey v. Tlegs, 51 Ida. 344, 5 Pac. (2d) 1049 (1931)).

Kansas

Surface sources.—The appropriation and riparian doctrines are recognized concurrently in Kansas. The riparian doctrine was well established in a case decided in 1905 (Clark v. Allaman, 71 Kans. 206, 80 Pac. 571 (1905)), and it now appears to be of paramount importance in this State (Frizzell v. Bindley, 144 Kans. 84, 58 Pac. (2d) 95 (1936)).

The statutes provide that water may be appropriated, and that in the portion of the State west of the 99th meridian, all natural waters may be diverted from natural beds, basins, and channels for domestic, irrigation, and other industrial purposes, but that natural surface lakes and ponds having no outlet may be drawn off or appropriated only by the owners of the lands on which located. Appropriations of water may be made upon application to the Division of Water Resources of the State Board of Agriculture, the chief engineer of which is charged with distribution of water under rights adjudicated by the courts.

Underground sources.—A statute provides that water obtained by means of artesian wells may be appropriated. Other statutes, which relate only to the portion of the State west of the 99th meridian, provide that surface or subterranean waters may be diverted from natural beds, basins, or channels for domestic, irrigation, and other industrial purposes; but that south of township 18 and west of the 99th meridian, all waters flowing in subterranean channels and courses, or flowing or standing in subterranean sheets or lakes, shall be appurtenant to the overlying lands and devoted to the above-named uses. The few court decisions acknowledge ownership of percolating water by the owner of overlying land (Emporia v. Soden, 25 Kans. 588, 37 Am. Rep. 265 (1881); Gilmore v. Royal Salt Co., 84 Kans. 729, 115 Pac. 541 (1911)).

Montana

Surface sources.—The appropriation doctrine is exclusive in operation with respect to surface streams, inasmuch as the riparian doctrine has been repudiated by the courts (Mettler v. Ames Realty Co., 61 Mont. 152, 201 Pac. 702 (1921)). The statutes provide that appropriations may be made of water in any river, stream, ravine, coulee, spring, lake, or other natural source of supply; and of flood, seepage, and waste waters by impounding them.

There is no centralized State control in Montana over the appropriation and administration of water. An appropriation from an unadjudicated stream may be made, either by following the statute, which requires posting a notice at the point of diversion and filing a copy with the county clerk, in which case the priority dates from the time of posting notice, or by

simply diverting water and applying it to beneficial use, in which event the priority dates from completion of the appropriation. An appropriation from a stream or other source, the waters of which have been adjudicated, may be made only by filing a petition in the county court and securing a decree allowing the appropriation. Determination of water rights are made exclusively by the courts, but the State engineer, at the direction of the State Water Conservation Board, may bring action to adjudicate the waters of any stream, and may make hydrographic surveys for use in the proceedings. Waters, the rights to which have been adjudicated, may be distributed by commissioners appointed by the courts at the request of holders of at least 15 percent of the water rights affected.

Underground sources.—Water flowing in a defined underground stream is subject to the same rules of appropriation as the water of a surface stream; but percolating water belongs to the owner of the soil in which it is found (Ryan v. Quinlan, 45 Mont. 521, 124 Pac. 512 (1912)).

Nebraska

Surface sources.—The appropriation and riparian doctrines both exist in Nebraska. The constitution provides that the water of every natural stream is dedicated to the people of the State, and that the right to divert unappropriated waters from every natural stream for beneficial use shall never be denied except when the public interest demands it (art. XV, secs. 5 and 6). A statute provides, further, that water flowing in any river, stream, canyon, or ravine may be appropriated. Supplemental appropriations may be made from natural lakes or reservoirs. An application must be made to the State Department of Roads and Irrigation for a permit to appropriate water, and when the appropriation has been perfected the department sends to the county clerk a certificate for record. The department makes determinations of appropriative water rights on stream systems, which are final unless appealed to the supreme court. The department has jurisdiction over the administration of water rights, and appoints superintendents and water commissioners to distribute water.

The riparian doctrine has been established in a number of court decisions, two leading cases having been decided in 1903, but riparian rights attach only to lands that have passed to private ownership after the enactment of the irrigation act of 1889 (Crawford Co. v. Hathaway, 67 Nebr. 325, 93 N. W. 781 (1903); Meng v. Coffee, 67 Nebr. 500, 93 N. W. 713 (1903)). Furthermore, the remedies of riparian owners who have not made use of water, against appropriators from the same stream, have been substantially limited by court decisions (McCook Irr. & Water Power Co. v. Crews, 70 Nebr. 109, 115, 96 N. W. 996 (1903), 102 N. W. 249 (1905); Cline v. Stock, 71 Nebr. 70, 79, 98 N. W. 454 (1904), 102 N. W. 265 (1905)).

Underground sources.—Subterranean waters are subject to reasonable use upon the overlying land, and cannot be extracted in quantities that result in injury to owners of other overlying lands (Olson v. Wahoo, 124 Nebr. 802, 248 N. W. 304 (1933)).

Nevada

Surface sources.—The appropriation doctrine now is the sole legal system under which rights to the use of surface streams may be acquired. The riparian doctrine was recognized in some very early cases and certain riparian rights became established (Vansickle v. Haines, 7 Nev. 249 (1872)). However, the riparian doctrine was repudiated in 1885, and has not since been recognized (Jones v. Adams, 19 Nev. 78, 6 Pac. 442 (1885); In re Humboldt River, 49 Nev. 357, 246 Pac. 692 (1926)).

The statutes provide that the water of all sources of supply, whether above or beneath the surface of the ground, belongs to the public, and, subject to existing rights, may be appropriated. An application for a permit to appropriate water must be made to the State engineer, and, upon completion of the appropriation, a certificate is issued. The State engineer may determine the rights upon a stream, upon petition of one or more water users, and file his determination in court in the form of a complaint in a civil action. In any suit brought by private parties for the determination of water rights, the

court is required by statute to direct the State engineer to furnish a hydrographic survey, and in its discretion the court may transfer the suit to the State engineer for a statutory determination. The State engineer has the duty of distributing water and of creating water districts and appointing water commissioners for adjudicated streams.

Underground sources.—All ground waters are subject to appropriation, except for domestic purposes where the draught does not exceed 2 gallons per minute and where the water is not artesian. Application for a permit must be made to the State engineer, as in case of surface streams. The State engineer may designate ground-water administrative basins upon petition of at least 10 percent of the owners of wells having appropriative rights, and with his approval artesian-wells supervisors and assistants may be appointed. The State engineer on his own motion, or upon petition of water users, may hold hearings to determine the adequacy of the water supply within an area or subarea, and is required to order withdrawals restricted during a period of shortage to conform to priority rights.

New Mexico

Surface sources.—Rights to the use of waters of surface streams in New Mexico are governed solely by the appropriation doctrine. The riparian doctrine never has been recognized in this State (Snow v. Abalos, 18 N. Mex. 681, 140 Pac. 1044 (1914)).

The constitution declares that the unappropriated water of every natural stream, perennial or torrential, belongs to the public and is subject to appropriation (art. XVI, sec. 2). According to statute, seepage water from constructed works may be appropriated, the owner of the works having the first right, if exercised within one year. Application must be made to the State engineer for a permit to appropriate water; upon completion of the works a certificate of construction is issued, followed upon application of the water to beneficial use by a license to appropriate water. The appropriation statute does not apply to uses of water for watering livestock. Determinations of rights may be made in suits brought by the attorney general at the request of the State engineer, upon completing of hydrographic surveys. In suits brought by private parties the attorney general is required to intervene if the State engineer so advises, and in any adjudication suit the court is required to direct the State engineer to furnish a hydrographic survey. Administration of rights is entrusted to the State engineer, who creates districts and subdistricts, and may appoint a watermaster and assistants upon request of a majority of the users in a district.

Underground sources.—The waters of underground streams, channels, artesian basins, reservoirs, or lakes, having reasonably ascertainable boundaries, are declared by statute to be public waters subject to appropriation. An application for a permit to appropriate such water for irrigation or industrial purposes must be made to the State engineer, and claimants of vested rights may file declarations of their rights with that official. The State engineer formulates rules and regulations for administering the statute; and in certain instances he has concurrent authority with artesian conservancy districts in regulating artesian wells within such districts.

North Dakota

Surface sources.—The appropriation and riparian doctrines both are in effect in this State. A statute provides that all waters from all sources of supply belong to the public and are subject to appropriation. An earlier statute, still in effect, vests in the owner of land the ownership of water upon or under his land if it does not form a definite stream, and gives him the right to use a definite stream so long as it remains on his land, but forbids his preventing its natural flow. Seepage water from constructed works may be appropriated. An application for a permit to appropriate water must be made to the State engineer, who may grant water rights subject to the approval of the State Water Conservation Commission. A certificate of construction is issued upon completion of works, and a license to appropriate upon application of

water to beneficial use. The State engineer is required to make hydrographic surveys as the basis for suits brought by the attorney general to determine water rights. The attorney general is required to intervene in any adjudication suit upon advice of the State engineer. The court, in any adjudication suit, is to direct the State engineer to furnish a hydrographic survey. The State is divided by statute into water divisions, with provision for appointment of officials to distribute water under the supervision of the State engineer.

There has been very little litigation over water rights in North Dakota. Riparian rights, however, were recognized by the United States Supreme Court in a Territorial case (Sturr v. Beck, 133 U. S. 541 (1890)), and the common-law riparian doctrine appears to be well established (Bigelow v. Draper, 6 N. Dak. 152, 69 N. W. 570 (1896); McDonough v. Russell-Miller Milling Co., 38 N. Dak. 465, 165 N. W. 504 (1917)).

Underground sources.—A statute provides that the owner of land owns water standing thereon, or flowing over or under the surface, but not forming a definite stream, and that he may use a definite surface or subterranean stream while it remains within his boundaries, but may not prevent its natural flow.

Oklahoma

Surface sources.—The appropriation and riparian doctrines presumably are concurrent in Oklahoma. However, while there have been several court decisions concerning the rights of riparian owners, the controversies have been mainly over the pollution of streams or damage to land caused by raising water levels, and none have involved the use of water for irrigation. Hence, the status of the riparian doctrine in relation to the claims of appropriators of water has not been determined.

A statute provides that the owner of land owns water standing on it or flowing over or under the surface in other than a definite stream; that he may use a definite surface or underground stream while on his land, but may not prevent its natural flow.

Water may be appropriated by making first an application to the Oklahoma Planning and Resources Board for a permit. The supreme court has held that a hydrographic survey and adjudication are conditions precedent to the granting of a valid permit to appropriate water; pending this determination, an application for a permit may be accepted by the board to fix priority (Gay v. Hicks, 33 Okla. 675, 124 Pac. 1077 (1912); Owens v. Snider, 52 Okla. 772, 153 Pac. 933 (1915)). A certificate of completion of construction is issued when the works are completed, and a license to appropriate water when it has been applied to beneficial use. Seepage from constructed works may similarly be appropriated. Hydrographic surveys of stream systems form the basis of suits brought by the attorney general for determination of rights, and the attorney general is required by statute to intervene in a suit, if advised by the board that the public interest so requires. Furthermore, the court in an adjudication suit is required to direct the board to furnish a hydrographic survey. The board is charged with supervision over the apportionment of water, and may create water districts and appoint watermasters.

Underground sources.—The statute provides that the owner of land owns water under the surface, but not forming a definite stream. However, the supreme court has held that the use of percolating water by the landowner must be reasonable, and that he may not exhaust a neighbor's ground-water supply for transport to distant lands, but that this does not mean that in actual practice there must be an apportionment of the water (Canada v. Shawnee, 179 Okla. 53, 64 Pac. (2d) 694 (1936)).

Oregon

Surface sources.—Oregon is essentially an appropriation-doctrine State. Various court decisions, principally early ones, decided riparian rights as between riparian landowners, but the water code of 1909 restricted riparian rights to beneficial use made prior to the passage of the act, or within a reasonable time thereafter. The validity of this legislation has been upheld in the courts (In re Hood River, 114 Ore. 112, 227 Pac. 1065 (1924); California-Oregon Power Co. v. Beaver Portland Cement Co., 73 Fed. (2d) 565, C.C.A. 9th (1934)). Only

appropriate rights can be adjudicated under the statutory procedure, which means that a riparian owner's claim can be so adjudicated only for a specific flow of water with a fixed date of priority, that is, on an appropriative basis (In re Deschutes River and Tributaries, 134 Ore. 623, 286 Pac. 563, 294 Pac. 1049 (1930)). The result of the legislation and court decisions has been a practical abrogation of the riparian doctrine, except as to certain vested rights principally for domestic and stock-watering purposes.

All water from all sources of water supply is declared by statute to belong to the public, and subject to existing rights, may be appropriated. However, certain streams are exempted from appropriation in order to preserve the natural flow for scenic and other purposes. Waste, spring, or seepage waters may be appropriated, subject to the prior right of use by the person on whose land the seepage or spring water first arises. However, a spring that discharges into a watercourse is subject to rights on the stream (Hildebrandt v. Montgomery, 113 Ore. 687, 234 Pac. 267 (1925)).

Applications for permits to appropriate water for irrigation and other purposes, except for power (which are governed by the hydroelectric act), are made to the State engineer, and upon perfection of the appropriation a certificate is issued. Determinations of rights are made by the State engineer, upon petition signed by one or more users of water from a stream, and are filed in court in proceedings similar to suits in equity. The court in its discretion may transfer a water-right case to the State engineer for determination, and in a suit to which the State is a party the court is required to call upon the State engineer for a hydrographic survey. The State engineer is in control of the administration of water rights through watermasters appointed for districts which he creates.

Underground sources.—In the portion of Oregon east of the summit of the Cascade Mountains, waters in underground streams, channels, artesian basins, reservoirs, or lakes, the boundaries of which may be reasonably ascertained, are declared by statute to be public waters subject to appropriation for any purpose other than for domestic and culinary use, stock, or watering of lawns and gardens not exceeding one-half acre. Permits from the State engineer are required, as in case of surface streams. Court decisions in Oregon have acknowledged the rule that percolating water belongs to the landowner (Hayes v. Adams, 109 Ore. 51, 218 Pac. 933 (1923)), so that this rule of ownership prevails in western Oregon, but has been modified by statute in the eastern part of the State.

South Dakota

Surface sources.—The appropriation and riparian doctrines both are recognized in South Dakota. The riparian doctrine was recognized in the Territory of Dakota by the United States Supreme Court (Sturr v. Beck, 133 U. S. 541 (1890)), as well as in a number of decisions of the State Supreme Court (Platt v. Rapid City, 291 N. W. 600 (1940)), and is of major importance in South Dakota water law.

The code provides that, subject to the provisions relating to artesian wells and water, the owner of land owns the water over or under the surface, other than that flowing in a definite stream, and may use a definite surface or underground stream so long as it remains there, but may not prevent its natural flow. The supreme court has held that under this statute, water, which does not constitute a "definite stream," even though it flows for several weeks in the spring in a long channel, belongs to the landowner (Benson v. Cook, 47 S. Dak. 611, 201 N. W. 526 (1924)), and is not governed either by the appropriation or riparian doctrine (Terry v. Hoppner, 59 S. Dak. 317, 239 N. W. 759 (1931)). The code also states that, subject to the foregoing statutory provision, and subject to vested private rights, all waters from every source of supply belong to the public and, except navigable waters, are open to appropriation. Seepage from constructed works may be appropriated. An appropriation is initiated by applying to the State engineer for a permit. The permittee receives a certificate of construction upon completion of works, and upon applying the water to beneficial use, a license to appropriate the water.

Under the dry-draw law, a right to the use of water from a ravine or watercourse not having a flow of at least 20 miner's inches during the greater part of the year, may be initiated by filing a location certificate with the register of deeds, posting a notice at the point of diversion, and mailing a copy to the State engineer. The claimant may obtain a certificate from the State engineer, but is not under his jurisdiction.

In an action to adjudicate water rights, the court is directed to request the State engineer to furnish a hydrographic survey, no part of the costs of the State or of the survey to be charged against private parties without their express consent. A previous provision, under which such costs were charged against private parties, was held unconstitutional (St. Germain Irrigating Ditch Co. v. Hawthorne Ditch Co., 32 S. Dak. 260, 143 N. W. 124 (1913)).

The attorney general may bring suit for the determination of rights. The State engineer is given control over all waters in definite streams, so far as they relate to irrigation or other water rights, and upon request of 5 or more holders of riparian rights in a definite stream, he is required to apportion the water. The State engineer may appoint a water commissioner for the distribution of water from any source, after consultation with the water users, to act under his direction.

Underground sources.—The ownership of ground water not in a definite stream—that is, percolating water—is vested by statute in the landowner. The supreme court has upheld the principle as stated in this statute (Madison v. Rapid City, 61 S. Dak. 83, 246 N. W. 283 (1932)). Defined or known underground streams, however, are governed by the laws that apply to surface streams (Deadwood Central R. R. v. Barker, 14 S. Dak. 558, 86 N. W. 619 (1901)).

Texas

Surface sources.—Texas recognizes both the appropriation and riparian doctrines. The appropriation statute declares the waters of the ordinary flow and underflow and tides of every flowing river or natural stream, of all lakes, bays, or arms of the Gulf of Mexico, and the storm, flood, or rain waters of every river or natural stream, canyon, ravine, depression, or watershed, to be the property of the State and subject to appropriation. An application for a permit to appropriate water must be made to the State Board of Water Engineers, and use of water for 3 years under the terms of a permit gives the appropriator a title by limitation against all other claimants to water from the same source of supply. (This limitation, however, is not operative as against the rights of riparian landowners: Freeland v. Peltier, 44 S. W. (2d) 404 (Tex. Civ. App. 1931).) Adjudications of rights are made exclusively in the courts; a statute authorizing determinations by the Board of Water Engineers having been held unconstitutional (Board of Water Engineers v. McKnight, 111 Tex. 82, 229 S.W. 301 (1921)). As a further result of this decision, the statutory provisions relating to the distribution of water under the supervision of the Board, according to rights as determined by the Board, have been repealed.

Lands that were granted prior to the passage of the irrigation act of 1889 have riparian rights, but such rights attach only to the ordinary flow and underflow of streams (Motl v. Boyd, 116 Tex. 82, 286 S. W. 458 (1926)). Waters not needed to satisfy the reasonable requirements of lands having these preexisting riparian rights, as well as storm and flood waters, may be appropriated.

Underground sources.—The underflow of streams is subject to appropriation, according to the statute; and it is also riparian water (Motl v. Boyd, *supra*). Percolating waters are the property of the owner of the land in which they are found (Texas Co. v. Burkett, 117 Tex. 16, 296 S. W. 273 (1927)).

Utah

Surface sources.—The appropriation doctrine governs rights to the use of water in Utah. Riparian rights never have been recognized (Stowell v. Johnson, 7 Utah 215, 26 Pac. 290 (1891); Whitmore v. Salt Lake City, 89 Utah 387, 57 Pac. (2d) 726 (1936)). The statutes provide that all waters, whether above or under the ground, are the property of the public, subject

to existing rights of use; and that water may be appropriated only by complying with the statutory procedure, under which an application for an appropriation must be made to the State engineer and under which a certificate is issued upon completion of the appropriation. The State engineer may initiate suits to determine water rights, and, upon the filing of any adjudication suit, the State engineer is notified by the clerk of the court, and is required to make a hydrographic survey and a proposed determination, which is filed in court as the basis of hearings and final adjudication. The State engineer has general administrative supervision over the waters of the State, and may appoint water commissioners for any river system or water source, after consultation with the water users.

Underground sources.—All ground waters are subject to appropriation under the statute as amended in 1935. Even prior to this amendment, the supreme court had applied the appropriation doctrine to the waters of artesian basins (*Wrathall v. Johnson*, 86 Utah 50, 40 Pac. (2d) 755 (1935); *Justesen v. Olsen*, 86 Utah 158, 40 Pac. (2d) 802 (1935)). The procedure for acquiring appropriative rights out of surface streams applies to ground waters as well. Existing claimants to the use of ground waters are required to file notice of their claims with the State engineer. The State engineer may define ground-water areas, and at any time on his own motion, or on petition of not less than one-third of the ground-water users in such an area, he may hold hearings to determine whether the supply is adequate for existing claims, and may apportion the supply if found inadequate. Water commissioners may be appointed for such areas.

Washington

Surface sources.—Both the appropriation and the riparian doctrines are in force in Washington. The water code declares that subject to existing rights, all waters belong to the public, and that rights may be acquired only by appropriation in the manner provided by statute; existing riparian or appropriative rights are not to be affected. An appropriation is initiated by applying to the State Supervisor of Hydraulics for a permit, and upon completion of the appropriation the claimant is entitled to a certificate. The supervisor of hydraulics may take the first step in determining rights, when in his judgment it is necessary, by preparing a statement and plan or map of the locality, and filing the same in court, and is required to do so upon petition of one or more claimants of water rights. In such suit the court refers the proceedings to the supervisor for the taking of testimony as referee, on completion of which a report is filed for further action of the court. The supervisor is in charge of the administration of water rights, in which connection he may designate water districts and appoint watermasters and stream patrolmen, when necessary, upon application of interested parties.

The riparian doctrine is important in the water law, but is of secondary importance in the irrigation economy of the

State. Riparian rights do not attach to navigable waters (*State ex rel. Ham, Yearsley and Rylie v. Superior Court*, 70 Wash. 442, 126 Pac. 945 (1912)), and the waters of nonnavigable streams to which the riparian doctrine applies are those that can be beneficially used on or in connection with riparian land, either directly or prospectively within a reasonable time, the excess being subject to appropriation (*Brown v. Chase*, 125 Wash. 542, 217 Pac. 23 (1923)). To secure protection, a riparian owner must show that either at present, or in the near future, he will make beneficial use of the water (*State v. American Fruit Growers*, 135 Wash. 156, 237 Pac. 498 (1925)).

Underground sources.—The waters of a defined underground stream are subject to the rules that apply to surface streams (*Meyer v. Tacoma Light & Water Co.*, 8 Wash. 144, 35 Pac. 601 (1894)). Percolating waters may be used by the owner of overlying land to a reasonable extent, and in a manner consistent with the reasonable use of his land (*Patrick v. Smith*, 75 Wash. 407, 134 Pac. 1076 (1913); *Evans v. Seattle*, 182 Wash. 450, 47 Pac. (2d) 984 (1935)).

Wyoming

Surface sources.—Rights to the use of surface streams in Wyoming are governed solely by the appropriation doctrine. The riparian doctrine was repudiated in a fairly early case as inapplicable to conditions within the State (*Moyer v. Preston*, 6 Wyo. 308, 44 Pac. 845 (1896)), and has never been acknowledged (*Wyoming v. Colorado*, 259 U. S. 419 (1922)). The constitution declares that the waters of all natural streams, springs, lakes, or other collections of still water are the property of the State, subject to prior appropriation, and that no appropriation shall be denied, except when such denial is demanded by the public interests (art. VIII, secs. 1 and 3). The constitution also provides for a board of control, composed of the State engineer as president, and the superintendents of the 4 water divisions, and vests the board with supervision of the waters of the State (art. VIII, secs. 2, 4 and 5).

To appropriate water, application must be made to the State engineer for a permit. When an appropriation has been perfected and the right has been adjudicated by the board of control, a certificate of appropriation is issued by the board. Adjudications of rights of streams are made by the board of control, in each case after the State engineer has made a hydraulic survey and the superintendent of the water division has taken testimony. A determination or adjudication so made is final unless appealed to the courts. Distribution of water according to priorities is made by the organization of water superintendents and district water commissioners, under the general direction of the State engineer.

Underground sources.—Percolating waters developed artificially belong to the owner of the land upon which they are developed (*Hunt v. Laramie*, 26 Wyo. 160, 181 Pac. 137 (1919)).

TABLE 19.—PROPORTION (PERCENT) OF TOTAL OF AREAS IRRIGATED, BY TYPE OF WATER RIGHTS, BY STATES: 1939, 1929, AND 1919

STATE	APPROPRIATION ¹			RIPARIAN			APPROPRIATION AND RIPARIAN			UNDERGROUND			APPROPRIATION AND UNDERGROUND			RIPARIAN AND UNDERGROUND			ADJUDICATED BY COURT			OTHER, MIXED, AND NOT REPORTED		
	1939 ²	1929	1919	1939 ²	1929	1919	1939 ²	1929	1919	1939 ²	1929	1919	1939 ²	1929	1919	1939 ²	1929	1919	1939 ²	1929	1919	1939 ²	1929	1919
Total (17 States) ³	50.1	41.6	45.9	3.0	2.8	1.9	4.6	—	—	10.6	9.3	5.7	4.5	—	—	0.6	—	—	25.2	41.6	38.5	1.4	4.8	7.9
Arizona	25.7	22.4	69.3	—	—	—	—	—	—	21.3	16.3	8.9	49.7	—	—	—	—	—	0.9	58.2	18.2	2.4	3.1	3.6
California	24.3	38.2	50.5	8.4	7.5	5.7	15.4	—	—	29.1	30.6	20.5	9.4	—	—	2.1	—	—	9.8	16.4	23.3	1.5	7.3	20.0
Colorado	40.7	10.4	9.7	—	—	—	—	—	—	2.0	0.5	0.4	0.2	—	—	—	—	—	55.8	88.4	67.2	1.3	0.7	2.7
Idaho	40.8	45.4	48.1	—	—	—	—	—	—	0.3	0.2	0.1	3.6	—	—	—	—	—	53.5	53.2	44.4	1.8	3.1	7.4
Kansas	15.4	56.9	64.8	2.7	0.1	0.1	1.9	—	—	44.8	16.3	28.5	0.4	—	—	0.2	—	—	28.1	17.7	0.9	6.5	9.0	5.7
Montana	75.6	43.7	53.6	—	—	—	—	—	—	0.1	0.1	(*)	(*)	—	—	—	—	—	23.0	50.5	41.7	1.3	5.7	4.7
Nebraska	85.3	72.4	93.0	0.7	—	—	0.1	—	—	13.3	4.4	0.1	0.3	—	—	0.3	—	—	1.5	22.3	2.1	0.5	0.9	4.7
Nevada	77.9	53.7	65.2	(5)	(5)	(5)	—	—	—	0.7	0.5	0.2	1.5	—	—	—	—	—	16.6	53.3	528.7	3.3	12.5	5.9
New Mexico	81.3	72.6	61.5	—	—	—	—	—	—	6.4	8.5	9.7	0.2	—	—	—	—	—	10.7	17.5	17.1	1.4	1.4	11.7
North Dakota	94.5	82.7	96.2	4.0	—	—	—	—	—	0.2	—	—	—	—	—	—	—	—	—	10.2	—	1.3	7.1	3.8
Oklahoma	55.1	47.1	18.8	18.4	1.1	2.7	—	—	—	13.9	5.0	4.1	—	—	—	2.1	—	—	6.4	—	74.1	4.1	46.6	0.3
Oregon	56.7	39.6	65.7	4.5	10.3	1.5	6.6	—	—	0.7	0.4	0.3	0.8	—	—	0.3	—	—	28.9	44.4	29.8	1.5	5.3	2.7
South Dakota	75.2	71.0	89.3	6.1	5.0	1.6	4.9	—	—	1.1	0.8	0.1	—	—	—	0.3	—	—	7.0	17.4	7.6	5.4	5.8	1.4
Texas	56.5	73.7	70.9	6.3	6.0	12.4	7.2	—	—	25.7	7.7	7.6	0.2	—	—	1.0	—	—	2.5	6.2	0.5	0.6	6.4	8.6
Utah	46.3	41.8	55.7	—	—	—	—	—	—	0.8	1.5	0.6	0.2	—	—	—	—	—	52.3	49.2	42.4	0.4	7.5	1.3
Washington	81.6	68.9	80.0	8.3	5.9	3.2	1.5	—	—	2.7	3.5	3.9	(*)	—	—	—	—	—	4.2	15.0	10.6	1.5	6.7	2.3
Wyoming	96.7	79.2	83.6	—	—	—	—	—	—	0.2	(*)	(*)	(*)	—	—	—	—	—	2.4	17.6	13.4	0.7	3.2	3.0

¹"Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," "Certificate or license from State," also includes "Riparian" rights for Montana and New Mexico in 1919.
²Water rights for supplemental enterprises not included (see State table 16 for each State in the separate State Reports).
³Water rights have not been established in Arkansas, Louisiana, or Florida.
⁴Less than one-tenth of 1 percent.
⁵Riparian rights are not recognized in Nevada, except those adjudicated by courts prior to 1885. The proportion reported as "Riparian," owing to misapprehension as to its legal status, is included with that reported as "Adjudicated by Court."

CENSUS OF IRRIGATION: 1940

TABLE 20.—AREA IRRIGATED WITH PUMPED WATER, 1939, 1929, AND 1919; AND AREA WORKS OF ENTERPRISES

(For the 17 western States)

ITEM (For definitions and explanations, see text)		TOTAL	Arizona	Arkansas	California	Colorado
Total area entirely and partly supplied with pumped water-----						
	1939--acres	6,990,655	566,298	160,818	3,186,053	101,582
	1929--acres	5,767,604	406,917	151,505	3,044,209	54,945
	1919--acres	3,105,331	264,727	141,969	1,298,423	49,505
	Increase or decrease (-), 1929-1939-----	percent	21.2	39.2	6.3	4.7
						84.9
ENTIRE SUPPLY PUMPED						
Area irrigated-----						
	1939--acres	4,451,343	149,935	160,112	2,142,514	61,720
	1929--acres	3,918,985	112,761	149,555	1,959,577	42,421
	1919--acres	2,525,338	46,370	141,719	1,126,687	23,732
	Increase or decrease (-), 1929-1939-----	percent	13.6	33.0	7.1	9.3
						45.5
Area works were capable of supplying with water-----						
	1940--acres	6,678,636	211,297	285,166	3,082,138	85,210
	1930--acres	5,420,619	161,584	206,766	2,507,713	66,642
Pumped from--						
Streams--						
Area irrigated-----						
	1939--acres	1,724,800	1,055	6,733	470,538	4,691
	1929--acres	1,713,380	8,123	1,502	469,944	27,765
	1919--acres	1,226,510	6,671	6,009	295,673	12,747
	Increase or decrease (-), 1929-1939-----	percent	0.7	-87.0	348.3	0.1
						-83.1
Proportion of total-----						
	1939--percent	100.0	0.1	0.4	27.2	0.3
	1929--percent	100.0	0.5	0.1	27.4	1.6
Area works were capable of supplying with water-----						
	1940--acres	2,781,219	1,951	10,946	813,716	8,351
	1930--acres	2,708,769	12,380	1,717	818,004	48,331
Wells--						
Area irrigated-----						
	1939--acres	2,508,076	144,175	149,915	1,511,789	56,771
	1929--acres	2,051,735	104,637	142,978	1,453,272	12,143
	1919--acres	1,263,098	39,694	135,260	826,846	10,114
	Increase or decrease (-), 1929-1939-----	percent	22.2	37.8	4.9	4.0
						367.5
Proportion of total-----						
	1939--percent	100.0	5.7	6.0	60.4	2.3
	1929--percent	100.0	5.1	7.0	70.8	0.6
Area works were capable of supplying with water-----						
	1940--acres	3,621,991	201,201	268,145	2,070,540	76,587
	1930--acres	2,465,888	149,005	199,849	1,646,280	15,463
Lakes--						
Area irrigated-----						
	1939--acres	45,831	100	134	21,972	134
	1929--acres	77,818		75	4,097	405
	1919--acres	35,730	5	450	4,168	871
	Increase or decrease (-), 1929-1939-----	percent	-41.1		78.7	436.3
						-66.9
Proportion of total-----						
	1939--percent	100.0	0.2	0.3	48.0	0.3
	1929--percent	100.0		0.1	5.3	0.5
Area works were capable of supplying with water-----						
	1940--acres	70,318	481	361	23,584	138
	1930--acres	135,880		200	4,524	410
Other sources--						
Area irrigated-----						
	1939--acres	172,686	4,605	3,330	138,215	(³)
	1929--acres	76,052	1	5,000	32,264	2,108
	Proportion of total-----					
	1939--percent	100.0	2.7	1.9	80.0	(³)
Area works were capable of supplying with water-----						
	1940--acres	225,108	7,664	5,714	174,298	(³)
	1930--acres	110,082	1	5,000	38,905	2,438

¹ Percent not shown when more than 1,000.

² Less than one-tenth of 1 percent.

³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

GENERAL DISCUSSION

XLVII

OPERATING PUMPS WERE CAPABLE OF SUPPLYING WITH WATER, 1940 AND 1930; BY SOURCE OF PUMPED WATER, BY STATES
and Arkansas and Louisiana)

Idaho	Kansas	Louisiana	Montana	Nebraska	Nevada	New Mexico	North Dakota	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming
520,235	58,437	405,951	184,192	109,462	15,179	166,291	2,906	2,089	194,320	56,875	815,689	183,525	258,799	23,976
291,544	15,562	449,435	107,245	26,492	7,876	44,433	1,669	458	137,551	61	600,579	160,612	256,854	9,659
114,784	16,155	435,316	35,988	2,826	8,684	25,496	2,469	295	68,867	1,569	464,149	29,450	145,017	2,072
78.4	275.5	-10.1	71.8	313.2	92.7	274.3	74.1	356.1	41.3	(¹)	35.8	14.3	0.8	143.2
504,927	55,921	398,112	37,017	91,629	2,325	81,869	2,406	2,089	57,522	1,962	800,585	23,741	66,059	10,898
120,921	15,157	448,339	44,419	26,272	3,156	37,541	1,669	458	62,024	61	593,248	123,948	167,803	9,675
112,507	13,985	409,576	15,981	1,661	2,942	17,599	2,469	295	68,189	869	461,618	29,097	48,410	1,672
152.2	268.9	-11.2	-16.7	248.8	-25.9	118.1	44.2	356.1	-7.3	(¹)	34.9	-80.8	-60.6	12.6
317,469	79,717	667,721	59,516	147,532	3,404	111,450	6,731	4,133	77,601	3,951	1,402,068	39,706	79,113	14,683
173,403	22,372	792,008	61,699	37,236	8,295	44,332	1,824	931	100,136	246	893,185	140,540	186,689	15,218
294,402	8,279	247,190	55,925	10,176	652	3,897	2,359	1,163	45,008	1,723	525,547	13,445	44,167	7,860
103,362	3,216	257,390	38,620	2,458	821	6,856	1,669	320	50,337	61	527,700	63,809	139,738	9,489
107,181	730	248,308	15,743	1,115	2,647	1,890	2,469	188	64,576	869	421,538	10,389	26,244	1,825
164.8	157.4	-4.0	-7.0	514.0	-20.6	-43.3	41.3	263.4	-10.9	(¹)	-0.4	-78.9	-68.4	-17.2
17.1	0.5	14.3	2.1	0.6	(²)	0.2	0.1	0.1	2.6	0.1	30.4	0.8	2.6	0.5
6.0	0.2	15.0	2.3	0.1	(²)	0.4	0.1	(²)	2.9	(²)	30.8	3.7	8.2	0.6
302,667	12,344	420,321	58,205	19,482	805	5,905	6,678	2,699	59,955	3,658	955,541	15,939	51,120	10,938
114,487	4,010	518,225	51,094	5,485	1,026	10,071	1,824	630	83,624	246	801,502	65,303	155,943	14,867
5,868	44,972	135,192	844	80,673	568	75,556	47	792	8,173	108	262,774	8,925	17,926	3,008
3,546	11,648	172,695	243	23,452	2,117	30,425	-----	65	3,804	-----	60,793	10,283	19,456	180
414	13,235	154,304	139	546	295	15,709	-----	107	1,993	-----	39,483	7,308	17,504	147
65.5	286.1	-21.7	247.3	244.0	-73.2	148.3	-----	(¹)	114.9	-----	332.2	-13.2	-7.9	(¹)
0.2	1.8	5.4	(²)	3.2	(²)	3.0	(²)	(²)	0.3	(²)	10.5	0.4	0.7	0.1
0.2	0.5	8.4	(²)	1.1	0.1	1.5	-----	(²)	0.2	-----	3.0	0.5	0.9	(²)
8,616	63,876	220,316	980	126,423	1,493	102,933	53	1,143	11,805	112	428,992	11,751	23,290	3,715
4,443	18,069	240,005	289	30,922	7,071	33,864	-----	66	4,179	-----	82,296	12,092	21,712	285
4,334	38	6,528	244	251	-----	(³)	-----	40	3,298	-----	4,406	1,371	2,948	(³)
5,144	-----	1,459	5,528	255	-----	15	-----	35	6,092	-----	1,861	49,451	3,395	6
4,812	-----	6,966	79	-----	-----	-----	-----	-----	1,620	-----	597	11,400	4,662	-----
-15.7	-----	347.4	-95.6	-1.6	-----	(³)	-----	14.3	-45.9	-----	136.8	-97.2	-13.2	(³)
9.5	0.1	14.2	0.5	0.5	-----	(³)	-----	0.1	7.2	-----	9.6	3.0	6.4	(³)
6.6	-----	1.9	7.1	0.3	-----	(²)	-----	(²)	7.8	-----	2.4	63.5	4.4	(²)
5,729	78	12,190	308	589	-----	(³)	-----	95	4,373	-----	6,898	12,016	3,432	(³)
38,645	-----	1,859	10,288	540	-----	65	-----	35	10,354	-----	2,562	62,615	3,717	66
323	2,632	9,202	(³)	529	1,105	2,423	-----	(³)	1,043	(³)	7,858	-----	1,018	-----
8,869	293	16,795	28	107	198	245	-----	40	1,591	-----	2,894	405	5,214	-----
0.2	1.5	5.3	(³)	0.3	0.6	1.4	-----	(³)	0.6	(³)	4.6	-----	0.6	-----
4.57	3,419	14,894	(³)	1,038	1,106	2,378	-----	(³)	1,468	(³)	10,667	-----	1,271	-----
15,928	293	31,919	28	269	198	332	-----	200	1,979	-----	6,825	530	5,317	-----

TABLE 20.—AREA IRRIGATED WITH PUMPED WATER, 1939, 1929, AND 1919; AND AREA WORKS OF ENTERPRISES OPERATING

(For the 17 western States)

ITEM (For definitions and explanations, see text)		TOTAL	Arizona	Arkansas	California	Colorado
PART OF SUPPLY PUMPED						
Area irrigated-----	1939--acres	2,539,312	416,363	706	1,043,539	39,862
	1929--acres	1,848,619	294,156	1,750	1,084,632	12,524
	1919--acres	579,993	218,357	250	171,736	25,773
Increase or decrease (-), 1929-1939-----	percent	37.4	41.5	-59.7	-3.8	218.3
Area works were capable of supplying with water-----	1940--acres	3,354,816	516,149	1,229	1,427,377	53,634
	1930--acres	2,530,903	390,108	2,694	1,503,517	13,284
Supplied from--						
Streams, gravity and pumped--						
Area irrigated-----	1939--acres	1,266,148	47,614	(*)	251,196	24,334
	1929--acres	258,094	53		85,169	2,828
	1919--acres	199,595			60,278	9,430
Increase or decrease (-), 1929-1939-----	percent	390.6	(¹)		194.9	760.5
Proportion of total-----	1939--percent	100.0	3.8	(²)	19.9	1.9
	1929--percent	100.0	(³)		33.0	1.1
Area works were capable of supplying with water-----	1940--acres	1,796,105	56,592	(²)	454,260	36,246
	1930--acres	437,233	70		200,955	3,032
Wells, pumped and flowing--						
Area irrigated-----	1939--acres	20,835	374		5,877	482
	1929--acres	16,798	258		9,761	
	1919--acres	35,685	558		23,561	85
Increase or decrease (-), 1929-1939-----	percent	24.0	45.0		-39.8	
Proportion of total-----	1939--percent	100.0	1.8		28.2	2.3
	1929--percent	100.0	1.5		58.1	
Area works were capable of supplying with water-----	1940--acres	24,850	457		6,757	902
	1930--acres	20,767	438		11,442	
Streams, gravity and wells, pumped--						
Area irrigated-----	1939--acres	1,252,329	368,375	479	786,466	15,046
	1929--acres	1,164,349	292,681		780,960	8,956
	1919--acres	344,713	217,799	250	87,897	16,258
Increase or decrease (-), 1929-1939-----	percent	7.6	25.9		0.7	68.0
Proportion of total-----	1939--percent	100.0	29.4	(³)	62.7	1.2
	1929--percent	100.0	25.1		67.1	0.8
Area works were capable of supplying with water-----	1940--acres	1,533,861	459,100	729	966,360	16,486
	1930--acres	1,507,586	358,891		1,022,726	9,412
Other combinations--						
Area irrigated-----	1939--acres					
	1929--acres	409,378	1,164	1,750	208,742	740
Proportion of total-----	1939--percent					
Area works were capable of supplying with water-----	1940--acres					
	1930--acres	565,317	30,709	2,694	268,394	840
Supplemental from pumped streams ⁴ --						
Area irrigated-----	1939--acres	25,644	(²)	(²)	5,807	8,892
	1929--acres	24,871	80		2,453	527
Proportion of total-----	1939--percent	100.0	(²)	(²)	22.6	34.6
Area works were capable of supplying with water-----	1940--acres	35,357	(²)	(²)	11,002	11,605
	1930--acres	32,787	98		4,046	542
Supplemental from pumped wells ⁴ --						
Area irrigated-----	1939--acres	518,429	15,210	302	355,435	104,309
	1929--acres	293,026	1,592		287,136	1,343
Proportion of total-----	1939--percent	100.0	2.9	0.1	68.5	20.1
Area works were capable of supplying with water-----	1940--acres	693,540	21,452	1,216	484,197	126,120
	1930--acres	321,748	1,595		314,399	2,229
Other mixed ⁵ --						
Area irrigated-----	1939--acres	266,927	6,166	623	50,757	17,398
Proportion of total-----	1939--percent	100.0	2.3	0.2	19.0	6.5
Area works were capable of supplying with water-----	1940--acres	325,947	7,100	1,210	70,627	20,027

¹ Percent not shown when more than 1,000.

² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

³ Less than one-tenth of 1 percent.

⁴ Areas shown under supplemental pumping are parts of areas shown under primary pumping and therefore are not added again into the totals (see text).

⁵ May include data for enterprises having unsegregated pumped or partly pumped sources and not included in above classifications or totals.

GENERAL DISCUSSION

XLIX

PUMPS WERE CAPABLE OF SUPPLYING WITH WATER, 1940 AND 1930; BY SOURCE OF PUMPED WATER, BY STATES—Continued

and Arkansas and Louisiana)

Idaho	Kansas	Louisiana	Montana	Nebraska	Nevada	New Mexico	North Dakota	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming
215,306	2,516	5,819	147,175	17,833	12,864	84,422	500	-----	136,798	34,913	15,104	159,784	192,740	13,078
170,623	405	1,096	62,824	220	4,740	6,892	-----	-----	75,527	-----	7,331	36,664	89,051	184
2,227	2,190	23,740	20,027	965	5,742	7,897	-----	-----	698	500	2,531	353	96,607	400
26.2	521.2	450.9	134.3	(¹)	171.2	(¹)	-----	-----	81.1	-----	106.0	335.8	116.4	(¹)
240,238	3,345	7,454	229,956	32,167	13,489	127,872	590	-----	172,379	73,749	19,906	193,497	227,826	14,133
206,440	800	1,195	114,194	315	22,884	8,212	-----	-----	91,117	-----	9,041	43,922	122,993	187
174,792	(²)	1,830	145,679	12,814	2,780	70,129	500	-----	132,382	34,913	12,007	151,206	191,824	11,908
76,894	-----	-----	56,970	-----	-----	-----	-----	-----	14,636	-----	3,200	14,200	4,144	-----
1,870	600	12,620	19,872	850	720	-----	-----	-----	253	-----	350	50	92,702	-----
127.3	-----	-----	155.7	-----	-----	-----	-----	-----	804.5	-----	275.2	964.8	(¹)	-----
13.9	(²)	0.1	11.5	1.0	0.2	5.5	(³)	-----	10.5	2.8	0.9	11.9	15.2	0.9
29.8	-----	-----	22.1	-----	-----	-----	-----	-----	5.6	-----	1.2	5.5	1.6	-----
197,391	(²)	2,685	228,320	26,301	2,895	110,675	590	-----	166,279	73,749	15,694	184,225	226,781	12,892
90,212	-----	-----	104,449	-----	-----	-----	-----	-----	14,636	-----	4,700	14,200	4,979	-----
414	(²)	214	-----	-----	237	11,729	-----	-----	-----	-----	1,141	307	-----	-----
50	-----	196	-----	-----	177	5,855	-----	-----	-----	-----	-----	398	103	-----
-----	50	1,075	-----	-----	65	6,556	-----	-----	340	-----	1,727	178	1,490	-----
728.0	-----	9.2	-----	-----	33.9	100.3	-----	-----	-----	-----	-----	-22.9	-----	-----
2.0	(²)	1.0	-----	-----	1.1	56.3	-----	-----	-----	-----	5.5	1.5	-----	-----
0.3	-----	1.2	-----	-----	1.1	34.8	-----	-----	-----	-----	-----	2.4	0.6	-----
419	(²)	393	-----	-----	360	13,704	-----	-----	-----	-----	1,258	428	-----	60
64	-----	220	-----	-----	189	6,879	-----	-----	-----	-----	-----	518	1,017	-----
40,100	2,443	3,775	1,496	5,019	9,837	2,564	-----	-----	4,416	-----	1,956	8,271	916	1,170
72,959	405	-----	2,694	70	2,260	655	-----	-----	994	-----	850	20	708	137
357	1,540	10,045	155	115	4,957	1,341	-----	-----	105	500	454	125	2,415	400
-45.0	503.2	-----	-44.5	(¹)	335.3	291.5	-----	-----	344.3	-----	130.1	(¹)	29.4	754.0
3.2	0.2	0.3	0.1	0.4	0.8	0.2	-----	-----	0.4	-----	0.2	0.7	0.1	0.1
6.3	(³)	-----	0.2	(³)	0.2	(³)	-----	-----	(³)	-----	(³)	(³)	(³)	(³)
42,428	3,183	4,396	1,636	5,866	10,234	3,299	-----	-----	6,100	-----	2,954	8,844	1,045	1,201
90,044	800	-----	4,520	70	17,045	935	-----	-----	1,158	-----	860	20	965	140
20,720	-----	900	3,160	150	2,303	382	-----	-----	59,897	-----	3,281	22,046	84,096	47
26,120	-----	975	5,225	245	5,650	398	-----	-----	75,323	-----	3,481	29,184	116,032	47
552	(²)	304	2,708	-----	(²)	-----	-----	-----	2,424	-----	1,802	(²)	145	2,781
8,915	60	-----	-----	-----	20	-----	-----	-----	7,887	-----	254	75	4,600	-----
2.2	(²)	1.2	10.6	-----	(²)	-----	-----	-----	9.5	-----	7.0	(²)	0.6	10.8
605	(²)	387	3,413	-----	(²)	-----	-----	-----	2,453	-----	2,395	(²)	160	2,830
9,256	1,000	-----	-----	-----	20	-----	-----	-----	11,074	-----	1,700	118	4,933	-----
2,517	13,429	2,429	1	15,548	518	5,031	-----	-----	703	-----	(²)	1,943	850	(²)
120	1,050	200	-----	-----	-----	-----	-----	-----	612	-----	-----	816	157	-----
0.5	2.6	0.5	(³)	3.0	0.1	1.0	-----	-----	0.1	-----	(²)	0.4	0.2	(²)
3,303	18,926	3,985	2	23,750	605	5,775	-----	-----	893	-----	(²)	2,258	854	(²)
128	1,162	650	-----	-----	-----	-----	-----	-----	612	-----	-----	816	157	-----
57,173	146	6,745	12,467	4,680	22,781	23,910	-----	85	17,386	278	8,884	20,272	12,575	4,601
21.5	0.1	2.5	4.7	1.8	8.5	9.0	-----	(⁵)	6.5	0.1	3.3	7.6	4.7	1.7
64,570	288	11,608	13,171	6,766	24,665	31,573	-----	154	19,262	402	12,549	20,811	15,756	5,408

CENSUS OF IRRIGATION: 1940

TABLE 21.—ENTERPRISES USING PUMPED WATER—INVESTMENT, 1940, 1930, AND 1920; AND COST

(For the 17 western States)

ITEM (For definitions and explanations, see text)		TOTAL	Arizona	Arkansas	California	Colorado
Total investment, entire supply pumped and part supply pumped-----	1940--dollars-----	512,390,046	76,688,203	5,733,495	243,573,872	7,643,065
	1930--dollars-----	¹ 413,456,976	52,877,571	6,824,598	¹ 235,767,965	6,452,510
	1920--dollars-----	178,519,476	21,087,181	7,143,223	85,276,671	3,486,853
ENTIRE SUPPLY PUMPED						
Investment, total-----	1940--dollars-----	241,970,954	13,091,794	5,688,745	138,963,467	1,447,748
	1930--dollars-----	¹ 242,782,577	10,206,959	6,773,348	¹ 135,252,088	6,001,642
	1920--dollars-----	158,274,490	3,959,591	7,134,723	70,414,827	2,893,707
Average, per acre-----	1940--dollars-----	36.23	61.96	19.98	45.09	16.99
	1930--dollars-----	¹ 44.79	63.25	32.76	¹ 53.93	90.06
	1920--dollars-----	35.88	56.94	40.52	45.32	77.19
Pumped from-- Streams-- Investment-----	1940--dollars-----	81,236,358	38,096	145,077	19,458,731	142,190
	1930--dollars-----	102,027,681	1,459,527	30,675	31,603,584	5,451,389
	1920--dollars-----	59,271,070	521,852	96,450	16,267,561	2,490,900
Average, per acre-----	1940--dollars-----	29.42	19.53	13.25	23.91	17.03
	1930--dollars-----	37.67	117.89	17.86	38.63	112.79
	1920--dollars-----	27.97	55.53	14.65	33.83	122.97
Maintenance and operation cost per acre-----	1939--dollars-----	3.81	2.93	5.07	3.18	1.79
	1929--dollars-----	4.30	9.83	6.27	4.47	3.89
	1919--dollars-----	6.50	8.12	7.06	5.10	9.49
Wells-- Investment-----	1940--dollars-----	139,675,087	9,594,076	5,414,533	104,729,374	1,300,983
	1930--dollars-----	¹ 131,426,464	8,747,182	6,640,773	¹ 100,421,609	474,053
	1920--dollars-----	76,741,804	3,417,339	7,028,773	54,057,185	375,277
Average, per acre-----	1940--dollars-----	38.56	47.68	20.19	50.58	16.99
	1930--dollars-----	¹ 53.30	58.70	33.23	¹ 61.00	30.66
	1920--dollars-----	45.82	57.16	41.70	50.60	23.37
Maintenance and operation cost per acre-----	1939--dollars-----	6.92	7.98	5.53	8.41	3.87
	1929--dollars-----	9.17	10.76	7.04	10.05	5.36
	1919--dollars-----	10.07	13.15	14.06	10.40	4.54
Lakes-- Investment-----	1940--dollars-----	1,865,165	2,530	2,725	49,938	1,575
	1930--dollars-----	3,591,977	-----	1,900	494,070	15,100
	1920--dollars-----	2,261,616	400	9,500	90,081	27,530
Average, per acre-----	1940--dollars-----	26.52	5.26	7.55	2.12	11.41
	1930--dollars-----	26.43	-----	9.50	109.21	31.95
	1920--dollars-----	37.84	80.00	10.00	20.34	23.51
Maintenance and operation cost per acre-----	1939--dollars-----	3.40	6.45	5.67	0.73	4.37
	1929--dollars-----	3.93	-----	3.49	3.97	3.21
	1919--dollars-----	5.20	10.00	11.78	1.66	3.21
Other sources-- Investment-----	1940--dollars-----	19,194,344	3,457,092	121,410	14,725,424	(²)
	1930--dollars-----	5,736,455	250	100,000	2,732,825	63,100
	1920--dollars-----	-----	-----	-----	-----	-----
Average, per acre-----	1940--dollars-----	85.27	451.08	21.25	84.48	(²)
	1930--dollars-----	52.11	250.00	20.00	70.24	25.88
	1920--dollars-----	-----	-----	-----	-----	-----
Maintenance and operation cost per acre-----	1939--dollars-----	6.18	9.96	4.09	6.61	(²)
	1929--dollars-----	7.22	100.00	8.00	7.09	1.28

¹ Revised.² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

GENERAL DISCUSSION

LI

OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF SUPPLY AND BY STATES
and Arkansas and Louisiana)

Idaho	Kansas	Louisiana	Montana	Nebraska	Nevada	New Mexico	North Dakota	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming
24,265,186	1,517,280	10,927,812	17,450,115	4,129,888	808,297	13,417,215	286,412	202,352	21,638,955	4,944,393	43,756,279	7,969,053	27,195,198	553,000
14,518,484	856,726	15,505,080	8,860,390	707,372	650,144	2,009,411	10,340	25,395	9,857,113	11,423	31,133,165	7,513,654	21,782,541	295,204
5,906,728	868,267	15,504,957	2,540,087	86,566	335,187	1,524,688	552,007	51,285	2,970,495	96,340	22,649,707	1,496,839	8,815,281	127,144
8,915,204	1,243,788	10,823,142	2,016,691	2,229,585	87,984	2,427,197	229,282	202,352	2,421,921	122,161	43,352,390	1,787,045	6,613,858	311,600
6,255,156	763,606	15,446,414	2,419,277	699,042	200,851	1,652,607	10,340	25,395	4,967,426	11,423	30,644,803	6,112,809	15,048,157	293,254
5,678,828	763,725	15,062,362	824,751	62,851	159,800	961,525	552,007	51,285	2,952,695	93,340	22,391,970	1,451,168	4,694,483	110,374
28.06	15.60	18.21	33.88	15.11	25.85	21.78	34.06	48.96	31.21	30.92	30.92	45.01	83.60	21.22
55.95	35.05	19.60	39.21	18.77	24.21	37.28	5.67	27.28	49.61	46.43	54.31	43.50	80.61	19.27
40.20	34.46	19.87	24.92	17.38	43.70	36.88	44.89	108.42	34.60	29.07	24.92	29.91	63.12	30.69
8,265,470	167,340	6,297,829	1,957,853	219,587	10,635	83,892	226,162	67,378	1,824,836	103,110	36,391,597	834,571	4,781,231	222,773
5,218,180	178,378	8,831,806	2,208,928	71,933	45,000	334,111	10,340	9,870	4,468,284	11,423	26,286,985	4,355,987	11,170,037	283,444
5,108,912	22,142	7,538,954	900,216	59,581	119,900	36,520	552,007	4,210	2,807,806	93,340	19,432,010	733,077	2,605,718	99,914
27.30	13.58	14.98	33.64	11.27	13.21	14.21	53.87	24.96	30.44	28.19	38.08	52.36	93.53	20.37
45.58	45.98	17.04	45.23	15.11	45.86	33.18	5.67	15.53	53.43	46.43	32.80	66.70	71.63	19.06
58.85	14.37	16.78	24.49	16.04	44.82	12.46	44.89	11.86	34.61	29.07	23.70	44.23	52.59	28.98
1.92	5.60	4.05	3.47	3.33	1.88	2.08	3.45	2.96	4.14	4.73	4.99	2.57	8.81	1.82
4.52	3.43	5.66	2.36	3.85	7.01	2.01	1.59	3.00	5.72	8.17	4.96	1.29	3.84	1.58
3.43	7.57	7.76	5.65	2.86	1.76	1.30	12.21	3.74	3.09	4.03	7.55	5.16	11.16	9.91
132,851	1,015,070	4,159,554	34,741	1,989,248	56,249	2,312,580	5,120	87,265	499,877	6,000	6,437,794	345,889	1,468,048	88,075
87,248	804,328	6,013,185	14,259	616,939	142,761	1,312,396	---	12,225	246,833	---	3,879,881	418,916	1,785,628	8,250
24,985	741,583	5,366,948	16,285	23,250	19,800	925,003	---	47,075	118,306	---	2,783,260	153,091	1,633,134	10,460
15.42	15.89	18.88	35.45	15.73	37.68	22.46	58.87	76.33	42.34	53.57	15.01	29.43	63.03	23.71
19.64	33.44	25.05	49.34	19.95	20.19	58.75	---	185.23	59.06	---	47.15	34.64	82.24	28.95
48.61	36.14	25.59	106.44	20.25	37.98	39.97	---	398.94	48.93	---	39.24	11.83	81.91	70.68
2.71	5.35	3.48	4.64	3.49	8.21	4.27	7.26	6.48	6.42	14.55	3.10	3.71	10.34	4.66
2.30	5.69	4.45	9.38	4.03	4.82	6.44	---	14.30	10.72	---	8.50	3.58	15.43	34.76
5.55	6.96	5.95	5.41	5.16	12.10	7.51	---	40.78	8.04	---	11.07	2.08	12.71	7.79
512,045	2,375	125,515	22,997	4,325	---	(²)	---	7,509	59,040	---	168,872	606,585	298,284	(²)
720,528	---	46,750	194,880	5,000	---	500	---	1,000	185,600	---	51,737	1,517,256	558,096	1,560
544,981	---	356,960	8,250	---	---	---	---	---	26,583	---	176,700	565,000	455,631	---
89.38	30.45	10.30	74.67	7.34	---	(²)	---	79.04	13.50	---	24.48	50.48	86.91	(²)
18.64	---	25.15	18.94	9.26	---	7.69	---	28.57	17.92	---	20.19	21.04	150.15	23.64
59.20	---	35.20	45.65	---	---	---	---	---	14.88	---	22.38	29.74	114.51	---
4.36	5.26	4.49	4.34	4.90	---	(²)	---	9.58	1.73	---	2.41	12.07	15.65	(²)
8.51	---	2.97	4.52	5.88	---	5.00	---	---	2.16	---	3.69	2.60	19.73	4.17
6.72	---	9.17	11.07	---	---	---	---	---	2.52	---	6.32	3.58	13.05	---
6,860	59,005	240,464	(²)	16,425	21,100	80,625	---	(²)	38,168	(²)	354,127	---	66,295	---
207,200	2,900	554,675	1,210	5,170	15,070	5,600	---	2,500	66,709	---	426,200	20,650	1,534,396	---
15.01	17.26	16.15	(²)	15.82	19.06	11.88	---	(²)	26.00	(²)	33.20	---	52.16	---
13.09	9.90	17.38	43.21	17.89	66.01	16.87	---	12.50	33.70	---	62.45	38.96	288.58	---
3.80	4.72	2.62	(²)	3.77	1.16	0.80	---	(²)	5.43	(²)	3.79	---	12.68	---
2.87	0.85	8.20	6.96	6.74	3.21	7.32	---	5.00	3.07	---	10.57	5.69	14.26	---

CENSUS OF IRRIGATION: 1940

TABLE 21.—ENTERPRISES USING PUMPED WATER—INVESTMENT, 1940, 1930, AND 1920; AND COST OF

(For the 17 western States)

ITEM (For definitions and explanations, see text)	TOTAL	Arizona	Arkansas	California	Colorado
PART OF SUPPLY PUMPED					
Investment, total-----1940—dollars	270,419,092	65,606,409	49,750	104,610,405	8,595,317
-----1930—dollars	170,674,399	42,670,612	51,250	100,515,777	450,888
-----1920—dollars	40,244,986	17,147,590	8,500	14,861,844	595,146
Average, per acre-----1940—dollars	80.61	125.23	40.48	73.29	119.24
-----1930—dollars	67.44	106.58	19.02	66.85	35.94
-----1920—dollars	60.05	71.02	28.35	78.42	22.60
Supplied from—					
Streams, gravity and pumped—					
Investment-----1940—dollars	138,541,602	8,195,261	(²)	34,584,451	3,270,498
-----1930—dollars	20,823,588	2,550	-----	9,730,362	90,360
-----1920—dollars	9,406,594	-----	-----	5,084,058	397,392
Average, per acre-----1940—dollars	77.15	144.81	(²)	76.13	90.23
-----1930—dollars	47.63	38.45	-----	48.42	29.80
-----1920—dollars	39.57	-----	-----	49.02	41.72
Maintenance and operation cost per acre-----1939—dollars	2.25	2.48	(²)	3.18	3.29
-----1929—dollars	4.41	5.49	-----	8.25	2.72
-----1919—dollars	2.35	-----	-----	1.93	2.54
Wells, pumped and flowing—					
Investment-----1940—dollars	1,855,316	34,487	-----	1,313,926	11,650
-----1930—dollars	1,548,810	28,750	-----	1,153,841	-----
-----1920—dollars	2,497,049	54,700	-----	1,776,156	5,300
Average, per acre-----1940—dollars	74.66	75.46	-----	194.45	12.89
-----1930—dollars	74.58	65.64	-----	100.84	-----
-----1920—dollars	58.47	68.46	-----	65.02	35.12
Maintenance and operation cost per acre-----1939—dollars	7.96	5.15	-----	20.81	0.35
-----1929—dollars	9.27	10.64	-----	13.47	-----
-----1919—dollars	8.04	13.64	-----	7.65	4.78
Streams, gravity and wells, pumped—					
Investment-----1940—dollars	111,874,661	54,903,401	7,200	55,040,258	209,787
-----1930—dollars	99,936,110	37,553,267	-----	60,683,254	212,058
-----1920—dollars	28,341,345	17,092,890	8,500	10,001,850	190,454
Average, per acre-----1940—dollars	72.94	119.59	9.88	56.96	12.72
-----1930—dollars	66.29	104.64	-----	59.53	22.55
-----1920—dollars	72.71	71.03	28.35	100.74	11.50
Maintenance and operation cost per acre-----1939—dollars	5.56	4.69	1.36	3.24	1.80
-----1929—dollars	4.46	5.06	-----	5.29	1.74
-----1919—dollars	5.97	2.70	30.15	15.62	0.75
Other combinations—					
Investment-----1940—dollars	-----	-----	-----	-----	-----
-----1930—dollars	37,811,165	5,027,245	51,250	19,437,761	26,100
Average, per acre-----1940—dollars	-----	-----	-----	-----	-----
-----1930—dollars	66.89	163.71	19.02	72.42	31.07
Maintenance and operation cost per acre-----1939—dollars	-----	-----	-----	-----	-----
-----1929—dollars	4.33	7.73	4.09	6.05	2.38
Supplemental from pumped streams—					
Investment-----1940—dollars	1,622,648	(²)	(²)	515,449	956,433
-----1930—dollars	927,158	10,200	-----	70,681	67,000
Average, per acre-----1940—dollars	45.89	(²)	(²)	46.85	82.43
-----1930—dollars	28.28	104.08	-----	17.47	123.62
Maintenance and operation cost per acre-----1939—dollars	4.84	(²)	(²)	7.85	4.84
-----1929—dollars	6.27	14.65	-----	5.59	6.15
Supplemental from pumped wells—					
Investment-----1940—dollars	16,524,863	472,510	14,500	13,156,321	1,947,019
-----1930—dollars	9,627,568	48,600	-----	9,459,878	55,350
Average, per acre-----1940—dollars	23.83	22.03	11.92	27.17	15.44
-----1930—dollars	29.92	30.47	-----	30.03	24.83
Maintenance and operation cost per acre-----1939—dollars	3.86	3.59	4.69	4.35	5.06
-----1929—dollars	5.91	2.44	-----	5.97	5.17
Other mixed ³ —					
Investment-----1940—dollars	14,200,902	294,173	29,000	4,872,453	469,591
Average, per acre-----1940—dollars	43.57	41.43	25.97	68.99	23.45
Maintenance and operation cost per acre-----1940—dollars	2.44	3.53	2.25	6.07	1.02

² Data included only in totals because less than 3 enterprises reported in the 1940 Census.³ May include data for enterprises having unsegregated pumped or partially pumped sources and not included in above classifications or totals.

GENERAL DISCUSSION

LIII

MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF SUPPLY AND BY STATES—Continued
and Arkansas and Louisiana)

Idaho	Kansas	Louisiana	Montana	Nebraska	Nevada	New Mexico	North Dakota	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming
15,349,962	273,492	104,870	15,433,422	1,900,301	220,313	10,990,018	57,130		19,217,034	4,822,232	383,889	6,182,008	20,581,340	241,400
8,285,328	73,120	58,876	4,441,113	8,330	449,313	356,804			4,889,887		486,362	1,200,625	6,734,384	1,950
227,900	104,532	442,095	1,615,318	23,735	195,397	563,165			17,800	3,000	257,737	45,671	4,120,798	16,770
63.89	81.76	14.04	87.11	59.08	16.33	86.08	96.83		111.48	65.39	19.29	31.95	90.34	17.06
40.12	91.40	49.10	38.89	26.44	19.63	43.45			53.66		54.02	27.34	54.75	10.43
47.20	27.85	10.53	47.83	17.32	22.17	62.32			25.14	3.00	53.63	65.81	40.68	26.45
14,225,602	(²)	26,950	15,406,871	1,515,810	27,103	10,411,418	57,130		18,977,045	4,822,232	281,287	6,046,221	20,513,648	150,200
5,663,215			4,374,096						347,967		229,067	105,650	280,321	
168,200	50,000	172,000	1,612,318	18,700	8,000				3,700		60,000	5,100	3,827,148	
72.07	(²)	10.11	87.48	57.63	9.36	94.07	96.83		114.13	65.39	17.92	32.83	90.46	11.65
62.78			41.88						23.77		48.74	7.44	56.30	
37.63	58.82	6.21	47.99	16.40	11.11				14.07		100.00	25.50	39.97	
1.82	(²)	2.70	1.31	2.08	0.25	3.74	3.40		2.50	1.46	6.08	1.09	2.08	0.14
2.80			1.91						1.54		8.00	1.73	8.24	
* 8.30	20.00	6.06	1.77	1.04	0.76				2.55		8.57		1.99	
6,800	(²)	21,169			22,927	401,119					26,395	11,265		4,000
28,500		17,326			10,760	251,863						20,870	36,900	
	4,000	22,500			5,500	388,165			2,600		163,057	18,571	56,500	
16.23	(²)	53.87			63.69	29.27					20.98	26.32		66.67
445.51		78.75			56.93	36.61						40.29	36.28	
	66.67	16.98			78.57	52.09			7.65		47.57	71.15	37.82	
4.27	(²)	5.94			1.67	2.69					1.90	2.58		
16.80		3.90			5.26	3.00						3.49	2.91	
		4.19			61.77	8.99			18.00		16.69	9.48	1.86	
1,018,895	15,622	39,850	15,411	85,477	98,398	73,933			183,680		62,360	64,948	30,100	25,391
1,098,605	30,010		25,267	2,330	119,903	86,301			32,292		43,887	3,500	43,836	1,600
59,700	50,532	247,595	3,000	5,035	181,887	175,000			11,500	3,000	34,680	22,000	237,150	16,770
24.01	4.91	9.07	9.42	14.57	9.61	22.41			30.11		21.11	7.34	28.80	21.14
12.20	37.51		5.59	33.29	7.03	92.50			27.89		51.03	175.00	45.42	11.43
166.76	17.86	19.05	17.65	21.89	22.67	110.48			109.52	3.00	44.58	94.42	58.28	26.45
1.73	1.00	4.31	0.75	1.38	0.55	2.89			2.48		3.54	0.81	5.30	1.67
1.55	10.12		1.11	2.86	2.29	1.13			5.58		8.84	19.00	8.86	0.52
1.00	1.55	10.69	6.67	3.00	1.57	39.77			17.89		16.83	2.84	20.70	1.20
1,277,300		28,550	41,750	6,000	318,650	13,640			4,278,278		213,400	1,047,800	6,043,091	350
48.90		29.28	7.99	24.49	56.40	34.27			56.80		61.30	35.90	52.08	7.45
2.22		5.89	0.72	1.67	4.22	4.19			1.45		5.66	2.99	3.08	0.85
9,317		(²)	10,940	30,370		(²)			15,062		12,147	(²)	7,204	61,509
210,208		10,000				5,000			229,690		2,008	1,505	320,866	
15.40		(²)	28.27	8.90		(²)			6.14		5.07	(²)	45.02	21.73
22.71		10.00				250.00			20.74		1.18	12.75	65.04	
1.90		(²)	2.03	2.65		(²)			0.64		2.50	(²)	6.61	4.94
6.11						38.15			2.48		7.87	5.60	13.55	
89,348	256,095	15,273	200	268,644	71,885	102,068			41,247		(²)	57,365	30,388	(²)
5,500	43,110	2,800							1,460			21,500	9,370	
27.05	13.53	3.83	100.00	11.31	118.82	17.67			46.19		(²)	25.41	35.58	(²)
42.97	37.10	4.31							2.58			26.35	59.68	
2.70	2.21	1.55	15.00	1.44	1.96	2.01			6.73		(²)	2.21	4.64	(²)
8.62	2.40	3.50							0.29			2.09	8.09	
1,403,443	17,400	252,535	279,235	57,617	207,591	1,378,932		5,600	917,211	10,352	411,305	332,197	2,549,048	713,239
21.74	60.42	21.76	21.20	8.52	8.42	43.67		36.36	47.62	25.75	32.78	15.96	161.78	131.89
1.63	4.75	3.39	0.95	0.94	0.25	0.65		6.78	1.57	2.17	2.03	1.26	5.79	0.97

Areas and Investments of the Bureau of Reclamation

Census of Irrigation.—According to statistics of the Bureau of the Census, the total area of agricultural land served with water by the Bureau of Reclamation of the United States Department of Interior, shows an increase of about 20 percent in the 10-year period, 1930 to 1940. This increase is divided almost equally between new land furnished a full supply of irrigation water, and land furnished a part supply to supplement inadequate water received from other systems.

The gains are analyzed as follows:

ITEM	Acres	Increase since 1929 (percent)
LAND WITHIN FEDERAL RECLAMATION PROJECTS		
Area irrigated-----1939	1,824,004	22
Area works were capable of irrigating-----1940	2,348,967	20
LAND OUTSIDE FEDERAL RECLAMATION PROJECTS		
Area supplied supplemental water-----1939	1,460,470	18
Area works were capable of supplying supplemental water-1940	1,762,721	21

Scope of operations.—The most extensive construction program undertaken by the Bureau since the enactment of the Reclamation Law in 1902 began in 1933. This program resulted from an acceleration of interest in water conservation in the West, the need for public works to provide employment, and the demand for newly irrigated land for the settlement of the increasing population of the West. Increasing drafts on underground water supplies and the prolonged droughts of the 1930-40 decade affected the water supplies of established irrigated areas, which brought demands for storage and diversion facilities to provide supplemental water. Increased recognition of the possibilities of power developments in multiple-purpose projects as a means of providing revenue to aid in repayment of irrigation costs was a major contributing factor.

Because of the magnitude of some of the projects, the full results of the program will not be fully realized for several years. The rate of progress towards completion is governed by appropriations, and since the opening of World War II also by priorities for critical materials and availability of labor. Since 1930, several major projects involving new land were completed, older undertakings were extended, and storage facilities were constructed on 11 projects for the purpose of supplementing the water supplies of land inadequately irrigated by other systems. When the construction program authorized as of January 1, 1940 is completed, the Bureau will be prepared to furnish a full supply of water to 5,115,224 acres, and supplemental water to 5,700,343 acres. In operation or planned in connection with the program on January 1, 1940 are power facilities with an ultimate capacity of 4,190,162 kilowatts.¹

Since the Census of 1930, dams were completed by the Bureau which increased the reservoir capacity on projects operated primarily for irrigation to 17,292,933 acre-feet. Dams under construction or authorized will, when completed, more than double this capacity and make a total of 39,088,000 acre-feet.

In addition, the Bureau completed the storage facilities for three major multiple-purpose projects which provide a total storage capacity of 36,189,000 acre-feet: Boulder Dam, (32,359,000 acre-feet) and Parker Dam (710,000 acre-feet) on the Colorado River in the Pacific Southwest; and Marshall Ford Dam (3,120,000 acre-feet) on the Colorado River in Texas. While these projects have a direct bearing on irrigation, their other functions predominate, and statistics relating to them are not included with data on projects dealt with in the 1940 Irrigation Census.

Projects in operation.—The Bureau of Reclamation had 40 projects in operation in 1940 in 15 States: Arizona, California, Colorado, Idaho, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. Of these, 7 are interstate projects. Most of the 40 are completed, but several require substantial additions to the distribution systems before their full capacities

may be utilized. Data on the acreage, irrigation and nonirrigation investment, and estimates of the costs to be repaid by irrigators on project land, supplemental water users, and power consumers have been tabulated.²

While irrigation is the major function of the Bureau of Reclamation, most of its projects in operation or under construction have multiple purposes, adding greatly to their feasibility.

Generally speaking, projects in operation are of the following types:

1. Those which provide a full or primary water supply for land wholly within project boundaries, and have no other function except in many instances the drainage of the area irrigated.
2. Those which provide a full supply for project lands brought into cultivation and at the same time afford supplemental water for areas outside of project boundaries inadequately irrigated by other systems. Some of this type have extensive power facilities which serve commercial customers and return a substantial revenue which aids in the repayment of project costs.
3. Those which store supplemental water for the irrigation of nonproject areas threatened with retrogression to desert through shortages or failure of primary water supplies. The demand for this type of project greatly increased during the drought years of the 30's and resulted in the authorization of several large projects, many with power facilities.
4. Multiple-purpose projects such as those created by construction of Boulder, Parker, and Marshall Ford Dams.

The relationship to irrigation of the projects in the first three classifications are summarized in detail in the Census Irrigation State Reports.

Of those in the fourth class, Boulder's storage and flow regulation of the Colorado River will aid irrigation in Arizona and southern California. Through the All-American Canal system, authorized by the Boulder Canyon Project Act of 1928 and which began service with the irrigation season of 1941, an adequate water supply is promised by a route entirely within the United States to half a million irrigable acres in California in the Imperial Valley and to a large potentially irrigable area which can be served by the Coachella branch of the system on the East Mesa and in the Coachella Valley.

Power developments.—Power revenues of the Boulder Plant will advance investigations and the construction of irrigation and power projects elsewhere in the 7 States of the Colorado River Basin, through the allocation of \$25,000,000 for this purpose over a period of 50 years. Power is expected to repay in 50 years about 90 percent of the cost of Boulder Dam. Storage of water for municipal purposes in southern California, flood control, river regulation, and recreation are other major functions of the project.

Parker Dam, constructed by the Bureau as a part of the Boulder system with funds provided by the Metropolitan Water District of southern California, creates a forebay from which water is pumped into the District's aqueduct for transfer 241 miles to Los Angeles and 12 other cities of the metropolitan area of southern California. The power plant at Parker Dam, beginning operation in 1942, will also supply pumping energy for Federal projects in Arizona, and for industrial and commercial purposes.

Marshall Ford Dam in Texas is primarily for flood control and power, but will also regulate the Colorado River of Texas thus aiding downstream irrigation of rice and other lands.

Projects under construction.—In addition to the three types of irrigation and the major multiple-purpose projects in operation, the Bureau of Reclamation has 18 other projects under construction nearly all of which have several purposes that were taken into consideration when the projects were authorized as economically feasible—a prerequisite to construction. These purposes include power development, municipal

¹ See footnote (3) page LV. Also, see footnote on page LVI. ² See table A on page LVII.

water supply, flood control, navigation, river regulation, soil conservation, recreation, and wildlife protection. These projects are located in the 14 States of Arizona, California, Colorado, Idaho, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming. These projects are listed in the applicable State reports under the heading "Bureau of Reclamation areas and investment."

The projects under construction are divided into two classes:

1. Those which will bring new land under irrigation (with or without power or other functions to assist in repaying the cost of construction).
2. Those which will provide supplemental water for areas inadequately irrigated (with power or other facilities included).

Both classes include projects having nonreimbursable features charged to flood control or navigation, or which may represent allocations of work by the Civilian Conservation Corps or the Work Projects Administration.

Among the major multiple-purpose projects under construction which are included in the State summaries in table E, is the Columbia River Basin development in Washington, of which Grand Coulee Dam is the major engineering feature scheduled for completion in 1941. This project is expected ultimately to bring under irrigation 1,200,000 acres of land. The Central Valley Project in California as planned will benefit 2,000,000 acres now mostly under irrigation, through substituted and supplemental water supplies and the prevention of salt water intrusion in the Sacramento-San Joaquin Delta Region. It may also bring in 50,000 or more acres of new land. The Colorado-Big Thompson Project will serve 625,000 acres of producing land now mostly irrigated, in northeastern Colorado through the diversion of 300,000 acre-feet of water annually from the Colorado River Basin through a transmountain tunnel to the South Platte River Basin on the eastern slope of the Rocky Mountains. All these projects depend on revenue from power facilities for the repayment of a substantial part of the construction costs of irrigation facilities.

Other projects under construction or authorized, in addition to the All-American Canal system in California, previously mentioned, are located in Arizona, California, Idaho, New Mexico, Oklahoma, Oregon, Utah, Washington, and Wyoming, and are discussed individually in the separate Census of Irrigation State Reports under "Bureau of Reclamation areas and investments."

Included in the projects authorized or under construction is a third or new type of development represented by six projects designed to rehabilitate dry-farm or partly irrigated areas principally in the Great Plains States which were seriously affected by drought in the 1930-40 decade. These projects authorized under Water Conservation and Utilization legislation cover relatively small acreages, and contributions of nonreimbursable labor are made by Work Projects Administration and the Civilian Conservation Corps. These contributions are designed to keep the reimbursable costs of the project chargeable against the land within the ability of water users to repay from agricultural production. The Water Conservation and Utilization projects included in table B summaries are located in the States of Montana, Nebraska, North Dakota, and South Dakota. Other projects of this type authorized from 1940 to 1942 are located in Colorado, Idaho, Utah, and Wyoming.

Investigations of future irrigation projects.—Preliminary estimates by Bureau of Reclamation engineers in 1940 indicate that projects can be developed, under current standards of economic feasibility involving multiple-purpose projects, to conserve water for the irrigation of 22,120,000 acres of land in the 17 western States, west of or bisected by the 100th meridian in addition to that irrigated in 1939. These States are Arizona, California, Colorado, Idaho, Kansas, Montana,

Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

In addition, the Reclamation engineers estimate that there are 11,700,000 acres of presently irrigated land which will require supplemental water if their agricultural production is to be sustained and the established communities dependent on them maintained.

To some extent the needs of the West for water conservation for irrigation of additional lands and supplemental water are being met by the construction program made up principally of multiple-purpose projects involving irrigation, power, and flood control. In addition, in 1940 the Bureau had under way or planned investigations of 175 additional projects in the 17 western States. Many of the investigations were basin-wide and were expected to uncover feasible individual projects.¹

Power development in Reclamation irrigation projects.—The development of hydroelectric power on irrigation projects engineered by the Bureau of Reclamation is incidental to the release of water from storage reservoirs and to the utilization of drops in the canals of distribution systems. The power thus generated in many instances is used to pump irrigation water to areas that cannot be served by gravity systems. Surplus power is sold on a wholesale basis; preference in the right to buy is given to publicly-owned nonprofit utilities.

There were 28 Reclamation power plants, including Boulder Dam, in operation in 1940. The installed capacity was 879,000 kilowatts.² By 1945, the scheduled installations were to total 3,207,662 kilowatts.

Irrigation costs on Reclamation projects.—In order to display the actual costs of Bureau of Reclamation projects which the water users or lands within Reclamation projects are expected to pay for the irrigation system, and to make the statistics comparable with those presented for non-Federal irrigation enterprises, the Bureau of Reclamation separated for inclusion in the 1940 Census of Irrigation those costs which came within the Census definition of the investment in works on operating projects on December 31, 1939 (see table A). These were generally the costs of irrigation storage and distribution facilities which were charged to the agricultural lands served or to be served. The influence of multiple-purpose features upon irrigation costs was recognized, but the costs of power facilities in most instances were eliminated as were also drainage costs which are reported in the 1940 Drainage Census. In preceding censuses the drainage costs and all the Federal and non-Federal power investments (in Arizona, as an example)³ were included in the irrigation schedules on which reports of the Bureau's investments were made and no specific recognition was made of costs incurred in providing supplemental water for nonproject lands.

The investment attributed to the Bureau includes certain expenditures by irrigation districts or water-user associations on Federal projects, principally in the States of Arizona, Idaho, Oregon, Washington, and Montana. The Federal investment reported to the Census also includes construction costs which have been written off by The Congress but which continue to represent an original outlay for irrigation by the United States. The over-all investment of the Bureau, as shown by the Irrigation Census Reports, includes the construction costs of facilities which provide supplemental as well as primary water supplies.

The gross per-acre construction costs of Federal Reclamation projects are three times higher than those reported by non-Federal enterprises. This is accounted for in a large measure by the accurate records of expenditures which are maintained and the outlays for storage facilities. More than 50 percent of the irrigation storage facilities of irrigation enterprises are credited to the Bureau and all these are of a permanent type of construction, as are also most of the main canals and laterals. Construction work has been carried on

¹ In 1942 the Bureau was concentrating on a shelf of at least 50 or more irrigation and multiple-purpose projects which could be quickly launched at the conclusion of World War II to provide employment, during construction, and settlement opportunities for returning service men and emergency industrial workers.

² The capacity of power plants on additional projects and revision of capacity of others authorized by July 1942 increased the ultimate capacity planned to 4,793,262 kilowatts.

³ The investment credited to the Bureau of Reclamation in State table 7, Arizona, for 1930, includes all power costs. The 1940 investment figure reflects the elimination from the irrigation investment of certain power costs and includes additional construction by the United States since 1930 which included Bartlett Dam and substantial betterments to the Salt River Project facilities.

extensively by the Government in periods of high prices of labor and materials, while there has been relatively little non-Federal construction in recent years. Much of the non-Federal irrigation was undertaken when diversions were simple and construction costs relatively low.

A more complete financial picture of Federal Reclamation projects reported to the 1940 Irrigation Census is presented by an analysis in table A of data by States on acreage and construction costs distributed among irrigation and other purposes. To show the costs repayable by water users on project lands for primary water supplies, the estimated amounts which will be returned by other beneficiaries—contractors for supplemental water, power consumers, lessors of grazing land—are given. Charge-offs and other nonreimbursable costs are also totalled.

Thus approximately 56 percent of the over-all costs of the operating projects are repayable directly from lands receiving a primary supply of water from Bureau works. The average net irrigation costs, on a basis comparable to non-Federal irrigation enterprises, is about \$71 an acre. The average per-acre cost of supplemental water provided by the Federal systems is \$22 compared with \$18.61 for similar service by non-Federal enterprises.

On Bureau of Reclamation projects under construction the influence of multiple-purpose features on the costs to be repaid by irrigation water users is even more pronounced. The double use of stored water for irrigation and generation of power; also the use of irrigation reservoirs for flood control and aid to navigation and prevention of salt water intrusion (on the Pacific Coast) are important factors. The provision of municipal water for growing cities of the arid west is an increasing consideration in Reclamation construction.

The construction program under way in 1940 involved an ultimate outlay of \$900,000,000 (exclusive of future requirements for Boulder Dam and for similar large multiple-purpose projects in operation in 1940). Of this amount more than half will be repayable by power revenues. About \$45,000,000 allocated to flood control, navigation, and relief labor, will be nonreimbursable; and \$10,000,000 will be repayable by municipalities receiving water supplies from multiple-purpose reservoirs. The remaining 43 percent of the construction costs will be repayable by water users on the 2,540,876 acres to receive primary water and on the 3,904,574 acres to receive supplemental water. Although detailed estimates of irrigation costs on some projects under construction were not available, the average construction charge for new lands brought under irrigation was estimated to be \$95 to \$100 an acre. The average charge per acre for supplemental water was estimated at \$45 to \$50 on land these new systems will benefit.¹

Under the Boulder Canyon Project Adjustment Act of 1940, the repayment of a flood control allocation of \$25,000,000 is deferred until expiration of the 50-year period of amortization. Practically all the remainder of the Boulder Dam construction costs and all other charges will be repaid by net power revenues within 50 years. The Metropolitan Water District of southern California will pay approximately 10 percent of the costs of Boulder Dam storage water. This water when released is diverted by pumping from Lake Havasu at Parker Dam downstream on the Colorado River into the District's aqueduct to supply Los Angeles and 12 other cities of the California coastal area.

For three years, \$500,000 a year from power revenues at Boulder Dam will be available for investigations of irrigation and power projects in the Colorado River Basin comprising Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming. The same amount annually from the same source will be available until 1987 for investigations and the construction of approved projects in this basin. In addition the States of Arizona and Nevada share extensively in Boulder Dam reserves in lieu of State taxes.

Title to Parker Dam, which was built with non-Federal funds advanced by the Metropolitan Water District of southern California, is retained in the United States. The power plant at the dam and the transmission system are being constructed with Government funds, and the Government will own one-half the power. The cost of the power facilities will be repaid from power revenues.

Of the cost of Marshall Ford Dam the amount to be repaid from power revenues by the Colorado River Authority of Texas, which operates the dam, is to be determined by the Secretary of the Interior.

None of the costs of these dams which are not directly serving irrigation nor of projects under construction are included in the Census Reports on Bureau of Reclamation investment.

Water conservation and utilization projects, designed to rehabilitate drought-stricken areas in the Great Plains and elsewhere and provide employment in rural areas, were first authorized by the Interior Department Appropriation Act of 1940. Later authorization was contained in the Water Conservation and Utilization Act (53 Stat. 1418), which provides for cooperation between the Departments of the Interior and Agriculture in the settlement and agricultural development of projects. The costs directly appropriated from the Federal Treasury are wholly reimbursable without interest in 40 annual payments, and do not include the contribution of labor by WPA forces and CCC enrollees, which are nonreimbursable.

Financial aspects of reclamation.—Until 1933, all Bureau of Reclamation construction except Boulder Dam was financed from the Reclamation Fund set up by the Reclamation Law of 1902. This fund comprised the proceeds from the sale of public lands, oil royalties, and repayments of construction costs, supplemented by occasional loans from the Federal Treasury which have all been repaid. Interest on bonds advanced for irrigation construction was waived in the Reclamation Law of 1902 as a concession to the national interest in the development of the area west of the 100th meridian where the Federal Government retains ownership of more than half of the land area. The interest-free policy has continued with funds subsequently allocated or appropriated from the Federal Treasury for irrigation facilities for large projects, including the Grand Coulee Dam (Columbia Basin Project) in Washington and the Central Valley in California. Interest is computed on the construction investment in power facilities at the rate of 3 percent annually.

The ultimate investment in Bureau of Reclamation projects, completed and under construction on July 1, 1940, is estimated at \$1,350,000,000.¹ Of this amount about \$600,000,000 is yet to be made available. Nearly half of the total investment will be repaid by water users, more than 45 percent by revenues from power and municipal water, and about 5 percent will be charged off to flood control, navigation, and other nonreimbursable activities.

The Reclamation Project Act of 1939 fixes the interest rate at not less than 3 percent on construction costs allocable to power facilities.

Although in times of unusual agricultural distress, as in the early 1930's, The Congress has granted moratoria on repayments to the Reclamation Fund. On July 1, 1940, fully 25 percent of construction costs of projects completed and in operation had been repaid.

Since 1926 the period of repayments of construction costs without interest to the Reclamation Fund has been 40 years. The Reclamation Project Act of 1939 reaffirmed that repayment period and provided for new contracts with a more flexible method of repayment based on varying crop returns with interest on unpaid or deferred balances.

A notable development in the matter of repayment of Reclamation construction costs is the creation of the Northern Colorado Conservancy District to aid in financing the Colorado-Big Thompson Project in Colorado. This project involves the diversion of water from the western portion of the State through the 13-mile Continental Divide Tunnel to supplement the supply for a highly developed irrigated area in the eastern portion. By popular vote the District imposed an ad valorem tax on urban and rural property with its limits, to assure the repayment of approximately one-fourth of the irrigation costs of the project. The remaining three-fourths of the irrigation costs charged to the District will be repaid by water users under the Reclamation Law. The irrigation costs repayable by the District will cover about half of the entire construction costs of the project. Power revenues will repay the remaining one-half of the construction costs.

¹ Projects authorized between January 1, 1940 and June 30, 1942, increase the total acreage to be served by the Bureau when the current program is completed to 5,115,224 acres with a primary supply and 7,116,074 acres with a supplemental supply, a total of 12,231,298 acres. These additional projects and increases in cost estimates place the over-all investment, when the current program of the Bureau of Reclamation is completed, including power facilities for 4,827,162 kilowatts, at \$1,653,607,003. The power facilities include the costs of Boulder Dam, Grand Coulee Dam, and other projects which are linked with irrigation.

GENERAL DISCUSSION

LVII

TABLE A.—SUMMARY OF DATA ON BUREAU OF RECLAMATION PROJECTS¹ IN OPERATION, JANUARY 1, 1940, WITH ESTIMATES OF COSTS REPAYABLE BY PROJECT LAND AND OTHER BENEFICIARIES

STATE	PROJECT LAND (PRIMARY SUPPLY)		OUTSIDE PROJECTS (SUPPLEMENTAL WATER)		CONSTRUCTION COSTS AND OTHER ITEMS REPAYABLE TO DEC. 31, 1939 ²			COSTS NOT REPAYABLE BY PROJECT LANDS			REPAYABLE BY PROJECT LANDS			
	Irrigated 1939	Works were capable of supplying 1940	Irrigated 1939	Works were capable of supplying 1940	Irrigation (primary-supplemental)	Nonirrigation (power, drainage, etc.) ³	Total	Authorized charge-offs and other nonreimbursable items ⁴	Repayable by non-project land, power, ⁵ etc.	Total	Amount repayable by all beneficiaries	Net irrigation costs ⁶	Net drainage costs	Total
	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Arizona	265,042	297,669	58,044	90,943	39,708,470	11,671,780	51,380,250	2,276,541	29,467,898	51,744,439	49,103,709	18,682,069	953,742	19,635,811
California	44,561	60,297	1,709	1,709	5,915,578	798,674	6,714,252	505,032	1,436,063	1,941,095	6,209,220	4,192,485	580,672	4,773,157
Colorado	85,137	121,746	13,074	16,336	12,928,239	1,411,577	14,339,816	2,073,165	1,644,315	3,717,480	12,266,651	9,481,970	1,140,366	10,622,336
Idaho	544,638	424,840	842,715	973,656	41,868,781	5,037,982	46,906,763	84,681	17,790,281	17,874,962	46,822,082	26,477,464	2,554,337	29,031,801
Montana	186,002	323,197			26,607,374	11,630,797	28,238,171		195,000	3,405,080	25,028,091	23,390,433	1,442,658	24,833,091
Nebraska	160,799	180,155	96,602	105,996	14,659,810	1,193,750	15,853,560		5,977,166	5,977,166	15,853,560	8,677,129	1,199,265	9,876,394
Nevada	57,471	66,788	11,874	41,210	8,838,237	1,460,121	10,298,358	4,437,820	2,867,749	7,305,569	5,860,538	2,549,423	1,135,329	2,992,789
New Mexico	98,064	115,695			7,760,844	10,334,649	18,095,493	2,879,007	5,879,445	8,758,452	15,216,486	7,001,827	2,335,214	9,337,041
North Dakota	14,131	19,928			1,393,237	176,431	1,569,668		131,162	1,438,506	1,262,075	176,431	1,438,506	
Oregon	130,403	175,171	85,042	117,733	27,002,875	1,269,961	28,272,836	895,841	5,041,813	5,937,654	27,376,995	21,251,647	1,083,535	22,335,182
South Dakota	34,222	72,504			4,628,868	729,515	5,358,383	379,031	4,979,352	4,979,352	4,249,837	729,515	4,979,352	
Texas	61,153	69,010	12,681	17,119	3,147,764	1,622,872	4,770,636	336,554	300,000	636,554	4,434,086	2,511,210	1,622,872	4,134,082
Utah	39,623	40,812	161,455	193,021	12,698,755	184,731	12,883,486		10,334,063	10,334,063	12,883,486	2,549,423		2,549,423
Washington	167,085	210,512	161,876	188,677	27,675,132	411,684	28,086,816	1,047,651	6,697,881	7,745,532	27,039,165	20,341,284		20,341,284
Wyoming	136,653	170,643	15,398	16,321	15,411,395	6,316,293	21,727,688	1,545,129	4,596,087	6,141,216	20,182,559	12,384,482	3,201,990	15,586,472
Totals	1,824,004	2,248,967	1,460,470	1,762,721	250,245,359	44,250,817	294,496,176	19,801,694	109,227,761	112,029,455	274,694,482	164,310,795	18,155,926	182,466,721
Less non-Federal expenditures							1126,580,309				26,580,309			
Net Federal costs							267,915,867				248,114,173			

¹There are 40 projects mentioned under "Bureau of Reclamation Areas and Investment" in 15 State Reports.
²Other items repayable include operation and maintenance during construction, penalties, etc.
³Power plants are located in the States of Arizona, California, Colorado, Idaho, Nebraska, Nevada, New Mexico, Utah, Washington, and Wyoming.
⁴Principally charge-offs authorized by Act of May 25, 1926.
⁵Average net irrigation costs repayable by project land estimated at \$71 an acre.
⁶Additional areas of 225,361 acres in operating projects, principally in Idaho, Montana, and Wyoming, brings total ultimate area to be served under present plans to 2,574,348 acres.
⁷Primary irrigation costs, \$211,046,133; supplemental, \$39,199,226.
⁸Total power costs estimated at \$26,102,891, including small outlays for miscellaneous purposes; drainage costs, \$18,147,926.
⁹Estimated additional investment to complete projects under present plans is \$12,780,426, bringing total completed cost of 40 operating projects to \$307,276,602.
¹⁰Estimated net power revenues in 40 years, \$50,026,981; amounts repayable by supplemental water, grazing lessors, and other beneficiaries, \$42,200,780, making a total of \$92,227,761 from these sources to be applied to over-all project costs.
¹¹Principal non-Federal outlays in Arizona for power-irrigation facilities; others for irrigation in Idaho, Nevada, Washington, and Wyoming.

TABLE B.—SUMMARY OF STATE DATA ON BUREAU OF RECLAMATION PROJECTS, UNDER CONSTRUCTION OR AUTHORIZED AND IN OPERATION, JANUARY 1, 1940

STATE	ULTIMATE AREA TO BE SERVED		Construction cost to December 31, 1939	Estimated completed cost ¹	ESTIMATED CONSTRUCTION NOT REPAYABLE BY LAND			Estimated costs repayable by land ³
	Primary supply (new land)	Supplemental water ⁴			Nonreimbursable items ²	Net power revenues	Other sources of income	
	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Projects under construction and authorized:⁵								
Arizona	139,000	11,000	4,430,941	20,500,000				20,500,000
California	742,000	2,525,000	56,256,321	293,863,000	12,000,000	108,000,000	853,000	175,010,000
Colorado	36,400	1,054,074	5,984,322	76,047,000	8,600,000	29,288,000		38,159,000
Idaho	51,400	160,000	3,223,405	21,946,800	5,050,000	3,400,000		13,496,800
Montana	12,800			2,010,000		940,000		1,070,000
Nebraska	12,000			2,560,000	1,575,000			985,000
New Mexico	45,000		180,695	8,155,000	2,500,000			5,655,000
North Dakota	18,276			2,090,000	1,210,000			880,000
Oklahoma	70,000		47,364	5,600,000	2,520,000		1,080,000	2,000,000
Oregon	56,000	47,500	512,042	9,430,000	2,000,000			7,430,000
South Dakota		12,000		2,470,000			500,000	480,000
Utah	10,000	95,000	3,052,618	15,774,000			9,992,000	5,782,000
Washington	1,272,000		111,557,290	412,585,000		298,908,000		113,677,000
Wyoming	76,000		20,125,805	26,500,000		17,200,000		9,300,000
Subtotal	2,540,876	3,904,574	205,370,799	899,530,000	37,885,000	456,796,000	12,425,000	392,424,800
Major multiple-purpose projects in operation, also under construction, July 1, 1940:								
Arizona-Nevada, Boulder Dam			120,923,931	135,000,000		122,500,000	12,500,000	
Arizona-California, Parker Dam (Power) ⁷			2,900,000	12,895,000		12,895,000		
Texas, Marshall Ford Dam ⁸			13,306,179	24,991,000			24,991,000	
Subtotal			137,130,110	172,886,000		135,395,000	37,491,000	
Irrigation projects in operation (see table A, footnotes 1, 2, and 4 to 11):								
Subtotal	2,574,348	1,795,769	294,496,176	307,276,602	19,801,694	49,945,865		237,529,043
GRAND TOTAL	5,115,224	5,700,343	636,997,085	1,379,692,602	57,686,694	642,136,865	49,916,000	629,953,843

¹Revision upward of construction costs and additional authorizations, January 1, 1940 to July 1942, increase estimates of over-all costs of entire program to \$1,653,607,003.
²Nonreimbursable items include flood control and navigation allocations, contributions of labor by WPA and CCC.
³Includes reimbursable costs to be repaid by water users for primary and supplemental supplies.
⁴In California large areas will receive a substituted water supply or will be benefited by repulsion of salt water.
⁵Includes 13 projects authorized under the Reclamation Law and 6 under water conservation and utilization legislation.
⁶Allocations are for municipal water supplies.
⁷Funds advanced by Metropolitan Water District for construction of Parker Dam estimated at \$6,600,000 not included.
⁸Includes reimbursable costs of Marshall Ford Dam from power revenues to be determined by Secretary of the Interior.
⁹Ultimate acreage planned for operating projects shown in footnote number 6 on table A.
¹⁰Includes \$26,580,309 of non-Federal funds invested in operating projects principally in Arizona.
¹¹From January 1940 and July 1942 additional projects authorized increase ultimate supplemental acreage to 7,116,074 acres, making a total of 12,231,298 acres to be served when current program (1942) is completed.

TABLE 22.—CENSUS OF AGRICULTURE—MORTGAGE STATUS OF IRRIGATED FARMS OPERATED BY FULL OWNERS AND PART OWNERS—NUMBER, ACREAGE, AND VALUE OF FARMS WITH CROPLAND HARVESTED WHOLLY IRRIGATED, 1940

(For the 17 western States, Arkansas, Louisiana, and Florida from the Census of Agriculture. Cropland harvested relates to calendar year 1939)

TENURE AND MORTGAGE STATUS	FARMS		LAND IN FARMS (ACRES)		Cropland harvested (acres)	VALUE OF LAND AND BUILDINGS (DOLLARS)		
	Number	Percent distribution	Total	Average per farm		Total	Average	
							Per farm	Per acre
REGARDLESS OF ADDITIONAL LAND OWNED								
Full owners, total	138,997	100.0	19,949,715	143.5	4,977,112	1,244,010,956	8,950	62.36
Free from mortgage	64,694	46.5	8,796,122	136.0	1,749,144	474,564,794	7,336	53.95
Mortgaged	67,454	48.5	10,318,577	153.0	3,028,117	717,367,421	10,635	69.52
No mortgage report	6,849	4.9	855,016	121.9	199,851	52,058,721	7,601	62.34
Part owners, total (both owned and rented portions)	26,204	100.0	26,799,747	1,022.7	2,951,131	466,678,535	17,809	17.41
Free from mortgage	9,897	37.8	9,318,420	941.5	825,126	130,546,406	13,191	14.01
Mortgaged	15,324	58.5	16,793,861	1,095.9	2,038,929	322,830,136	21,067	19.22
No mortgage report	985	5.8	687,466	699.4	87,076	13,301,993	13,532	19.35
Owned portion only	26,204	100.0	12,532,897	478.3	(¹)	263,065,459	10,039	20.99
Free from mortgage	9,897	37.8	4,110,010	415.3	(¹)	69,945,881	7,067	17.02
Mortgaged	15,324	58.5	8,152,531	532.0	(¹)	186,442,641	12,167	22.87
No mortgage report	985	5.8	270,356	275.0	(¹)	6,676,937	6,792	24.70
NO ADDITIONAL LAND OWNED ²								
Full owners, total	105,185	100.0	14,424,083	137.1	3,501,779	879,980,727	8,366	61.01
Free from mortgage	49,569	47.1	6,502,896	131.2	1,220,122	331,413,088	6,686	50.96
Mortgaged	53,063	50.4	7,579,251	142.8	2,202,938	531,039,265	10,008	70.06
No mortgage report	2,551	2.4	341,936	134.0	78,719	17,528,354	6,871	51.26
Part owners, total (both owned and rented portions)	20,632	100.0	20,225,949	980.3	2,178,315	347,465,581	16,841	17.18
Free from mortgage	7,851	38.1	6,824,019	869.2	610,200	95,598,402	12,177	14.01
Mortgaged	12,273	59.5	13,125,247	1,069.4	1,528,580	246,091,999	20,051	18.75
No mortgage report	508	2.5	276,683	544.7	59,535	5,775,180	11,368	20.87
Owned portion only	20,632	100.0	9,284,154	450.0	(¹)	195,576,717	9,479	21.07
Free from mortgage	7,851	38.1	2,929,206	373.1	(¹)	50,876,905	6,480	17.37
Mortgaged	12,273	59.5	6,238,776	508.3	(¹)	141,865,326	11,559	22.74
No mortgage report	508	2.5	116,172	228.7	(¹)	2,854,486	5,580	24.40

¹Not available. ²Differences between these totals and totals for farms regardless of additional land owned do not represent data for operating owners who owned additional land. Some operators did not make a report as to this item.

TABLE 23.—MORTGAGED IRRIGATED FARMS OPERATED BY FULL OWNERS AND PART OWNERS REPORTING AMOUNT OF DEBT—NUMBER, ACREAGE, VALUE, AND AMOUNT OF DEBT FOR FARMS WITH CROPLAND HARVESTED WHOLLY IRRIGATED, 1940

(For the 17 western States, Arkansas, Louisiana, and Florida from the Census of Agriculture. Cropland harvested relates to calendar year 1939)

TENURE (Mortgaged farms reporting amount of debt)	Number of farms	LAND IN FARMS (ACRES)		Cropland harvested (acres)	VALUE OF LAND AND BUILDINGS (DOLLARS)			MORTGAGE DEBT (DOLLARS)			Average equity per farm (dollars)	Ratio of debt to value (percent)	RATE OF INTEREST ON FIRST MORTGAGE	
		Total	Average per farm		Total	Average		Amount	Average per farm	Average per acre			Farms reporting	Average of the rates
						Per farm	Per acre							
REGARDLESS OF ADDITIONAL LAND OWNED														
Full owners	66,631	10,157,517	152.4	2,982,342	709,000,426	10,641	69.80	259,825,785	3,899	25.58	6,741	36.6	65,497	5.4
Part owners:														
Both owned and rented portions	15,170	16,530,857	1,089.7	2,018,408	319,116,180	21,036	19.30	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Owned portion only	15,170	8,013,283	528.2	(¹)	184,902,075	12,189	23.07	75,326,985	4,854	9.15	7,355	39.7	14,972	5.4
NO ADDITIONAL LAND OWNED ²														
Full owners	52,524	7,465,370	142.1	2,177,979	526,020,224	10,015	70.46	196,011,105	3,732	26.26	6,283	37.3	51,709	5.4
Part owners:														
Both owned and rented portions	12,166	12,914,601	1,061.5	1,515,466	244,077,548	20,062	18.90	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Owned portion only	12,166	6,116,037	502.2	(¹)	140,793,776	11,573	23.01	56,569,271	4,650	9.25	6,923	40.2	12,017	5.4

¹Not available. ²Differences between these totals and totals for farms regardless of additional land owned do not represent data for operating owners who owned additional land. Some operators did not make a report as to this item.

TABLE 24.—REAL-ESTATE AND PERSONAL-PROPERTY TAXES LEVIED IN 1939 ON FARMS WITH CROPLAND HARVESTED WHOLLY IRRIGATED, FOR FARMS OF FULL OWNERS AND OF PART OWNERS: CENSUS OF 1940

(For the 17 western States, Arkansas, Louisiana, and Florida from the Census of Agriculture. Number of farms, acreage, and value relate to Apr. 1, 1940; taxes reported are those levied in 1939)

TENURE	Number of specified irrigated farms	SPECIFIED IRRIGATED FARMS REPORTING REAL-ESTATE TAXES							PERSONAL-PROPERTY TAXES					
		Number	Land in farms (acres)		Cropland harvested (acres)	Value of land and buildings (dollars)			Real-estate taxes (dollars)			Farms reporting	Amount (dollars)	Average per farm reporting (dollars)
			Total	Average per farm		Total	Per farm	Per acre	Total	Average per acre	Per \$100 of value			
REGARDLESS OF ADDITIONAL LAND OWNED														
All owners	165,201	144,505	27,960,603	193.5	7,205,985	1,393,933,358	9,646	49.85	18,230,618	0.65	1.31	92,605	2,713,682	29
Full owners	138,997	121,061	16,510,586	136.4	4,483,299	1,149,611,723	9,496	69.63	14,673,058	0.89	1.28	74,412	1,845,865	25
Part owners ¹	26,204	23,444	11,450,017	488.4	2,722,686	244,321,635	10,421	21.34	3,557,560	0.31	1.46	16,193	868,017	48
NO ADDITIONAL LAND OWNED ²														
All owners	125,820	111,428	20,410,380	183.2	5,251,331	1,008,694,736	9,052	49.42	12,924,285	0.63	1.28	72,030	1,958,141	27
Full owners	105,185	92,570	11,770,463	127.2	3,206,047	824,375,887	8,905	70.04	10,295,523	0.87	1.25	57,486	1,294,921	23
Part owners ¹	20,635	18,858	8,639,917	458.2	2,045,284	184,318,849	9,774	21.33	2,628,762	0.30	1.43	14,544	643,220	44

¹Relates only to property owned by the operator. (See tables above)
²Differences between these totals and totals for farms regardless of additional land owned do not represent data for operating owners who owned additional land. Some operators did not make a report as to this item.

CENSUS OF IRRIGATION: 1940

TABLE 26.—MORTGAGED IRRIGATED FARMS OPERATED BY FULL OWNERS REPORTING AMOUNT OF DEBT—NUMBER, ACREAGE, VALUE, AND AMOUNT OF DEBT FOR FARMS WITH CROPLAND HARVESTED WHOLLY IRRIGATED, BY STATES, 1940

(For the 17 Western States, Arkansas, Louisiana, and Florida from the Census of Agriculture)

STATE	SPECIFIED IRRIGATED FARMS OPERATED BY FULL OWNERS REPORTING AMOUNT OF DEBT						SPECIFIED IRRIGATED FARMS OPERATED BY FULL OWNERS OWNING NO ADDITIONAL LAND ¹ AND REPORTING AMOUNT OF DEBT						No report as to other land owned (number)	RATE OF INTEREST ON FIRST MORTGAGE DEBT			
	Number	Land in farms (acres)	Value of land and buildings (dollars)	Mortgage debt (dollars)		Average equity per farm (dollars)	Ratio of debt to value (percent)	Number	Land in farms (acres)	Value of land and buildings (dollars)	Mortgage debt (dollars)			Average equity per farm (dollars)	Ratio of debt to value (percent)	Farms reporting	Average of the interest rates
				Amount	Average per farm						Amount	Average per farm					
Total (20 States)	66,631	10,157,517	709,000,426	259,825,785	3,899	6,741	36.6	52,524	7,465,370	526,020,224	196,011,105	3,732	6,283	37.3	6,745	65,497	5.4
Arizona	1,772	245,832	21,235,548	7,139,561	4,029	7,954	33.6	1,374	138,350	15,426,234	5,497,606	4,001	7,226	35.6	158	1,736	5.3
Arkansas	55	12,435	361,110	137,995	3,943	6,375	38.2	23	8,237	253,050	88,180	3,834	7,168	34.8	3	35	5.7
California	24,826	1,405,652	356,791,052	126,054,826	5,077	9,295	35.3	19,979	1,053,024	266,446,780	95,280,574	4,769	8,567	35.8	2,219	24,357	5.4
Colorado	6,208	1,481,264	51,128,588	21,721,546	3,499	4,737	42.5	4,711	1,028,268	36,573,396	15,597,471	3,311	4,453	42.6	740	6,111	5.6
Florida	802	47,335	9,973,957	3,073,486	5,105	11,463	30.8	410	37,041	6,534,047	2,273,059	5,544	10,393	34.8	44	594	5.3
Idaho	8,208	993,909	65,395,855	25,840,143	3,148	4,576	40.8	5,899	645,725	43,437,081	18,074,703	3,064	4,299	41.6	1,388	8,065	5.2
Kansas	131	27,887	1,192,423	422,355	3,224	5,878	35.4	69	12,622	621,185	206,527	2,993	6,010	33.2	33	128	5.5
Louisiana	237	45,211	2,031,580	793,374	3,348	5,224	39.1	118	20,018	870,555	377,827	3,202	4,176	43.4	26	236	5.9
Montana	2,569	816,264	21,366,250	8,518,740	3,316	5,001	39.9	2,046	647,586	16,541,214	6,603,953	3,228	4,857	39.9	270	2,548	5.3
Nebraska	512	100,294	5,478,018	2,012,607	3,931	6,768	36.7	372	67,209	3,797,458	1,410,966	3,793	6,415	37.2	33	507	5.1
Nevada	794	613,765	13,629,630	5,298,293	6,673	10,493	38.9	627	392,431	9,798,796	3,939,264	6,283	9,345	40.2	70	785	5.3
New Mexico	1,651	438,762	15,822,587	4,466,333	2,705	6,878	28.2	1,218	231,197	10,581,422	3,119,548	2,561	6,126	29.5	207	1,599	5.4
North Dakota	39	4,583	389,790	104,567	2,681	7,313	26.8	33	4,029	290,390	66,167	2,005	6,795	22.8	1	39	5.3
Oklahoma	18	818	148,290	59,994	3,333	4,905	40.5	11	764	91,240	37,285	3,390	4,905	40.9	1	18	6.1
Oregon	3,786	965,602	30,285,251	10,373,193	2,740	5,259	34.3	3,037	770,825	23,327,358	8,198,018	2,699	4,982	35.1	321	3,737	5.5
South Dakota	70	25,371	539,080	208,383	2,977	4,724	38.7	60	22,885	451,020	167,588	2,795	4,724	37.2	3	69	5.1
Texas	1,498	774,164	23,247,253	6,796,212	4,537	10,982	29.2	1,146	624,927	15,615,513	4,981,588	4,347	9,279	31.9	96	1,472	5.4
Utah	6,278	856,149	38,310,865	15,772,888	2,512	3,580	41.2	4,982	655,467	29,850,965	12,252,631	2,459	3,532	41.0	615	6,167	5.4
Washington	5,399	256,873	34,562,880	13,940,956	2,582	3,820	40.3	4,811	217,851	30,017,543	12,188,111	2,533	3,706	40.6	108	5,315	5.5
Wyoming	1,998	1,067,349	19,112,439	7,110,333	3,559	6,007	37.2	1,598	908,914	15,494,977	5,650,039	3,536	6,161	36.5	209	1,979	5.4

¹Differences between these totals and totals for farms regardless of additional land owned do not represent data for operating owners who owned additional land. Some operators did not make a report as to this item.

TABLE 27.—MORTGAGED IRRIGATED FARMS OPERATED BY PART OWNERS REPORTING AMOUNT OF DEBT—NUMBER, ACREAGE, VALUE, AND AMOUNT OF DEBT FOR FARMS WITH CROPLAND HARVESTED WHOLLY IRRIGATED, BY STATES: 1940

(For the 17 Western States, Arkansas, Louisiana, and Florida from the Census of Agriculture)

STATE	SPECIFIED IRRIGATED FARMS OPERATED BY PART OWNERS REPORTING AMOUNT OF DEBT						SPECIFIED IRRIGATED FARMS OPERATED BY PART OWNERS OWNING NO ADDITIONAL LAND ¹ AND REPORTING AMOUNT OF DEBT						No report as to other land owned (number)	RATE OF INTEREST ON FIRST MORTGAGE DEBT			
	Number	Land in farms (acres)	Value of land and buildings (dollars)	Mortgage debt (dollars)		Average equity per farm (dollars)	Ratio of debt to value (percent)	Number	Land in farms (acres)	Value of land and buildings (dollars)	Mortgage debt (dollars)			Average equity per farm (dollars)	Ratio of debt to value (percent)	Farms reporting	Average of the interest rates
				Amount	Average per farm						Amount	Average per farm					
Total (20 States)	15,170	8,013,283	184,902,075	73,328,985	4,834	7,355	39.7	12,166	6,118,037	140,793,776	56,569,271	4,650	6,923	40.2	1,326	14,972	5.4
Arizona	647	223,020	11,461,109	4,321,440	6,679	11,035	37.7	519	188,025	8,702,490	3,255,843	6,273	10,495	37.4	49	636	5.3
Arkansas	9	1,224	35,150	14,250	1,583	2,322	40.5	5	664	21,600	9,900	1,980	2,340	45.8	3	9	6.2
California	3,745	680,705	70,220,618	26,236,977	7,006	11,745	37.4	3,100	465,525	52,807,048	20,299,310	6,548	10,486	38.4	249	3,694	5.3
Colorado	1,739	956,518	16,382,352	6,846,857	3,937	4,908	44.5	1,351	674,986	11,230,017	5,095,951	3,772	4,540	45.4	165	1,724	5.6
Florida	79	7,139	1,135,074	427,699	5,414	8,954	37.7	55	5,779	693,644	298,884	5,434	7,177	43.1	6	77	5.7
Idaho	1,771	339,541	13,320,765	6,025,763	3,402	4,119	45.2	1,335	244,596	9,679,884	4,392,886	3,291	3,980	45.4	245	1,736	5.2
Kansas	75	18,836	575,956	258,680	3,449	4,230	44.9	51	11,913	423,330	181,880	3,568	4,734	43.0	14	75	5.3
Louisiana	136	31,681	1,527,447	704,946	5,183	6,048	46.2	80	17,127	739,042	372,342	4,654	4,584	50.4	11	134	5.8
Montana	1,047	1,268,733	13,042,658	5,471,973	5,226	7,231	42.0	830	1,012,968	10,216,445	4,329,896	5,217	7,092	42.4	87	1,040	5.3
Nebraska	187	77,508	1,955,956	748,305	4,002	6,458	38.3	150	68,947	1,552,764	587,160	3,914	6,437	37.8	16	182	5.1
Nevada	119	171,220	2,014,796	806,865	6,780	10,151	40.0	89	48,165	1,327,396	558,716	6,278	8,637	42.1	11	119	5.1
New Mexico	467	354,184	4,633,018	1,576,689	3,380	6,540	34.1	365	277,898	3,430,663	1,246,173	3,414	5,985	36.3	53	460	5.5
North Dakota	4	417	27,090	7,532	1,883	4,890	27.8	4	417	27,090	7,532	1,885	4,890	27.8	4	5	5.5
Oklahoma	3	8,980	64,750	28,000	9,333	12,250	43.2	2	7,700	39,150	20,000	10,000	9,575	51.1	3	4	4.7
Oregon	708	620,497	7,758,414	3,200,275	4,533	6,456	41.2	580	522,345	6,105,312	2,551,826	4,400	6,127	41.8	46	700	5.4
South Dakota	54	41,224	526,957	190,048	5,519	6,239	36.1	49	39,001	509,307	175,290	3,577	6,817	34.4	3	53	5.1
Texas	729	680,861	9,952,242	3,279,342	4,498	9,153	33.0	574	584,536	8,191,288	2,583,529	4,501	9,770	31.5	49	717	5.6
Utah	1,862	465,358	10,552,624	4,832,874	2,596	3,072	45.8	1,526	351,327	8,504,004	3,826,412	2,507	3,065	45.0	230	1,842	5.5
Washington	851	112,150	6,006,683	2,474,586	2,908	4,151	41.2	750	76,249	4,815,856	2,071,421	2,762	3,790	42.2	14	842	5.6
Wyoming	940	1,953,687	14,708,458	5,871,884	6,247	9,401	39.9	751	1,523,869	11,879,446	4,704,320	6,264	9,288	40.3	75	925	5.4

¹Differences between these totals and totals for farms regardless of additional land owned do not represent data for operating owners who owned additional land. Some operators did not make a report as to this item.

Irrigation Census by Drainage Basins

The special Irrigation Census of 1902 presented the first list of major and tributary drainage basins used for Census purposes. For the Census of 1940, the number of tributary drainage basins was greatly increased and for the first time specific boundary lines for drainage basins were determined and delineated on maps to define more clearly the drainage basins used as unit areas for the Census of Irrigation.

The boundaries shown on the maps follow natural divides between stream systems as closely as could be determined from available topographical maps and other sources. However, where valley lands of tributary streams approach similar lands of the arterial stream, it often became necessary to select more or less arbitrary locations for boundaries, although in each case the boundaries of a given basin were located, as far as possible, to include irrigation projects and areas irrigated from water originating within that basin. It is realized that in many instances, with adequate field studies, more exact and desirable boundaries could be established and some of the drainage basins listed might be replaced by more important ones. It would also add to the usefulness of Census data if the larger drainage basins or divisions thereof, used in the Census of Irrigation, could be closely harmonized with the sections of major basins used as units for the measurement of stream flow, administration of water, and for water and land conservation planning.

The summary drainage basin tables in section C of this volume do not show all individual basins mapped or for which statistics are tabulated in the State reports reprinted in section D.

The summary tables do, however, show interstate drainage basins. The drainage basins not named in these tables represent intra-state tributary drainage basins, the statistics for which are totaled in groups by States, and the groups in turn are listed in their proper positions within the major basins.

The 17 western States and Arkansas and Louisiana extend into and are a part or all of 12 major basins and arbitrary groups of basins designated as, Red River of the North (I) (Lake Winnipeg Basin, Canada); Missouri River (II); Mississippi River, exclusive of Missouri River (III); Gulf of Mexico streams, other than Mississippi River and Rio Grande (IV); Rio Grande (V); Colorado River (VI); Gulf of California (Mexico), exclusive of Colorado River (VII); Whitewater Draw (1) and Vamori Wash (2); Great Basin (VIII); Columbia River (IX); Klamath River (X); Pacific Ocean Streams, excluding Gulf of California streams and Columbia and Klamath Rivers (XI); and Sacramento-San Joaquin Delta and tributary streams (XII). These principal drainage basins are divided into secondary and minor tributary basins as shown in the drainage basin tables of the State reports, the map lists, and the following master list. The master list gives names of the drainage basins which reported irrigated lands in 1939, while the lists attached to the State and composite maps show all basins mapped regardless of irrigated acreage. The numbers in parentheses (), following each basin and State name, are index numbers of basins as delineated on the State maps. The numbers and letters shown in column 2 of the master list are for drainage basins on the composite map. Basins for the State of Florida are shown at the end of the list.

NAMES OF DRAINAGE BASINS WITH INDEX NUMBERS

(For the 17 western States and Arkansas, Louisiana, and Florida. State and composite maps, "Irrigation—by Drainage Basins—1939," available from the Superintendent of Documents, Washington, D. C.)

NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables	NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables	NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables
Lake Winnipeg Basin (Canada); Red River (of the North)—N. Dak. (1) Souris River—N. Dak. (2)	I 1	Missouri River—Continued Yellowstone River—Continued Big Horn River—Continued Nowood Creek—Wyo. (19) Greybull River—Wyo. (15) Shell Creek—Wyo. (74) Shoshone River—Sage Creek—Wyo. (11); Mont. (42) Little Horn River—Wyo. (9); Mont. (43) Rosebud Creek—Mont. (44) Tongue River direct—Wyo. (6); Mont. (45) Goose Creek—Wyo. (8) Powder River direct—Wyo. (5); Mont. (46) South Fork—Wyo. (24) Middle Fork—Wyo. (22) Crazy Woman Creek—Wyo. (20) Clear Creek—Wyo. (7) Little Powder River—Wyo. (4); Mont. (47) O'Fallon Creek—Mont. (48) Little Missouri River direct—Wyo. (5); Mont. (49); South Dak. (7); N. Dak. (7) Boxelder Creek—Mont. (50); S. Dak.; N. Dak. Little Beaver Creek—Mont. (51); N. Dak. (15) Beaver Creek—Mont. (52); N. Dak. (9) Knife River—N. Dak. (6) Heart River—N. Dak. (10) Cannonball River—S. Dak.; N. Dak. (11) Grand River—N. Dak. (12); S. Dak. (6) Moreau River—S. Dak. (8) Cheyenne River direct—S. Dak. (10) Belle Fourche River direct—Wyo. (2); Mont. (53); S. Dak. (12) Badwater Creek—Wyo. (1); S. Dak. (15) South Fork Cheyenne River direct— Wyo. (21); Nebr. (12); S. Dak. (26) Battle and Spring Creeks—S. Dak. (24) Rapid and Box Elder Creeks—S. Dak. (15) Elk Creek—S. Dak. (14) Cherry Creek—S. Dak. (11) Bad River—S. Dak. (16) White River direct—Nebr. (5); S. Dak. (22) South Fork White River—S. Dak. (20) Niobrara River—Wyo. (55); S. Dak. (21); Nebr. (2) Keya Paha River—S. Dak. (19); Nebr. (15) James River—N. Dak. (5); S. Dak. (4)	14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 54	Missouri River—Continued Big Sioux River—S. Dak. (8) Platte River direct—Nebr. (8) North Platte River direct—Colo. (6); Wyo. (52); Nebr. (4) Beaver Creek—Wyo. (82) Encampment Creek—Colo. (83); Wyo. (61) Spring Creek—Wyo. (60) Pass Creek—Wyo. (56) Medicine Bow River direct—Wyo. (51) Rock Creek—Wyo. (71) Little Medicine Bow River direct— Wyo. (75) Sheep Creek—Wyo. (72) Muddy Creek—Wyo. (68) Great Divide—Wyo. (50) Sweetwater River—Wyo. (58) Boxelder Creek—Wyo. (57) La Prele Creek—Wyo. (56) La Bonte Creek—Wyo. (55) Laramie River direct—Colo. (5); Wyo. (64) Little Laramie River—Wyo. (65) Sybille Creek—Wyo. (55) North Laramie River—Wyo. (52) Chugwater Creek—Wyo. (54) Rawhide Creek—Wyo. (54) Horse Creek—Wyo. (53) Blue Creek—Nebr. (5) South Platte River direct—Colo. (52); Nebr. (9) Plum Creek—Colo. (51) Bear Creek—Colo. (29) Cherry Creek—Colo. (19) Clear Creek—Colo. (28) St. Vrain Creek direct—Colo. (15) Boulder Creek—Colo. (20) Thompson River—Colo. (14) Cache la Poudre River—Wyo. (70); Colo. (4) Crow Creek—Wyo. (66); Colo. (2) Bijou Creek group—Colo. (16) Fawnee Creek—Colo. (72) Horsetail Creek—Colo. (1) Lodgepole Creek—Wyo. (65); Nebr. (10) Loup River—Nebr. (6) Elkhorn River—Nebr. (7) Kansas River direct—Kans. (7) Republican River direct—Colo. (18); Nebr. (11); Kans. (8) Arkaree River—Colo. (17); Kans.; Nebr. (17) Frenchman Creek—Colo. (82); Nebr. (16)	56 II-B II-Ba 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 II-B—Con. 1 2 II-C 1 2

GENERAL DISCUSSION

NAMES OF DRAINAGE BASINS WITH INDEX NUMBERS—Continued

(For the 17 western States and Arkansas, Louisiana, and Florida. State and composite maps, "Irrigation—by Drainage Basins—1939," available from the Superintendent of Documents, Washington, D. C.)

NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables	NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables	NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables
Missouri River—Continued		Rio Grande—Continued		Colorado River—Continued	
Kansas River—Continued		Upper Rio Grande—Continued		Upper Colorado River—Continued	
Smoky Hill River direct—Colo. (71); Kans. (5)	4	Alamosa and La Jara Creeks—Colo. (65)	1	San Juan River—Continued	
Saline River—Kans. (8)	5	Trinchera Creek—Colo. (55)	2	Los Pinos River—Colo. (63); N. Mex. (36)	2
Solomon River—Kans. (4)	6	Conejos River direct—Colo. (67)	3	Animas River—Colo. (62); N. Mex. (37)	3
White Woman Creek—Colo. (73); Kans. (12)	7	San Antonio River—N. Mex. (15)	5	La Plata River—Colo. (61); N. Mex. (38)	4
Big Blue River—Nebr. (15); Kans. (2)	8	Costilla Creek—Colo. (68); N. Mex. (16)	4	Chaco River—N. Mex. (39)	5
Osage River—Kans. (9)	II-D	Latir Creek and Red River—N. Mex. (17)	5	Mancos River—Colo. (60); N. Mex. (37)	6
Mississippi River direct, exclusive of Missouri River—Ark. (11); La. (1)	III	Rio Hondo—N. Mex. (18)	6	McElmo Creek—Colo. (59); Utah (36)	7
St. Francis River direct—Ark. (1)	1	Rio Pueblo de Taos—N. Mex. (19)	7	Montezuma Creek—Colo. (74); Utah (37)	8
L'Anguille River—Ark. (10)	2	Embudo River—N. Mex. (20)	8	Cottonwood Wash—Utah (38)	9
White River direct—Ark. (13)	3	Rio Chama direct—Colo. (75); N. Mex. (21)	9	Chinle Creek—N. Mex. (40); Ariz. (3); Utah (39)	10
Black River—Ark. (3)	5	Calliente River—N. Mex. (22)	10		VI-A-Con.
Village River—Ark. (24)	5	Santa Cruz River—N. Mex. (25)	11	Faria River—Utah (40); Ariz. (4)	25
Cache River direct—Ark. (2)	7	Tesuque Creek—N. Mex. (24)	12	Lower Colorado River direct (exclusive of Imperial Valley)—Ariz. (1); Nev. (26); Calif. (10)	VI-B
Bayou de Vue—Ark. (9)	10	Jemez Creek—N. Mex. (25)	13	Little Colorado River direct—Ariz. (5); N. Mex. (41)	VI-Ba
Big Creek—Ark. (23)	11	Rio Puerco direct—N. Mex. (26)	14	Nutriso Creek—Ariz. (6)	1
Arkansas River direct—Colo. (53); Kans. (10); Okla. (3); Ark. (7)	III-A	San Jose River—N. Mex. (27)	15	Concho Creek—N. Mex.; Ariz. (7)	2
Texas Creek—Colo. (77)	1	Alamosa River—N. Mex. (28)	16	Zuni River—N. Mex. (42); Ariz. (8)	3
Grape Creek—Colo. (46)	2	San Luis Creek direct—Colo. (45)	17	Silver Creek—Ariz. (9)	4
Turkey Creek—Colo. (47)	3	Saguache Creek—Colo. (44)	18	Puerco River—N. Mex. (45); Ariz. (10)	5
Fountain Creek—Colo. (48)	4	San Luis Lake—Colo. (66)	19	Salt Lake and Rito Creek—N. Mex. (47)	6
St. Charles River—Colo. (49)	5	San Augustine—N. Mex. (48)	20		VI-B-Con.
Huerfano River direct—Colo. (54)	6	Estancia Valley—N. Mex. (49)	21	Kanab Creek—Utah (41); Ariz. (11)	1
Cucharas River—Colo. (55)	7	Tularosa Valley—N. Mex. (50)	22	Virgin River direct—Utah (42); Ariz. (12); Nev. (27)	2
Apishapa River—Colo. (52)	8	Rio Tularosa—N. Mex. (51)	23	Ash Creek—Utah (43)	3
Timpas Creek—Colo. (51)	9	Fresal River—N. Mex. (52)	24	Santa Clara River—Utah (44)	4
Purgatoire River—N. Mex. (1); Colo. (69)	10	Sacramento River and Salt Lakes—N. Mex. (53); Tex. (21)	25	Muddy River direct—Nev. (28)	5
Big Sandy Creek—Colo. (30)	11	Mimbres Valley—N. Mex. (54)	26	Meadow Valley Wash—Nev. (29)	6
Two Butte and Bear Creeks—Colo. (50); Kans. (13)	12	Lower Rio Grande direct—Tex. (1)	V-B	Las Vegas Valley—Nev. (30)	7
Pawnee River—Kans. (11)	13	Pecos River direct—N. Mex. (29); Tex. (2)	1	Williams River—Ariz. (15)	8
Salt Fork Arkansas River—Kans. (16); Okla. (4)	14	Gallinas River—N. Mex. (50)	2	White River—Nev. (42)	9
Cimarron River—N. Mex. (2); Okla. (5); Colo. (70); Kans. (14)	15	Rio Hondo—N. Mex. (51)	3	Pahrangat Valley—Nev. (43)	10
Verdigris River—Kans. (15); Okla. (2)	16	Rio Penasco—N. Mex. (52)	4	Red Lake—Ariz. (31)	11
Neosho River—Kans. (9); Okla. (1); Ark. (5)	17		VI	Whitewater River—Calif. (100)	12
Canadian River direct—N. Mex. (3); Tex. (16); Okla. (7)	18	Colorado River	VI	Gila River	VI-Bb
Vermejo River—N. Mex. (4)	19	Upper Colorado River direct—Colo. (13); Utah (18); Ariz.	VI-A	Upper Gila River direct—N. Mex. (44); Ariz. (14)	1
Cimarron River—N. Mex. (5)	20	Fraser River—Colo. (21)	1	San Francisco River—N. Mex. (45); Ariz. (35)	2
Ocate Creek—N. Mex. (6)	21	Williams River—Colo. (22)	2	Blue River—N. Mex. (46); Ariz. (16)	3
Mora River direct—N. Mex. (7)	22	Muddy Creek—Colo. (12)	3	San Simon Creek—Ariz. (17)	4
Coyote Creek—N. Mex. (8)	23	Blue River—Colo. (27)	4	San Carlos River—Ariz. (18)	5
Sapello Creek—N. Mex. (9)	24	Eagle River—Colo. (26)	5	San Pedro River—Ariz. (19)	6
Ute Creek—N. Mex. (10)	25	Roaring Fork—Colo. (54)	6	Queen Creek—Ariz. (20)	7
Carrizo and Mustang Creeks—N. Mex. (11); Tex. (17)	26	Elk Creek—Colo. (78)	7	Santa Cruz River direct—Ariz. (21)	8
North Canadian River—N. Mex. (12); Okla. (6); Tex. (18)	27	Garfield Creek—Colo. (76)	8	Rillito Creek—Ariz. (22)	9
Red River direct—N. Mex. (13); Tex. (19); Okla. (9); Ark. (19); La. (2)	III-B	Roan Creek—Colo. (25)	9	Salt River direct—Ariz. (23)	10
Washita River—Tex. (20); Okla. (10)	1	Plateau Creek—Colo. (35)	10	Black River—Ariz. (24)	11
Black River—La. (3)	4	Gunnison River direct—Colo. (40)	11	Tonto Creek—Ariz. (25)	12
Quachita River—Ark. (16); La. (4)	5	Taylor River—Colo. (42)	12	Verde River—Ariz. (26)	13
Bartholomew Bayou—Ark. (22); La. (7)	10	Slate River—Colo. (41)	13	Lower Gila River direct—Ariz. (27)	14
Gulf of Mexico, other than Mississippi River and Rio Grande	IV	Tomichi Creek—Colo. (45)	14	Aqua Fria River—Ariz. (28)	15
Baffins Bay—Tex. (5)	1	Smith Fork—Colo. (38)	15	Hassayampa River—Ariz. (29)	16
Nueces River—Tex. (4)	2	North Fork—Colo. (39)	16	Centennial Wash—Ariz. (30)	17
Guadalupe River direct—Tex. (5)	3	Uncompahgre River—Colo. (37)	17	Animas Valley—N. Mex. (55)	18
San Antonio River—Tex. (6)	4	Salt Creek group—Colo. (24); Utah	18	Sulphur Springs—Ariz. (33)	19
Colorado River direct—N. Mex. (33); Tex. (7)	5	Little Dolores River—Colo. (81); Utah (19)	19	Imperial Valley—Calif. (102)	VI-C
Llano River—Tex. (8)	6	Dolores River direct—Colo. (36); Utah (20)	20	Gulf of California (Mexico), exclusive of Colorado River, (total)	VII
Brazos River direct—N. Mex. (34); Tex. (9)	7	San Miguel River—Colo. (58)	21	Whitewater Draw—Ariz. (34)	1
Little River—Tex. (10)	8	Green River direct—Wyo. (40); Utah (21); Colo. (9)	VI-Aa	Vamori (Walshni) Wash—Ariz. (52)	2
San Jacinto River—Tex. (11)	9	Horse Creek—Wyo. (29)	1		
Trinity River—Tex. (12)	10	Cottonwood Creek—Wyo. (75)	2	Great Basin, total—Oreg.; Idaho; Wyo.; Utah; Nev.; Calif.	VIII
Sabine River direct—Tex. (13); La. (11)	11	New Fork—Wyo. (30)	3	Bonneville Lake, total—Idaho; Utah; Nev.; Wyo.	VIII-A
Neches River—Tex. (14)	12	South Piney Creek—Wyo. (41)	4	Great Salt Lake direct—Idaho (53); Nev.; Utah (1)	1
Calcasieu River direct—La. (12)	13	La Barge Creek—Wyo. (42)	5	Bear River direct—Utah (2); Wyo. (46); Idaho (54)	2
Bundick Creek—La. (13)	14	Fontenelle Creek—Wyo. (43)	6	Thomas Creek—Wyo. (25); Idaho (55)	3
Bayou Serpente—La. (14)	15	Sandy Creek—Wyo. (39)	7	Little Bear River—Idaho (56); Utah (5)	4
West Fork Calcasieu River—La. (15)	16	Bitter Creek—Wyo. (49)	8	Malad River—Idaho (57); Utah (4)	5
Mermentau River direct—La. (16)	17	Blacks Fork direct—Utah (22); Wyo. (48)	9	Weber River direct—Utah (5)	6
Nespique Bayou—La. (17)	18	Muddy Creek—Wyo. (47)	10	Chalk Creek—Utah (6)	7
Bayou Queue de Tortue—La. (18)	19	Hens Fork—Wyo. (45)	11	East Canyon Creek—Utah (7)	8
Verdillon River—La. (19)	20	Henry Fork—Utah (24); Wyo. (58)	12	Ogden River—Utah (8)	9
Atochafalaya River direct—La. (20)	21	Yampa River direct—Colo. (10)	13	Jordan River direct—Utah (9)	10
Bayou Teche direct—La. (21)	22	Elk River—Colo. (7)	14	Utah Lake direct—Utah (10)	11
Bayou Boeuf—La. (22)	23	Trout Creek—Colo. (11)	15	Spanish Fork system—Utah (11)	12
Bayou Lafourche—La. (23)	24	Little Snake River—Wyo. (59); Colo. (8)	16	Provo River system—Utah (12)	13
Lake Pontchartrain	25	Brush Creek—Utah (25)	17		
Amite River—La. (24)	26	Ashley Creek—Utah (26)	18	Sevier River	
Natalbany River—La. (25)	27	Duchene River—Utah (27)	19	Upper Sevier River direct—Utah (13)	14
Tangipahoa River—La. (26)	28	White River—Colo. (25); Utah (28)	20	East Fork Sevier River direct—Utah (14)	15
Chefmette River—La. (27)	29	Willow Creek—Utah (29)	21	Otter Creek—Utah (15)	16
Rio Grande	V	Price River—Utah (30)	22	San Pitch River—Utah (16)	17
Upper Rio Grand direct—Colo. (57); N. Mex. (14)	V-A	San Rafael River—Utah (31)	23		
		Fremont River direct—Utah (32)	22		
		Muddy River—Utah (33)	23		
		Escalante River—Utah (34)	24		
		San Juan River direct—Colo. (64); N. Mex. (35); Utah (35); Ariz. (2)	VI-Ab		
		Piedra River—Colo. (79)	1		

NAMES OF DRAINAGE BASINS WITH INDEX NUMBERS—Continued

(For the 17 western States and Arkansas, Louisiana, and Florida. State and composite maps, "Irrigation—by Drainage Basins—1939," available from the Superintendent of Documents, Washington, D. C.)

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Great Basin—Continued		Columbia River—Continued		Columbia River—Continued	
Bonneville Lake—Continued		Upper Columbia River—Continued		Lower Columbia River direct—Wash. (1); Oreg. (1)-----	IX-C
Sevier River—Continued		Clark Fork—Continued		Walla Walla River—Oreg. (15); Wash. (22)-----	1
Lower Sevier River—Utah (17)-----	18	Upper Clark Fork—Mont. (56)-----	3	Umatilla River direct—Oreg. (16)-----	2
Deep Creek (Box Elder County, Utah)—Idaho (65); Utah (47)-----	19	Blackfoot River—Mont. (57)-----	4	Birch Creek—Oreg. (17)-----	3
Grouse Creek—Nev.; Utah (48)-----	20	Bitterroot River—Mont. (58)-----	5	Butter Creek—Oreg. (18)-----	4
Thousand Spring Creek—Nev. (51); Utah—Deep Creek (Tooele County, Utah)—Nev. (35); Utah (49)-----	21	Flathead River direct—Mont. (59)-----	6	Willow Creek—Oreg. (19)-----	5
Snake Valley—Nev. (36); Utah (50)-----	22	Swan River—Mont. (60)-----	7	John Day River direct—Oreg. (20)-----	6
Beaver River—Utah (51)-----	23	Little Bitterroot River—Mont. (61)-----	8	Rock Creek—Oreg. (21)-----	7
Little Salt Lake—Utah (52)-----	24	Priest River—Wash. (3); Idaho (51)-----	9	Deschutes River direct—Oreg. (22)-----	8
Coal Creek—Utah (53)-----	25	Kettle River—Wash. (4)-----	10	Squaw Creek—Oreg. (23)-----	9
Escalante Desert—Nev.; Utah (54)-----	26	Colville River—Wash. (5)-----	11	Crooked River—Oreg. (24)-----	10
Shoal Creek—Nev.; Utah (55)-----	27	Spokane River direct—Idaho (45); Wash. (6)-----	12	White River—Oreg. (25)-----	11
Lahontan Lake Basin, total—Oreg.; Nev.; Calif.-----	VIII-B	Coeur d'Alene River—Idaho (46); Wash. Latah Creek—Idaho (49); Wash. (7)-----	13	Fifteenmile Creek—Oreg. (26)-----	12
Northern Great Basin, total—Oreg.; Nev.; Calif.-----	VIII-Ba	Sanpoil River—Wash. (8)-----	14	Klickitat River—Wash. (23)-----	13
Malheur Lake:		Okanogan River—Wash. (9)-----	15	Hood River—Oreg. (27)-----	14
Silvies River—Oreg. (50)-----	1	Methow River—Wash. (10)-----	16	White Salmon River—Wash. (24)-----	15
Harney Lake direct—Oreg. (51)-----	2	Lake Chehalis—Wash. (11)-----	17	Sandy River—Oreg. (28)-----	16
Silver Creek—Oreg. (52)-----	3	Entiat River—Wash. (12)-----	18	Willamette River direct—Oreg. (29)-----	17
Donner und Blitzen River—Oreg. (53)-----	4	Wenatchee River—Wash. (13)-----	19	Calapooya River—Oreg. (30)-----	18
Benjamin Lake—Oreg. (54)-----	5	Crab Creek—Wash. (14)-----	20	Santiam River—Oreg. (31)-----	19
Silver Lake—Oreg. (55)-----	6	Yakima River direct—Wash. (15)-----	21	Luckiamute River—Oreg. (32)-----	20
Summer Lake—Oreg. (56)-----	7	Naches River—Wash. (16)-----	22	Yamhill River—Oreg. (33)-----	21
Lake Abert—Oreg. (57)-----	8	Ahtanum Creek—Wash. (17)-----	23	Molalla River—Oreg. (34)-----	22
Cowhead and Warner Lakes—Calif. (81); Nev. (50); Oreg. (58)-----	9	Snake River-----	IX-B	Tualatin River—Oreg. (35)-----	23
Trout Creek—Oreg. (59)-----	10	Upper Snake River direct—Idaho (1)-----	1	Clackamas River—Oreg. (36)-----	24
Whitehorse Creek—Oreg. (60)-----	11	South Fork Snake River direct—Wyo. (14); Idaho (2)-----	2	Lewis River—Wash. (25)-----	25
Black Rock Desert—Nev. (48)-----	12	Gros Ventre River—Wyo. (26)-----	3	Cowlitz River—Wash. (26)-----	26
Quinn River direct—Nev. (49)-----	13	Grays River—Wyo. (28)-----	4	Klamath River direct—Oreg. (45); Calif. (3)-----	X
McDermitt Creek—Nev.; Oreg. (61)-----	14	Salt River—Wyo. (27); Idaho (3)-----	5	Williamson River direct—Oreg. (46)-----	1
Tennille Creek—Oreg. (62)-----	15	Henry's Fork direct—Wyo. (69); Idaho (4)-----	6	Sprague River—Oreg. (47)-----	2
Surprise Valley—Nev. (51); Calif. (82)-----	16	Teton River—Wyo. (13); Idaho (5)-----	7	Lost River—Calif. (4); Oreg. (48)-----	3
Madeline Plains—Calif. (85)-----	17	Grays Lake—Idaho (6)-----	8	Shasta River—Calif. (5)-----	4
Smoke Creek—Calif. (85); Nev. (52)-----	18	Blackfoot River—Idaho (7)-----	9	Scott River—Calif. (6)-----	5
Sierra Nevada Slope, total—Nev.; Calif.-----	VIII-Bb	Portneuf River—Idaho (8)-----	10	Trinity River—Calif. (7)-----	6
Pyramid Lake direct—Nev. (16)-----	1	Bannock Creek—Idaho (9)-----	11	Pacific Ocean streams, excl. Gulf of Calif. streams and Columbia and Klamath Rivers-----	XI
Truckee River direct (upper)—Calif. (87); Nev. (17)-----	2	Lower Snake River direct—Idaho (10); Oreg. (2); Wash. (18)-----	12	Pacific Ocean streams north of the Columbia River-----	XI-A
Steamboat and Washoe Valleys—Nev. (19)-----	3	Raft River—Utah (45); Idaho (11)-----	13	Puget Sound direct—Wash. (27)-----	1
Truckee Canal—Nev. (18)-----	4	Goose Creek—Nev. (1); Utah (46); Idaho (12)-----	14	Nisqually River—Wash. (28)-----	2
Carson River (upper)—Calif. (88); Nev. (20)-----	5	Salmon Falls Creek—Nev. (2); Idaho (13)-----	15	White and Puyallup Rivers—Wash. (29)-----	3
Truckee and Carson Rivers (lower)—Nev. (21)-----	6	Little and Big Wood Rivers direct—Idaho (14)-----	16	Lake Washington—Wash. (30)-----	4
Walker Lake direct—Nev. (22)-----	7	Camas Creek—Idaho (15)-----	17	Snohomish River—Wash. (31)-----	5
Walker River direct—Nev. (23)-----	8	Bruneau River—Nev. (3); Idaho (16)-----	18	Skagit and Samish Rivers—Wash. (32)-----	6
West Walker River—Calif. (89); Nev. (24)-----	9	Boise River direct—Idaho (17)-----	19	Dungeness River—Wash. (33)-----	7
East Walker River—Calif. (90); Nev. (25)-----	10	North Fork Boise River—Idaho (18)-----	20	Nooksack River Area—Wash. (34)-----	8
Honey Lake—Nev. (55); Calif. (86)-----	12	South Fork Boise River—Idaho (19)-----	21	Sumas River—Wash. (35)-----	9
Mono Lake—Calif. (91)-----	13	Moore Creek—Idaho (20)-----	22	Chehalis River—Wash. (36)-----	10
Adobe Meadows—Calif. (92)-----	14	Owyhee River direct—Idaho (21); Oreg. (3)-----	23	Other Pacific Slope streams in Washington—Wash. (37)-----	11
Owens River—Calif. (93)-----	15	South Fork Owyhee River direct—Nev. (5); Idaho (22); Oreg. (4)-----	24	Pacific Ocean streams between the Columbia and Klamath Rivers-----	XI-B
Central Great Basin and Eastern Nevada, total—Nev.; Calif.-----	VIII-Bc	East Fork Owyhee River—Nev. (4); Idaho (23)-----	25	Rogue River direct—Oreg. (37)-----	1
Humboldt River:		Jordan Creek—Idaho (24); Oreg. (5)-----	26	Little Butte Creek—Oreg. (38)-----	2
Upper Humboldt River direct—Nev. (6)-----	1	Malheur River direct—Oreg. (6)-----	27	Bear Creek—Oreg. (39)-----	3
Lamoille and Rabbit Creeks—Nev. (7)-----	2	Bully Creek—Oreg. (7)-----	28	Evans Creek—Oreg. (40)-----	4
North Fork Humboldt River—Nev. (8)-----	3	Willow Creek—Oreg. (8)-----	29	Applegate River—Calif. (1); Oreg. (41)-----	5
South Fork Humboldt River—Nev. (9)-----	4	Payette River direct—Idaho (25)-----	30	Illinois River—Calif. (2); Oreg. (42)-----	6
Maggie Creek—Nev. (10)-----	5	North Fork Payette River—Idaho (26)-----	31	Umpqua River—Oreg. (43)-----	7
Pine Creek—Nev. (11)-----	6	South Fork Payette River—Idaho (27)-----	32	Other Pacific Slope streams—Oreg. (44); Calif. (11)-----	8
Middle Humboldt River direct—Nev. (12)-----	7	Weiser River—Idaho (28)-----	33	Pacific Ocean streams between the Klamath River and San Francisco Bay-----	XI-C
Reese River—Nev. (13)-----	8	Burnt River—Oreg. (9)-----	34	Mad River—Calif. (8)-----	1
Little Humboldt River—Nev. (14)-----	9	Powder River—Oreg. (10)-----	35	Eel River—Calif. (9)-----	2
Lower Humboldt River—Nev. (15)-----	10	Imaha River—Oreg. (11)-----	36	Russian River—Calif. (10)-----	3
Sonoma and Clear Creeks—Nev. (47)-----	11	Salmon River:		Other coastal streams in northern California—Calif. (11)-----	4
Clover Valley—Nev. (52)-----	12	Upper Salmon River direct—Idaho (29)-----	37	San Francisco Bay direct—Calif. (12)-----	XI-D
Ruby Valley—Nev. (53)-----	13	Pahsimeroi River—Idaho (30)-----	38	Petaluma Creek—Calif. (13)-----	1
Goshute and Steptoe Valleys—Nev. (54)-----	14	Lenhi River—Idaho (31)-----	39	Sonoma Creek—Calif. (14)-----	2
Spring Valley—Nev. (57)-----	15	Lower Salmon River direct—Idaho (32)-----	40	Napa River—Calif. (15)-----	3
Crescent, Diamond, Grass, and Newark Valleys—Nev. (58)-----	16	North Fork Salmon River—Idaho (33)-----	41	Suisun Bay direct—Calif. (16)-----	4
Big Smoky Valley—Nev. (59)-----	17	Panther Creek—Idaho (34)-----	42	Walnut Creek—Calif. (17)-----	5
Balston, Monitor, and Hot Creek Valleys—Nev. (40)-----	18	Middle Fork Salmon River—Idaho (35)-----	43	Alameda Creek—Calif. (18)-----	6
Railroad Valley—Nev. (41)-----	19	South Fork Salmon River—Idaho (36)-----	44	Santa Clara Valley streams—Calif. (19)-----	7
Smith Creek and Dixie Valleys—Nev. (46)-----	20	Little Salmon River—Idaho (37)-----	45	Pacific Ocean streams south of San Francisco Bay-----	XI-E
Fish Lake Valley—Calif. (94); Nev. (45)-----	21	Grande Ronde River direct—Oreg. (12); Wash. (19)-----	46	Streams between San Francisco Bay and Santa Maria River-----	XI-Ea
Amarogosa River and Dry Lakes—Nev. (44); Calif. (95)-----	22	Wallowa River—Oreg. (13)-----	47	Pajaro and San Benito Rivers—Calif. (20)-----	1
Antelope Valley—Calif. (97)-----	23	Joseph Creek—Oreg. (14)-----	48	Salinas River—Calif. (21)-----	2
Mojave River—Calif. (98)-----	24	Asotin Creek—Wash. (20)-----	49	Other coastal streams north of Santa Maria River—Calif. (35)-----	4
Columbia River-----	IX	Clearwater River direct—Idaho (38)-----	50	Santa Maria River and streams south of Santa Maria River—Calif. (22)-----	XI-Eb
Upper Columbia River direct—Wash. (1)-----	IX-A	Selway River—Idaho (40)-----	52	Santa Maria River—Calif. (23)-----	1
Kootenai River—Mont. (54); Idaho (50)-----	1	South Fork Clearwater River—Idaho (41)-----	53	San Antonio River—Calif. (28)-----	2
Clark Fork direct—Mont. (55); Idaho (52); Wash. (2)-----	2	Palouse River—Idaho (44); Wash. (21)-----	54	Santa Ynez River—Calif. (24)-----	3
		Mud Lake direct—Idaho (58)-----	57	Ventura River—Calif. (25)-----	4
		Camas Creek direct—Idaho (59)-----	58	Santa Clara River and Calleguas Creek—Calif. (26)-----	5
		Beaver Creek—Idaho (60)-----	59	Los Angeles and San Gabriel Rivers—Calif. (27)-----	6
		Medicine Lodge Creek—Idaho (61)-----	60	Santa Ana River—Calif. (28)-----	7
		Birch Creek—Idaho (62)-----	61		
		Little Lost River—Idaho (63)-----	62		
		Big Lost River—Idaho (64)-----	63		

GENERAL DISCUSSION

LXV

NAMES OF DRAINAGE BASINS WITH INDEX NUMBERS—Continued

(For the 17 western States and Arkansas, Louisiana, and Florida. State and composite maps, "Irrigation—by Drainage Basins—1939," available from the Superintendent of Documents, Washington, D. C.)

NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables	NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables	NAME OF DRAINAGE BASIN AND INDEX NUMBERS FOR STATE MAPS AND STATE BASIN TABLES	Index numbers for composite map and summary tables
Pacific Ocean streams, excl. Gulf of California streams and Columbia and Klamath Rivers—Continued		Sacramento-San Joaquin Delta and tributary streams—Continued		Sacramento-San Joaquin Delta and tributary streams—Continued	
Pacific Ocean streams south of San Francisco Bay—Continued		Sacramento-San Joaquin Delta direct—Con.		Sacramento-San Joaquin Delta direct—Con.	
Santa Maria River and streams south—Con.		Sacramento River—Continued		San Joaquin River direct—Continued	
Santa Margarita River—Calif. (29)-----	8	Upper Sacramento River direct—Con.		Kern River direct—Continued	
San Luis Rey River—Calif. (30)-----	9	Paynes Creek—Calif. (46)-----	10	Poso Creek and White River—	
San Dleguito River—Calif. (31)-----	10	Redbank Creek group—Calif. (47)-----	11	Calif. (68)-----	32
San Diego River—Calif. (32)-----	11	Antelope and Mill Creeks—		Tule River and Deer Creek—Calif. (69)	33
Sweetwater River—Calif. (33)-----	12	Calif. (48)-----	12	Kaweah River—Calif. (70)-----	34
Olay and Tia Juana Rivers—Calif. (34)-----	13	Thomas Creek—Calif. (49)-----	13	Fanoche and Los Gatos Creeks group—	
Other coastal streams south of Santa		Deer Creek—Calif. (50)-----	14	Calif. (71)-----	35
Maria River—Calif. (36)-----	14	Middle Sacramento River direct—		Kings River—Calif. (72)-----	36
San Jacinto River—Calif. (99)-----	15	Calif. (51)-----	15	Fresno River—Calif. (73)-----	37
Sacramento-San Joaquin Delta and tributary streams-----	XII	Rock Creek—Calif. (52)-----	16	Merced River—Calif. (74)-----	38
Sacramento-San Joaquin Delta direct—		Stony Creek—Calif. (53)-----	17	Orestimba and Los Banos Creeks group—	
Calif. (37)-----	1	Chico Creek—Calif. (54)-----	18	Calif. (75)-----	39
Sacramento River:		Butte Creek—Calif. (55)-----	19	Tuolumne River—Calif. (76)-----	40
Upper Sacramento River direct—		West Side streams—Calif. (56)-----	20	Stanislaus River—Calif. (77)-----	41
Calif. (38)-----	2	Feather River direct—Calif. (57)-----	21	Calaveras River—Calif. (78)-----	42
Pit River direct—Calif. (39)-----	3	Yuba and Upper Bear Rivers—		Mokelumne River—Calif. (79)-----	43
Goose Lake—Oreg. (49); Calif. (40)-----	4	Calif. (58)-----	22	Cosumnes River—Calif. (80)-----	44
Clear Creek—Calif. (41)-----	5	Lower Bear River—Calif. (59)-----	23	FLORIDA	
Cow Creek—Calif. (42)-----	6	Lower Sacramento River direct—		St. Marys River (1)-----	1
Bear Creek—Calif. (43)-----	7	Calif. (60)-----	24	St. Johns River and North Atlantic slope (2)	2
Cottonwood Creek—Calif. (44)-----	8	American River—Calif. (61)-----	25	Kissimmee and Caloosahatchee Rivers (3)	3
Battle Creek—Calif. (45)-----	9	Cache Creek—Calif. (62)-----	26	Everglades (4)-----	4
		Putah Creek—Calif. (63)-----	27	Aucilla River (11)-----	11
		San Joaquin River direct—Calif. (64)-----	28	Suwanee River (12)-----	12
		Avenal and El Paso Creeks group—		Withlacoochee River (13)-----	13
		Calif. (65)-----	29	Tampa Bay (14)-----	14
		Caliente Creek—Calif. (66)-----	30	Peace Creek (15)-----	15
		Kern River direct—Calif. (67)-----	31		

**SUMMARY FOR 17 WESTERN STATES AND
ARKANSAS AND LOUISIANA (Section C)**

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 1.—IRRIGATION SUMMARY: 1890 TO 1940

[For the 17 western States and Arkansas and Louisiana]

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area.....acres....	¹ 1,225,056,640	1,223,969,120	1,223,969,120	1,223,969,120	1,224,063,360	1,224,364,160	1,224,241,280
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	1,897,845	2,184,644	2,062,813	1,916,391	1,776,046	1,390,336	934,878
Land in all farms.....acres.....	629,050,311	608,320,098	568,693,705	505,440,954	416,462,547	376,476,067	195,595,861
Farms irrigated: ¹							
Farms.....number...	291,655	289,779	265,147	222,789	162,723	² 113,849	54,136
Increase or decrease (-) over preceding census....percent..	³ 10.0	.....	19.0	36.9	43.0	110.3	.....
Proportion of all farms.....percent..	15.4	13.3	12.9	11.6	9.2	8.2	5.8
Land in farms.....acres.....	112,601,431	(⁴)	78,339,222	(⁴)	(⁴)	(⁴)	(⁴)
Proportion of all farm land.....percent..	17.9	(⁴)	13.6	(⁴)	(⁴)	(⁴)	(⁴)
Area irrigated.....acres.....	⁵ 17,616,777	⁶ 12,938,381	⁷ 14,633,252	(⁸)	(⁸)	² 7,744,492	² 3,715,945
Increase or decrease (-) over preceding census....percent..	³ 21.8	.....	.....	.....	.....	108.4	.....
Proportion of total land area of State.....percent..	1.5	1.1	1.2	.....	.....	0.6	0.3
Proportion of all farm land.....percent..	2.8	2.1	2.6	.....	.....	2.1	1.9
Value of irrigated farms (land and buildings).....dollars..	3,467,116,512	(⁴)	4,629,781,819	(⁴)	(⁴)	(⁴)	(⁴)
Average per farm.....dollars..	11,887.73	(⁴)	17,461.19	(⁴)	(⁴)	(⁴)	(⁴)
Average per acre.....dollars..	30.79	(⁴)	59.10	(⁴)	(⁴)	(⁴)	(⁴)
Value of farm implements and machinery ⁹.....dollars..	283,024,144	(⁴)	257,110,965	(⁴)	(⁴)	(⁴)	(⁴)
Average per farm ⁹.....dollars..	970.41	(⁴)	969.69	(⁴)	(⁴)	(⁴)	(⁴)
Average per acre ⁹.....dollars..	2.51	(⁴)	3.28	(⁴)	(⁴)	(⁴)	(⁴)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	91,637	(⁴)	75,517	63,298	56,858	(⁴)	(⁴)
Units irrigated ¹⁰.....number...	430,022	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Area irrigated.....acres.....	21,003,739	(⁴)	19,547,544	19,191,716	14,433,285	(⁴)	(⁴)
Area existing works were capable of supplying with water.....acres.....	28,055,248	(⁴)	26,101,890	26,020,477	20,885,403	(⁴)	(⁴)
Area irrigable.....acres.....	31,305,949	(⁴)	30,599,470	¹¹ 35,890,821	¹¹ 32,245,464	(⁴)	(⁴)
Additional area existing works were capable of supplying with water.....acres.....	7,051,509	(⁴)	6,554,346	6,828,761	5,852,118	(⁴)	(⁴)
Additional irrigable area in enterprises not supplied with water.....acres.....	10,302,210	(⁴)	¹¹ 11,051,926	¹¹ 16,699,105	¹¹ 17,612,179	(⁴)	(⁴)
Investment in irrigation enterprises.....dollars..	1,052,049,201	(⁴)	² 892,755,790	697,657,328	321,454,008	70,010,594	29,533,921
Increase or decrease (-) over preceding census....percent..	⁸ 17.8	(⁴)	28.0	117.0	359.2	137.1	.....
Average per acre based on area works were capable of supplying with water.....dollars..	37.50	(⁴)	34.20	26.81	15.85	(⁴)	(⁴)
Increase or decrease (-) over preceding census....percent..	⁹ 9.6	(⁴)	27.6	69.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	1,126,545,687	(⁴)	1,015,108,210	819,778,005	437,948,825	(⁴)	(⁴)
Average per acre based on irrigable area in enterprises.....dollars..	35.99	(⁴)	33.17	¹¹ 22.84	¹¹ 13.58	(⁴)	(⁴)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	2.23	(⁴)	2.77	2.43	¹² 1.07	(⁴)	(⁴)

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Revised. ³Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁴Not available. ⁵Irrigated land from which crops were harvested plus 2,749,303 acres of irrigated land used only for pasture. ⁶Irrigated land from which crops were harvested. ⁷Acres of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁸Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁹Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹⁰Schedules called for "Number of farms," see explanation in text. ¹¹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹²Does not include cost of operation and maintenance for rice growing districts in Gulf States; consequently figure is not comparable. ¹³The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from those shown for earlier years.

TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

[For the 17 western States and Arkansas and Louisiana]

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
	Number	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
All farms.....	1,897,845	629,050,311	143,843,948	15,067,474	2,749,303	12,803,166,043	20.35	2,555,505,540	4.06	1,085,720,348	1.74
Owners and managers.....	1,076,457	459,428,855	84,359,515	11,005,815	2,317,655	8,783,602,098	19.12	1,850,915,794	4.03	737,899,289	1.61
Tenants.....	821,388	169,621,456	59,484,433	4,061,659	431,648	4,019,563,945	23.70	704,589,746	4.15	357,821,059	2.11
Irrigated farms, total.....	291,655	112,601,431	19,711,450	15,067,474	2,749,303	3,467,116,512	30.79	629,915,422	5.59	283,024,144	2.51
Owners and managers.....	221,639	97,502,649	14,493,368	11,005,815	2,317,655	2,784,524,630	28.56	529,180,148	5.43	217,717,548	2.23
Tenants.....	70,016	15,098,782	5,218,082	4,061,659	431,648	682,591,882	45.21	100,735,274	6.67	65,306,596	4.33
Wholly irrigated farms.....	219,614	65,984,746	11,995,168	11,995,168	2,071,385	2,366,971,049	35.87	448,859,681	6.80	191,640,325	2.90
Owners and managers.....	168,131	57,315,843	8,744,365	8,744,365	1,745,651	1,897,179,811	33.10	377,501,371	6.59	146,131,755	2.55
Tenants.....	51,483	8,668,903	3,250,803	3,250,803	325,734	469,791,238	54.19	71,358,310	8.23	45,508,570	5.25
Partly irrigated farms.....	72,041	46,616,685	7,716,282	3,072,306	677,918	1,100,145,463	22.68	181,055,741	3.88	91,383,819	1.96
Owners and managers.....	53,508	40,186,806	5,749,003	2,261,450	572,004	887,344,819	22.08	151,678,777	3.77	71,585,793	1.78
Tenants.....	18,533	6,429,879	1,967,279	810,856	105,914	212,800,644	33.10	29,376,964	4.57	19,798,026	3.08
Nonirrigated farms, total.....	1,606,190	516,448,880	124,132,498	.....	.....	9,336,049,531	18.08	1,925,590,118	3.73	812,696,204	1.57

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939, BY SOURCE OF WATER SUPPLY

[For the 17 western States and Arkansas and Louisiana]

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA			DELIVERY OF WATER TO IRRIGATORS, 1939							
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹		
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot	
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres	Acres	Dollars	Dollars
Total	91,637	31,305,949	28,055,248	21,003,739	19,547,544	19,191,718	7.4	19,377,064	20,210,007	18,802,811	3.0	3.28	1.11	
Primary sources:														
Streams, gravity.....	25,726	18,642,336	16,811,045	13,063,955	12,980,575	14,527,060	0.6	11,798,244	12,552,792	11,440,122	2.6	1.18	0.45	
Streams, pumped.....	5,915	3,225,700	2,761,219	1,724,800	1,713,380	1,226,510	0.7	1,601,396	1,699,903	1,578,627	3.2	4.39	1.39	
Streams, gravity and pumped.....	344	2,182,762	1,796,105	1,266,148	258,094	199,595	390.6	1,224,860	1,259,596	1,219,178	4.0	2.72	0.68	
Wells, pumped.....	38,715	3,770,232	3,621,991	2,508,076	2,051,735	1,263,098	22.2	2,463,353	2,396,465	2,371,469	2.6	7.28	2.84	
Wells, flowing.....	1,398	52,791	50,222	41,481	48,479	65,856	-14.4	36,567	19,614	17,231	2.6	1.06	0.40	
Wells, pumped and flowing.....	163	25,648	24,850	20,835	16,798	35,685	24.0	20,651	19,508	19,324	2.6	8.93	3.47	
Lakes, gravity.....	149	46,656	44,805	25,659	58,103	100,646	-55.8	23,786	24,872	23,223	3.1	1.31	0.43	
Lakes, pumped.....	354	75,047	70,818	45,831	77,818	35,730	-41.1	44,869	42,300	41,455	1.8	3.32	1.86	
Springs.....	3,432	265,666	253,493	210,373	217,246	198,008	-3.2	179,209	170,424	145,060	2.3	0.93	0.41	
Springs and streams.....	995	306,174	287,297	230,004	.....	.....	.....	189,938	215,216	183,091	2.3	0.64	0.29
Stored storm water.....	434	37,682	33,217	21,399	39,587	98,873	-45.9	17,539	19,010	15,546	1.4	1.20	0.87	
City water.....	184	14,661	14,372	10,837	1,654	990	555.2	10,451	9,527	9,378	3.5	5.71	1.64	
Sewage.....	53	6,717	6,447	5,260	3,529	2,578	49.1	4,384	3,715	3,141	2.7	2.39	0.90	
Streams, gravity; wells, pumped..	580	1,705,708	1,533,861	1,252,329	1,164,349	344,713	7.6	1,234,969	1,241,531	1,226,447	2.5	4.30	1.73	
Streams, gravity; wells, flowing..	111	82,725	81,553	71,571	21,292	82,655	236.1	49,754	50,807	48,694	1.4	0.87	0.65	
Streams, pumped; wells, pumped..	437	369,853	225,108	172,636	.....	.....	.....	169,822	168,533	165,119	2.4	6.46	2.70
Waste water, seepage or drainage..	770	116,346	113,393	65,613	.....	.....	.....	61,605	58,065	55,699	2.1	1.46	0.70
Other mixed.....	741	379,125	325,952	266,932	866,434	996,621	-70.2	245,667	239,007	.....	2.8	2.83	1.01
Other and not reported.....	1	.....	.....	.....	28,471	13,148	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:²														
Streams, gravity and/or storage..	718	3,719,709	3,531,553	2,736,696	.....	.....	.....	2,448,977	2,396,400	2,180,285	1.3	0.46	0.35
Streams, pumped.....	231	36,712	35,357	25,644	24,671	.....	3.1	21,049	25,500	20,653	2.7	3.55	1.33
Wells, pumped.....	10,066	718,088	693,540	518,429	293,026	.....	76.9	511,291	499,973	496,145	1.9	3.83	2.06
Wells, flowing.....	120	8,126	7,944	6,441	148	.....	(³)	4,744	4,732	3,148	1.3	0.27	0.22

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 units the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more units it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered.

²Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

³Percent not shown when more than 1,000.

TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

[For the 17 western States and Arkansas and Louisiana]

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total	1,052,049,201	100.0	37.50	892,755,790	100.0	34.20	-2.07	20,193,761	2.28	18,690,184	2.77	-0.63	16,253,192	2.43
Primary sources:														
Streams, gravity.....	441,278,658	41.9	26.25	452,381,562	50.6	26.44	-1.9	12,580,607	0.84	12,392,865	1.21	-0.37	12,183,139	1.25
Streams, pumped.....	81,236,358	7.7	29.42	102,027,581	11.4	37.67	-8.25	1,698,767	3.81	1,678,550	4.30	-0.49	1,151,313	6.50
Streams, gravity and pumped.....	136,541,602	13.2	77.13	20,823,588	2.3	47.63	29.50	1,259,596	2.23	252,784	4.41	-2.18	198,656	2.33
Wells, pumped.....	139,675,087	13.3	38.56	131,426,464	14.7	53.30	-71.51	2,394,081	6.92	1,921,060	9.17	-2.25	1,064,338	10.07
Wells, flowing.....	1,706,366	0.2	33.96	2,366,242	0.8	42.27	-8.29	19,614	1.01	22,403	2.34	-1.33	27,543	2.77
Wells, pumped and flowing.....	1,855,318	0.2	74.66	1,548,810	0.2	74.56	0.08	19,508	7.96	15,542	9.27	-1.31	29,600	8.04
Lakes, gravity.....	1,248,164	0.1	27.86	4,693,943	0.5	35.61	-7.75	24,872	1.06	55,527	2.70	-1.04	78,586	1.30
Lakes, pumped.....	1,655,166	0.2	26.52	3,591,977	0.4	26.43	0.09	42,300	3.40	76,518	3.93	-0.53	45,558	5.20
Springs.....	3,356,541	0.3	13.24	3,408,382	0.4	13.27	-0.03	170,424	0.83	195,502	1.02	-0.19	139,244	1.63
Springs and streams.....	4,053,412	0.4	14.11	.....	.....	.....	.....	215,236	0.51	.....	.....	.....	.....	.....
Stored storm water.....	637,637	0.1	19.20	1,822,468	0.2	28.31	-9.11	19,010	1.12	36,023	1.31	-0.19	57,666	2.39
City water.....	540,022	0.1	37.57	32,306	(³)	17.85	19.72	9,105	4.66	978	7.31	-2.65	361	20.73
Sewage.....	209,541	(⁴)	32.50	261,986	(⁴)	65.35	-32.85	3,715	2.41	2,902	2.16	0.25	1,631	9.05
Streams, gravity; wells, pumped..	111,874,661	10.6	72.94	99,936,110	11.2	66.29	6.65	1,201,354	3.56	1,159,631	4.46	-0.90	315,640	5.97
Streams, gravity; wells, flowing..	1,714,990	0.2	21.03	578,037	0.1	16.89	4.14	50,807	0.70	20,268	2.52	-1.82	79,354	1.36
Streams, pumped; wells, pumped..	19,194,344	1.8	85.27	.....	.....	.....	.....	169,822	6.19	.....	.....	.....	.....	.....
Waste water, seepage or drainage..	699,435	0.1	6.17	.....	.....	.....	.....	68,103	1.45	.....	.....	.....	.....	.....
Other mixed.....	14,200,912	1.3	43.57	56,702,676	6.4	49.82	-5.50	258,129	2.44	843,862	3.52	-1.05	838,622	2.71
Other and not reported.....	1	.....	.....	592,642	0.1	20.18	.....	.....	.....	14,769	2.04	.....	11,941	10.75
Supplemental sources:⁵														
Streams, gravity and/or storage..	69,896,269	6.6	19.79	.....	.....	.....	.....	2,452,362	0.31	.....	.....	.....	.....	.....
Streams, pumped.....	1,622,648	0.2	45.69	927,158	0.1	28.28	17.61	25,200	4.64	23,696	6.27	-1.63	.....	.....
Wells, pumped.....	16,524,893	1.6	23.83	9,627,568	1.1	29.92	-6.09	501,669	3.86	276,347	5.91	-2.05	.....	.....
Wells, flowing.....	117,168	(⁴)	14.75	6,200	(⁴)	24.31	-9.56	4,732	0.24	57	0.61	-0.37	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Revised.

⁴Less than one-tenth of 1 percent.

⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

[For the 17 western States and Arkansas and Louisiana]

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930	1920			1940		1930	1920	
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED						AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued					
Total.....	Acres 21,003,739	Acres 3,287,210	Acres 19,547,544	Acres 19,191,716	Percent 7.4		Acres	Acres	Acres	Acres	Percent
Individual and partnership....	7,314,152	596,171	6,410,581	6,848,807	14.1	Reclamation district.....	136,276	22,743	.....	.....	.....
Cooperative, incorporated....	5,743,545	760,981	6,271,394	6,581,400	6.1	Commercial.....	1,961,202	232,804	2,160,950	2,799,563	-8.2
Cooperative, unincorporated....	908,943	97,407	.....	.....	.....	Bureau of Reclamation ²	2,349,967	1,762,721	1,944,825	1,680,643	20.8
Irrigation district.....	3,514,702	211,470	3,452,275	1,622,687	1.8	Office of Indian Affairs ²	802,996	.....	739,446	484,486	8.6
Reclamation district.....	59,052	22,743	.....	.....	.....	State.....	37,948	2,000	13,000	7,379	179.0
Commercial.....	1,017,781	128,238	1,230,763	1,822,001	-17.3	City and/or sewage.....	164,219	7,730	146,132	44,458	5.5
Bureau of Reclamation ²	1,524,004	1,460,470	1,485,028	1,254,569	22.8	Other.....	13,811	.....	407,619	813,469	-96.6
Office of Indian Affairs ²	515,765	.....	331,840	284,551	55.4						
State.....	17,022	2,000	11,489	5,620	48.2	IRRIGABLE AREA³					
City and/or sewage.....	63,457	7,730	121,218	40,145	-31.2	Total.....	31,305,949	4,482,635	39,599,470	35,890,821	2.3
Other.....	5,316	.....	233,016	531,735	-97.7	Individual and partnership....	10,137,716	830,666	8,969,051	13,008,415	13.0
						Cooperative, incorporated....	7,464,492	924,803	8,698,800	10,628,543	-1.3
						Cooperative, unincorporated....	1,118,653	119,049	.....	.....	.....
						Irrigation district.....	5,687,191	467,807	6,013,347	3,432,109	-5.7
						Reclamation district.....	137,526	22,743	.....	.....	.....
						Commercial.....	2,551,707	291,694	2,519,597	3,999,581	-2.6
						Bureau of Reclamation ²	2,794,102	1,808,153	2,569,649	2,627,176	8.7
						Office of Indian Affairs ²	1,185,449	.....	1,122,134	932,985	6.5
						State.....	44,581	10,000	14,231	9,851	213.3
						City and/or sewage.....	158,271	7,730	140,534	49,660	12.6
						Other.....	16,251	.....	452,127	1,202,781	-96.4
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER											
Total.....	28,055,248	4,268,394	26,101,890	26,020,477	7.5						
Individual and partnership....	9,633,198	798,308	7,982,142	9,255,766	20.7						
Cooperative, incorporated....	6,818,052	879,033	7,861,061	8,403,298	1.7						
Cooperative, unincorporated....	1,078,184	111,378	.....	.....	.....			
Irrigation district.....	4,969,385	451,677	4,846,095	2,531,425	2.5						

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²U.S. Dept. of the Interior. ³For 1920 relates to total area. Irrigable area for that year was not reported. ⁴For explanation of areas, see text.

TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

[For the 17 western States and Arkansas and Louisiana]

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more units ²	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Units served ²	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ³	Maintenance and operation per acre ⁴	Works and equipment per acre ³	Maintenance and operation per acre ⁴			From which crops were harvested	On which crops failed	
	Number	Number	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Number	Acres	Acres	Acres	Acres
Total.....	91,637	5,732	31,305,949	28,055,248	33.53	2.14	19.84	0.85	490,022	21,003,739	18,300,138	256,188	2,444,413
Individual and partnership....	86,050	1,093	10,137,716	9,633,198	17.40	2.65	21.22	3.33	90,037	7,314,152	6,001,250	78,234	1,234,668
Cooperative, incorporated....	2,678	2,418	7,464,492	6,818,052	25.82	1.28	17.19	0.39	126,490	5,743,545	5,150,308	89,006	474,231
Cooperative, unincorporated....	1,678	1,283	1,118,859	1,078,184	14.03	0.75	12.74	0.18	21,804	908,943	744,319	14,700	149,924
Irrigation district.....	427	422	5,987,191	4,969,385	51.30	2.46	11.13	0.34	108,277	3,514,702	3,237,145	39,843	237,714
Reclamation district.....	14	11	137,526	136,276	17.82	2.82	0.61	0.23	311	59,052	56,735	250	2,067
Commercial.....	275	239	2,551,707	1,961,202	28.56	3.57	30.00	0.84	19,210	1,017,781	948,940	5,636	63,305
U. S. Bureau of Reclamation ²	97	96	2,794,102	2,349,967	89.78	2.12	22.00	0.35	43,517	1,524,004	1,628,892	25,485	171,627
U. S. Office of Indian Affairs.....	186	117	1,185,449	802,996	60.23	1.93	.....	.....	16,254	515,765	467,816	2,339	105,610
State.....	143	6	44,581	37,948	28.73	3.82	257.51	.....	154	17,022	14,985	879	1,378
City and/or sewage.....	62	43	158,271	154,219	34.12	3.02	41.81	0.64	5,155	63,457	77,866	3,061	2,530
Other.....	25	4	16,251	13,811	12.70	1.66	.....	.....	69	5,316	3,902	55	1,359

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Schedules called for "Number of farms," see explanation in text. ³Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ⁴Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁵For explanation of areas and investment, see text.

TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

[For the 17 western States and Arkansas and Louisiana]

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							Increase or decrease (-) 1930-40	AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940				1930	1920	Percent		Primary enterprises	Supplemental enterprises		
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment									Investment in water rights
Total.....	Dollars 3,052,049,201	Dollars 963,888,263	Dollars 88,160,938	Dollars 1,025,672,714	Dollars 26,376,487	Dollars 892,755,790	Dollars 697,657,328	Percent 17.8	Dollars 34.36	Dollars 20.65	Dollars 24,897,210	Dollars 74,496,486
Individual and partnership....	187,982,730	170,366,731	17,013,999	184,571,636	2,811,094	187,867,180	154,634,169	-0.3	17.69	21.31	79,149	4,307,879
Cooperative, incorporated....	206,969,498	189,434,484	17,535,014	193,742,284	13,227,214	179,329,962	183,041,500	25.0	27.38	19.95	1,233,608	3,600,687
Cooperative, unincorporated....	17,171,378	15,648,066	1,523,312	16,550,668	620,712	.....	.....	.....	14.51	13.68	102,577	438,335
Irrigation district.....	265,737,810	250,701,900	5,035,910	258,961,654	5,776,156	210,733,476	88,573,514	26.1	52.46	11.15	9,786,698	12,446,829
Reclamation district.....	2,413,740	2,393,108	20,632	2,408,740	5,000	.....	.....	.....	17.56	0.91	5,476	24,500
Commercial.....	66,243,823	59,250,003	6,993,820	62,981,424	3,252,399	62,351,714	85,735,470	6.2	30.21	30.04	656,883	1,811,209
U. S. Bureau of Reclamation ²	250,245,359	211,046,133	39,199,225	249,714,587	530,772	193,988,576	129,609,819	29.0	89.81	22.24	8,127,211	12,955,672
U. S. Office of Indian Affairs.....	48,420,058	48,420,058	.....	48,365,692	54,366	31,576,620	14,851,236	53.3	60.30	.....	4,821,135	38,871,503
State.....	1,650,272	1,135,247	515,025	1,603,993	46,379	1,046,954	344,174	57.7	29.82	257.51	67,283	28,425
City and/or sewage.....	5,631,467	5,307,467	324,000	5,585,336	46,131	15,511,463	2,936,678	-63.7	34.42	41.91	17,791	5,000
Other.....	183,058	183,056	.....	176,802	6,264	10,348,945	38,030,768	-98.2	13.26	.....	400	6,447

¹Only for enterprises serving 5 or more units.

²Revised.

³For explanation of investment, see text.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE: CENSUS OF 1940
[For the 17 western States and Arkansas and Louisiana]

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter-prises 1940	Area		Total indebted-ness 1940	Average per acre assessed 1939 ⁵	Average per acre works were capable of supplying with water ⁴	Total arrearages			Average per acre assessed 1939 ⁶	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri-gable 1940	Works were capable of supplying with water 1940				Enter-prises 1940	Dec. 31 1939	Dec. 31 1938					Dollars
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	1,419	16,883,066	14,655,187	386,640,274	32.90	29.94	202	31,080,285	29,352,985	11.29	19,163,180	34,284,667	28,700,362
Partnership.....	41	35,311	33,901	232,914	7.74	6.85	2	(⁶)	(⁶)	(⁶)	509,737	867,823	197,001
Cooperative, incorporated..	750	4,210,672	3,947,336	23,008,847	6.32	5.79	58	1,409,193	1,277,294	10.47	6,897,301	9,775,088	8,487,624
Cooperative, unincorporated..	42	172,997	172,797	4,201,664	28.53	24.32	7	1,146,574	975,617	12.50	858,103	561,157	353,319
Irrigation district.....	332	5,276,890	4,656,794	152,639,874	33.80	35.41	90	24,313,110	24,060,076	14.87	5,439,029	12,234,193	12,368,105
Reclamation district.....	5	82,910	82,910	1,412,344	42.12	17.03	1	(⁶)	(⁶)	(⁶)	64,648	139,081	137,702
Commercial.....	93	1,882,409	1,331,255	19,962,688	28.85	14.45	23	1,682,906	1,682,906	12.21	1,296,666	4,687,582	3,176,396
Bureau of Reclamation ⁸	76	4,121,792	3,674,717	148,142,068	64.63	58.54	30	1,276,528	1,087,633	1.76	3,373,760	4,461,271	3,559,275
Office of Indian Affairs ⁹	72	1,080,283	755,675	106,888,107	61.37	48.81	11	1,045,682	1,042,320	33.81	615,481	1,099,592	288,072
State.....	1	(⁷)	(⁷)	(⁷)	(⁷)	(⁷)	.....	.....	.....	.....	5,344	7,250	.....
City and/or sewage.....	7	9,802	9,802	151,766	16.35	15.48	.....	.....	.....	.....	96,314	447,138	115,548
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,797	4,512	320

¹ Only for enterprises serving 5 or more units. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ² In payment of principal, interest, and/or other funded obligations. ³ Based on primary enterprises only; average for supplemental enterprises is \$11.63. ⁴ Based on primary enterprises only; average for supplemental enterprises is \$10.01. ⁵ Based on primary enterprises only; average for supplemental enterprises is \$9.93. ⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁷ Data for 1 "State" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁸ U. S. Dept. of the Interior. ⁹ Represents indebtedness and arrearages of irrigation districts and a water-user association to the U. S. Government and to non-Federal agencies. ¹⁰ Represents construction costs of irrigation works less cancellations and repayments. ¹¹ Data for less than 3 enterprises shown with permission of the enterprise involved. For explanation of areas and investment, see text.

TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE
[For the 17 western States and Arkansas and Louisiana]

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	20,193,761	43,172,526	2,983,963	2,828,094	2.14	0.95	3,999	16,071,522	24,006
Individual and partnership.....	6,761,064	17,912,563	572,367	1,908,696	2.65	3.33	412	159,329	994
Cooperative, incorporated..	5,705,859	7,321,830	730,043	282,560	1.28	0.39	2,124	3,293,180	8,360
Cooperative, unincorporated..	795,725	596,649	96,941	17,799	0.75	0.18	659	222,518	2,154
Irrigation district.....	3,506,863	8,641,111	195,890	66,328	2.46	0.34	393	5,216,167	5,465
Reclamation district.....	35,766	100,785	22,743	5,323	2.82	0.23	9	28,302	37
Commercial.....	1,016,082	3,626,450	128,238	107,281	3.57	0.64	202	1,716,515	1,859
U. S. Bureau of Reclamation ⁸	1,022,039	3,855,722	1,230,111	435,148	2.12	0.35	81	3,694,039	3,409
U. S. Office of Indian Affairs.....	497,699	959,648	.....	.....	1.93	.....	89	1,481,825	2,156
State.....	6,059	23,069	.....	.....	3.82	.....	3	760	2
City and/or sewage.....	41,853	126,385	7,730	4,959	3.02	0.64	28	258,887	182
Other.....	4,932	8,314	.....	.....	1.69	.....	1	(²)	(²)

¹ Only for enterprises serving 5 or more units. ² Data for 1 "Other" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ³ Data for less than 3 enterprises shown with permission of the enterprise involved. For explanation of areas and investment, see text.

TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940
[For the 17 western States and Arkansas and Louisiana]

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capacity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Num-ber	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles	Ac.-ft.	Miles	Miles	G. p. m.	G. p. m.	Hp.	Hp.	Number	Rated capac-ity	Number	Rated capac-ity
Total.....	34,544	4,607	612,021	122,857	4,576.7	7,709	33,787,382	28,584.9	4,641	555,073	68,279	43,355,271	78,293	1,762,687	78,528	75,802,998
Individual and partnership..	29,728	3,242	189,852	43,659	830.4	5,971	736,070	17,011.3	4,412	510,171	65,097	39,942,106	73,200	1,321,262	73,449	51,215,121
Cooperative, incorporated..	2,272	709	194,390	25,597	617.5	918	4,292,118	5,089.1	165	19,269	1,377	1,172,648	1,908	144,627	1,915	5,318,596
Cooperative, unincorporated..	1,382	83	26,171	5,739	82.2	130	469,621	532.6	31	6,681	354	251,902	452	14,830	449	433,126
Irrigation district.....	464	169	82,300	21,243	2,205.9	213	6,326,964	3,727.6	13	3,625	769	1,120,816	1,461	118,745	1,444	8,547,271
Reclamation district.....	3	1	1,980	205	9.2	2	.....	14.6	.....	.....	.....	.....	59	5,233	60	977,000
Commercial.....	176	109	41,482	7,020	198.7	147	2,931,186	1,044.3	12	12,955	252	237,847	488	78,577	489	6,012,675
Bureau of Reclamation ⁸	81	89	49,932	12,457	714.2	85	17,292,933	899.9	.....	167	348,000	300	52,351	300	2,502,252	
Office of Indian Affairs ⁹	339	102	13,486	6,432	70.9	111	1,695,896	292.2	8	982	189	197,748	300	22,976	299	674,656
State.....	42	84	777	132	4.0	105	31,607	42.6	.....	.....	6	28,089	80	4,070	78	94,510
City and/or sewage.....	32	16	1,491	39	3.6	23	9,992	118.2	.....	.....	6	3,635	19	453	19	12,635
Other.....	15	3	260	34	0.1	4	92	12.5	.....	.....	18	12,480	26	563	26	15,156

¹ Includes main and lateral canals but not farm ditches.

² Includes flumes.

³ U. S. Dept. of the Interior.

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TABLE 11.—DAMS, BY MATERIAL, 1940 AND 1930

[For the 17 western States and Arkansas and Louisiana]

MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number
Total.....	34,544	4,607	21,047	2,949
Concrete or masonry.....	3,666	409	2,380	362
Timber.....	4,595	72	3,077	.....
Earth and rock.....	18,032	3,795	¹ 12	1,713
Other and mixed.....	² 7,766	225	¹ 15,675	718
Not reported.....	485	106	803	156

¹ Revised.

² Principally temporary dams, replaced annually.

TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

[For the 17 western States and Arkansas and Louisiana]

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	78,528	100.0	75,802,998	100.0	51	Total, 1940.....	78,293	100.0	1,762,687	100.0
Electric motor.....	50,597	64.4	43,527,320	57.4	55	Centrifugal pump.....	30,792	39.3	597,067	33.9
Centrifugal.....	19,208	24.5	21,333,038	28.1	31	Electric.....	17,869	22.8	319,348	18.1
Turbine.....	28,506	36.3	20,861,980	27.5	70	Internal-combustion.....	12,683	16.2	241,186	13.7
Plunger.....	2,537	3.2	173,528	0.2	94	Other.....	240	0.3	36,533	2.1
Other.....	346	0.4	1,158,774	1.5	55	Turbine pump.....	34,584	44.2	901,137	51.1
Internal-combustion engine.....	21,533	27.4	20,532,240	27.1	42	Electric.....	26,911	34.4	609,379	34.6
Centrifugal.....	12,750	16.2	12,594,513	16.6	26	Internal-combustion.....	7,607	9.7	287,433	16.3
Turbine.....	7,285	9.3	6,951,383	9.2	69	Other.....	66	0.1	4,325	0.2
Plunger.....	1,043	1.3	85,167	0.1	63	Plunger pump.....	4,212	5.4	17,553	1.0
Other.....	455	0.6	901,177	1.2	32	Electric.....	2,094	2.7	9,864	0.6
Other kinds of motive power.....	1,213	1.5	1,842,277	2.4	63	Internal-combustion.....	1,074	1.4	5,804	0.3
Centrifugal.....	178	0.2	1,668,451	2.2	28	Other.....	1,044	1.3	1,655	0.1
Turbine.....	53	0.1	139,430	0.2	56	Other and mixed types of pumps.....	8,705	11.1	246,930	14.0
Plunger.....	910	1.2	15,476	(¹)	72	Electric.....	6,559	8.4	179,333	10.2
Other.....	72	0.1	18,920	(¹)	39	Internal-combustion.....	1,851	2.4	53,570	3.0
Mixed kinds of motive power.....	5,186	6.6	9,901,161	13.1	50	Other.....	295	0.4	14,027	0.8
Centrifugal.....	2,311	2.9	6,440,390	8.5	32	Total, 1930.....	² 59,344	.....	1,283,419	.....
Turbine.....	2,360	3.0	2,793,235	3.7	69	Increase or decrease (-) 1930-1940.....	18,949	.....	479,268	.....
Plunger.....	397	0.5	25,249	(¹)	61					
Other.....	117	0.1	642,287	0.8	39					
Total, 1930.....	61,445	.....	57,244,859	.....	51					
Increase or decrease (-) 1930-1940..	17,083	.....	18,558,139	.....	.....			

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

[For the 17 western States and Arkansas and Louisiana]

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 28,584.9	Miles ³ 17,963.1	Percent 64.6	Wood-stave:	Miles 808.5	Miles 593.4	Percent 36.2
Concrete:				1 to 12 inches.....	230.1	} 406.4	} 5.3
1 to 12 inches.....	14,126.6	7,519.1	87.9	13 to 24 inches.....	197.9		
13 to 24 inches.....	3,968.6	} 2,681.9	70.2	Over 24 inches.....			
Over 24 inches.....	597.0				Clay and other:		
Metal:				1 to 12 inches.....	456.3	235.4	93.8
1 to 12 inches.....	7,083.1	4,019.7	76.2	13 to 24 inches.....	120.5	} 60.4	} 185.4
13 to 24 inches.....	712.5	} 835.5	13.0	Over 24 inches.....	51.9		
Over 24 inches.....	231.9						

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches).

³ Includes 917.8 miles of pipe lines not segregated by size and 93.5 miles of pipe lines not segregated by materials.

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TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

[For the 17 western States and Arkansas and Louisiana]

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	3,532	3,853	3,068	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises..... acres..	9,553,069	10,611,415	8,860,760	(a) Enterprises reporting lands drained and/or needing drainage...percent..	62.0	² 34.9	¹ 17.2
Area irrigated in these enterprises.....acres..	6,224,568	(2)	(2)	(b) All irrigation enterprises.....percent..	18.4	19.0	7.9
Area for which drains have been installed..acres..	3,861,305	3,707,354	1,519,853	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres..	897,912	1,078,566	1,476,771	(a) Irrigable area reporting.....percent..	49.8	45.1	¹ 33.8
				(b) Irrigated area reporting.....percent..	76.5	(2)	(2)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately. ²Not available. ³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

[For the 17 western States and Arkansas and Louisiana]

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929 ¹	1919 ¹	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	51,518,947	44,335,802	60,005,556	39,425,558	31,606,035	36,626,781	12,093,389	12,729,767	23,378,775
Area irrigated by these enterprises.....acres.....	11,529,614	10,723,726	10,879,174	8,769,099	7,815,218	7,771,979	2,760,515	2,908,508	3,107,195
Average water per acre irrigated.....acre-feet..	4.5	4.1	5.5	4.5	4.0	4.7	4.4	4.4	7.5
Total water delivered to irrigators.....acre-feet..	45,289,815	17,968,596	15,339,104	21,706,882	14,311,037	8,673,341	23,582,933	3,657,559	6,665,763
Area irrigated by these enterprises.....acres.....	16,349,287	6,474,338	6,059,953	7,722,104	5,054,632	3,980,026	8,627,183	1,419,706	2,079,927
Average water per acre irrigated.....acre-feet..	2.8	2.8	2.5	2.8	2.8	2.2	2.7	2.6	3.2
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	7,692,960	.....	.....	1,142,357	.....	.....	6,550,603	.....	.....
Area irrigated by these enterprises.....acres.....	3,027,777	.....	.....	484,821	.....	.....	2,542,956	.....	.....
Average water per acre irrigated.....acre-feet..	2.5	.....	.....	2.4	.....	.....	2.6	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,021,061	.....	.....	1,416,366	.....	.....	604,695	.....	.....
Area irrigated by these enterprises.....acres.....	1,172,497	.....	.....	864,978	.....	.....	307,519	.....	.....
Average water per acre irrigated.....acre-feet..	1.7	.....	.....	1.6	.....	.....	2.0	.....	.....
Total water delivered to irrigators.....acre-feet..	3,251,732	.....	.....	1,740,754	.....	.....	1,510,978	.....	.....
Area irrigated by these enterprises.....acres.....	2,470,026	.....	.....	855,455	.....	.....	1,614,571	.....	.....
Average water per acre irrigated.....acre-feet..	1.3	.....	.....	2.0	.....	.....	0.9	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	954,800	.....	.....	6,793	.....	.....	948,007	.....	.....
Area irrigated by these enterprises.....acres.....	516,035	.....	.....	5,426	.....	.....	510,609	.....	.....
Average water per acre irrigated.....acre-feet..	1.9	.....	.....	1.3	.....	.....	1.9	.....	.....

¹Data only for enterprises serving 5 or more units. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

[For the 17 western States]

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
Total ²	Acres 20,395,043	Percent 100.0	Acres 3,284,290	Acres ³ 18,944,856	Percent 100.0	Acres ³ 18,592,888	Percent 100.0
Appropriation ⁴	10,216,475	50.1	1,143,582	7,883,564	41.6	³ 8,541,671	45.9
Riparian.....	604,274	3.0	26,374	530,912	2.8	³ 346,607	1.9
Appropriation and riparian.....	937,431	4.6	97,071	.....	.....	.....	.....
Underground.....	2,163,315	10.6	503,264	1,755,227	9.3	1,067,606	5.7
Appropriation and underground.....	922,074	4.5	61,700	.....	.....	.....	.....
Riparian and underground.....	122,037	0.6	2,136	.....	.....	.....	.....
Adjudicated by court.....	5,138,337	25.2	1,432,322	7,871,804	41.6	7,159,954	38.5
Other mixed and not reported.....	291,100	1.4	17,841	³ 903,349	4.8	³ 1,477,050	7.9

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).

²Data for Arkansas and Louisiana not included as water rights have no legal status in these States.

³Revised.

⁴"Appropriation" includes water rights published in the 1930 and 1920 Irrigation Census Reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

[For the 17 western States

PRIMARY ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED UNITS ¹							
			No units ²	1 unit	2 to 4 units	5 to 24 units	25 to 99 units	100 to 999 units	1,000 units and more	
1	Enterprises, 1940.....number...	80,502	2,227	66,269	6,567	3,572	1,253	561	50	
2	Irrigated units, 1939 ³.....number.....	430,022	.....	66,269	16,297	36,782	59,464	141,640	109,570
3	Area irrigated, 1939.....acres.....	21,003,739	.....	5,832,007	1,244,689	2,371,642	2,769,280	5,448,420	3,337,701
4	(a) From which crops were harvested.....acres.....	16,300,138	.....	4,718,854	1,028,946	1,987,380	2,476,494	5,015,186	3,073,378
5	(b) On which crops failed.....acres.....	259,188	.....	62,352	12,127	40,978	58,729	69,570	15,432
6	(c) Irrigated pasture.....acres.....	2,444,413	.....	1,050,801	203,716	343,264	234,057	363,664	248,891
CAPITAL INVESTMENT, 1940										
7	Total capital investment in all enterprises.....dollars..	963,888,263	12,153,234	140,428,110	27,297,580	65,530,535	96,274,601	385,076,346	237,127,857	
8	(a) Cost of irrigation works and equipment.....dollars..	940,555,592	10,776,306	136,646,774	26,099,164	63,086,538	92,951,928	373,329,096	235,668,786	
9	(b) Investment in water rights.....dollars.....	23,332,671	1,376,928	1,781,336	1,198,416	2,443,997	3,322,673	11,747,250	1,462,071	
10	Area works were capable of supplying with water.....acres.....	28,055,248	409,125	7,611,711	1,615,820	3,046,312	3,789,805	7,437,618	4,145,857	
11	Average investment per acre irrigated.....dollars.....	45.89	.....	24.08	21.93	21.93	34.77	70.68	71.05
12	Average investment per acre which the works could supply with water.....dollars.....	34.36	29.71	18.45	16.89	21.51	25.41	51.77	57.20	
MAINTENANCE AND OPERATION, AND CHARGES, 1939										
13	Enterprises reporting maintenance and operation.....number...	72,015	1,018	59,859	6,069	3,271	1,195	554	49	
14	(a) Area irrigated in these enterprises.....acres.....	20,193,761	.....	5,365,456	1,161,602	2,234,360	2,701,049	5,433,544	3,297,750
15	(b) Cost of maintenance and operation.....dollars.....	43,172,526	91,948	15,638,217	2,024,941	2,767,493	4,033,704	11,123,017	7,493,206	
16	(c) Average cost per irrigated acre reporting.....dollars.....	2.14	.....	2.91	1.74	1.24	1.49	2.05	2.27
17	Total annual charges ³.....dollars.....	32,876,404	21,597	.....	.....	3,457,516	5,353,930	14,288,661	9,744,700
18	Average charge per irrigated acre reporting.....dollars.....	2.89	.....	.....	.....	1.55	1.97	2.63	2.92
19	Area against which charges were assessed.....acres.....	16,570,704	66,500	.....	.....	2,473,709	3,304,829	6,533,300	4,192,366
20	Average annual charge per acre assessed.....dollars.....	1.96	0.32	.....	.....	1.40	1.62	2.19	2.32
21	Total charges collected ³.....dollars.....	27,552,300	13,127	.....	.....	1,906,794	4,320,177	12,302,456	9,009,806
INDEBTEDNESS AND ARREARAGE, 1939										
22	Enterprises reporting indebtedness ⁴.....number.....	1,329	17	.....	.....	376	525	370	41
23	(a) Area irrigated in these enterprises.....acres.....	8,618,597	.....	.....	.....	436,002	1,448,334	4,274,013	2,460,248
24	(b) Indebtedness.....dollars.....	360,304,925	1,874,967	.....	.....	10,593,203	29,868,739	173,497,174	144,470,842
25	(c) Average indebtedness per acre irrigated.....dollars.....	41.81	.....	.....	.....	24.30	20.62	40.59	58.72
26	(d) Cost of irrigation works and equipment.....dollars.....	625,781,421	5,356,241	.....	.....	26,301,698	65,022,794	320,607,061	208,493,627
27	(e) Investment in water rights.....dollars.....	14,752,904	1,294,798	.....	.....	1,184,475	2,215,890	9,600,122	457,619
28	(f) Total investment.....dollars.....	640,534,325	6,651,039	.....	.....	27,486,173	67,238,684	330,207,183	208,951,246
29	(g) Maintenance and operation.....dollars.....	19,596,943	29,626	.....	.....	802,790	2,924,315	9,142,287	6,697,925
30	(h) Total annual charges ³.....dollars.....	25,711,540	10,209	.....	.....	1,193,575	3,974,369	12,206,033	8,327,354
31	(i) Total charges collected ³.....dollars.....	22,722,525	74,928	.....	.....	881,533	3,306,932	10,600,840	7,858,292
32	(j) Area against which annual charges were assessed.....acres.....	10,810,295	16,760	.....	.....	524,406	1,835,744	5,313,007	3,120,378
33	(k) Average indebtedness per acre assessed.....dollars.....	32.90	7.91	.....	.....	18.92	16.25	32.59	45.58
34	(l) Average charges per acre assessed.....dollars.....	2.38	0.61	.....	.....	2.28	2.16	2.30	2.67
35	(m) Average charges per acre irrigated.....dollars.....	2.99	.....	.....	.....	2.77	2.75	2.86	3.38
36	Enterprises reporting arrearage ⁴.....number.....	187	5	.....	.....	51	65	59	7
37	(a) Area assessed in these enterprises.....acres.....	2,671,635	9,440	.....	.....	64,609	441,594	1,102,196	1,053,796
38	(b) Total arrearage.....dollars.....	30,859,349	446,327	.....	.....	2,811,582	6,396,312	9,545,299	11,659,829
39	(c) Average arrearage per acre assessed.....dollars.....	11.29	6.23	.....	.....	38.73	14.50	8.66	11.06
40	(d) Indebtedness.....dollars.....	143,287,600	1,491,804	.....	.....	5,710,031	14,002,909	69,954,407	52,128,449
TYPE, 1940										
41	Individual and partnership.....number.....	75,179	2,099	65,767	6,250	1,039	23	1	.....
42	Cooperative (incorporated and unincorporated).....number.....	4,155	48	323	262	2,255	949	309	9	
43	Irrigation district.....number.....	410	11	2	3	89	147	135	23	
44	Commercial.....number.....	258	7	26	8	111	61	43	2	
45	U. S. Bureau of Reclamation.....number.....	72	1	1	.....	4	16	38	12
46	U. S. Office of Indian Affairs.....number.....	188	11	32	32	39	41	30	3	
47	All other.....number.....	240	50	118	12	35	16	8	1	
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939										
48	Enterprises reporting pay roll.....number.....	3,833	23	.....	.....	2,108	1,100	552	50
49	Wages and salaries paid and payable for 1939.....dollars.....	15,737,214	605,858	.....	.....	973,553	2,336,236	6,390,466	5,431,101
50	Persons employed during week ending April 29, 1939.....number.....	23,597	527	.....	.....	4,605	5,150	8,484	4,831
SOURCE OF WATER SUPPLY, 1939										
51	Streams, gravity.....number.....	25,726	515	18,434	2,929	2,539	934	354	21	
52	Streams, pumped.....number.....	5,915	277	5,092	317	109	65	46	9	
53	Wells, pumped.....number.....	38,715	1,219	33,998	2,721	630	115	32	.....
54	Wells, pumped and flowing; or wells flowing.....number.....	1,561	23	1,453	70	12	.....	3	.....
55	Lakes, gravity or pumped.....number.....	503	13	426	42	10	8	4	.....
56	Streams and springs; or springs.....number.....	4,427	81	3,943	217	134	44	8	.....
57	Mixed, streams and wells.....number.....	1,472	32	1,078	106	81	62	95	18	
58	Other mixed or stored storm water.....number.....	2,183	67	1,845	165	57	25	22	2	
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL		IRRIGATED UNITS¹						
				No units ²	1 unit	2 to 4 units	5 to 24 units	25 to 99 units	100 to 999 units	1,000 units and more
1	Enterprises, 1940.....number.....	11,135	805	9,563	552	84	66	53	12	
2	Irrigated units, 1939 ¹.....number.....	61,794	.....	9,563	1,283	1,011	3,514	13,297	33,126
3	Area irrigated, 1939.....acres.....	3,287,210	.....	513,281	67,384	125,186	340,926	882,425	1,358,007
CAPITAL INVESTMENT, 1940										
4	Total capital investment in all enterprises.....dollars.....	88,160,938	4,531,859	14,434,239	1,269,112	1,889,114	7,262,672	26,870,792	31,903,150	
5	(a) Cost of irrigation works and equipment.....dollars.....	85,117,122	4,523,204	14,374,179	1,256,368	1,735,937	6,696,662	24,627,728	31,903,044	
6	(b) Investment in water rights.....dollars.....	3,043,816	8,655	60,060	12,744	153,177	566,010	2,243,064	106	
7	Area works were capable of supplying with water.....acres.....	4,268,994	205,891	636,887	82,063	146,379	393,559	1,110,826	1,692,789	
8	Average investment per acre irrigated.....dollars.....	26.82	.....	28.12	18.83	15.09	21.30	30.45	23.49
9	Average investment per acre which the works could supply with water.....dollars.....	20.65	22.01	22.66	15.47	12.91	18.45	24.19	18.85	

¹Schedules called for "Number of farms," see explanation in text.

²Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

³Annual charges, reported only by enterprises serving 5 or more units, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, UNITS,¹ AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

and Arkansas and Louisiana]

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT						
No acres ²	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	\$10,000,000 and more	
2,227	57,207	12,906	6,619	1,185	340	18	69,573	7,536	2,574	708	108	3	
.....	68,421	31,288	68,488	76,042	137,688	48,085	103,514	34,500	57,831	108,468	118,139	7,570	
.....	1,027,740	2,125,032	4,265,380	4,059,903	6,522,638	2,403,046	5,635,965	2,413,431	3,187,634	4,546,857	4,880,522	399,330	
.....	1,444,849	1,846,442	3,512,621	3,417,465	5,812,677	2,266,484	4,580,187	2,041,138	2,752,562	4,089,457	4,520,613	305,181	
.....	24,426	29,860	60,322	56,368	77,009	11,113	79,381	27,663	60,736	54,646	35,835	765	
.....	158,785	248,640	682,537	586,070	632,952	125,449	976,397	344,630	374,274	392,754	323,974	32,364	
12,153,234	80,654,407	53,708,037	100,787,171	151,913,671	435,698,244	128,973,499	76,081,210	57,691,158	84,340,652	267,736,289	423,641,958	52,396,996	
.....	79,886,852	52,783,037	96,768,647	144,507,956	426,989,916	128,842,878	76,530,890	56,748,203	81,675,147	253,610,183	419,636,219	52,454,950	
.....	1,378,928	767,556	925,000	4,018,524	7,405,715	130,621	1,550,320	942,955	2,665,505	14,126,106	4,005,739	42,046	
.....	409,125	2,535,976	2,783,224	5,219,548	5,408,433	8,772,439	7,280,316	2,975,921	4,161,871	6,606,523	6,648,930	396,687	
.....	49.55	25.27	23.63	37.42	66.80	53.67	13.85	23.90	26.46	56.88	86.80	154.41	
.....	29.71	31.80	19.30	19.31	28.09	49.67	44.07	10.75	19.37	20.27	63.72	131.42	
1,018	51,414	11,920	6,174	1,139	332	18	61,684	7,081	2,451	690	106	3	
.....	1,500,227	1,964,675	3,987,122	3,921,128	6,417,563	2,403,046	5,131,367	2,286,103	3,086,612	4,507,774	4,840,575	339,330	
.....	91,948	8,132,806	5,782,820	6,366,965	11,801,497	6,082,888	9,671,055	5,386,269	6,087,590	10,716,633	7,765,666	1,545,113	
.....	5.42	2.95	1.59	1.62	1.84	1.83	1.88	2.36	1.97	2.36	2.02	4.55	
.....	21,667	334,593	854,189	3,408,272	7,506,643	15,183,990	5,567,050	541,021	3,923,337	13,051,345	12,696,364	1,567,395	
.....	8.99	4.57	1.93	2.36	2.47	2.32	0.62	1.06	1.69	3.05	2.60	4.62	
.....	67,170	47,939	216,362	1,987,473	3,827,373	7,529,593	2,894,794	914,963	2,626,912	5,179,900	6,321,977	396,583	
.....	0.32	6.98	3.95	1.71	1.96	2.02	0.59	0.97	1.49	2.52	2.01	3.95	
.....	13,127	248,739	576,005	2,732,767	5,705,779	13,301,522	4,974,361	273,555	688,370	3,089,215	10,510,567	817,735	
17	39	144	457	423	239	10	88	189	503	456	91	3	
.....	2,535	28,453	398,807	1,660,121	5,036,841	1,491,840	60,210	192,832	1,047,433	3,286,033	3,722,759	339,330	
.....	1,874,967	174,196	849,206	16,012,969	49,329,976	214,072,737	77,990,884	84,642	554,728	6,328,523	83,828,732	230,160,741	
.....	68.72	29.85	40.15	29.71	42.50	52.28	1.41	2.88	6.04	25.75	61.83	115.96	
.....	5,356,241	514,184	3,466,161	36,151,971	100,452,783	375,560,188	104,279,893	240,690	1,787,766	21,205,009	184,810,664	365,382,352	
.....	1,294,798	48,634	229,128	1,806,846	5,222,914	6,109,963	28,831	146,187	1,438,480	10,563,081	2,534,279	42,046	
.....	6,651,039	562,818	3,695,289	37,958,817	105,675,697	381,670,151	104,320,514	269,521	1,933,953	22,643,489	195,373,735	387,916,631	
.....	29,626	33,522	242,210	1,487,210	3,753,895	10,189,796	3,860,684	41,828	205,579	1,567,467	7,814,119	8,422,637	
.....	10,209	60,458	322,312	1,894,433	5,473,468	13,478,364	4,482,296	59,837	306,694	2,180,229	10,721,830	10,875,555	
.....	74,928	36,893	277,197	1,733,004	4,369,561	12,351,961	3,876,961	33,339	243,952	1,794,761	9,110,099	10,722,639	
.....	16,760	6,942	37,889	487,147	2,154,484	6,318,020	1,789,053	61,329	220,366	1,167,763	4,039,199	4,925,053	
.....	7.91	22.28	21.40	31.18	22.79	33.58	43.59	1.30	2.27	5.18	19.77	46.73	
.....	0.61	8.71	8.71	3.87	2.54	2.13	2.51	1.39	1.87	2.65	2.21	3.95	
.....	24.62	11.99	4.73	3.32	2.68	3.00	1.02	1.60	2.09	3.30	2.92	4.62	
.....	5	3	11	55	62	48	3	7	15	45	25	5	
.....	9,440	319	2,483	75,870	446,704	1,333,209	803,610	5,757	24,783	105,288	793,735	68,082	
.....	446,327	8,804	64,042	3,090,855	7,162,056	9,741,059	10,346,206	16,472	25,535	448,036	15,415,852	14,812,440	
.....	6.23	27.60	24.99	36.66	16.03	7.31	12.67	2.86	1.01	3.47	18.65	8.85	
.....	1,491,804	17,928	120,147	8,092,417	22,956,686	78,251,618	32,357,000	22,137	46,189	1,103,223	37,494,516	94,187,238	
2,099	56,302	11,900	4,565	294	19	.....	67,497	6,329	1,296	56	1	.....
.....	48	673	889	1,767	631	142	5	1,793	994	290	19	.....
.....	11	8	23	128	140	93	7	27	23	119	203	.....
.....	7	35	38	71	72	34	1	36	43	89	81	.....
.....	1	2	.....	6	20	40	3	.....	1	1	34	.....
.....	11	82	20	49	17	7	.....	67	40	42	32	.....
.....	50	105	36	33	11	5	.....	153	41	33	12	.....
23	309	636	1,695	942	310	18	1,050	938	1,128	607	107	3	
.....	605,858	81,342	240,441	1,533,552	3,135,845	6,801,424	3,338,752	220,371	351,542	1,533,160	5,613,757	7,176,706	
.....	527	543	1,234	5,899	4,932	7,781	2,681	2,440	2,237	4,257	7,084	841,678	
515	13,723	5,868	4,485	896	229	10	22,422	1,829	1,027	389	59	.....
.....	277	4,571	639	309	80	37	5,381	297	137	88	12	.....
.....	1,219	31,102	5,189	1,147	54	4	.....	4,829	1,091	81	1	.....
.....	23	1,390	112	35	1	.....	1,442	96	19	4	.....	
.....	13	405	45	33	5	2	.....	456	19	18	.....	
.....	81	3,612	465	235	30	4	.....	4,236	127	57	7	
.....	32	778	294	218	86	58	.....	978	201	151	104	
.....	67	1,626	294	157	33	6	.....	1,945	138	74	25	
805	8,679	1,246	275	70	53	7	10,486	437	137	64	11	1	
.....	9,161	1,764	2,506	5,384	19,366	23,613	11,413	2,190	5,581	13,986	29,624	2	
.....	271,662	196,058	160,426	255,111	1,100,378	1,303,575	525,459	161,264	271,390	1,051,041	1,278,056	3	
4,531,859	9,244,631	4,008,814	4,415,179	6,339,066	36,208,445	23,412,944	11,522,414	3,308,622	5,175,441	34,092,181	34,062,280	4	
.....	4,523,204	9,215,593	3,972,820	4,229,748	6,134,922	33,895,891	23,144,944	11,349,245	3,286,548	5,040,706	31,378,343	34,062,280	
.....	8,655	29,038	35,994	185,431	204,144	2,312,554	268,000	173,169	22,074	134,735	2,713,838	.....
.....	205,891	354,770	234,390	215,323	283,285	1,475,601	1,499,134	686,218	201,845	344,986	1,525,111	1,510,234	
.....	.....	34.03	20.45	27.52	24.85	32.91	17.96	21.93	20.52	19.07	32.44	26.65
.....	22.01	26.06	17.10	20.50	22.38	24.54	15.62	16.79	16.39	15.00	22.35	22.55	

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more units.
² Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

[For the 17 western States

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED UNITS ¹						
			No units ²	1 unit	2 to 4 units	5 to 24 units	25 to 99 units	100 to 999 units	1,000 units and more
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
10	Enterprises reporting maintenance and operation.....number...	10,089	180	9,181	525	80	63	50	10
11	(a) Area irrigated in these enterprises.....acres....	2,953,963	.....	491,729	64,812	122,707	314,907	851,721	1,138,087
12	(b) Cost of maintenance and operation.....dollars...	2,828,094	20,246	1,754,675	146,409	32,625	147,767	375,009	351,363
13	(c) Average cost per irrigated acre reporting.....dollars..	0.95	.....	3.57	2.26	0.27	0.47	0.44	0.31
14	Total annual charges ³.....dollars.....	1,408,263	5,420	.....	.....	52,048	206,940	808,165	335,690
15	Average charge per irrigated acre reporting.....dollars..	0.60	.....	.....	.....	0.43	0.73	0.99	0.30
16	Area against which charges were assessed.....acres....	2,592,476	20,465	.....	.....	126,982	299,625	1,008,162	1,137,242
17	Average annual charge per acre assessed.....dollars..	0.54	0.26	.....	.....	0.41	0.69	0.80	0.30
18	Total charges collected ³.....dollars.....	1,148,062	23,584	.....	.....	48,451	177,673	513,987	384,367
INDEBTEDNESS AND ARREARAGE, 1939									
19	Enterprises reporting indebtedness ⁴.....number....	90	4	.....	.....	17	31	30	8
20	(a) Area irrigated in these enterprises.....acres....	1,992,609	.....	.....	.....	39,172	222,570	558,134	1,172,733
21	(b) Indebtedness.....dollars.....	26,335,949	2,139,073	.....	.....	254,414	2,796,396	9,044,012	12,101,454
22	(c) Average indebtedness per acre irrigated.....dollars..	13.22	.....	.....	.....	6.49	12.56	16.20	10.32
23	(d) Cost of irrigation works and equipment.....dollars..	52,755,167	2,448,925	.....	.....	620,477	5,023,076	16,406,996	28,255,693
24	(e) Investment in water rights.....dollars.....	2,672,198	2,257	.....	.....	127,133	551,435	1,991,267	106
25	(f) Total investment.....dollars.....	55,427,365	2,451,182	.....	.....	747,610	5,574,511	18,398,263	28,255,799
26	(g) Maintenance and operation.....dollars.....	617,924	4	.....	.....	7,572	81,795	263,522	265,031
27	(h) Total annual charges ⁵.....dollars.....	1,064,346	5,240	.....	.....	26,490	129,507	650,819	252,290
28	(i) Total charges collected ⁵.....dollars.....	1,000,936	22,482	.....	.....	31,148	119,381	448,568	379,367
29	(j) Area against which annual charges were assessed.....acres..	1,975,639	17,465	.....	.....	39,172	206,375	694,885	1,017,742
30	(k) Average indebtedness per acre assessed.....dollars..	11.63	3.54	.....	.....	6.30	11.80	12.89	11.08
31	(l) Average charges per acre assessed.....dollars.....	0.54	0.30	.....	.....	0.68	0.63	0.94	0.25
32	(m) Average charges per acre irrigated.....dollars.....	0.67	.....	.....	.....	0.70	0.67	1.26	0.25
33	Enterprises reporting arrearage ⁶.....number....	15	2	.....	.....	3	4	6	.....
34	(a) Area assessed in these enterprises.....acres....	222,483	(⁶)	.....	.....	4,506	14,200	186,312	.....
35	(b) Total arrearage.....dollars.....	220,936	(⁶)	.....	.....	6,100	66,969	138,167	.....
36	(c) Average arrearage per acre assessed.....dollars..	0.93	(⁶)	.....	.....	1.35	4.22	0.74	.....
37	(d) Indebtedness.....dollars.....	4,604,073	(⁶)	.....	.....	12,900	282,840	3,401,439	.....
TYPE, 1940									
38	Individual and partnership.....number....	10,871	786	9,530	540	14	.....	1	.....
39	Cooperative (incorporated and unincorporated).....number..	201	13	32	12	60	49	34	1
40	Irrigation district.....number....	17	2	.....	.....	4	6	4	1
41	Commercial.....number....	17	2	.....	.....	5	5	4	1
42	U. S. Bureau of Reclamation.....number....	25	1	1	.....	.....	6	9	8
43	U. S. Office of Indian Affairs.....number....	.....	.....	.....	.....	.....	.....	.....	.....
44	All other.....number....	4	1	.....	.....	1	.....	1	1
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
45	Enterprises reporting pay roll.....number....	166	10	.....	.....	52	54	46	4
46	Wages and salaries paid and payable for 1939.....dollars..	334,308	58,683	.....	.....	11,887	57,306	173,999	32,433
47	Persons employed during week ending April 29, 1939.....number..	409	34	.....	.....	60	110	186	19
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939									
48	Streams, pumped.....number....	231	26	197	5	1	1	1	.....
49	Wells, pumped or flowing.....number....	10,186	736	9,000	430	15	3	2	.....
50	Streams, gravity or storage.....number....	718	43	366	117	68	62	50	12

¹ Schedules called for "Number of farms," see explanation in text.

² Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

³ Annual charges, reported only by enterprises serving 5 or more units, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, UNITS,¹ AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

and Arkansas and Louisiana]

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ²	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
160	6,319	1,208	280	67	49	6	9,491	405	126	58	9	10
.....	261,430	189,692	150,921	242,672	997,549	1,141,699	506,096	157,569	250,743	1,011,397	1,058,136	11
20,246	1,068,809	548,143	380,163	149,063	369,763	291,867	1,461,291	306,406	267,061	512,033	279,303	12
.....	4.09	2.89	18.52	0.61	0.37	0.26	2.69	1.96	1.07	0.51	0.26	13
5,420	1,445	8,246	122,207	207,405	794,543	268,997	12,433	23,742	183,373	877,905	310,750	14
.....	5.25	2.93	2.58	0.95	0.54	0.24	0.39	0.38	0.32	0.89	0.29	15
20,465	275	3,961	71,162	229,800	1,125,094	1,141,699	33,623	70,649	246,569	1,160,694	1,060,521	16
0.26	5.25	2.07	1.72	0.90	0.71	0.24	0.37	0.34	0.74	0.76	0.29	17
23,584	1,545	10,033	106,164	163,653	677,428	165,635	4,679	19,496	129,911	544,173	449,603	18
4	.....	5	18	25	32	6	4	9	26	42	9	19
.....	743	15,849	104,816	679,626	1,191,575	2,022	14,315	93,969	672,110	1,210,173	20	
2,139,073	7,310	289,099	1,937,977	15,670,895	6,290,895	2,652	7,622	479,663	13,245,862	12,569,530	21	
.....	9.84	18.24	18.49	23.06	5.28	1.31	0.53	5.10	19.71	10.41	22	
2,446,925	54,226	943,563	4,023,421	23,367,139	21,917,893	12,201	89,276	1,263,957	21,355,210	30,034,523	23	
2,257	.....	126,225	178,059	2,097,657	268,000	122,550	100	53,307	2,496,241	.....	24	
2,451,182	54,226	1,069,788	4,201,480	25,464,796	22,185,893	134,751	89,376	1,317,264	23,851,451	30,034,523	25	
4	.....	2,741	66,062	67,792	247,810	213,515	1,280	3,582	39,995	305,571	267,496	26
5,240	.....	2,411	65,843	129,003	673,252	188,597	1,068	3,704	71,135	689,495	298,944	27
22,482	.....	2,545	66,443	122,290	620,374	164,802	1,161	5,507	66,374	478,291	449,603	28
17,465	.....	643	22,907	97,554	807,371	1,029,699	3,312	13,315	97,034	791,296	1,070,692	29
3.54	.....	8.26	7.84	17.94	19.22	5.30	0.31	3.47	3.69	13.65	10.99	30
0.30	.....	3.75	2.87	1.32	0.83	0.18	0.32	0.28	0.73	0.87	0.28	31
.....	.....	4.44	4.77	1.42	1.08	0.18	0.21	0.72	1.06	1.11	0.29	32
2	.....	5	1	6	5	.....	.....	5	9	.....	.....	33
(6)	.....	143	1,508	22,698	180,469	.....	.....	143	23,828	198,512	.....	34
(6)	.....	2,400	700	83,219	114,917	.....	.....	2,400	14,400	204,136	.....	35
(6)	.....	16.78	0.46	3.77	0.64	.....	.....	16.78	0.31	0.99	.....	36
(6)	.....	2,400	7,500	1,206,840	2,478,439	.....	.....	2,400	84,144	4,517,529	.....	37
786	8,656	1,214	209	5	1	.....	10,418	380	68	5	.....	38
13	22	31	61	48	25	1	66	53	54	27	1	39
2	.....	.....	2	5	8	.....	.....	2	7	8	.....	40
2	.....	1	2	6	6	.....	1	2	5	8	1	41
1	1	.....	1	5	11	6	1	.....	1	14	9	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
1	.....	.....	.....	1	2	.....	.....	.....	2	2	.....	44
10	.....	12	48	51	42	3	21	32	58	49	6	45
58,663	.....	1,194	30,676	62,196	168,887	12,672	3,429	7,720	56,880	206,862	57,417	46
34	.....	8	106	76	173	12	16	54	90	219	26	47
26	172	23	6	3	1	.....	217	9	3	2	.....	48
736	8,190	1,078	179	3	.....	.....	9,745	369	67	5	.....	49
43	317	145	90	64	52	7	524	59	67	57	11	50

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more units.
² Data for less than 3 enterprises shown with permission of the enterprise involved.
³ Data are included only in total because less than 3 enterprises reported in the 1940 Irrigation Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	TOTAL (19 States) ¹	Red River (of the North) and tributaries in North Dakota (I)	MISSOURI RIVER (II)	
			Total ²	Direct (II)
IRRIGATED UNITS AND AREAS				
1 Irrigated units ³.....1939...number.....	430,022	61	47,386	835
2 Area irrigated.....1939...acres.....	21,003,739	4,493	4,410,385	76,298
3 (a) Cropland harvested.....1939...acres.....	18,300,138	4,468	3,922,984	71,226
4 (b) Crop failure.....1939...acres.....	259,188	.....	67,790	550
5 (c) Pasture.....1939...acres.....	2,444,413	35	419,611	4,522
6 Area irrigated.....1929...acres.....	19,547,544	2,099	4,185,180	24,367
7 .....1919...acres.....	19,191,716	.....	4,147,278	27,707
8 Increase or decrease (-), 1929-1939.....percent.....	7.4	114.1	5.4	213.1
9 Irrigable area in enterprises.....1940...acres.....	31,305,949	8,100	6,542,576	166,802
10 .....1930...acres.....	30,599,470	2,409	6,231,873	42,388
11 .....1920 ⁵ ...acres.....	35,890,821	.....	8,483,171	92,270
12 Excess of irrigable area over the area irrigated.....1940...acres.....	10,302,210	3,607	2,132,191	90,504
13 .....1930...acres.....	11,051,926	310	2,046,693	18,021
14 .....1920 ⁵ ...acres.....	16,699,105	.....	4,335,893	64,563
15 Area works were capable of supplying with water.....1940...acres.....	28,055,248	7,980	5,942,958	120,485
16 .....1930...acres.....	26,101,890	2,099	5,472,012	40,149
17 .....1920...acres.....	26,020,477	.....	5,805,630	62,559
18 Increase or decrease (-), 1930-1940.....percent.....	7.5	280.2	8.6	200.1
19 Excess of area works were capable of supplying with water over area irrigated.....1940...acres.....	7,051,608	3,487	1,532,573	44,187
20 .....1930...acres.....	6,554,346	.....	1,266,832	15,782
21 .....1920...acres.....	6,828,761	.....	1,658,352	34,852
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	74.9	56.3	74.2	63.3
23 .....1929...percent.....	74.9	100.0	76.5	60.7
24 .....1919...percent.....	73.8	.....	71.4	44.3
CAPITAL INVESTED TO JANUARY 1				
25 Total investment in irrigation enterprises.....1940...dollars.....	1,052,049,201	130,566	179,750,238	3,069,111
26 (a) Cost of irrigation works and equipment.....1940...dollars.....	1,025,672,714	130,225	176,408,046	3,053,632
27 (b) Investment in water rights (reported).....1940...dollars.....	26,376,487	341	3,342,192	15,479
28 Total investment in irrigation enterprises.....1930...dollars.....	792,755,790	20,925	136,506,721	1,535,899
29 .....1920...dollars.....	697,657,328	.....	131,553,106	2,300,975
30 Increase or decrease (-), 1930-1940.....percent.....	17.8	524.0	31.7	99.8
31 Average investment based on area works were capable of supplying with water, per acre.....1940...dollars.....	37.50	16.36	30.25	25.47
32 .....1930...dollars.....	34.20	9.97	24.95	38.25
33 .....1920...dollars.....	26.81	.....	22.66	36.78
34 Average investment per acre irrigated.....1939...dollars.....	50.09	29.06	40.76	40.23
35 Estimated final investment in existing enterprises.....1940...dollars.....	1,126,545,687	142,566	196,094,323	3,927,530
36 Average investment based on estimated final investment and irrigable area, per acre.....1940...dollars.....	35.99	17.60	29.97	23.55
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS				
	Primary	Supplemental	Primary	Supplemental
	Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation.....1939...number.....	72,172	10,102	13	1,369
38 Area irrigated in these enterprises.....1939...acres.....	20,193,761	2,993,963	4,493	4,293,280
39 Cost of maintenance and operation.....1939...dollars.....	43,172,526	2,828,094	5,912	3,466,125
40 Average cost, per acre irrigated.....1939...dollars.....	2.14	0.95	1.32	0.81
41 Total annual charges (reported) ⁶ 10.....1939...dollars.....	32,876,404	1,406,263	3,235	3,186,350
42 Average annual charge per acre irrigated.....1939...dollars.....	2.40	0.59	0.83	1.10
43 Area against which charges were assessed.....1939...acres.....	16,570,704	2,592,476	7,249	3,224,334
44 Average annual charge per acre assessed.....1939...dollars.....	1.98	0.54	0.45	0.99
45 Total charges collected ⁶.....1939...dollars.....	27,552,300	1,148,062	3,479	2,594,720
46 Indebtedness to December 31 (reported) ¹⁰.....1939...dollars.....	360,304,925	26,335,349	29,500	76,335,251
WATER DELIVERED TO IRRIGATORS, 1939				
47 Enterprises reporting water delivered.....1939...number.....	72,638	10,092	12	9,371
48 Area irrigated by these enterprises.....1939...acres.....	19,377,064	2,986,061	4,460	4,031,049
49 Water delivered.....1939...acre-feet.....	52,982,775	4,206,532	6,528	7,547,370
50 Average water delivered per acre irrigated.....1939...acre-feet.....	2.7	1.4	1.5	1.9
51 Average cost of water per acre irrigated.....1939...dollars.....	2.60	1.10	1.23	1.03
52 Average cost of water per acre-foot delivered.....1939...dollars.....	0.95	0.78	0.85	0.55
DRAINAGE OF IRRIGATED LAND				
53 Enterprises reporting land drained or needing drainage.....1939...number.....	3,535	.....	466	23
54 Irrigable area in these enterprises.....1939...acres.....	9,553,069	.....	1,989,332	15,865
55 Irrigated area in these enterprises.....1939...acres.....	6,224,568	.....	1,266,478	6,449
56 Area for which drains have been installed.....1939...acres.....	3,861,305	.....	431,045	7,331
57 Additional area needing drainage.....1939...acres.....	987,912	.....	108,165	1,449

⁶Schedules called for "Number of farms," see explanation in text.

¹For the 17 western States and Arkansas and Louisiana.

²Data for 2 enterprises in Osage River Drainage Basin, Kans., are included with Missouri River total.

³Data for the intrastate tributaries of the Clarks Fork are not shown separately but are included in the Clarks Fork total.

⁴Data for the intrastate tributaries of the Big Horn River are not shown separately but are included in the Big Horn River total.

⁵For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939
and Arkansas and Louisiana]

MISSOURI RIVER (II)—Continued																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Total	Direct (II-A)	Clarks Fork				Big Horn River																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Total ⁵	Direct (6)	Total ⁴	Direct (8)	Shoshone River (17)		Little Horn River (18)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
11,794	3,198	933	458	5,785	1,243	1,714	160	1	884,530	240,998	88,489	43,589	448,898	104,560	113,849	16,016	2	884,184	225,078	80,206	39,878	383,161	95,409	98,116	14,475	3	7,447	1,687	502	88	3,822	366	80	20	4	112,899	14,280	7,761	3,823	61,915	8,785	17,653	1,521	5	861,145	132,312	92,968	90,650	381,326	88,898	95,636	1,637	6	889,025	189,453	77,736	72,525	358,949	93,902	95,091	1,408	7	14.3	48.5	-4.8	-51.9	24.0	17.9	19.0	878.4	8	1,515,241	347,513	113,256	52,940	777,811	194,951	161,701	36,765	9	1,401,212	242,693	113,320	110,625	710,522	143,464	163,768	2,705	10	1,826,870	279,211	141,007	130,736	842,297	162,331	217,998	11,353	11	530,711	106,517	24,787	9,351	328,913	90,391	47,852	20,749	12	540,067	80,381	20,352	19,975	348,596	54,766	68,132	1,068	13	937,845	89,758	63,271	58,211	483,348	68,429	122,907	9,945	14	1,360,217	330,391	110,785	50,793	661,210	183,835	142,671	32,793	15	1,210,890	236,401	111,593	106,888	552,748	129,765	142,902	2,705	16	1,322,304	262,801	130,627	121,818	534,404	123,151	134,431	4,340	17	12.4	39.8	-0.7	-53.4	19.6	41.7	-0.2	(⁶)	18	375,687	89,395	22,316	7,204	212,312	79,275	28,822	16,777	19	349,545	74,089	18,615	18,238	190,822	41,067	47,266	1,068	20	433,279	73,348	52,891	49,293	175,455	29,249	39,340	2,932	21	72.4	72.9	79.9	85.8	67.9	56.9	79.8	48.8	22	71.1	68.7	83.3	83.2	65.5	68.4	66.9	60.5	23	67.2	72.1	59.5	59.5	67.2	76.2	70.7	32.4	24	40,787,196	11,765,745	1,927,897	705,142	22,303,032	3,524,149	6,745,092	934,665	25	40,495,096	11,677,433	1,910,346	699,011	22,226,639	3,519,632	6,738,082	928,896	26	272,100	88,312	17,551	6,131	76,393	4,517	7,010	5,769	27	31,917,310	7,070,112	928,437	920,562	19,775,462	3,042,063	9,285,642	39,590	28	30,181,550	7,508,390	1,225,493	1,168,593	16,670,257	3,635,033	8,702,480	35,000	29	27.7	66.4	107.6	-23.4	12.8	15.8	-27.4	(⁶)	30	29.97	35.61	17.40	13.88	33.73	19.17	47.28	28.50	31	26.36	29.91	8.32	8.45	35.78	23.44	64.98	14.84	32	22.82	28.57	9.36	9.55	31.19	29.52	64.74	8.06	33	41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57
1,515,241	347,513	113,256	52,940	777,811	194,951	161,701	36,765	9	1,401,212	242,693	113,320	110,625	710,522	143,464	163,768	2,705	10	1,826,870	279,211	141,007	130,736	842,297	162,331	217,998	11,353	11	530,711	106,517	24,787	9,351	328,913	90,391	47,852	20,749	12	540,067	80,381	20,352	19,975	348,596	54,766	68,132	1,068	13	937,845	89,758	63,271	58,211	483,348	68,429	122,907	9,945	14	1,360,217	330,391	110,785	50,793	661,210	183,835	142,671	32,793	15	1,210,890	236,401	111,593	106,888	552,748	129,765	142,902	2,705	16	1,322,304	262,801	130,627	121,818	534,404	123,151	134,431	4,340	17	12.4	39.8	-0.7	-53.4	19.6	41.7	-0.2	(⁶)	18	375,687	89,395	22,316	7,204	212,312	79,275	28,822	16,777	19	349,545	74,089	18,615	18,238	190,822	41,067	47,266	1,068	20	433,279	73,348	52,891	49,293	175,455	29,249	39,340	2,932	21	72.4	72.9	79.9	85.8	67.9	56.9	79.8	48.8	22	71.1	68.7	83.3	83.2	65.5	68.4	66.9	60.5	23	67.2	72.1	59.5	59.5	67.2	76.2	70.7	32.4	24	40,787,196	11,765,745	1,927,897	705,142	22,303,032	3,524,149	6,745,092	934,665	25	40,495,096	11,677,433	1,910,346	699,011	22,226,639	3,519,632	6,738,082	928,896	26	272,100	88,312	17,551	6,131	76,393	4,517	7,010	5,769	27	31,917,310	7,070,112	928,437	920,562	19,775,462	3,042,063	9,285,642	39,590	28	30,181,550	7,508,390	1,225,493	1,168,593	16,670,257	3,635,033	8,702,480	35,000	29	27.7	66.4	107.6	-23.4	12.8	15.8	-27.4	(⁶)	30	29.97	35.61	17.40	13.88	33.73	19.17	47.28	28.50	31	26.36	29.91	8.32	8.45	35.78	23.44	64.98	14.84	32	22.82	28.57	9.36	9.55	31.19	29.52	64.74	8.06	33	41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																								
1,360,217	330,391	110,785	50,793	661,210	183,835	142,671	32,793	15	1,210,890	236,401	111,593	106,888	552,748	129,765	142,902	2,705	16	1,322,304	262,801	130,627	121,818	534,404	123,151	134,431	4,340	17	12.4	39.8	-0.7	-53.4	19.6	41.7	-0.2	(⁶)	18	375,687	89,395	22,316	7,204	212,312	79,275	28,822	16,777	19	349,545	74,089	18,615	18,238	190,822	41,067	47,266	1,068	20	433,279	73,348	52,891	49,293	175,455	29,249	39,340	2,932	21	72.4	72.9	79.9	85.8	67.9	56.9	79.8	48.8	22	71.1	68.7	83.3	83.2	65.5	68.4	66.9	60.5	23	67.2	72.1	59.5	59.5	67.2	76.2	70.7	32.4	24	40,787,196	11,765,745	1,927,897	705,142	22,303,032	3,524,149	6,745,092	934,665	25	40,495,096	11,677,433	1,910,346	699,011	22,226,639	3,519,632	6,738,082	928,896	26	272,100	88,312	17,551	6,131	76,393	4,517	7,010	5,769	27	31,917,310	7,070,112	928,437	920,562	19,775,462	3,042,063	9,285,642	39,590	28	30,181,550	7,508,390	1,225,493	1,168,593	16,670,257	3,635,033	8,702,480	35,000	29	27.7	66.4	107.6	-23.4	12.8	15.8	-27.4	(⁶)	30	29.97	35.61	17.40	13.88	33.73	19.17	47.28	28.50	31	26.36	29.91	8.32	8.45	35.78	23.44	64.98	14.84	32	22.82	28.57	9.36	9.55	31.19	29.52	64.74	8.06	33	41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																														
375,687	89,395	22,316	7,204	212,312	79,275	28,822	16,777	19	349,545	74,089	18,615	18,238	190,822	41,067	47,266	1,068	20	433,279	73,348	52,891	49,293	175,455	29,249	39,340	2,932	21	72.4	72.9	79.9	85.8	67.9	56.9	79.8	48.8	22	71.1	68.7	83.3	83.2	65.5	68.4	66.9	60.5	23	67.2	72.1	59.5	59.5	67.2	76.2	70.7	32.4	24	40,787,196	11,765,745	1,927,897	705,142	22,303,032	3,524,149	6,745,092	934,665	25	40,495,096	11,677,433	1,910,346	699,011	22,226,639	3,519,632	6,738,082	928,896	26	272,100	88,312	17,551	6,131	76,393	4,517	7,010	5,769	27	31,917,310	7,070,112	928,437	920,562	19,775,462	3,042,063	9,285,642	39,590	28	30,181,550	7,508,390	1,225,493	1,168,593	16,670,257	3,635,033	8,702,480	35,000	29	27.7	66.4	107.6	-23.4	12.8	15.8	-27.4	(⁶)	30	29.97	35.61	17.40	13.88	33.73	19.17	47.28	28.50	31	26.36	29.91	8.32	8.45	35.78	23.44	64.98	14.84	32	22.82	28.57	9.36	9.55	31.19	29.52	64.74	8.06	33	41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																		
72.4	72.9	79.9	85.8	67.9	56.9	79.8	48.8	22	71.1	68.7	83.3	83.2	65.5	68.4	66.9	60.5	23	67.2	72.1	59.5	59.5	67.2	76.2	70.7	32.4	24	40,787,196	11,765,745	1,927,897	705,142	22,303,032	3,524,149	6,745,092	934,665	25	40,495,096	11,677,433	1,910,346	699,011	22,226,639	3,519,632	6,738,082	928,896	26	272,100	88,312	17,551	6,131	76,393	4,517	7,010	5,769	27	31,917,310	7,070,112	928,437	920,562	19,775,462	3,042,063	9,285,642	39,590	28	30,181,550	7,508,390	1,225,493	1,168,593	16,670,257	3,635,033	8,702,480	35,000	29	27.7	66.4	107.6	-23.4	12.8	15.8	-27.4	(⁶)	30	29.97	35.61	17.40	13.88	33.73	19.17	47.28	28.50	31	26.36	29.91	8.32	8.45	35.78	23.44	64.98	14.84	32	22.82	28.57	9.36	9.55	31.19	29.52	64.74	8.06	33	41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																													
40,787,196	11,765,745	1,927,897	705,142	22,303,032	3,524,149	6,745,092	934,665	25	40,495,096	11,677,433	1,910,346	699,011	22,226,639	3,519,632	6,738,082	928,896	26	272,100	88,312	17,551	6,131	76,393	4,517	7,010	5,769	27	31,917,310	7,070,112	928,437	920,562	19,775,462	3,042,063	9,285,642	39,590	28	30,181,550	7,508,390	1,225,493	1,168,593	16,670,257	3,635,033	8,702,480	35,000	29	27.7	66.4	107.6	-23.4	12.8	15.8	-27.4	(⁶)	30	29.97	35.61	17.40	13.88	33.73	19.17	47.28	28.50	31	26.36	29.91	8.32	8.45	35.78	23.44	64.98	14.84	32	22.82	28.57	9.36	9.55	31.19	29.52	64.74	8.06	33	41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																								
29.97	35.61	17.40	13.88	33.73	19.17	47.28	28.50	31	26.36	29.91	8.32	8.45	35.78	23.44	64.98	14.84	32	22.82	28.57	9.36	9.55	31.19	29.52	64.74	8.06	33	41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																														
41.41	48.82	21.79	16.18	49.68	33.70	59.25	58.36	34	47,583,418	13,080,931	1,935,907	713,152	28,729,135	4,286,040	7,236,892	1,252,617	35	31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																									
31.40	34.76	17.09	13.47	36.94	21.99	44.75	34.07	36	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																																											
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																																																				
Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																																																																								
1,957	40	395	5	250	6	100	2	674	12	107	72	(⁶)	2	16,016	38	960,050	71,719	235,388	2,919	86,694	15,377	43,437	(⁶)	443,950	10,530	104,520	113,205	(⁶)	24,222	39	813,436	24,314	222,643	1,571	45,016	2,339	27,486	(⁶)	466,923	14,368	137,686	114,713	(⁶)	1,514	40	0.85	0.34	0.95	0.54	0.52	0.15	0.63	(⁶)	1.05	1.36	1.32	1.01	(⁶)	1.51	40	803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																																																																																												
803,787	56,569	264,198	2,860	36,070	31,000	26,241	456,839	15,693	136,728	149,531	16,874	41	1.12	0.83	1.41	1.10	0.57	2.07	0.74	1.27	1.54	1.43	1.40	1.85	42	818,552	84,233	205,023	2,600	64,892	31,000	35,948	434,944	10,235	112,527	118,369	15,694	43	0.98	0.67	1.29	1.10	0.56	1.00	0.73	1.09	1.53	1.22	1.26	1.08	44	596,360	40,993	275,453	2,860	35,004	14,973	20,002	247,761	16,476	97,721	43,632	3,146	45	19,398,988	2,281,998	5,703,572	41,584	26,347	700,000	17,510	13,085,367	890,414	1,824,816	3,392,794	698,230	46	1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																																																																																																																																																									
1,920	36	366	4	234	6	89	2	662	11	97	72	(⁶)	2	6,772	48	859,275	54,349	224,060	319	69,367	15,377	32,725	(⁶)	387,928	10,530	66,123	112,333	(⁶)	8,861	49	1,984,675	51,167	503,340	244	147,217	16,310	85,294	(⁶)	1,019,069	6,860	148,564	368,643	(⁶)	1.3	50	2.3	0.9	2.2	0.8	2.1	1.1	2.6	(⁶)	2.6	3.7	2.2	3.3	(⁶)	0.40	51	1.00	0.95	1.25	0.85	0.63	2.03	0.80	(⁶)	1.15	1.53	1.44	1.39	(⁶)	0.30	52	0.44	1.01	0.56	1.11	0.30	1.91	0.31	(⁶)	0.44	2.35	0.64	0.42	(⁶)	0.30	52	144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
144	35	9	4	62	9	13	111	53	820,839	190,592	16,971	11,771	568,259	178,337	130,861	18,774	54	496,781	148,157	12,841	8,441	301,928	91,627	89,953	8,222	55	230,894	69,821	240	80	159,288	49,074	71,235	384	56	53,452	15,681	1,040	550	33,008	8,074	14,403	1,481	57																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

⁵ Percent not shown when more than 1,000.

⁷ Revised.

⁸ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

⁹ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

¹⁰ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

¹¹ Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER (II)—Continued								
	Yellowstone River (II-A)—Continued								
	Tongue River				Powder River				
	Total ⁴	Direct	Total ⁵	Direct	Total ⁵	Direct	Total ⁵	Direct	
		(20)		(22)					
IRRIGATED UNITS AND AREAS									
1	Irrigated units ⁶.....1939..number.....	922	533	372	66				
2	Area irrigated.....1939..acres.....	82,491	45,036	56,711	7,280				
3	(a) Cropland harvested.....1939..acres.....	73,536	39,800	46,376	6,791				
4	(b) Crop failure.....1939..acres.....	67	67	1,361	50				
5	(c) Pasture.....1939..acres.....	8,888	5,169	9,074	439				
6	Area irrigated.....1929..acres.....	65,498	22,217	50,279	5,847				
7	.....1919..acres.....	54,195	20,975	89,631	3,193			
8	Increase or decrease (-), 1929-1939.....percent.....	25.9	102.7	12.8	24.5				
9	Irrigable area in enterprises.....1940..acres.....	97,291	59,023	84,071	9,699				
10	.....1930..acres.....	76,521	29,138	59,516	6,375			
11	.....1920 ⁷ ..acres.....	100,563	43,075	138,856	10,846			
12	Excess of irrigable area over the area irrigated.....1940..acres.....	14,800	13,987	27,360	2,419				
13	.....1930..acres.....	11,023	6,921	9,237	528			
14	.....1920 ⁷ ..acres.....	46,368	22,100	49,225	7,653			
15	Area works were capable of supplying with water...1940..acres.....	92,849	54,632	79,168	9,349				
16	.....1930..acres.....	73,950	29,031	56,411	5,920			
17	.....1920..acres.....	80,693	32,174	117,181	9,803			
18	Increase or decrease (-), 1930-1940.....percent.....	25.6	88.2	40.3	57.9				
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	10,358	9,596	22,457	2,069				
20	.....1930..acres.....	8,452	6,814	6,132	73			
21	.....1920..acres.....	26,498	11,199	27,550	6,610			
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	98.8	82.4	71.6	77.9				
23	.....1929..percent.....	98.6	76.5	89.1	98.8			
24	.....1919..percent.....	67.2	65.2	76.5	32.6			
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	2,883,111	2,231,511	963,947	89,557				
26	(a) Cost of irrigation works and equipment.....1940..dollars....	2,818,053	2,171,757	950,055	88,220				
27	(b) Investment in water rights (reported).....1940..dollars....	65,058	59,754	13,892	1,337				
28	Total investment in irrigation enterprises.....1930..dollars....	1,207,250	569,793	823,698	167,200				
29	.....1920..dollars....	1,419,629	734,059	1,195,398	187,502			
30	Increase or decrease (-), 1930-1940.....percent.....	138.8	291.6	17.0	-46.4				
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	31.05	40.85	12.18	9.58				
32	.....1930..dollars....	16.33	19.63	14.60	28.24			
33	.....1920..dollars....	17.59	22.82	10.20	19.13			
34	Average investment per acre irrigated.....1939..dollars....	34.95	49.55	17.00	12.30				
35	Estimated final investment in existing enterprises.....1940..dollars....	2,919,756	2,268,141	970,082	93,142				
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	30.01	38.43	11.54	9.60				
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	
		Enterprises		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	198	9	137	2	176	7	22	
38	Area irrigated in these enterprises.....1939..acres.....	79,049	27,562	42,907	(⁸)	53,466	15,122	6,329	
39	Cost of maintenance and operation.....1939..dollars....	33,963	4,107	15,617	(⁸)	24,909	1,829	5,986	
40	Average cost, per acre irrigated.....1939..dollars....	0.43	0.15	0.36	(⁸)	0.47	0.12	0.95	
41	Total annual charges (reported) ⁹ ¹⁰.....1939..dollars....	31,050	5,160	15,192	3,890	9,916	1,856	4,283	
42	Average annual charge per acre irrigated.....1939..dollars....	0.49	0.20	0.52	0.23	0.47	0.13	0.90	
43	Area against which charges were assessed.....1939..acres.....	67,230	25,898	33,264	17,000	22,599	14,500	4,759	
44	Average annual charge per acre assessed.....1939..dollars....	0.46	0.20	0.46	0.23	0.44	0.13	0.90	
45	Total charges collected ⁹.....1939..dollars....	29,420	4,674	14,865	2,444	6,548	2,010	4,283	
46	Indebtedness to December 31 (reported) ¹⁰.....1939..dollars....	119,412	660,000	119,112	660,000				
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	219	7	158	1	199	8	31	
48	Area irrigated by these enterprises.....1939..acres.....	73,881	12,962	42,051	(⁸)	56,487	15,161	7,095	
49	Water delivered.....1939..acre-feet.....	116,737	15,796	71,177	(⁸)	77,989	11,957	12,071	
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.6	1.2	1.7	(⁸)	1.4	0.8	1.7	
51	Average cost of water per acre irrigated.....1939..dollars....	0.55	0.15	0.56	(⁸)	0.47	0.13	0.93	
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.35	0.12	0.33	(⁸)	0.34	0.17	0.55	
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	10		4		9		2	
54	Irrigable area in these enterprises.....1939..acres.....	19,915		13,343		13,859		(⁸)	
55	Irrigated area in these enterprises.....1939..acres.....	18,638		12,093		5,985		(⁸)	
56	Area for which drains have been installed.....1939..acres.....	442		45		580		(⁸)	
57	Additional area needing drainage.....1939..acres.....	412		312		598		(⁸)	

⁶ Schedules called for "Number of farms," see explanation in text.
⁷ Data for the intrastate tributaries of the Little Missouri River are not shown separately but are included in the Little Missouri River total.
⁸ Data for Belle Fourche (North Fork) in South Dakota for 1920 are included with Cheyenne River direct.
⁹ Data for the intrastate tributaries of the White River are not shown separately but are included in the White River total.
¹⁰ Data for the intrastate tributaries of the Tongue River are not shown separately but are included in the Tongue River total.
¹¹ Data for the intrastate tributaries of the Powder River are not shown separately but are included in the Powder River total.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1940, 1930, 1920; AND IRRIGATED UNITS,² MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana.]

MISSOURI RIVER (II)—Continued													
Yellowstone River (II-A)—Continued	Little Missouri River				Cheyenne River						White River		
	Intrastate tributaries in Montana	Total ¹	Direct	Total	Direct ²	Belle Fourche River			S. Fork Cheyenne River		Intrastate tributary in South Dakota (Cherry Creek) (47)	Total ³	Direct
						Total ²	Direct	Redwater Creek (42)	Total ⁴	Direct				(43)	(49)
		(31)		(40)									
584	24	18	1,162	5	883	761	122	269	96	5	117	94	1
66,965	789	721	62,842	350	43,953	39,762	4,191	18,514	8,930	25	13,480	12,551	2
55,926	749	681	51,999	127	38,487	34,756	3,731	13,360	6,959	25	12,451	11,526	3
38	.....	.....	2,524	205	401	193	208	1,918	443	.....	795	791	4
11,001	40	40	8,319	18	5,065	4,613	252	3,236	1,528	.....	234	234	5
128,162	1,462	.....	71,550	.....	51,789	.....	.....	19,740	17,724	.....	8,682	.....	6
119,061	1,080	.....	110,143	99,339	1,966	.....	.....	8,844	5,906	.....	8,008	.....	7
-47.7	-46.0	.....	-12.2	.....	-15.1	.....	.....	-6.2	-49.6	.....	55.3	.....	8
95,299	3,251	2,327	130,837	1,072	87,511	81,116	6,395	42,107	19,003	147	21,586	20,410	9
198,640	2,127	.....	132,003	.....	97,816	.....	.....	39,986	30,645	.....	13,795	.....	10
324,936	7,398	.....	197,288	176,715	5,054	.....	.....	15,519	11,764	.....	21,922	.....	11
28,394	2,462	1,606	67,995	722	43,558	41,954	2,204	23,593	10,073	122	8,106	7,859	12
70,478	655	.....	60,453	.....	46,017	.....	.....	14,246	12,921	.....	5,113	.....	13
205,875	6,318	.....	87,145	77,382	3,088	.....	.....	6,675	5,858	.....	13,914	.....	14
85,814	2,711	1,842	128,036	806	86,525	80,378	6,147	40,564	17,557	141	16,973	15,880	15
178,597	1,962	.....	115,980	.....	90,991	.....	.....	24,888	21,707	.....	13,110	.....	16
196,598	4,863	.....	159,083	143,847	3,621	.....	.....	11,615	7,910	.....	16,939	.....	17
-52.2	.....	.....	10.4	.....	-4.9	.....	.....	63.0	-19.1	.....	29.5	.....	18
18,849	1,922	1,121	65,194	456	42,572	40,616	1,956	22,050	8,627	116	3,493	3,329	19
51,435	500	.....	44,430	.....	39,192	.....	.....	5,148	3,993	.....	4,428	.....	20
77,537	3,783	.....	48,940	44,514	1,655	.....	.....	2,771	2,004	.....	8,931	.....	21
78.0	29.1	39.1	49.1	43.4	50.8	49.5	68.2	45.6	50.9	17.7	79.4	79.0	22
71.4	74.5	.....	61.7	.....	56.9	.....	.....	79.3	81.7	.....	66.2	.....	23
60.6	22.2	.....	69.2	69.1	54.3	.....	.....	76.1	74.7	.....	47.3	.....	24
923,464	36,806	18,708	5,227,045	1,550	4,858,998	4,757,813	101,185	364,382	179,899	2,115	555,414	527,901	25
912,570	36,677	18,579	5,211,534	1,550	4,852,744	4,757,094	95,650	355,125	174,882	2,115	545,939	518,426	26
10,894	129	129	15,511	.....	6,254	712	5,535	9,257	5,017	.....	9,475	9,475	27
2,112,351	28,656	.....	4,539,915	.....	4,276,534	.....	.....	257,131	230,356	.....	478,392	.....	28
2,162,393	71,608	.....	5,605,911	5,277,782	76,066	.....	.....	252,063	166,820	.....	183,349	.....	29
-56.3	28.4	.....	15.1	.....	13.6	.....	.....	41.7	-21.9	.....	16.1	.....	30
10.76	13.58	10.16	40.82	1.92	56.16	59.19	16.46	8.98	10.25	15.00	32.72	33.24	31
11.76	14.61	.....	39.14	.....	47.00	.....	.....	10.33	10.61	.....	36.49	.....	32
11.00	14.73	.....	35.24	36.69	21.01	.....	.....	21.70	21.09	.....	10.82	.....	33
13.79	46.65	25.95	83.18	4.43	110.55	119.66	24.14	19.68	20.15	84.60	41.20	42.06	34
947,607	45,806	24,683	5,261,910	3,200	4,867,163	4,765,428	101,735	389,017	203,164	2,530	664,614	636,551	35
9.94	14.05	10.61	40.22	2.99	55.62	58.75	15.91	9.24	10.69	17.21	30.79	31.19	36
Primary Enterprises	Sup. Enterprises												
264	(8) 1	17	190	5	62	31	31	113	66	10	45	41	37
60,903	(8)	546	59,174	350	43,266	39,548	3,718	15,533	6,752	25	12,887	12,471	38
19,982	(8)	638	68,364	755	54,977	53,200	1,777	12,473	8,384	159	20,477	19,982	39
0.33	(8)	1.17	1.16	2.16	1.27	1.35	0.48	0.80	1.24	6.36	1.59	1.60	40
5,694	.....	.....	131,242	.....	124,125	122,908	1,217	7,117	550	.....	16,824	16,784	41
0.25	.....	.....	2.69	.....	3.05	3.16	0.71	0.88	1.49	.....	1.58	1.59	42
23,864	.....	.....	72,756	.....	59,643	57,924	1,719	13,113	370	.....	10,660	10,575	43
0.24	.....	.....	1.80	.....	2.08	2.12	0.71	0.54	1.49	.....	1.58	1.59	44
2,174	.....	.....	83,883	.....	77,002	76,285	717	6,881	450	.....	15,613	15,613	45
462,286	.....	.....	4,577,395	.....	4,577,395	4,577,395	.....	.....	.....	.....	173,628	151,000	46
240	.....	17	13	186	5	51	31	125	57	5	42	37	47
47,652	.....	689	55,955	350	42,105	39,388	2,717	13,475	6,132	25	12,679	12,439	48
90,323	.....	648	61,447	384	41,643	36,442	5,201	19,384	8,054	36	8,117	7,891	49
1.9	.....	0.9	1.1	1.1	1.0	0.9	1.9	1.4	1.3	1.4	0.6	0.6	50
0.88	.....	1.07	0.96	2.52	2.16	2.99	3.16	0.58	0.82	1.08	1.65	1.64	51
0.20	.....	1.14	2.28	1.97	3.02	3.41	0.30	0.62	0.83	3.61	2.58	2.59	52
19	.....	4	6	.....	(8) 2	(8) 2	.....	3	(8) 1	(8) 1	3	(8) 1	53
11,243	.....	215	74,747	.....	(8)	(8)	.....	2,190	(8)	.....	12,020	(8)	54
9,232	.....	66	36,247	.....	(8)	(8)	.....	1,980	(8)	.....	9,586	(8)	55
523	.....	59	25,850	.....	(8)	(8)	.....	300	(8)	.....	43	(8)	56
2,713	.....	36	5,983	.....	(8)	(8)	.....	730	(8)	.....	5	.....	57

¹ Data for the intrastate tributaries of the South Fork Cheyenne River are not shown separately but are included in the South Fork Cheyenne River total.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE
[For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index number is shown in parentheses for each drainage basin)	MISSOURI RIVER (II)—Continued						
			Platte River (II-B)				
	Niobrara River ¹	James River	Total		Direct		
	(51)	(54)			(II-B)		
IRRIGATED UNITS AND AREAS							
1	Irrigated units ².....1939...number.....	89	10	26,579		2,784	
2	Area irrigated.....1939...acres.....	10,359	336	2,360,615		128,586	
3	(a) Cropland harvested.....1939...acres.....	9,318	336	2,119,398		125,403	
4	(b) Crop failure.....1939...acres.....	310		51,895		2,217	
5	(c) Pasture.....1939...acres.....	731		189,322		966	
6	Area irrigated.....1929...acres.....	3,831		2,315,297		71,290	
7	.....1919...acres.....	6,138		2,136,402		37,532
8	Increase or decrease (-), 1929-1939.....percent.....	170.4		2.0		80.4	
9	Irrigable area in enterprises.....1940...acres.....	14,551	370	3,339,995		458,091	
10	.....1930...acres.....	4,766		3,081,680		179,011
11	.....1920 ³ ...acres.....	28,956		3,431,037		151,377
12	Excess of irrigable area over the area irrigated.....1940...acres.....	4,192	34	979,380		329,505	
13	.....1930...acres.....	935		766,383		107,721
14	.....1920 ³ ...acres.....	22,818		1,294,635		113,845
15	Area works were capable of supplying with water.....1940...acres.....	13,222	352	3,061,356		376,465	
16	.....1930...acres.....	4,563		2,813,195		140,456
17	.....1920...acres.....	10,265		2,579,720		68,732
18	Increase or decrease (-), 1930-1940.....percent.....	189.8		8.8		168.0	
19	Excess of area works were capable of supplying with water over area irrigated.....1940...acres.....	2,863	16	700,741		247,879	
20	.....1930...acres.....	732		497,898		69,166
21	.....1920...acres.....	4,127		443,318		31,200
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	78.3	95.5	77.1		34.2	
23	.....1929...percent.....	84.0		82.3		50.8
24	.....1919...percent.....	59.8		82.8		54.6
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940...dollars.....	139,055	10,190	95,210,869		14,001,510	
26	(a) Cost of irrigation works and equipment.....1940...dollars.....	137,735	10,190	92,445,664		13,795,794	
27	(b) Investment in water rights (reported).....1940...dollars.....	1,320		2,765,205		205,716	
28	Total investment in irrigation enterprises.....1930...dollars.....	26,879		69,493,120		989,656	
29	.....1920...dollars.....	360,439		62,893,983		488,642
30	Increase or decrease (-), 1930-1940.....percent.....	417.3		37.0		(4)	
31	Average investment based on area works were capable of supplying with water, per acre.....1940...dollars.....	10.52	28.95	31.10		37.19	
32	.....1930...dollars.....	5.89		24.70		7.05
33	.....1920...dollars.....	35.11		24.38		7.11
34	Average investment per acre irrigated.....1939...dollars.....	13.42	30.33	40.33		108.89	
35	Estimated final investment in existing enterprises.....1940...dollars.....	144,330	10,770	99,285,391		16,662,253	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940...dollars.....	9.92	29.11	29.73		36.37	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
				Primary	Supplemental	Primary	Supplemental
				Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939...number.....	77	8	4,381	1,302	1,328	52
38	Area irrigated in these enterprises.....1939...acres.....	10,218	274	2,304,103	586,429	125,588	57,936
39	Cost of maintenance and operation.....1939...dollars.....	8,540	1,162	1,863,717	475,109	270,102	27,094
40	Average cost, per acre irrigated.....1939...dollars.....	0.84	4.24	0.81	0.81	2.15	0.47
41	Total annual charges (reported) ⁶.....1939...dollars.....			1,769,060	245,105	70,538	26,335
42	Average annual charge per acre irrigated.....1939...dollars.....			1.05	0.51	1.04	0.48
43	Area against which charges were assessed.....1939...acres.....			1,798,015	480,844	69,452	55,434
44	Average annual charge per acre assessed.....1939...dollars.....			0.98	0.51	1.02	0.48
45	Total charges collected ⁶.....1939...dollars.....			1,649,339	128,489	74,153	
46	Indebtedness to December 31 (reported) ⁷.....1939...dollars.....			28,505,928	1,760,178	7,771,892	
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939...number.....	79	9	4,179	1,270	1,252	41
48	Area irrigated by these enterprises.....1939...acres.....	8,799	286	2,208,815	582,240	126,528	58,083
49	Water delivered.....1939...acre-feet.....	16,607	352	3,823,963	428,522	231,637	28,415
50	Average water delivered per acre irrigated.....1939...acre-feet.....	1.9	1.2	1.7	0.7	1.8	0.5
51	Average cost of water per acre irrigated.....1939...dollars.....	0.92	4.27	1.08	0.91	2.18	0.53
52	Average cost of water per acre-foot delivered.....1939...dollars.....	0.49	3.47	0.63	1.23	1.19	1.09
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939...number.....	4	3	175		19	
54	Irrigable area in these enterprises.....1939...acres.....	806	108	746,729		7,742	
55	Irrigated area in these enterprises.....1939...acres.....	704	74	550,335		3,043	
56	Area for which drains have been installed.....1939...acres.....	181	90	110,018		3,182	
57	Additional area needing drainage.....1939...acres.....	83	18	25,050		49	

⁴Schedules called for "Number of farms," see explanation in text.

⁵Data for 1 enterprise in Keya Paha River Basin are included with Niobrara River.

⁶Data for the intrastate tributaries of the Laramie River are not shown separately but are included in the Laramie River total.

⁷For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

MISSOURI RIVER (II)—Continued															
Platte River (II-B)—Continued															
North Platte River (II-Ba)					South Platte River (II-Bb)										
Total	Direct (II-Ba)	Laramie River		Intrastate tributaries in Wyoming	Intrastate tributary in Nebraska (Blue Creek) (22)	Total	Direct (II-Bb)								
		Total ²	Direct (15)							Total	Direct				
7,693	6,044	854	615	884	111	15,309	6,108		1						
1,041,146	878,431	168,374	95,493	186,101	8,240	1,162,685	557,441		2						
872,920	584,229	138,681	84,584	142,191	7,810	1,093,547	524,363		3						
13,037	7,931	2,674	1,902	2,282	180	36,381	18,485		4						
156,189	86,272	27,009	8,947	41,658	250	32,757	14,563		5						
881,389	441,263	180,084	108,585	182,420	.....	1,267,604	470,892		6					
872,140	351,050	156,159	78,560	196,200	.....	1,224,974	362,191		7					
9.4	53.7	-11.4	-12.9	-3.3	.....	-8.3	18.4		8					
1,447,453	808,946	330,105	231,362	295,281	13,121	1,354,911	659,542		9						
1,312,827	549,764	328,057	228,757	251,557	.....	1,555,134	540,615		10					
1,603,305	579,728	373,353	177,979	401,296	.....	1,671,199	519,535		11					
406,307	130,515	161,731	135,869	109,180	4,881	192,226	102,101		12						
361,468	108,501	137,963	119,172	59,137	.....	287,530	69,723		13					
731,165	228,678	217,194	99,419	205,096	.....	446,225	157,344		14					
1,300,503	785,749	288,153	193,648	214,854	11,747	1,314,272	649,009		15						
1,188,645	529,278	268,426	179,372	238,487	.....	1,441,367	504,642		16					
1,172,858	429,252	298,153	129,116	259,274	.....	1,335,109	398,310		17					
8.5	48.5	7.3	8.0	-9.9	.....	-8.8	28.6		18					
259,357	107,318	119,779	98,155	28,753	3,507	151,587	91,568		19						
247,286	89,015	78,332	69,787	46,067	.....	173,763	33,750		20					
300,718	78,202	141,994	50,556	63,074	.....	110,135	36,119		21					
80.1	86.3	58.4	49.3	86.6	70.1	88.5	85.9		22						
79.4	82.4	70.8	61.1	80.7	.....	87.9	93.3		23					
74.4	81.8	52.4	60.8	75.7	.....	91.8	90.9		24					
36,063,805	26,903,346	4,515,097	3,146,107	4,539,230	106,132	42,244,548	24,481,175		25						
35,727,789	26,769,827	4,488,283	3,127,095	4,364,077	105,582	40,023,052	22,664,285		26						
336,036	139,519	26,814	9,012	175,153	550	2,221,496	1,816,890		27						
31,010,853	23,310,257	4,268,150	3,454,911	2,567,690	.....	36,899,152	17,685,220		28					
23,702,212	17,624,060	4,386,686	974,841	2,676,082	.....	36,676,829	9,199,612		29					
16.3	15.4	5.8	-8.9	76.8	.....	14.5	38.4		30					
27.73	34.24	15.67	16.25	21.13	9.03	32.14	37.72		31						
25.87	44.04	15.90	19.26	10.77	.....	25.60	35.05		32					
21.91	41.06	14.71	7.55	10.32	.....	27.47	23.10		33					
34.64	39.66	26.82	32.95	24.39	12.88	36.33	43.82		34						
37,198,273	27,021,799	5,296,822	3,896,682	4,765,385	114,267	42,460,189	24,525,796		35						
25.70	33.40	16.05	16.84	16.14	8.71	31.34	37.19		36						
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.						
Enterprises															
1,261	180	628	174	267	2	105	4	26	1,567	1,068	622	628	37		
1,002,601	132,790	659,017	127,787	162,509	(⁵)	94,055	(⁵)	173,405	1,263	7,670	1,147,827	395,617	555,763	182,101	38
649,303	99,934	509,511	98,958	69,962	(⁵)	52,594	(⁵)	63,872	652	5,958	871,762	347,796	453,662	164,963	39
0.65	0.75	0.77	0.77	0.43	(⁵)	0.56	(⁵)	0.37	0.52	0.78	0.76	0.88	0.82	0.91	40
669,296	81,188	582,586	80,836	45,333	43,655	36,996	352	4,381	982,453	137,582	512,934	24,627	41
1.16	0.70	1.31	0.70	0.59	0.64	0.73	0.36	0.70	0.97	0.44	1.05	0.20	42
647,129	116,123	487,871	115,023	92,812	84,432	58,591	1,100	7,855	1,061,335	309,287	523,764	126,084	43
1.03	0.70	1.19	0.70	0.49	0.52	0.63	0.32	0.56	0.93	0.44	0.98	0.20	44
552,041	1,235	477,746	883	40,057	38,435	22,979	352	11,259	976,054	127,254	544,392	23,011	45
14,804,347	1,270,559	14,568,980	1,270,559	99,490	99,490	112,877	3,000	3,803,648	489,619	1,906,098	1,250	46
1,179	166	601	161	271	(⁵)	113	(⁵)	291	4	16	1,550	1,061	602	621	47
942,654	129,016	625,487	127,713	167,094	(⁵)	95,449	(⁵)	145,685	1,263	4,388	1,112,195	395,057	523,061	182,240	48
1,941,395	68,888	1,400,396	68,327	223,319	(⁵)	140,223	(⁵)	207,862	543	9,758	1,695,551	331,167	948,468	168,793	49
2.0	0.5	2.2	0.5	1.3	(⁵)	1.5	(⁵)	1.4	0.4	2.2	1.5	0.8	1.8	0.9	50
0.87	0.78	1.07	0.79	0.42	(⁵)	0.55	(⁵)	0.49	0.52	1.33	1.10	1.01	1.12	0.91	51
0.44	1.47	0.48	1.47	0.32	(⁵)	0.38	(⁵)	0.35	1.20	0.60	0.72	1.20	0.62	0.98	52
64	27	29	6	7	(⁵)	86	20	53
573,585	362,722	170,077	153,959	38,700	(⁵)	138,058	94,816	54
416,524	323,828	71,347	56,225	19,495	(⁵)	118,747	80,931	55
80,441	60,000	18,341	2,455	2,100	25,986	9,396	56
19,853	12,559	7,242	7,240	40	(⁵)	5,060	3,391	57

⁴ Percent not shown when more than 1,000.

⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

⁶ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁷ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE
 [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER (II)—Continued						
	Platte River (II-B)—Continued						
	South Platte River (II-Bb)—Continued						
	Cache la Poudre River	Crow Creek		Lodgepole Creek			
	(8)	(9)		(13)			
IRRIGATED UNITS AND AREAS							
1	Irrigated units ¹.....1939..number.....	2,371	42		216		
2	Area irrigated.....1939..acres.....	225,521	7,571		19,017		
3	(a) Cropland harvested.....1939..acres.....	214,943	6,743		17,062		
4	(b) Crop failure.....1939..acres.....	8,617	593		1,306		
5	(c) Pasture.....1939..acres.....	1,961	235		649		
6	Area irrigated.....1929..acres.....	297,401	5,947		13,425		
7	.....1919..acres.....	272,125	4,525		20,004	
8	Increase or decrease (-), 1929-1939.....percent.....	-24.2	27.3		41.7		
9	Irrigable area in enterprises.....1940..acres.....	255,647	8,437		26,953		
10	.....1930..acres.....	389,975	8,366		18,018	
11	.....1920 ³ ..acres.....	416,208	13,040		33,823	
12	Excess of irrigable area over the area irrigated..1940..acres.....	30,126	866		7,938		
13	.....1930..acres.....	92,574	2,419		4,593	
14	.....1920 ³ ..acres.....	144,083	8,515		13,819	
15	Area works were capable of supplying with water...1940..acres.....	239,910	8,073		27,023		
16	.....1930..acres.....	336,971	7,903		17,211	
17	.....1920..acres.....	289,634	7,117		25,646	
18	Increase or decrease (-), 1930-1940.....percent.....	-28.8	2.2		51.2		
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	14,369	502		7,006		
20	.....1930..acres.....	39,570	1,956		3,786	
21	.....1920..acres.....	17,509	2,592		5,642	
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	94.0	93.8		73.1		
23	.....1929..percent.....	88.3	75.2		78.0	
24	.....1919..percent.....	94.0	63.6		78.0	
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	10,151,853	262,174		469,482		
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	10,123,026	248,827		466,522		
27	(b) Investment in water rights (reported).....1940..dollars.....	28,827	13,347		2,860		
28	Total investment in irrigation enterprises.....1930..dollars.....	9,642,017	166,821		337,580		
29	.....1920..dollars.....	10,713,682	100,519		445,738	
30	Increase or decrease (-), 1930-1940.....percent.....	5.3	57.2		39.0		
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	42.32	32.48		18.04		
32	.....1930..dollars.....	28.61	21.11		19.62	
33	.....1920..dollars.....	36.99	14.14		17.38	
34	Average investment per acre irrigated.....1939..dollars.....	45.02	34.53		24.69		
35	Estimated final investment in existing enterprises..1940..dollars.....	10,203,283	294,474		497,452		
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	39.91	31.35		18.46		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	287	258	22	12	151	3
38	Area irrigated in these enterprises.....1939..acres.....	222,719	159,095	2,678	1,265	18,445	258
39	Cost of maintenance and operation.....1939..dollars.....	144,015	125,719	5,271	5,325	32,814	250
40	Average cost, per acre irrigated.....1939..dollars.....	0.65	0.80	1.97	4.21	1.78	0.97
41	Total annual charges (reported) ⁵.....1939..dollars.....	250,802	90,649	8,998
42	Average annual charge per acre irrigated.....1939..dollars.....	1.22	0.68	2.00
43	Area against which charges were assessed.....1939..acres.....	206,674	134,180	4,499
44	Average annual charge per acre assessed.....1939..dollars.....	1.21	0.68	2.00
45	Total charges collected ⁵.....1939..dollars.....	185,695	80,129	9,000
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	1,048,227	408,369	82,000
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	292	251	38	12	143	3
48	Area irrigated by these enterprises.....1939..acres.....	221,138	159,294	7,471	1,265	18,442	258
49	Water delivered.....1939..acre-feet.....	279,916	112,327	10,214	3,239	23,270	241
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.3	0.7	1.4	2.6	1.2	0.9
51	Average cost of water per acre irrigated.....1939..dollars.....	1.35	1.03	1.97	4.21	2.08	0.97
52	Average cost of water per acre-foot delivered..1939..dollars.....	1.07	1.47	1.44	1.64	1.72	1.04
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	41	1
54	Irrigable area in these enterprises.....1939..acres.....	17,009	(4)
55	Irrigated area in these enterprises.....1939..acres.....	15,883	(4)
56	Area for which drains have been installed.....1939..acres.....	14,557	(4)
57	Additional area needing drainage.....1939..acres.....	174	(4)

¹ Schedules called for "Number of farms," see explanation in text.

² Data for the intrastate tributaries of the Smoky Hill River are not shown separately but are included in the Smoky Hill River total.

³ Percent not shown when more than 1,000.

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

MISSOURI RIVER (II)—Continued															
Platte River (II-B)—Continued				Kansas River (II-C)											
South Platte River (II-Bb)—Con.		Intrastate tributaries in Nebraska		Total	Direct	Republican River					Smoky Hill River			Big Blue River	
Intrastate tributaries in Colorado	Total					Direct	Total	Direct	Arkaree River	Frenchman Creek	Total ¹	Direct	White Woman Creek		(8)
					(II-C)										
6,572	793	792	43	517		233	92	192	108	40	44	124	1		
353,135	28,188	46,204	703	31,592		9,905	6,891	14,895	9,423	1,211	7,273	4,386	2		
330,436	27,528	43,692	603	30,067		9,497	5,787	14,783	8,727	1,055	6,968	4,295	3		
7,380	260	1,005	14	576		275	259	42	407	150	237	8	4		
15,319	410	1,507	86	1,049		134	845	70	289	5	68	83	5		
478,903	25,044	25,139	.....	23,387		.....	.....	.....	141	.....	.....	.....	6
565,129	1,756	34,672	.....	34,360		.....	.....	.....	278	.....	.....	19	7
-26.3	12.6	76.8	.....	35.5		.....	.....	.....	(²)	.....	.....	.....	8
404,332	79,540	85,137	1,372	42,183		15,692	10,235	15,256	14,542	2,458	10,581	7,040	9		
595,488	34,708	35,913	.....	32,872		.....	.....	.....	391	.....	.....	.....	10
688,593	5,155	53,644	.....	52,080		.....	.....	.....	1,450	.....	.....	44	11
51,197	51,342	18,933	669	10,491		5,786	3,344	1,361	5,119	1,247	3,308	2,554	12		
117,585	9,574	10,774	.....	9,485		.....	.....	.....	250	.....	.....	.....	13
122,464	3,400	18,972	.....	17,720		.....	.....	.....	1,172	.....	.....	25	14
391,257	70,116	61,942	1,252	40,345		14,532	9,765	16,048	13,902	2,123	10,421	6,433	15		
573,058	32,727	32,823	.....	23,088		.....	.....	.....	325	.....	.....	.....	16
614,402	3,021	44,402	.....	43,022		.....	.....	.....	1,265	.....	.....	44	17
-31.7	114.2	88.7	.....	38.7		.....	.....	.....	(²)	.....	.....	.....	18
38,122	41,918	15,738	559	8,553		4,626	2,874	1,153	4,479	912	3,148	2,047	19		
94,155	7,683	6,684	.....	5,699		.....	.....	.....	185	.....	.....	.....	20
46,273	1,295	9,730	.....	8,662		.....	.....	.....	988	.....	.....	25	21
90.3	40.2	74.6	55.7	78.6		68.2	70.6	92.8	57.8	57.0	69.8	68.2	22		
83.6	76.5	79.5	.....	80.4		.....	.....	.....	43.3	.....	.....	.....	23
92.1	58.1	78.1	.....	79.9		.....	.....	.....	22.0	.....	.....	43.2	24
6,879,864	2,901,006	1,083,626	33,556	715,564		308,932	103,925	303,707	161,088	39,268	100,893	172,318	25		
6,520,292	2,899,049	1,061,595	32,745	696,439		304,032	90,020	302,387	161,003	39,224	100,885	171,397	26		
359,572	1,957	22,041	910	20,125		4,900	13,905	1,320	85	44	8	921	27		
9,035,919	593,359	595,747	.....	490,429		.....	.....	.....	12,490	.....	.....	.....	28
16,217,178	25,300	537,605	.....	500,285		.....	.....	.....	34,953	.....	.....	1,925	29
-23.9	388.9	81.6	.....	45.1		.....	.....	.....	(²)	.....	.....	.....	30
17.58	41.37	17.49	26.67	17.76		21.25	10.64	18.92	11.59	18.50	9.68	25.79	31		
15.77	18.13	18.18	.....	16.85		.....	.....	.....	38.22	.....	.....	.....	32
26.40	8.71	12.11	.....	11.63		.....	.....	.....	27.51	.....	.....	36.93	33
19.48	102.88	23.45	47.87	22.61		31.19	15.08	20.39	17.10	32.43	13.87	39.29	34		
6,969,184	2,964,676	1,123,220	41,906	733,864		323,427	106,230	304,207	171,173	43,458	104,803	175,277	35		
17.24	37.27	17.23	30.54	17.40		20.51	10.38	18.71	11.77	17.58	9.90	24.90	36		
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
485	167	225	2	500	3	39	257	3	194	3	30	95	35	37	109
348,222	52,898	23,077	(⁴)	44,858	12	637	30,963	12	9,411	12	6,561	14,891	9,059	1,027	7,123
236,000	50,538	72,550	(⁴)	101,079	71	2,934	50,712	71	26,662	71	4,451	19,599	24,924	3,224	18,600
0.68	0.96	2.58	(⁴)	2.25	5.92	4.61	1.64	5.92	2.83	5.92	0.67	1.32	2.75	3.14	2.51
209,719	22,306	46,773	18,275	18,275	4,700	1,989	11,586
0.66	0.45	2.33	1.01	1.01	1.53	0.50	1.05
326,398	49,023	20,099	18,060	18,060	3,067	3,969	11,024
0.54	0.46	2.33	1.01	1.01	1.53	0.50	1.05
235,967	24,114	47,091	20,023	20,023	5,100	3,570	11,353
765,323	80,000	2,126,041	13,700	13,700	13,700
475	174	198	2	489	1	40	249	1	188	1	31	30	96	37	36
342,083	52,000	27,438	(⁴)	43,772	(⁴)	624	29,601	(⁴)	9,848	(⁴)	5,906	13,848	9,293	1,111	7,273
434,683	46,567	55,940	(⁴)	86,473	(⁴)	672	66,317	(⁴)	19,615	(⁴)	10,613	36,089	14,183	1,555	11,202
1.3	0.9	2.0	(⁴)	2.0	(⁴)	1.1	2.2	(⁴)	2.0	(⁴)	1.8	2.6	1.5	1.4	1.5
0.83	1.18	2.65	(⁴)	2.31	(⁴)	4.70	1.69	(⁴)	2.80	(⁴)	0.74	1.33	2.75	3.18	2.61
0.66	1.32	1.31	(⁴)	1.17	(⁴)	4.36	0.75	(⁴)	1.41	(⁴)	0.41	0.51	1.80	2.28	1.70
24	6	32	4	14	12	1	1	4	10
25,933	27,944	1,242	140	648	328	(⁴)	(⁴)	220	(⁴)	234
21,533	12,021	860	70	404	164	(⁴)	(⁴)	188	(⁴)	198
2,033	399	588	62	235	192	(⁴)	(⁴)	65	(⁴)	226
1,455	88	270	78	182	102	(⁴)	(⁴)	10	(⁴)

¹Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

³Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE
[For the 17 western States]

ITEM ^a (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER (II)—Continued			MISSISSIPPI RIVER (III) (Exclusive of the Missouri River)	
	Intrastate tributaries in Montana	Intrastate tributaries in North Dakota	Intrastate tributaries in South Dakota	Total	Direct (III)
IRRIGATED UNITS AND AREAS					
1 Irrigated units ^b.....1939...number.....	5,796	38	148	14,206	156
2 Area irrigated.....1939...acres.....	853,261	344	1,290	927,594	9,548
3 (a) Cropland harvested.....1939...acres.....	748,059	276	1,259	948,045	9,227
4 (b) Crop failure.....1939...acres.....	3,221	12	31	31,022	254
5 (c) Pasture.....1939...acres.....	101,981	56	.....	48,527	67
6 Area irrigated.....1929...acres.....	871,405	.....	1,067	902,590	8,972
7 .....1919...acres.....	933,394	.....	709	958,493	17,416
8 Increase or decrease (-), 1929-1939.....percent.....	-2.1	.....	20.9	2.8	6.4
9 Irrigable area in enterprises.....1940...acres.....	1,281,056	1,206	2,442	1,458,502	15,528
10 .....1930...acres.....	1,515,131	.....	1,509	1,280,730	17,342
11 .....1920 ² ...acres.....	2,816,852	.....	6,934	1,543,064	24,070
12 Excess of irrigable area over the area irrigated.....1940...acres.....	127,795	862	1,152	530,908	5,980
13 .....1930...acres.....	613,726	.....	442	378,170	8,370
14 .....1920 ² ...acres.....	1,883,458	.....	6,225	584,571	6,654
15 Area works were capable of supplying with water.....1940...acres.....	1,174,965	810	1,837	1,350,911	14,202
16 .....1930...acres.....	1,238,055	.....	1,214	1,170,583	11,688
17 .....1920...acres.....	1,601,901	.....	3,594	1,152,261	23,755
18 Increase or decrease (-), 1930-1940.....percent.....	-5.1	.....	51.3	15.4	21.7
19 Excess of area works were capable of supplying with water over area irrigated.....1940...acres.....	321,704	466	547	423,317	4,854
20 .....1930...acres.....	366,650	.....	147	268,023	2,696
21 .....1920...acres.....	668,507	.....	2,885	193,768	6,339
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	72.6	42.5	70.2	68.7	67.2
23 .....1929...percent.....	70.4	.....	87.9	77.1	76.9
24 .....1919...percent.....	58.3	.....	19.7	83.2	73.3
CAPITAL INVESTED TO JANUARY 1					
25 Total investment in irrigation enterprises.....1940...dollars.....	33,418,918	18,551	212,707	37,101,932	156,931
26 (a) Cost of irrigation works and equipment.....1940...dollars.....	33,178,141	18,445	212,658	36,159,140	156,931
27 (b) Investment in water rights (reported).....1940...dollars.....	240,777	106	49	942,792	.....
28 Total investment in irrigation enterprises.....1930...dollars.....	27,858,818	.....	25,135	31,831,573	284,998
29 .....1920...dollars.....	29,289,550	.....	128,136	35,183,789	302,385
30 Increase or decrease (-), 1930-1940.....percent.....	20.0	.....	746.3	16.6	-44.9
31 Average investment based on area works were capable of supplying with water, per acre.....1940...dollars.....	28.44	22.90	115.79	27.46	11.05
32 .....1930...dollars.....	22.50	.....	20.70	27.19	24.43
33 .....1920...dollars.....	18.28	.....	35.55	30.54	12.73
34 Average investment per acre irrigated.....1939...dollars.....	39.17	53.93	164.89	40.00	16.44
35 Estimated final investment in existing enterprises.....1940...dollars.....	37,807,167	22,336	218,081	37,496,140	156,981
36 Average investment based on estimated final investment and irrigable area, per acre.....1940...dollars.....	29.51	18.52	89.30	25.71	10.11
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
	Primary	Supplemental		Primary	Supplemental
	Enterprises			Enterprises	
37 Enterprises reporting maintenance and operation.....1939...number.....	1,839	22	33	4,227	215
38 Area irrigated in these enterprises.....1939...acres.....	826,518	117,725	324	897,343	33,415
39 Cost of maintenance and operation.....1939...dollars.....	485,537	11,079	1,641	1,763,296	52,748
40 Average cost, per acre irrigated.....1939...dollars.....	0.59	0.09	5.06	1.97	1.58
41 Total annual charges (reported) ^{3 4}.....1939...dollars.....	427,889	29,745	284	738,670	10,980
42 Average annual charge per acre irrigated.....1939...dollars.....	1.10	0.32	0.79	1.48	1.79
43 Area against which charges were assessed.....1939...acres.....	477,513	93,854	359	568,001	6,142
44 Average annual charge per acre assessed.....1939...dollars.....	0.90	0.32	0.79	1.30	1.79
45 Total charges collected ⁵.....1939...dollars.....	222,147	32,853	.....	898,535	1,275
46 Indebtedness to December 31 (reported) ⁶.....1939...dollars.....	22,075,841	673,268	.....	7,667,224	.....
WATER DELIVERED TO IRRIGATORS, 1939					
47 Enterprises reporting water delivered.....1939...number.....	1,849	20	34	4,206	204
48 Area irrigated by these enterprises.....1939...acres.....	766,534	90,308	344	886,841	35,062
49 Water delivered.....1939...acre-feet.....	1,432,711	119,947	930	1,716,209	46,572
50 Average water delivered per acre irrigated.....1939...acre-feet.....	1.9	1.3	2.7	1.9	1.3
51 Average cost of water per acre irrigated.....1939...dollars.....	0.74	0.32	5.06	2.31	2.08
52 Average cost of water per acre-foot delivered.....1939...dollars.....	0.39	0.24	1.87	1.19	1.57
DRAINAGE OF IRRIGATED LAND					
53 Enterprises reporting land drained or needing drainage.....1939...number.....	65	.....	4	221	.....
54 Irrigable area in these enterprises.....1939...acres.....	316,598	.....	103	164,985	2,733
55 Irrigated area in these enterprises.....1939...acres.....	165,291	.....	16	116,659	2,230
56 Area for which drains have been installed.....1939...acres.....	55,950	.....	16	50,820	2,194
57 Additional area needing drainage.....1939...acres.....	21,764	.....	44	6,772	505

^a Schedules called for "Number of farms," see explanation in text.

¹ Data for the intrastate tributaries of the Canadian River are not shown separately but are included in the Canadian River total.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued

and Arkansas and Louisiana]

MISSISSIPPI RIVER (III)—Continued (Exclusive of the Missouri River)													
Arkansas River (III-A)													
Total	Direct (III-A)	Two Butte and Bear Creeks (12)	Salt Fork Arkansas River (14)	Cimarron River (15)	Verdigris River (16)	Canadian River			Intrastate tributaries in Colorado	Intrastate tributaries in Kansas			
						Total ¹	Direct (18)	North Canadian River (27)					
11,569	7,484	64	9	99	6	1,846	113	50	1,867	194	1		
979,919	486,304	3,603	512	9,155	24	61,210	3,621	1,065	109,291	12,820	2		
608,792	444,111	3,583	512	7,441	24	58,358	3,511	1,020	83,455	11,308	3		
29,546	18,432	.....	.....	582	.....	1,349	46	32	7,893	1,290	4
41,581	23,751	.....	.....	1,132	.....	1,503	64	13	14,943	222	5
753,533	461,620	.....	.....	4,200	.....	69,450	2,145	.....	201,747	15,793	6
851,150	525,103	.....	.....	8,345	.....	90,875	2,371	.....	210,024	16,409	7
-9.8	5.3	.....	.....	118.0	.....	-11.9	68.8	.....	-47.3	-18.8	8
1,030,597	695,621	4,513	1,022	17,231	27	95,382	5,561	2,081	195,893	19,908	9		
1,051,963	545,162	.....	.....	10,980	.....	116,344	2,762	.....	354,258	24,495	10
1,344,646	641,783	.....	.....	25,312	.....	180,804	3,022	.....	435,579	60,239	11
350,678	209,317	910	510	8,076	3	35,172	1,940	1,016	89,302	7,088	12		
298,430	83,542	.....	.....	6,780	.....	49,894	617	.....	152,511	8,702	13
493,496	116,680	.....	.....	16,967	.....	89,928	651	.....	225,555	43,830	14
933,312	640,488	4,513	942	11,971	27	77,819	5,461	1,779	179,174	18,378	15		
960,622	510,645	.....	.....	10,795	.....	109,619	2,762	.....	305,887	22,953	16
1,009,821	564,120	.....	.....	21,472	.....	137,882	2,615	.....	260,260	25,714	17
-2.8	25.4	.....	.....	10.9	.....	-29.0	97.7	.....	-41.4	-19.9	18
253,393	154,184	910	430	2,816	3	15,509	1,840	714	72,883	5,558	19		
207,089	49,025	.....	.....	6,595	.....	40,169	617	.....	104,140	7,160	20
159,771	39,017	.....	.....	13,127	.....	47,006	244	.....	50,236	9,305	21
72.9	75.9	79.8	54.4	76.5	88.9	78.7	66.3	59.9	59.3	69.8	22		
76.4	90.4	.....	.....	38.9	.....	63.4	77.7	.....	65.0	68.8	23
84.3	93.1	.....	.....	38.9	.....	65.9	90.7	.....	80.7	63.8	24
26,691,327	20,123,546	616,895	14,775	251,899	2,815	1,973,811	425,590	101,262	3,429,431	268,155	25		
25,753,471	19,534,001	616,895	14,475	258,607	2,740	1,879,695	424,894	101,114	3,178,985	268,073	26		
937,856	589,545	.....	300	3,292	75	94,116	596	148	250,446	82	27	
21,722,223	11,710,356	.....	.....	203,310	.....	1,917,660	51,395	.....	7,019,119	835,028	28
30,241,390	15,161,972	.....	.....	416,304	.....	5,155,465	148,331	.....	8,552,044	848,855	29
22.9	71.8	.....	.....	28.8	.....	2.9	728.1	.....	-51.1	-67.9	30
28.60	31.42	136.69	15.68	21.88	104.26	25.36	77.93	55.92	19.14	14.59	31		
22.61	22.93	.....	.....	18.83	.....	17.49	16.61	.....	22.95	36.38	32
29.94	26.88	.....	.....	19.39	.....	37.39	56.72	.....	33.24	33.01	33
39.26	41.38	171.22	28.86	28.61	117.29	32.25	117.53	95.08	32.26	20.92	34		
27,038,278	20,291,510	619,295	15,775	292,065	2,815	2,017,906	432,340	104,262	3,506,536	292,375	35		
26.24	29.17	137.22	15.44	16.95	104.26	20.94	77.75	50.10	17.90	14.69	36		
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.		
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises			
2,626	214	1,486	199	10	9	80	6	177	55	40	183	37	
666,154	33,223	480,588	32,013	3,569	512	8,972	24	58,029	3,027	801	12,955	38	
882,253	51,847	707,172	50,817	3,827	1,285	11,908	372	36,099	4,248	4,877	53,495	39	
1.32	1.56	1.47	1.59	1.07	2.51	1.33	15.50	0.62	1.40	6.09	4.23	40	
664,006	10,980	548,562	10,980	3,973	500	41,871	470	41	
1.42	1.79	1.51	1.79	1.25	0.71	0.83	0.65	42	
535,710	6,142	416,857	6,142	3,178	700	59,771	719	43	
1.24	1.79	1.32	1.79	1.25	0.71	0.70	0.65	44	
643,870	1,275	554,137	1,275	4,426	35,078	45	
4,139,507	3,322,400	1,350	218,187	46	
2,547	203	1,443	187	13	9	69	6	177	61	45	162	47	
642,255	34,870	466,417	31,660	3,591	512	5,957	24	57,229	3,358	1,061	96,558	48	
1,231,893	46,044	1,013,491	44,196	9,599	590	6,571	29	63,935	4,019	2,157	116,989	49	
1.9	1.3	2.2	1.4	2.7	1.2	1.1	1.2	1.1	1.2	2.0	0.6	50	
1.76	2.06	1.96	2.13	1.30	2.51	1.45	15.50	0.90	1.34	6.10	0.96	51	
0.92	1.56	0.90	1.52	0.49	2.18	1.32	12.83	0.81	1.12	3.00	0.79	2.50	52
139	88	1	4	7	4	24	15	53
147,661	124,619	(6)	418	15,076	(6)	257	5,551	1,837	54
103,345	92,007	(6)	398	9,053	(6)	138	3,860	1,004	55
39,124	37,202	(6)	338	15	15	109	1,437	56
4,733	3,317	(6)	1,156	(6)	10	230	5	57

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	MISSISSIPPI RIVER (III)—Continued (Exclusive of the Missouri River)					
	Red River (III-B)				Intrastate tributaries in Arkansas	
	Total	Direct	Washita River	Black River (Ouachita River and Bartholomew Bayou) (5) + (10)		
	(III-B)	(1)				
IRRIGATED UNITS AND AREAS						
1	Irrigated units ^a.....1939..number.....	1,504	1,484	17	3	977
2	Area irrigated.....1939..acres.....	129,714	129,132	268	314	108,413
3	(a) Cropland harvested.....1939..acres.....	124,028	123,499	215	314	105,998
4	(b) Crop failure.....1939..acres.....	1,099	1,099	.....	.....	123
5	(c) Pasture.....1939..acres.....	4,587	4,534	53	.....	2,292
6	Area irrigated.....1929..acres.....	39,398	.....	.....	.....	.....
7	.....1919..acres.....	7,191	.....	.....	.....	.....
8	Increase or decrease (-), 1929-1939.....percent.....	229.2	.....	.....	.....	.....
9	Irrigable area in enterprises.....1940..acres.....	216,190	215,107	766	317	196,187
10	.....1930..acres.....	55,734	.....	.....	.....	.....
11	.....1920 ^a ..acres.....	23,446	.....	.....	.....	.....
12	Excess of irrigable area over the area irrigated.....1940..acres.....	86,476	85,975	498	3	87,774
13	.....1930..acres.....	16,336	.....	.....	.....	.....
14	.....1920 ^a ..acres.....	16,255	.....	.....	.....	.....
15	Area works were capable of supplying with water...1940..acres.....	213,693	212,862	504	317	189,714
16	.....1930..acres.....	55,586	.....	.....	.....	.....
17	.....1920..acres.....	13,493	.....	.....	.....	.....
18	Increase or decrease (-), 1930-1940.....percent.....	284.4	.....	.....	.....	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	83,969	83,730	236	3	81,301
20	.....1930..acres.....	16,188	.....	.....	.....	.....
21	.....1920..acres.....	6,292	.....	.....	.....	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	60.7	60.7	53.2	99.1	57.1
23	.....1929..percent.....	70.9	.....	.....	.....	.....
24	.....1919..percent.....	53.3	.....	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1						
25	Total investment in irrigation enterprises.....1940..dollars....	6,646,969	6,612,924	30,932	3,113	3,606,705
26	(a) Cost of irrigation works and equipment.....1940..dollars....	6,642,033	6,608,888	30,032	3,113	3,606,705
27	(b) Investment in water rights (reported).....1940..dollars....	4,936	4,036	900	.....	.....
28	Total investment in irrigation enterprises.....1930..dollars....	5,208,934	.....	.....	.....	.....
29	.....1920..dollars....	399,634	.....	.....	.....	.....
30	Increase or decrease (-), 1930-1940.....percent.....	27.6	.....	.....	.....	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	31.11	31.07	61.37	9.82	19.01
32	.....1930..dollars....	93.71	.....	.....	.....	.....
33	.....1920..dollars....	29.64	.....	.....	.....	.....
34	Average investment per acre irrigated.....1939..dollars....	51.24	51.21	115.42	9.91	33.27
35	Estimated final investment in existing enterprises..1940..dollars....	6,671,191	6,635,571	32,507	3,113	3,629,690
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	30.86	30.85	42.44	9.82	18.50
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
37	Enterprises reporting maintenance and operation...1939..number....	682	665	14	3	834
38	Area irrigated in these enterprises.....1939..acres.....	119,672	119,091	267	314	102,649
39	Cost of maintenance and operation.....1939..dollars....	307,429	305,335	1,944	750	549,227
40	Average cost, per acre irrigated.....1939..dollars....	2.57	2.56	5.03	2.39	5.35
41	Total annual charges (reported) ⁶ 7.....1939..dollars....	59,882	59,882	.....	.....	13,535
42	Average annual charge per acre irrigated.....1939..dollars....	2.08	2.08	.....	.....	5.24
43	Area against which charges were assessed.....1939..acres.....	28,833	28,833	.....	.....	2,582
44	Average annual charge per acre assessed.....1939..dollars....	2.06	2.08	.....	.....	5.24
45	Total charges collected ⁶.....1939..dollars....	250,490	250,490	.....	.....	2,175
46	Indebtedness to December 31 (reported) ⁷.....1939..dollars....	3,547,717	3,547,717	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939						
47	Enterprises reporting water delivered.....1939..number....	737	720	15	2	845
48	Area irrigated by these enterprises.....1939..acres.....	127,464	127,092	268	(5)	107,780
49	Water delivered.....1939..acre-feet..	145,707	145,161	419	(5)	296,777
50	Average water delivered per acre irrigated.....1939..acre-feet..	1.1	1.1	1.6	(5)	2.8
51	Average cost of water per acre irrigated.....1939..dollars....	2.57	2.56	5.03	(5)	5.38
52	Average cost of water per acre-foot delivered..1939..dollars....	2.25	2.24	3.22	(5)	1.95
DRAINAGE OF IRRIGATED LAND						
53	Enterprises reporting land drained or needing drainage.....1939..number....	15	9	5	1	54
54	Irrigable area in these enterprises.....1939..acres.....	1,587	1,172	205	(5)	13,004
55	Irrigated area in these enterprises.....1939..acres.....	587	338	39	(5)	7,497
56	Area for which drains have been installed.....1939..acres.....	1,274	972	92	(5)	8,228
57	Additional area needing drainage.....1939..acres.....	270	200	70	.....	1,264

^a Schedules called for "Number of farms," see explanation in text.
¹ Data for the intrastate tributaries of the Colorado River are not shown separately but are included in the Colorado River total.
² Data for the intrastate tributaries of the Brazos River are not shown separately but are included in the Brazos River total.
³ Data for the intrastate tributaries of the Sabine River are not shown separately but are included in the Sabine River total.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

GULF OF MEXICO (IV) (Exclusive of the Rio Grande and Mississippi River)												
Total (IV)	Colorado River		Brazos River		Sabine River		Intrastate tributaries in Texas	Intrastate tributaries in Louisiana				
	Total ¹	Direct	Total ²	Direct	Total ³	Direct						(11)
		(5)		(7)								
12,588	927	846	1,549	1,543	463	214	2,652	6,997			1	
902,392	85,446	84,921	174,155	174,084	74,435	28,247	149,490	418,966			2	
866,930	83,084	82,612	168,696	168,627	74,425	28,237	126,236	414,429			3	
3,438	44	43	1,211	1,211	.....	.....	1,937	314			4
32,026	2,318	2,266	4,248	4,247	.....	.....	10	3,623			5
62,958	61,888	.....	21,560	.....	46,722	.....	110,685	422,103			6
698,077	71,278	.....	7,535	.....	90,757	.....	106,929	421,578			7
36.1	38.1	.....	707.8	.....	59.3	.....	35.1	-0.8			8
1,874,654	272,828	272,004	302,835	302,743	188,912	41,537	356,842	753,237			9	
1,536,404	224,368	.....	47,417	.....	157,235	.....	299,759	807,625			10
1,606,169	277,268	.....	22,896	.....	195,118	.....	305,954	800,933			11
972,262	187,382	187,083	128,680	128,659	114,477	13,290	207,352	334,371			12	
873,446	162,480	.....	25,857	.....	110,513	.....	189,074	385,522			13
904,092	205,990	.....	15,361	.....	104,361	.....	199,025	379,355			14
1,520,796	176,991	176,172	286,829	286,737	111,432	41,537	224,740	720,804			15	
1,221,997	140,626	.....	30,061	.....	92,035	.....	200,932	758,343			16
1,157,529	128,666	.....	19,560	.....	123,358	.....	208,281	680,664			17
24.5	25.9	.....	854.2	.....	21.1	.....	11.8	-5.0			18
618,404	91,545	91,251	112,674	112,653	36,997	13,290	75,250	301,938			19	
559,039	76,738	.....	8,501	.....	45,313	.....	90,247	336,240			20
459,452	54,988	.....	12,025	.....	32,601	.....	101,352	259,066			21
59.3	48.3	48.2	60.7	60.7	66.8	68.0	66.5	58.1			22	
54.3	44.0	.....	71.7	.....	50.8	.....	55.1	55.7			23
60.3	56.7	.....	38.5	.....	73.6	.....	51.3	61.9			24
30,498,361	2,783,786	2,729,498	3,801,148	3,794,713	4,099,609	1,160,042	8,944,844	10,868,974			25	
30,342,685	2,718,920	2,664,637	3,777,180	3,770,745	4,067,287	1,117,756	8,920,324	10,868,974			26	
155,676	64,866	64,861	23,968	23,968	42,322	.....	24,520	.....			27
28,578,193	1,914,643	.....	657,555	.....	3,395,771	.....	7,755,262	14,854,962			28
29,439,808	3,560,916	.....	569,543	.....	2,270,705	.....	9,634,534	13,404,110			29
6.7	45.4	.....	478.1	.....	20.7	.....	15.3	-25.8			30
20.05	15.73	15.49	13.25	13.23	36.79	27.93	39.80	15.08			31	
23.39	13.62	.....	21.87	.....	36.90	.....	38.60	19.59			32
25.43	28.34	.....	29.12	.....	18.41	.....	46.26	19.69			33
33.80	32.58	32.14	21.83	21.80	55.08	41.07	59.84	25.95			34	
30,696,730	2,796,666	2,739,828	3,860,885	3,854,450	4,100,109	1,160,042	8,975,934	10,963,136			35	
16.37	10.25	10.07	12.75	12.73	21.70	27.93	25.15	14.55			36	
Primary	Sup.		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.		
Enterprises			Enterprises		Enterprises		Enterprises		Enterprises			
4,407	16	411	1,080	2	1,075	2	45	13	798	2	2,073	12
863,270	11,582	82,783	157,278	(5)	157,211	(5)	74,395	28,207	139,388	(5)	409,426	2,434
3,568,374	7,653	489,622	588,998	(5)	588,701	(5)	309,139	103,899	693,205	(5)	1,488,410	3,683
4.13	0.66	5.90	3.74	(5)	3.74	(5)	4.16	3.68	4.97	(5)	3.64	1.51
3,157,777	12,905	572,689	416,370	416,370	433,276	144,931	548,409	12,905	1,187,033
6.60	1.61	8.27	9.47	9.47	6.78	5.38	6.89	1.61	5.35
498,277	14,500	69,253	43,957	43,957	63,861	26,921	92,528	14,500	228,676
6.34	0.89	8.27	9.47	9.47	6.78	5.38	5.93	0.89	5.19
2,104,511	13,285	394,202	362,440	300	362,440	300	465,378	157,973	426,473	12,985	456,018
7,222,993	210,500	688,162	586,947	70,000	586,947	70,000	2,241,361	575,080	1,049,085	140,500	2,657,438
4,982	19	438	1,255	2	1,252	2	42	12	926	2	2,321	15
816,018	11,727	81,874	172,594	(5)	172,575	(5)	57,968	11,786	147,839	(5)	355,743	2,579
2,185,426	21,687	365,501	375,598	(5)	375,558	(5)	224,629	31,533	380,743	(5)	838,955	2,116
2.7	1.8	4.5	2.2	(5)	2.2	(5)	3.9	2.7	2.6	(5)	2.4	0.8
5.14	1.68	7.67	4.76	(5)	4.76	(5)	6.54	6.46	5.61	(5)	4.32	1.51
1.92	0.91	1.72	2.19	(5)	2.19	(5)	1.69	2.41	2.18	(5)	1.83	1.84
676	7	21	19	3	27	618
413,034	491	42,417	42,389	1,410	157,291	211,425
160,158	439	22,038	22,030	1,032	37,808	98,841
286,975	165	22,102	22,090	1,206	91,098	172,404
52,261	300	300	40,087	11,874

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁶ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁷ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	RIO GRANDE (V)					
	Total (V)	Direct (V-A) + (V-B)	Upper Rio Grande (V-A)			
			Total			
IRRIGATED UNITS AND AREAS						
1 Irrigated units ^a.....1939..number.....	54,887	38,669			27,570	
2 Area irrigated.....1939..acres.....	1,521,578	930,310			903,631	
3 (a) Cropland harvested.....1939..acres.....	1,322,174	827,945			759,121	
4 (b) Crop failure.....1939..acres.....	38,950	12,473			27,586	
5 (c) Pasture.....1939..acres.....	160,454	89,892			116,924	
6 Area irrigated.....1929..acres.....	1,564,725	951,740			898,277	
7 ".....1919..acres.....	1,312,855	694,718			878,122	
8 Increase or decrease (-), 1929-1939.....percent.....	-2.8	-2.3			0.6	
9 Irrigable area in enterprises.....1940..acres.....	2,378,063	1,480,687			1,286,675	
10 ".....1930..acres.....	2,177,664	1,198,512			1,216,528	
11 ".....1920 ^b ..acres.....	2,628,153	1,386,144			1,519,045	
12 Excess of irrigable area over the area irrigated..1940..acres.....	856,485	560,377			383,047	
13 ".....1930..acres.....	612,939	246,772			318,249	
14 ".....1920 ^b ..acres.....	1,315,298	701,426			640,923	
15 Area works were capable of supplying with water...1940..acres.....	2,177,705	1,393,695			1,180,567	
16 ".....1930..acres.....	1,914,781	1,113,177			1,080,646	
17 ".....1920.....acres.....	1,914,285	1,099,365			1,072,125	
18 Increase or decrease (-), 1930-1940.....percent.....	13.7	25.2			9.2	
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	656,127	463,385			276,936	
20 ".....1930..acres.....	350,056	161,437			182,369	
21 ".....1920.....acres.....	601,430	414,647			194,003	
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	69.9	66.8			76.5	
23 ".....1929..percent.....	81.7	85.5			83.1	
24 ".....1919..percent.....	68.6	62.3			81.9	
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars....	80,563,998	59,477,527			30,123,362	
26 (a) Cost of irrigation works and equipment.....1940..dollars....	78,900,146	58,541,031			28,912,436	
27 (b) Investment in water rights (reported).....1940..dollars....	1,663,852	936,496			1,210,926	
28 Total investment in irrigation enterprises.....1930..dollars....	53,748,608	37,325,421			18,081,167	
29 ".....1920.....dollars....	34,824,111	21,340,536			10,624,888	
30 Increase or decrease (-), 1930-1940.....percent.....	49.9	59.3			66.6	
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	36.99	42.68			25.52	
32 ".....1930.....dollars....	28.07	33.53			16.73	
33 ".....1920.....dollars....	18.19	19.41			9.92	
34 Average investment per acre irrigated.....1939..dollars....	52.95	63.93			33.34	
35 Estimated final investment in existing enterprises..1940..dollars....	83,966,088	61,343,041			32,449,137	
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	35.31	41.15			25.22	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
	Enterprises		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation...1939..number.....	2,508	247	895	192	1,231	204
38 Area irrigated in these enterprises.....1939..acres.....	1,441,916	199,098	915,829	132,290	841,998	152,688
39 Cost of maintenance and operation.....1939..dollars....	2,676,138	115,190	2,063,240	92,679	748,544	78,645
40 Average cost, per acre irrigated.....1939..dollars....	1.86	0.58	2.26	0.70	0.89	0.52
41 Total annual charges (reported) ⁴.....1939..dollars....	2,971,774	238,315	2,542,033	29,087	965,372	20,305
42 Average annual charge per acre irrigated.....1939..dollars....	2.50	1.53	3.01	0.25	1.36	0.18
43 Area against which charges were assessed.....1939..acres.....	1,780,422	266,865	1,243,994	117,781	908,666	115,715
44 Average annual charge per acre assessed.....1939..dollars....	1.67	0.89	2.04	0.25	1.06	0.18
45 Total charges collected ⁴.....1939..dollars....	2,968,852	62,440	2,763,493	32,621	1,066,628	17,225
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars....	45,245,240	1,449,874	39,378,779	268,150	15,031,611	318,250
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number.....	2,524	272	914	215	1,273	226
48 Area irrigated by these enterprises.....1939..acres.....	1,412,046	150,959	895,810	131,584	820,555	132,910
49 Water delivered.....1939..acre-feet.....	3,034,957	79,624	1,929,971	64,550	1,670,533	59,935
50 Average water delivered per acre irrigated.....1939..acre-feet.....	2.1	0.5	2.2	0.5	2.0	0.5
51 Average cost of water per acre irrigated.....1939..dollars....	2.48	0.65	3.00	0.65	1.33	0.56
52 Average cost of water per acre-foot delivered..1939..dollars....	1.16	1.24	1.39	1.32	0.66	1.25
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number.....	183		41		45	
54 Irrigable area in these enterprises.....1939..acres.....	1,121,694		871,515		398,819	
55 Irrigated area in these enterprises.....1939..acres.....	639,928		629,668		248,931	
56 Area for which drains have been installed.....1939..acres.....	721,017		682,118		248,218	
57 Additional area needing drainage.....1939..acres.....	86,260		48,702		18,444	

^a Schedules called for "Number of farms," see explanation in text.

¹ Includes San Antonio River Drainage Basin in New Mexico.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY 25

1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

RIO GRANDE (V)—Continued											
Upper Rio Grande (V-A)—Continued											
Direct (V-A)	Conejos River		Costilla Creek (4)	Intrastate tributaries in Colorado	Intrastate tributaries in New Mexico	Independent basins in the Upper Rio Grande					
	Total ¹	Direct (3)				Total	Sacramento River and Salt Lakes (25)	Intrastate basins in Colorado	Intrastate basins in New Mexico		
15,357	1,040	968	920	506	8,918	829	4	184	641	1	
529,905	90,145	89,362	35,967	71,157	86,740	89,707	31	71,571	18,105	2	
462,215	69,185	68,463	32,407	53,443	72,420	69,451	31	53,474	15,946	3	
8,140	4,030	4,007	241	4,231	8,409	1,485	.....	257	1,228	4
59,550	16,930	16,892	3,319	13,443	4,911	18,771	.....	17,840	931	5
492,163	80,918	.....	4,003	114,155	111,206	95,812	.....	76,249	13,377	6
430,532	88,676	.....	4,417	104,199	141,945	108,353	.....	89,361	18,902	7
7.7	11.4	.....	798.5	-37.7	-22.0	-6.4	.....	-6.1	35.3	8
749,196	116,279	115,486	51,421	131,717	122,891	115,171	38	86,179	28,954	9	
577,847	112,313	.....	10,112	210,709	196,320	109,225	.....	87,255	14,841	10
680,874	115,887	.....	7,385	222,324	241,231	251,344	.....	217,318	33,936	11
219,291	26,134	26,104	15,454	60,550	36,151	25,464	7	14,608	10,849	12	
85,664	31,395	.....	6,109	96,554	85,114	13,413	.....	11,006	1,464	13
250,342	27,211	.....	2,968	118,125	99,286	142,991	.....	127,957	15,034	14
710,991	112,626	111,833	50,771	83,631	113,766	108,782	38	83,089	25,655	15	
538,360	99,808	.....	7,606	194,514	132,772	107,586	.....	86,006	14,610	16
543,604	95,680	.....	4,803	123,118	170,396	134,524	.....	107,672	26,762	17
32.1	12.8	.....	567.5	-57.0	-14.3	1.1	.....	-3.4	75.6	18
181,086	22,481	22,451	14,804	12,464	27,026	19,075	7	11,518	7,550	19	
46,177	18,890	.....	3,603	80,359	21,566	11,774	.....	9,757	1,233	20
113,072	7,004	.....	386	18,919	28,451	26,171	.....	18,311	7,860	21
74.5	80.0	79.9	70.8	85.1	76.2	82.5	81.6	86.1	70.6	22	
91.4	81.1	.....	52.6	58.7	83.8	89.1	.....	88.7	91.6	23
79.2	92.7	.....	92.0	84.6	83.3	80.5	.....	83.0	70.6	24
21,892,541	1,347,703	1,338,053	1,886,586	1,761,615	2,220,425	1,014,492	850	178,709	834,933	25	
21,348,037	1,138,178	1,128,898	1,823,385	1,696,095	2,160,424	746,317	850	118,802	626,665	26	
544,504	209,525	209,185	63,201	65,520	60,001	268,175	.....	59,907	208,268	27
10,257,372	839,676	.....	910,360	3,573,739	1,730,626	769,394	.....	132,090	337,441	28
5,132,478	584,739	.....	11,471	2,446,808	1,540,861	938,531	.....	287,360	649,686	29
113.4	60.5	.....	107.2	-50.7	28.3	31.9	.....	35.3	147.4	30
30.79	11.97	11.96	37.16	21.06	19.52	9.33	22.37	2.15	32.54	31	
19.05	8.41	.....	119.69	18.37	13.03	7.15	.....	1.54	23.10	32
9.44	5.90	.....	2.39	19.87	9.04	6.98	.....	2.67	24.28	33
41.31	14.95	14.97	52.45	24.75	25.60	11.31	27.42	2.50	46.12	34	
23,043,479	1,351,053	1,341,403	1,887,836	1,763,890	3,304,805	1,098,074	950	180,054	917,070	35	
30.76	11.62	11.62	36.71	13.39	26.89	9.53	25.00	2.09	31.67	36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises
478	183	79	7	69	7	40	74	268	292	12	8
520,951	118,763	88,136	22,477	87,373	22,477	34,604	68,276	(3) 73,662	56,369	3,833	38
553,311	78,942	17,059	233	16,633	233	26,059	19,864	(3) 49,378	82,673	526	39
1.06	0.65	0.19	0.01	0.19	0.01	0.75	0.29	(3) 0.67	1.47	0.14	40
750,220	15,160	22,492	175	22,357	175	42,835	70,368	4,970	72,372	7,085	41
1.58	0.14	0.30	0.07	0.30	0.07	1.33	1.42	0.65	1.19	42
597,132	105,100	76,100	2,600	75,528	2,500	43,560	101,850	8,115	84,077	5,947	43
1.26	0.14	0.30	0.07	0.30	0.07	0.98	0.69	0.61	1.19	44
946,751	11,875	16,136	552	16,048	552	28,908	17,869	4,798	38,824	18,140	45
13,331,328	268,160	16,700	100	16,700	100	175,186	729,116	80,000	777,648	1,633	46
513	203	68	4	64	4	44	83	206	359	17	9
511,944	117,925	83,510	3,477	82,937	3,477	35,061	69,749	(3) 52,365	67,926	3,893	47
1,215,947	51,909	144,236	3,678	142,424	3,678	64,565	92,305	(3) 68,628	84,852	1,448	48
2.4	0.4	1.7	1.1	1.7	1.1	1.8	1.3	(3) 1.3	1.2	0.4	49
1.55	0.59	0.29	0.07	0.28	0.07	1.25	1.11	(3) 1.11	1.47	0.13	50
0.65	1.33	0.17	0.06	0.17	0.06	0.68	0.84	(3) 0.85	1.18	0.36	51
18	8	(3) 2	4	10	53
323,407	6,338	(3) 60,250	8,100	724	54
222,523	4,745	(3) 13,632	7,400	631	55
243,541	696	(3) 3,800	158	23	56
17,945	2	70	897	57

³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919: CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		RIO GRANDE (V)—Continued					
		Lower Rio Grande (V-B)				Pecos River	
		Total		Direct (V-B)		Total	
IRRIGATED UNITS AND AREAS							
1	Irrigated units*.....1939..number.....	27,317	23,312	4,005			
2	Area irrigated.....1939..acres.....	617,947	400,405	217,542			
3	(a) Cropland harvested.....1939..acres.....	563,053	365,730	197,323			
4	(b) Crop failure.....1939..acres.....	11,364	4,333	7,031			
5	(c) Pasture.....1939..acres.....	43,530	30,342	13,188			
6	Area irrigated.....1929..acres.....	666,448	459,557	175,798			
7	.....1919..acres.....	434,733	254,186	176,459			
8	Increase or decrease (-), 1929-1939.....percent.....	-7.3	-12.9	23.7			
9	Irrigable area in enterprises.....1940..acres.....	1,091,388	741,491	349,897			
10	.....1930..acres.....	961,138	620,665	287,164			
11	.....1920 ² ..acres.....	1,109,108	705,270	397,443			
12	Excess of irrigable area over the area irrigated.....1940..acres.....	473,441	341,086	132,355			
13	.....1930..acres.....	294,690	161,108	111,366			
14	.....1920 ² ..acres.....	674,375	451,094	220,985			
15	Area works were capable of supplying with water.....1940..acres.....	997,138	682,704	314,434			
16	.....1930..acres.....	834,135	574,817	223,642			
17	.....1920..acres.....	842,160	555,761	281,150			
18	Increase or decrease (-), 1930-1940.....percent.....	19.5	18.8	40.6			
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	379,191	282,299	96,892			
20	.....1930..acres.....	167,687	115,260	47,844			
21	.....1920..acres.....	407,427	301,576	104,692			
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	62.0	58.6	69.2			
23	.....1929..percent.....	79.9	79.9	78.6			
24	.....1919..percent.....	51.6	45.7	62.8			
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	50,440,636	37,584,986	12,855,650			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	49,987,710	37,192,994	12,794,716			
27	(b) Investment in water rights (reported).....1940..dollars.....	452,926	391,992	60,934			
28	Total investment in irrigation enterprises.....1930..dollars.....	35,667,441	27,066,049	7,220,317			
29	.....1920..dollars.....	24,189,223	16,208,058	7,483,049			
30	Increase or decrease (-), 1930-1940.....percent.....	41.4	38.9	78.0			
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	50.59	55.05	40.89			
32	.....1930..dollars.....	42.76	47.09	32.29			
33	.....1920..dollars.....	28.72	29.16	26.62			
34	Average investment per acre irrigated.....1939..dollars.....	81.63	93.87	59.10			
35	Estimated final investment in existing enterprises.....1940..dollars.....	51,516,951	38,299,562	13,217,389			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	47.20	51.65	37.78			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary Supplemental		Primary Supplemental		Primary Supplemental	
		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	1,277	43	417	9	860	34
38	Area irrigated in these enterprises.....1939..acres.....	599,918	46,410	394,878	13,527	205,040	32,883
39	Cost of maintenance and operation.....1939..dollars.....	1,927,594	36,545	1,509,929	15,737	417,665	20,808
40	Average cost, per acre irrigated.....1939..dollars.....	3.21	0.79	3.82	1.16	2.04	0.63
41	Total annual charges (reported) ⁴.....1939..dollars.....	2,006,402	218,010	1,791,613	13,927	214,589	204,083
42	Average annual charge per acre irrigated.....1939..dollars.....	4.22	5.29	4.85	1.10	2.02	7.16
43	Area against which charges were assessed.....1939..acres.....	871,756	151,150	646,862	12,681	224,894	138,469
44	Average annual charge per acre assessed.....1939..dollars.....	2.30	1.44	2.77	1.10	0.95	1.47
45	Total charges collected ⁴.....1939..dollars.....	1,902,224	45,215	1,806,742	20,746	95,482	24,469
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	30,213,629	1,131,624	26,047,451	.....	4,166,178	1,131,624
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	1,251	46	401	12	850	34
48	Area irrigated by these enterprises.....1939..acres.....	591,491	18,048	383,866	13,659	207,625	4,389
49	Water delivered.....1939..acre-feet.....	1,364,424	19,689	714,024	12,641	650,400	7,048
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.3	1.1	1.9	0.9	3.1	1.6
51	Average cost of water per acre irrigated.....1939..dollars.....	4.05	1.32	4.90	1.16	2.41	1.80
52	Average cost of water per acre-foot delivered.....1939..dollars.....	1.75	1.21	2.63	1.26	0.77	1.12
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	138	.....	23	.....	115	.....
54	Irrigable area in these enterprises.....1939..acres.....	722,875	.....	548,108	.....	174,767	.....
55	Irrigated area in these enterprises.....1939..acres.....	390,897	.....	307,145	.....	83,852	.....
56	Area for which drains have been installed.....1939..acres.....	472,799	.....	438,577	.....	34,222	.....
57	Additional area needing drainage.....1939..acres.....	67,816	.....	31,357	.....	36,459	.....

³ Schedules called for "Number of farms," see explanation in text.

⁴ Data for the intrastate tributaries of the Dolores River are not shown separately but are included in the Dolores River total.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER (VI)—Continued							
	Upper Colorado River (VI-A)—Continued							
	Green River (VI-Aa)							
	Total	Direct (VI-Aa)	Henry's Fork (12)		Yampa River		Total ²	
IRRIGATED UNITS AND AREAS								
1	Irrigated units ³.....1939..number.....	8,348	335	119		782		
2	Area irrigated.....1939..acres.....	636,977	59,737	20,877		77,908		
3	(a) Cropland harvested.....1939..acres.....	463,490	43,675	13,343		67,743		
4	(b) Crop failure.....1939..acres.....	14,302	1,303	429		733		
5	(c) Pasture.....1939..acres.....	159,185	14,759	7,105		9,432		
6	Area irrigated.....1929..acres.....	610,659	27,699	15,894		86,472		
7	.....1919..acres.....	586,387	22,826	8,296		81,661		
8	Increase or decrease (-), 1929-1939.....percent.....	4.3	115.7	31.4		-9.9		
9	Irrigable area in enterprises.....1940..acres.....	930,100	102,850	31,754		111,572		
10	.....1930..acres.....	926,619	43,288	26,598		130,000		
11	.....1920 ³ ..acres.....	1,148,821	36,121	25,940		142,636		
12	Excess of irrigable area over the area irrigated.....1940..acres.....	293,123	43,113	10,877		33,664		
13	.....1930..acres.....	315,960	15,589	10,714		43,528		
14	.....1920 ³ ..acres.....	562,434	13,295	17,642		60,975		
15	Area works were capable of supplying with water...1940..acres.....	782,571	73,311	27,802		96,344		
16	.....1930..acres.....	792,677	31,943	18,677		115,989		
17	.....1920..acres.....	855,264	31,072	23,694		102,861		
18	Increase or decrease (-), 1930-1940.....percent.....	-1.3	129.5	48.9		-16.9		
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	145,594	13,574	6,925		18,436		
20	.....1930..acres.....	182,016	4,244	2,793		29,517		
21	.....1920..acres.....	268,877	8,246	15,396		21,200		
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	81.4	81.5	75.1		80.9		
23	.....1929..percent.....	77.0	86.7	85.0		74.6		
24	.....1919..percent.....	68.6	73.5	35.0		79.4		
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars....	12,160,991	1,294,994	207,686		947,853		
26	(a) Cost of irrigation works and equipment.....1940..dollars....	11,905,889	1,247,200	203,730		906,123		
27	(b) Investment in water rights (reported).....1940..dollars....	255,102	47,794	3,956		41,730		
28	Total investment in irrigation enterprises.....1930..dollars....	8,820,495	630,488	111,750		973,607		
29	.....1920..dollars....	8,592,346	547,166	77,320		1,197,975		
30	Increase or decrease (-), 1930-1940.....percent.....	37.9	105.4	85.8		-2.6		
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	15.54	17.66	7.47		9.84		
32	.....1930..dollars....	11.13	19.74	5.96		8.39		
33	.....1920..dollars....	10.05	17.61	3.26		11.65		
34	Average investment per acre irrigated.....1939..dollars....	19.09	21.68	9.95		12.17		
35	Estimated final investment in existing enterprises.....1940..dollars....	13,511,067	1,369,854	217,809		1,212,458		
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	14.53	13.32	6.86		10.87		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Supplemental		Primary	Supplemental	Primary	Supplemental
		Enterprises			Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	1,407	35	173	63	1	387	4
38	Area irrigated in these enterprises.....1939..acres.....	616,600	75,265	54,162	13,982	(⁴)	69,449	2,371
39	Cost of maintenance and operation.....1939..dollars....	324,586	8,977	27,724	6,518	(⁴)	42,493	236
40	Average cost, per acre irrigated.....1939..dollars....	0.53	0.12	0.51	0.28	(⁴)	0.61	0.10
41	Total annual charges (reported) ⁵.....1939..dollars....	209,180	30,628	6,917	2,747	.....	13,205	150
42	Average annual charge per acre irrigated.....1939..dollars....	0.64	0.43	0.65	0.58	.....	0.57	0.08
43	Area against which charges were assessed.....1939..acres.....	389,618	103,885	12,550	8,793	.....	25,099	2,000
44	Average annual charge per acre assessed.....1939..dollars....	0.54	0.29	0.55	0.31	.....	0.53	0.08
45	Total charges collected ⁶.....1939..dollars....	212,823	30,233	5,044	25,603	.....	6,737	150
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars....	938,003	1,652,321	.....	20,000	.....	88,400	.....
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	1,480	35	178	64	1	442	8
48	Area irrigated by these enterprises.....1939..acres.....	608,656	55,298	56,429	17,777	(⁴)	71,188	2,481
49	Water delivered.....1939..acre-feet.....	1,544,353	68,067	143,002	43,427	(⁴)	210,980	2,486
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.5	1.2	2.5	2.4	(⁴)	3.0	1.0
51	Average cost of water per acre irrigated.....1939..dollars....	0.55	0.47	0.49	0.19	(⁴)	0.65	0.10
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.22	0.38	0.19	0.08	(⁴)	0.22	0.10
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....	28	.....	1	.....	.....	4	.....
54	Irrigable area in these enterprises.....1939..acres.....	158,409	.....	(⁴)	.....	.....	4,375	.....
55	Irrigated area in these enterprises.....1939..acres.....	65,229	.....	(⁴)	.....	.....	3,520	.....
56	Area for which drains have been installed.....1939..acres.....	3,090	.....	.....	.....	.....	.....	.....
57	Additional area needing drainage.....1939..acres.....	9,443	.....	(⁴)	.....	.....	745	.....

¹ Schedules called for "Number of farms," see explanation in text.
² Data for other intrastate tributaries of the San Juan River are not shown separately but are included in the San Juan River total.
³ Data for the intrastate tributaries of the Yampa River are not shown separately but are included in the Yampa River total.
⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

COLORADO RIVER (VI)—Continued														
Upper Colorado River (VI-A)—Continued														
Green River (VI-Aa)—Continued							San Juan River (VI-Ab)							
Yampa River—Continued		White River (20)	Intrastate tributaries in Wyoming	Intrastate tributaries in Utah	Total ¹	Direct (VI-Ab)	Los Pinos River (2)							
Direct (13)	Little Snake River (16)													
487	169	255	785	6,062	4,631	1,333	589						1	
42,926	21,637	36,046	197,187	245,222	180,850	32,709	40,971						2	
37,513	18,818	31,803	137,475	189,451	154,332	29,424	33,033						3	
518	111	382	2,051	9,404	5,642	633	93						4	
4,895	2,708	3,861	57,861	66,387	20,876	2,652	7,945						5	
22,138	19,803	27,773	175,305	276,184	178,932	21,922	43,041						6	
18,029	23,080	25,625	189,461	278,336	140,607	23,031	30,022						7	
83.9	10.4	29.8	12.5	-11.2	0.5	49.2	-4.8						8	
65,802	27,600	43,497	324,484	315,943	260,692	52,189	56,234						9	
34,996	23,472	36,263	283,447	405,293	247,845	33,478	63,337						10	
28,221	34,280	40,441	396,846	506,797	251,188	51,021	55,586						11	
22,976	5,963	7,451	127,297	70,721	99,842	19,480	15,263						12	
12,858	3,889	8,490	108,142	129,129	87,813	11,556	20,296						13	
10,192	11,200	14,816	227,185	228,461	110,581	27,990	25,584						14	
53,848	26,033	41,287	242,812	301,035	221,566	40,677	45,663						15	
28,187	23,052	31,648	244,346	348,542	225,370	32,431	57,992						16	
18,832	28,807	29,238	285,645	382,574	167,488	28,443	42,033						17	
91.0	12.9	30.4	-0.6	-13.6	-1.7	25.4	-21.3						18	
10,922	4,396	5,221	45,625	55,813	40,716	7,968	4,692						19	
6,049	3,449	3,875	69,041	72,378	45,438	10,509	14,951						20	
803	5,727	3,613	116,184	104,238	26,881	5,412	12,011						21	
79.7	83.1	87.3	81.2	81.5	81.6	80.4	89.7						22	
78.5	85.0	87.8	71.7	79.2	79.8	67.6	74.2						23	
95.7	80.1	87.6	59.3	72.8	84.0	81.0	71.4						24	
656,773	179,540	523,625	2,366,391	6,820,442	10,112,286	2,469,494	1,142,704						25	
633,913	173,100	505,820	2,325,674	6,717,342	9,930,927	2,454,488	1,098,659						26	
22,860	6,440	17,805	40,717	103,100	181,359	15,006	44,045						27	
298,435	219,827	460,500	1,708,767	4,920,773	2,587,588	717,995	561,050						28	
162,768	511,556	447,141	2,542,334	3,778,335	3,088,495	1,039,358	524,590						29	
120.1	-18.3	13.7	38.5	38.6	290.8	243.9	103.7						30	
12.20	6.90	12.69	9.75	22.66	45.64	60.71	25.02						31	
10.59	9.54	14.55	6.99	14.12	11.48	22.14	9.67						32	
8.64	17.76	15.29	8.90	9.88	18.44	36.54	12.48						33	
15.30	8.30	14.53	12.00	27.81	55.92	75.50	27.89						34	
903,093	185,250	530,170	2,816,831	7,363,965	13,858,427	3,673,978	1,864,811						35	
13.70	6.71	12.19	8.68	23.31	49.37	70.40	33.16						36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises
207	4	92	134	3	424	14	226	13	507	19	155	2	64	5
35,016	2,371	21,423	35,084	576	193,842	21,999	244,081	50,157	177,764	2,083	32,555	(4)	40,940	61
27,321	236	10,490	19,365	110	64,817	1,254	164,669	7,372	198,237	1,455	79,636	(4)	29,758	24
0.78	0.10	0.49	0.55	0.19	0.33	0.06	0.67	0.15	1.12	0.70	2.45	(4)	0.73	0.39
7,981	150	5,049	4,500	17,081	411	164,730	30,067	180,771	1,203	61,465	16,451
0.57	0.08	0.70	0.32	0.37	0.02	0.71	0.60	1.17	1.07	2.69	0.42
14,379	2,000	8,987	16,389	71,982	19,120	254,805	82,765	173,326	1,470	23,588	41,718
0.56	0.08	0.56	0.27	0.24	0.02	0.65	0.36	1.04	0.82	2.61	0.39
1,674	150	5,063	778	13,404	2,750	161,257	27,333	110,769	10,484	26,109	15,817
87,950	450	750	394,666	39,000	434,187	1,613,321	726,495	166,000	495,359	6,598
280	8	99	137	3	429	12	230	11	319	10	58	1	42	3
38,564	2,481	20,484	35,887	576	185,328	1,942	242,047	50,137	150,235	1,071	22,452	(4)	35,027	45
137,008	2,486	38,678	136,782	992	442,025	4,557	568,127	59,896	402,553	2,066	66,203	(4)	99,344	35
3.6	1.0	1.9	3.8	1.7	2.4	2.3	2.3	1.2	2.7	1.9	2.9	(4)	2.8	0.8
0.78	0.10	0.64	0.54	0.19	0.34	0.16	0.73	0.50	1.11	0.85	2.43	(4)	0.44	0.31
0.22	0.10	0.34	0.14	0.11	0.14	0.07	0.31	0.42	0.42	0.44	0.82	(4)	0.15	0.40
3	4	12	7	21	12	1
3,635	2,475	97,946	51,313	88,486	16,051	(4)
2,840	1,960	21,988	36,761	51,187	9,638	(4)
.....	2	26	3,062	606	265
705	465	2,450	5,738	5,333	2,523	(4)

¹Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER (VI)—Continued					
	Upper Colorado River (VI-A)—Continued					
	San Juan River (VI-Ab)—Continued					
	Animas River (3)	La Plata River (4)	Chinle Creek (10)	Intrastate tributaries in Colorado	Intrastate tributaries in Utah	
IRRIGATED UNITS AND AREAS						
1 Irrigated units ^a.....1939..number.....	1,021	280	419	752	117	
2 Area irrigated.....1939..acres.....	38,440	13,915	3,171	46,402	4,542	
3 (a) Cropland harvested.....1939..acres.....	34,536	10,013	2,911	40,467	3,248	
4 (b) Crop failure.....1939..acres.....	220	2,482	260	947	1,007	
5 (c) Pasture.....1939..acres.....	3,684	1,420	.....	4,988	287
6 Area irrigated.....1929..acres.....	51,708	28,530	.....	23,035	.....
7 .....1919..acres.....	41,174	23,004	.....	18,594	.....
8 Increase or decrease (-), 1929-1939.....percent.....	-25.7	-51.2	.....	101.4	.....
9 Irrigable area in enterprises.....1940..acres.....	50,118	31,598	10,308	70,711	7,784	
10 .....1930..acres.....	62,639	38,883	.....	32,625	.....
11 .....1920 ^b ..acres.....	73,413	29,918	.....	44,795	.....
12 Excess of irrigable area over the area irrigated.....1940..acres.....	11,678	17,683	7,137	24,309	3,242	
13 .....1930..acres.....	10,931	10,353	.....	9,590	.....
14 .....1920 ^b ..acres.....	32,239	6,914	.....	26,201	.....
15 Area works were capable of supplying with water...1940..acres.....	44,478	23,020	5,336	53,888	7,654	
16 .....1930..acres.....	62,699	35,388	.....	30,680	.....
17 .....1920..acres.....	47,974	23,765	.....	23,652	.....
18 Increase or decrease (-), 1930-1940.....percent.....	-21.6	-34.9	.....	75.6	.....
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	6,038	9,105	2,165	7,486	3,112	
20 .....1930..acres.....	4,991	6,858	.....	7,645	.....
21 .....1920..acres.....	6,800	761	.....	5,068	.....
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	86.4	60.4	59.4	86.1	59.3	
23 .....1929..percent.....	91.2	80.6	.....	75.1	.....
24 .....1919..percent.....	85.8	96.8	.....	76.6	.....
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars.....	976,984	211,761	579,495	4,490,927	157,867	
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	893,927	202,402	579,495	4,461,732	157,170	
27 (b) Investment in water rights (reported).....1940..dollars.....	83,057	9,359	.....	29,195	697
28 Total investment in irrigation enterprises.....1930..dollars.....	811,597	172,714	.....	387,987	.....
29 .....1920..dollars.....	1,148,088	142,588	.....	241,935	.....
30 Increase or decrease (-), 1930-1940.....percent.....	20.4	22.6	.....	(^c)	.....
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	21.97	9.20	108.60	83.34	20.69	
32 .....1930..dollars.....	14.31	4.88	.....	12.65	.....
33 .....1920..dollars.....	23.93	6.00	.....	10.23	.....
34 Average investment per acre irrigated.....1939..dollars.....	25.42	15.22	182.75	96.78	34.76	
35 Estimated final investment in existing enterprises.....1940..dollars.....	980,244	315,571	1,938,695	4,707,377	158,147	
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	19.56	9.99	188.08	66.57	20.32	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Sup.	Primary	Sup.	Primary	Sup.
	Enterprises		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation.....1939..number.....	89	5	57	4	3	13
38 Area irrigated in these enterprises.....1939..acres.....	35,945	312	13,875	1,002	3,171	4,542
39 Cost of maintenance and operation.....1939..dollars.....	25,788	112	7,155	559	6,625	3,569
40 Average cost, per acre irrigated.....1939..dollars.....	0.72	0.36	0.52	0.56	2.09	0.79
41 Total annual charges (reported) ^e.....1939..dollars.....	29,545	7,963	503	6,625	9,698
42 Average annual charge per acre irrigated.....1939..dollars.....	0.86	0.66	0.69	2.09	2.66
43 Area against which charges were assessed.....1939..acres.....	36,523	18,806	1,070	3,171	6,640
44 Average annual charge per acre assessed.....1939..dollars.....	0.81	0.42	0.47	2.09	1.46
45 Total charges collected ^e.....1939..dollars.....	24,156	5,133	39,004	450
46 Indebtedness to December 31 (reported) ^e.....1939..dollars.....	38,600	57	148,905	2,700
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number.....	63	3	44	2	3	13
48 Area irrigated by these enterprises.....1939..acres.....	29,968	312	12,108	(^c)	3,171	4,542
49 Water delivered.....1939..acre-foot.....	102,540	1,300	16,437	(^c)	4,470	5,039
50 Average water delivered per acre irrigated.....1939..acre-foot.....	3.4	4.2	1.4	(^c)	1.4	1.1
51 Average cost of water per acre irrigated.....1939..dollars.....	0.77	0.35	0.55	(^c)	2.09	2.24
52 Average cost of water per acre-foot delivered.....1939..dollars.....	0.23	0.08	0.40	(^c)	1.48	2.02
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number.....	3	3	2
54 Irrigable area in these enterprises.....1939..acres.....	3,017	472	(^c)
55 Irrigated area in these enterprises.....1939..acres.....	3,017	257	(^c)
56 Area for which drains have been installed.....1939..acres.....	251	90	(^c)
57 Additional area needing drainage.....1939..acres.....	700	10	(^c)

* Schedules called for "Number of farms," see explanation in text.
¹ Data for the intrastate tributaries of the Little Colorado River and Independent basin (6), Salt Lake and Rito Creek (N. Mex.), are not shown separately but are included in the Little Colorado River total.
² Data for the intrastate tributaries of the Virgin River are not shown separately but are included in the Virgin River total.
³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

COLORADO RIVER (VI)—Continued													
Upper Colorado River (VI-A)—Continued					Lower Colorado River (VI-B) (Exclusive of Imperial Valley)								
Paria River (25)	Interstate tributaries in Colorado	Intra-state tributaries in Utah	Total	Direct (VI-B)	Little Colorado River (VI-Ba)		Kanab Creek (1)	Virgin River (2)		Gila River (VI-Bb)			
					Total ¹	Direct (VI-Ba)		Total ²	Direct	Total (VI-Bb)	Direct (1)+(14)		
44	7,336	610	18,991	2,243	1,751	767	135	1,871	1,068	11,838	3,562	1	
891	426,387	29,486	756,910	94,002	18,460	8,736	2,296	29,353	14,604	577,468	211,914	2	
767	342,210	22,547	687,021	83,376	15,376	6,908	2,170	25,006	12,239	523,368	189,574	3	
57	4,915	2,157	3,693	44	156	141	.....	671	523	2,258	1,017	4
67	79,262	4,782	66,186	582	2,725	1,687	128	3,676	1,842	51,842	21,323	5	
.....	477,423	.....	.....	519,625	19,336	7,249	322	22,387	.....	509,542	112,133	6
.....	436,427	.....	.....	495,710	17,026	10,260	450	35,350	.....	401,400	83,406	7
.....	10.7	.....	.....	-81.9	-4.5	20.5	613.7	31.1	.....	13.3	89.0	8
1,738	566,202	35,205	1,333,188	284,257	42,410	20,905	2,710	51,894	29,686	868,067	355,687	9	
.....	640,783	.....	.....	1,323,119	38,966	14,683	822	36,192	.....	848,290	280,014	10
.....	735,604	.....	.....	728,326	35,358	20,821	710	100,242	.....	658,416	210,531	11
847	141,815	5,719	576,278	190,255	23,950	12,169	412	22,541	15,082	310,599	143,773	12	
.....	163,360	.....	.....	803,494	19,630	7,434	500	13,805	.....	338,748	167,881	13
.....	297,177	.....	.....	232,616	18,322	10,561	260	64,892	.....	257,016	127,125	14
1,706	521,243	30,616	1,033,057	159,562	33,055	17,011	2,710	47,148	27,925	744,404	267,840	15	
.....	582,956	.....	.....	672,117	31,146	11,937	667	32,059	.....	734,725	226,814	16
.....	547,583	.....	.....	551,506	21,880	14,131	610	45,558	.....	544,014	174,229	17
.....	-10.6	.....	.....	-76.3	6.1	42.5	306.3	47.1	.....	1.3	18.1	18
815	94,856	1,130	276,147	65,560	14,585	8,275	412	17,795	13,321	166,936	55,926	19	
.....	105,533	.....	.....	152,492	11,810	4,688	345	9,672	.....	225,183	114,681	20
.....	109,156	.....	.....	55,796	4,844	3,871	160	10,208	.....	142,614	90,823	21
52.2	81.8	96.3	73.3	58.9	55.8	51.4	84.8	62.3	52.3	77.6	79.1	22	
.....	81.9	.....	.....	77.3	62.1	60.7	48.3	69.8	.....	69.4	49.4	23
.....	80.1	.....	.....	89.9	77.9	72.6	79.8	77.6	.....	73.8	47.9	24
9,208	15,471,329	401,905	92,610,020	16,239,067	2,365,201	1,135,412	71,181	1,360,114	747,982	69,360,203	21,799,071	25	
8,985	15,200,625	388,365	91,279,870	15,648,951	2,378,926	1,130,237	70,361	1,183,390	681,515	68,821,655	21,725,808	26	
223	270,704	13,540	1,330,150	590,136	6,275	5,175	800	176,724	66,467	538,548	73,263	27	
.....	13,177,669	.....	.....	29,994,983	1,452,187	465,060	13,540	706,326	.....	62,542,801	14,262,958	28
.....	13,510,691	.....	.....	22,214,932	460,206	146,913	20,500	1,622,939	.....	25,236,237	2,888,708	29
.....	17.4	.....	.....	-45.9	64.2	144.1	425.7	91.9	.....	10.9	52.8	30
5.40	29.68	13.13	89.65	101.77	72.16	66.75	26.27	28.85	26.79	93.18	61.39	31	
.....	22.60	.....	.....	44.63	46.63	38.96	20.30	22.11	.....	85.12	62.88	32
.....	24.67	.....	.....	40.28	21.03	10.40	33.61	35.62	.....	46.39	16.58	33
10.33	36.28	13.63	122.35	172.75	129.21	129.97	30.98	46.34	51.22	120.11	102.67	34	
9,368	16,290,490	411,505	117,230,591	26,586,544	3,259,002	1,528,525	71,181	1,488,729	792,447	82,321,121	33,741,026	35	
5.39	28.67	11.69	87.93	93.53	76.85	73.12	26.27	28.69	26.69	92.70	94.86	36	
	Primary	Sup.		Primary	Sup.					Primary	Sup.		
	Enterprises			Enterprises						Enterprises			
11	1,547	91	37	2,068	135	51	77	201	77	1,182	134	377	118
767	413,783	28,273	29,471	731,795	15,098	93,990	17,242	8,395	2,105	28,411	14,449	558,158	15,068
1,105	293,986	12,643	11,916	3,530,651	52,747	341,980	24,341	15,249	2,360	49,367	28,363	2,888,257	62,737
1.44	0.71	0.45	0.40	4.82	3.49	3.64	1.41	1.82	1.13	1.67	1.96	5.17	3.50
420	251,860	12,892	15,884	3,039,562	450	309,040	32,712	17,750	3,701	49,051	28,706	2,606,648	450
0.96	1.05	0.83	0.67	5.12	3.00	3.32	2.18	2.65	2.34	2.26	2.24	5.76	3.00
577	262,677	15,995	23,684	739,339	250	102,332	22,168	12,617	1,690	24,609	14,009	577,680	250
0.73	0.96	0.81	0.67	4.11	1.80	3.02	1.48	1.41	1.99	2.05	2.05	4.51	1.80
475	205,364	6,633	14,662	2,106,289	400	299,522	22,128	12,940	3,026	40,382	21,949	1,712,427	400
.....	7,699,799	167,212	36,900	43,374,155	2,500	4,177,718	236,527	109,904	36,885	18,324	38,654,270	2,500
9	1,516	88	27	2,008	128	45	80	51	16	182	66	1,145	125
558	401,338	27,160	25,454	718,234	72,536	93,765	14,705	8,536	1,893	24,301	10,907	552,873	72,506
2,241	2,049,883	47,593	59,863	2,630,180	80,680	585,613	32,640	18,578	6,184	97,335	40,519	1,778,084	80,530
4.0	5.1	1.8	2.4	3.7	1.1	6.2	2.2	2.2	3.3	4.0	3.7	3.2	1.1
1.54	0.84	0.68	0.35	5.61	2.90	3.29	2.38	2.27	2.17	2.15	2.33	6.12	2.90
0.38	0.16	0.39	0.15	1.53	2.61	0.53	1.07	1.05	0.66	0.54	0.63	1.90	2.82
.....	52	1	29	6	5	5	5	7
.....	138,494	(?)	456,400	182,358	6,233	6,233	4,905	(?)	245,003
.....	88,517	(?)	285,781	57,465	1,012	1,012	3,852	(?)	219,872
.....	19,565	(?)	105,317	56,010	62	62	2,520	(?)	45,706
.....	7,915	(?)	119,201	106,040	291	291	900	(?)	1,320

⁴ Percent not shown when more than 1,000.

⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

⁷ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		COLORADO RIVER (VI)—Continued							
		Lower Colorado River (VI-B)—Continued (Exclusive of Imperial Valley)							
		Gila River (VI-Bb)—Continued							
		San Francisco and Blue Rivers (2) + (3)	Intrastate tributaries in Arizona	Independent basins in Gila River					
Total	Intrastate basin in New Mexico (Animas Valley) (18)			Intrastate basin in Arizona (Sulphur Springs) (19)					
IRRIGATED UNITS AND AREAS									
1	Irrigated units ¹.....1939..number.....	149	8,026	101	11	90			
2	Area irrigated.....1939..acres.....	2,437	358,159	4,958	343	4,615			
3	(a) Cropland harvested.....1939..acres.....	2,195	328,977	2,622	295	2,327			
4	(b) Crop failure.....1939..acres.....	34	1,129	78	2	76			
5	(c) Pasture.....1939..acres.....	208	28,053	2,258	46	2,212			
6	Area irrigated.....1929..acres.....	2,223	395,079						
7	.....1919..acres.....	3,591	314,006						
8	Increase or decrease (-), 1929-1939.....percent.....	9.6	-9.3						
9	Irrigable area in enterprises.....1940..acres.....	9,729	477,843	44,808	647	44,161			
10	.....1930..acres.....	2,907	564,777						
11	.....1920 ² ..acres.....	11,134	435,828						
12	Excess of irrigable area over the area irrigated.....1940..acres.....	7,292	119,684	39,850	304	39,546			
13	.....1930..acres.....	684	169,698						
14	.....1920 ² ..acres.....	7,543	121,822						
15	Area works were capable of supplying with water.....1940..acres.....	9,687	460,205	6,672	642	6,030			
16	.....1930..acres.....	2,462	505,157						
17	.....1920..acres.....	3,859	365,403						
18	Increase or decrease (-), 1930-1940.....percent.....	293.5	-8.9						
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	7,250	102,046	1,714	299	1,415			
20	.....1930..acres.....	239	110,078						
21	.....1920..acres.....	268	51,397						
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	25.2	77.8	74.3	53.4	76.5			
23	.....1929..percent.....	90.3	78.2						
24	.....1919..percent.....	93.1	85.9						
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars.....	46,433	47,376,295	138,404	23,282	116,122			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	43,620	46,915,662	136,565	21,130	115,435			
27	(b) Investment in water rights (reported).....1940..dollars.....	2,813	460,633	1,839	1,152	687			
28	Total investment in irrigation enterprises.....1930..dollars.....	41,964	48,237,304						
29	.....1920..dollars.....	25,224	22,306,873						
30	Increase or decrease (-), 1930-1940.....percent.....	10.6	-1.8						
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	4.79	102.95	20.74	34.71	19.26			
32	.....1930..dollars.....	17.04	95.49						
33	.....1920..dollars.....	6.54	61.05						
34	Average investment per acre irrigated.....1939..dollars.....	19.05	132.28	27.92	64.96	25.16			
35	Estimated final investment in existing enterprises.....1940..dollars.....	47,183	48,387,933	144,979	24,582	120,397			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	4.85	101.26	3.24	37.99	2.73			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
			Primary	Sup.	Primary	Sup.	Primary	Sup.	
			Enterprises		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation.....1939..number.....	72	644	9	89	7	9	7	80
38	Area irrigated in these enterprises.....1939..acres.....	2,328	344,380	535	4,576	605	340	605	4,236
39	Cost of maintenance and operation.....1939..dollars.....	3,643	2,018,206	3,390	18,109	2,022	2,852	2,022	15,257
40	Average cost, per acre irrigated.....1939..dollars.....	1.56	5.86	6.34	3.96	3.34	8.39	3.34	3.60
41	Total annual charges (reported) ⁴.....1939..dollars.....	981	1,837,204	450					
42	Average annual charge per acre irrigated.....1939..dollars.....	1.07	6.47	3.00					
43	Area against which charges were assessed.....1939..acres.....	931	356,106	250					
44	Average annual charge per acre assessed.....1939..dollars.....	1.05	5.16	1.80					
45	Total charges collected ⁴.....1939..dollars.....		1,052,829	400					
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....		24,315,867	2,500					
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	78	604	9	92	7	9	7	83
48	Area irrigated by these enterprises.....1939..acres.....	2,294	341,222	58,578	3,057	605	312	605	2,745
49	Water delivered.....1939..acre-feet.....	6,364	1,022,581	59,570	5,112	486	831	486	4,281
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.8	3.0	1.0	1.7	0.8	2.7	0.8	1.6
51	Average cost of water per acre irrigated.....1939..dollars.....	1.51	6.91	5.04	6.39	3.34	9.20	3.34	6.04
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.55	2.31	4.96	3.82	4.16	3.45	4.16	3.87
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....		8						
54	Irrigable area in these enterprises.....1939..acres.....		244,968						
55	Irrigated area in these enterprises.....1939..acres.....		219,957						
56	Area for which drains have been installed.....1939..acres.....		45,691						
57	Additional area needing drainage.....1939..acres.....		1,320						

¹Schedules called for "Number of farms," see explanation in text.

²1930 and 1920 data are designated as "Whitewater Draw and tributaries" and do not include Vamori Wash.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana.]

COLORADO RIVER (VI)—Continued						Gulf of California (VII) (exclusive of Colorado River) Whitewater Draw and Vamori Wash, Arizona (1)+(2)	GREAT BASIN (VIII)						
Lower Colorado River (VI-B)—Continued (Exclusive of Imperial Valley)							Total (VIII)	Bonnevill Lake (VIII-A)					
Intrastate tributary in Nevada (Las Vegas Valley) (7)	Intrastate tributary in Arizona (Williams River) (8)	Independent basins							Total (VIII-A)				
		Total	Intrastate basin in Arizona (Red Lake) (11)	Intrastate basins in Nevada	Intrastate basin in California (Whitewater River) (12)	Intrastate tributary in California (Imperial Valley) (VI-C)		Total (VIII-A)					
111	82	960	4	157	799	4,550	405	45,605	40,423	1			
2,585	1,714	31,050	40	12,029	18,881	416,939	8,498	2,073,727	1,063,238	2			
1,170	1,213	25,139	27	7,429	17,683	404,823	4,573	1,548,788	944,399	3			
16	68	492	.....	37	445	4,000	528	29,375	24,175	4		
1,379	435	5,429	13	4,563	853	8,016	3,397	495,564	114,664	5			
.....	.....	.....	.....	.....	.....	.....	3,301	2,036,033	.....	6
.....	.....	.....	.....	.....	.....	.....	5,871	2,277,651	.....	7
.....	.....	.....	.....	.....	.....	.....	157.4	1.9	.....	8
3,492	2,425	57,933	42	14,419	43,472	526,817	14,261	2,504,611	1,272,056	9			
.....	.....	.....	.....	.....	.....	.....	5,570	3,004,651	.....	10
927	711	26,883	2	2,390	24,491	109,878	16,623	4,165,450	188,818	11			
.....	.....	.....	.....	.....	.....	.....	5,763	430,884	.....	12
.....	.....	.....	.....	.....	.....	.....	2,299	968,618	.....	13
.....	.....	.....	.....	.....	.....	.....	10,752	1,887,799	.....	14
3,169	2,346	40,663	42	13,494	27,127	526,632	13,482	2,381,171	1,205,711	15			
.....	.....	.....	.....	.....	.....	.....	4,763	2,536,482	.....	16
.....	.....	.....	.....	.....	.....	.....	9,950	2,625,313	.....	17
.....	.....	.....	.....	.....	.....	.....	183.2	-6.1	.....	18
604	632	9,613	2	1,465	8,146	109,693	4,964	307,444	122,473	19			
.....	.....	.....	.....	.....	.....	.....	1,452	500,459	.....	20
.....	.....	.....	.....	.....	.....	.....	4,079	547,662	.....	21
80.9	73.1	76.4	95.2	89.1	70.0	79.2	63.1	87.1	89.8	22			
.....	.....	.....	.....	.....	.....	.....	99.5	80.3	.....	23
.....	.....	.....	.....	.....	.....	.....	59.0	80.5	.....	24
120,689	52,948	3,020,587	2,300	137,935	2,880,352	16,742,110	226,627	59,698,865	37,401,770	25			
119,555	52,900	3,004,112	2,300	121,460	2,880,352	16,740,410	226,622	55,186,777	35,099,945	26			
1,144	48	16,475	.....	16,475	.....	1,700	5	3,512,088	2,301,825	27	
.....	.....	.....	.....	.....	.....	.....	230,606	67,579,074	.....	28
.....	.....	.....	.....	.....	.....	.....	299,368	62,207,175	.....	29
.....	.....	.....	.....	.....	.....	.....	-1.7	-11.7	.....	30
38.09	22.57	74.28	54.76	10.22	106.18	31.79	16.83	25.07	31.02	31			
.....	.....	.....	.....	.....	.....	.....	48.52	26.64	.....	32
.....	.....	.....	.....	.....	.....	.....	30.09	22.63	.....	33
47.06	30.89	97.28	57.50	11.47	151.75	40.15	26.67	28.79	34.53	34			
129,789	59,608	3,314,637	3,650	138,085	3,172,902	16,777,575	257,503	61,709,956	38,257,756	35			
37.16	24.58	57.22	86.90	9.58	72.99	31.85	18.06	24.64	30.08	36			
		Primary	Sup.		Primary	Sup.		Primary	Sup.		Primary	Sup.	
		Enterprises			Enterprises			Enterprises			Enterprises		
99	66	372	(³) 1	4	25	(³) 1	343	22	159	3,941	142	1,708	127
2,246	1,504	28,139	(³)	40	11,537	(³)	16,562	416,453	6,207	1,957,973	360,457	1,043,166	275,210
3,391	5,046	215,299	(³)	500	4,340	(³)	210,459	1,279,705	20,082	1,600,266	118,396	769,649	79,703
1.51	3.39	7.65	(³)	12.50	0.38	(³)	12.71	3.07	3.24	0.82	0.33	0.74	0.29
.....	38,430	2,712	35,718	1,686,000	610	1,306,994	201,239	973,059	112,855
.....	3.91	0.46	9.04	4.05	0.22	1.13	0.57	1.04	0.42
.....	10,870	6,018	4,852	562,000	2,719	1,228,342	382,071	985,092	279,700
.....	3.54	0.45	7.35	3.00	0.22	1.07	0.53	0.99	0.40
.....	28,204	2,709	25,495	1,690,000	1,154,491	260,086	999,743	181,017
.....	68,755	68,755	15,500,000	5,934,982	10,564,468	4,012,844	7,823,862
.....
56	60	424	(³) 1	3	21	(³) 1	400	45	133	3,933	155	1,761	141
1,228	1,434	28,037	(³)	25	9,590	(³)	18,422	416,937	2,555	1,821,964	296,139	956,312	211,214
7,604	3,975	118,745	(³)	51	23,863	(³)	94,811	1,169,960	5,688	4,644,167	513,971	2,329,574	221,774
6.2	2.8	4.2	(³)	2.0	2.5	(³)	5.1	2.8	2.2	2.5	1.7	2.4	1.0
2.63	3.49	8.77	(³)	8.00	0.41	(³)	13.44	4.06	7.50	1.13	0.66	1.02	0.50
0.42	1.26	2.07	(³)	3.92	0.16	(³)	2.61	1.45	3.37	0.44	0.38	0.42	0.47
.....
.....	(³) 1	5	(³) 2	3	⁶ 1	251	209
.....	(³)	17,956	(³)	14,780	525,000	562,861	300,720
.....	(³)	3,460	(³)	416	416,000	471,434	275,135
.....	(³)	994	(³)	360	200,000	188,450	85,420
.....	10,650	(³)	10,000	315,000	53,514	32,706

*Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.
⁶Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	GREAT BASIN (VIII) —Continued						
	Bonneville Lake (VIII-A)—Continued						
	Great Salt Lake						
	Total ¹	Direct (1)		Bear River Total ²			
IRRIGATED UNITS AND AREAS							
1	Irrigated units ^a.....1939...number.....	31,023	1,340	9,526			
2	Area irrigated.....1939...acres.....	773,745	25,282	403,605			
3	(a) Cropland harvested.....1939...acres.....	677,876	21,969	347,659			
4	(b) Crop failure.....1939...acres.....	11,338	1,229	3,447			
5	(c) Pasture.....1939...acres.....	84,531	2,064	52,499			
6	Area irrigated.....1929...acres.....	801,712	.....	419,409		
7	.....1919...acres.....	848,639	.....	480,452		
8	Increase or decrease (-), 1929-1939.....percent.....	-3.5	.....	-3.8		
9	Irrigable area in enterprises.....1940...acres.....	892,289	28,227	470,251			
10	.....1930...acres.....	953,001	.....	490,780		
11	.....1920 ³ ...acres.....	1,249,721	.....	685,746		
12	Excess of irrigable area over the area irrigated.....1940...acres.....	118,544	2,945	66,646			
13	.....1930...acres.....	151,289	.....	71,371		
14	.....1920 ³ ...acres.....	401,082	.....	205,294		
15	Area works were capable of supplying with water.....1940...acres.....	844,413	27,153	444,479			
16	.....1930...acres.....	879,599	.....	459,724		
17	.....1920...acres.....	989,919	.....	547,673		
18	Increase or decrease (-), 1930-1940.....percent.....	-4.0	.....	-3.3		
19	Excess of area works were capable of supplying with water over area irrigated.....1940...acres.....	70,868	1,871	40,874			
20	.....1930...acres.....	77,887	.....	40,315		
21	.....1920...acres.....	141,280	.....	67,221		
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	91.6	93.1	90.8			
23	.....1929...percent.....	91.1	.....	91.2		
24	.....1919...percent.....	85.7	.....	87.7		
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940...dollars.....	28,927,034	2,409,673	10,068,475			
26	(a) Cost of irrigation works and equipment.....1940...dollars.....	27,363,991	2,405,343	8,924,489			
27	(b) Investment in water rights (reported).....1940...dollars.....	1,563,043	4,330	1,143,986			
28	Total investment in irrigation enterprises.....1930...dollars.....	21,884,330	.....	7,493,444		
29	.....1920...dollars.....	18,109,805	.....	7,438,075		
30	Increase or decrease (-), 1930-1940.....percent.....	32.2	.....	34.4		
31	Average investment based on area works were capable of supplying with water, per acre.....1940...dollars.....	34.26	88.74	22.65			
32	.....1930...dollars.....	24.88	.....	16.30		
33	.....1920...dollars.....	18.29	.....	13.58		
34	Average investment per acre irrigated.....1939...dollars.....	37.39	95.31	24.95			
35	Estimated final investment in existing enterprises.....1940...dollars.....	29,670,639	2,572,882	10,356,410			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940...dollars.....	33.25	91.15	22.02			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939...number.....	1,155	86	110	13	483	34
38	Area irrigated in these enterprises.....1939...acres.....	746,661	156,953	23,036	6,235	389,144	11,406
39	Cost of maintenance and operation.....1939...dollars.....	564,917	59,735	17,087	8,420	235,441	6,492
40	Average cost, per acre irrigated.....1939...dollars.....	0.76	0.38	0.74	1.35	0.61	0.57
41	Total annual charges (reported) ⁴.....1939...dollars.....	734,692	95,404	22,480	2,190	285,537	5,537
42	Average annual charge per acre irrigated.....1939...dollars.....	1.10	0.62	1.17	0.37	0.86	0.56
43	Area against which charges were assessed.....1939...acres.....	696,567	161,932	19,816	9,349	347,108	9,864
44	Average annual charge per acre assessed.....1939...dollars.....	1.05	0.59	1.13	0.23	0.82	0.56
45	Total charges collected ⁴.....1939...dollars.....	777,827	165,995	21,239	7,296	263,628	6,387
46	Indebtedness to December 31 (reported) ⁵.....1939...dollars.....	3,600,826	7,437,410	21,217	1,802,475	217,415	923,000
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939...number.....	1,215	103	99	16	494	36
48	Area irrigated by these enterprises.....1939...acres.....	684,526	157,328	17,557	6,345	357,183	11,479
49	Water delivered.....1939...acre-feet.....	1,689,115	195,031	48,301	11,835	814,950	17,951
50	Average water delivered per acre irrigated.....1939...acre-feet.....	2.5	1.2	2.8	1.9	2.3	1.6
51	Average cost of water per acre irrigated.....1939...dollars.....	1.04	0.62	1.20	0.41	0.81	0.57
52	Average cost of water per acre-foot delivered.....1939...dollars.....	0.42	0.50	0.44	0.22	0.35	0.37
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939...number.....	152	10	39
54	Irrigable area in these enterprises.....1939...acres.....	240,658	352	136,206
55	Irrigated area in these enterprises.....1939...acres.....	223,924	324	126,584
56	Area for which drains have been installed.....1939...acres.....	47,334	99	18,048
57	Additional area needing drainage.....1939...acres.....	31,758	67	26,186

^aSchedules called for "Number of farms," see explanation in text.
¹Data for the intrastate tributaries of the Great Salt Lake Basin are not shown separately but are included in the Great Salt Lake Basin total.
²Data for the intrastate tributaries of the Bear River are not shown separately but are included in the Bear River total.
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

GREAT BASIN (VIII)—Continued																	
Bonneville Lake (VIII-A)—Continued																	
Great Salt Lake—Continued				Independent basins													
Bear River—Continued		Intrastate tributary in Utah (Sevier River) (14)+(18)	Total	Deep Creek (Box Elder County, Utah) (19)	Deep Creek (Tooele County, Utah) (22)	Snake Valley (23)	Intrastate basins in Utah	Intrastate basin in Nevada (Thousand Spring Creek) (21)									
Direct (2)	Malad River (5)																
6,099	512	7,415	1,985	90	82	86	1,713	14							1		
336,336	15,504	237,569	71,924	4,137	2,700	13,999	48,313	2,775							2		
291,807	14,561	206,575	57,948	4,133	2,488	6,222	42,410	2,715							3		
3,946	7	5,983	3,854		44	2,010	1,800								4		
41,183	946	20,011	10,122	4	188	5,767	4,103	60							5		
206,221	9,620	258,929			2,147										6		
252,073	17,898	323,718			1,983										7		
63.1	62.9	-8.2			25.8										8		
395,049	20,377	277,779	101,988	6,098	2,824	17,340	66,487	9,259							9		
250,806	11,215	336,671			2,362										10		
370,284	45,339	630,484			4,326										11		
58,713	4,873	40,210	30,064	1,961	124	3,341	18,154	6,484							12		
44,587	1,695	77,742			215										13		
118,211	27,471	304,766			2,343										14		
374,231	17,155	270,066	81,232	4,696	2,824	16,193	62,624	4,893							15		
226,457	11,170	303,757			2,172										16		
285,815	18,317	402,387			3,448										17		
65.3	53.6	-11.1			30.0										18		
37,895	1,651	32,497	19,306	561	124	2,194	14,311	2,118							19		
20,236	1,650	44,828			25										20		
43,742	449	76,669			1,483										21		
89.9	90.4	88.0	78.8	88.1	95.6	86.5	77.1	56.7							22		
91.1	85.2	85.2			98.8										23		
85.2	97.5	80.9			57.5										24		
7,936,443	223,037	6,082,351	2,382,365	25,907	25,322	128,982	1,905,959	296,215							25		
6,948,909	193,569	5,603,973	2,131,981	22,757	22,322	111,197	1,679,525	296,180							26		
1,087,534	29,478	488,378	250,404	3,150	3,000	17,785	226,434	35							27		
4,267,038	113,336	6,793,638			12,277										28		
4,533,194	350,272	9,509,836			8,644										29		
86.0	96.8	-10.3			106.3										30		
21.21	13.00	22.56	26.11	5.51	8.97	7.97	30.43	60.54							31		
18.84	10.15	22.37			5.65										32		
15.32	19.12	23.63			2.57										33		
23.60	14.39	25.64	33.12	6.26	9.38	9.21	39.45	106.74							34		
8,209,353	226,812	6,138,536	2,448,581	26,157	38,322	140,778	1,947,109	296,215							35		
20.78	11.13	22.10	24.01	4.29	13.57	8.12	29.29	31.99							36		
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
359	28	61	4	253	24	300	17	13	17	46	212	17	12				
328,497	5,371	12,838	171	228,749	111,432	67,756	6,825	4,102	1,720	12,128	47,031	6,825	2,775				
197,038	1,804	10,296	36	142,044	15,885	63,288	3,063	3,221	1,683	6,945	48,652	3,093	2,687				
0.60	0.34	0.80	0.21	0.62	0.14	0.93	0.45	0.79	0.98	0.56	1.03	0.45	1.04				
238,571	863	9,071		205,863	16,012	32,504	1,439	3,095	250	1,262	27,897	1,439					
0.87	0.21	0.83		0.94	0.14	0.72	0.24	0.81	0.53	0.30	0.76	0.24					
289,048	4,021	10,975		232,363	111,859	56,162	5,909	5,400	474	4,240	46,048	5,909					
0.83	0.21	0.83		0.89	0.14	0.58	0.24	0.57	0.53	0.30	0.61	0.24					
218,666	855	11,363		192,941	12,546	29,075	2,476	3,100		960	24,896	2,476					
214,713		1,636		396,197	384,367	16,021	2,065		2,266		13,755	2,065					
347	29	94	5	267	23	279	15	14	17	35	204	15	9				
305,828	5,409	14,485	206	209,463	47,108	62,323	6,778	4,137	2,390	9,419	43,917	6,778	2,460				
675,683	7,622	32,755	226	490,334	23,602	150,125	3,141	12,648	7,661	19,360	96,600	3,141	13,266				
2.2	1.4	2.3	1.1	2.3	0.5	2.4	0.5	3.1	3.2	2.1	2.2	0.5	5.4				
0.81	0.33	0.89	0.21	0.91	0.07	1.13	0.61	0.88	0.96	0.58	1.27	0.61	1.15				
0.37	0.23	0.39	0.19	0.39	0.14	0.47	1.32	0.28	0.30	0.27	0.36	1.32	0.21				
24		2		57													
113,501		(⁶)		60,062													
104,040		(⁶)		51,211													
14,863		(⁶)		38,086													
23,681		(⁶)		948													

*Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

⁶Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States

ITEM (For definitions and explanations, see text. Major basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	GREAT BASIN (VIII)—Continued						
	Lahontan Lake (VIII-B)						
	Total (VIII-B)	Northern Great Basin (VIII-Ba) (Independent basins)					
		Total (VIII-Ba)	Cowhead and Warner Lakes (9)	Quinn River		Surprise Valley (16)	Smoke Creek (18)
			Total ²	Direct (13)			
IRRIGATED UNITS AND AREAS							
1 Irrigated units*.....1939..number.....	5,152	772	62	115	97	186	15
2 Area irrigated.....1939..acres.....	990,489	238,918	34,668	25,896	16,777	34,454	1,099
3 (a) Cropland harvested.....1939..acres.....	604,389	168,128	20,272	16,870	12,896	27,482	819
4 (b) Crop failure.....1939..acres.....	5,200	897	10	228	93	50	20
5 (c) Pasture.....1939..acres.....	380,900	76,893	14,386	8,798	5,788	6,922	260
6 Area irrigated.....1929..acres.....				8,518			
7 .....1919..acres.....				9,935			
8 Increase or decrease (-), 1929-1939.....percent.....				204.0			
9 Irrigable area in enterprises.....1940..acres.....	1,232,555	308,106	40,775	28,841	21,636	47,723	1,232
10 .....1930..acres.....				11,060			
11 .....1920 ⁴ ..acres.....				19,635			
12 Excess of irrigable area over the area irrigated.....1940..acres.....	242,066	72,188	6,107	2,945	2,861	13,269	133
13 .....1930..acres.....				2,542			
14 .....1920 ⁴ ..acres.....				9,700			
15 Area works were capable of supplying with water.....1940..acres.....	1,175,460	304,075	40,115	28,013	20,814	47,311	1,232
16 .....1930..acres.....				10,927			
17 .....1920.....acres.....				13,452			
18 Increase or decrease (-), 1930-1940.....percent.....				156.4			
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	184,971	68,157	5,447	2,117	2,037	12,857	133
20 .....1930..acres.....				2,409			
21 .....1920.....acres.....				3,517			
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.3	77.6	86.4	92.4	90.2	72.8	89.2
23 .....1929.....percent.....				78.0			
24 .....1919.....percent.....				73.9			
CAPITAL INVESTED TO JANUARY 1							
25 Total investment in irrigation enterprises.....1940..dollars.....	22,297,095	1,733,612	119,928	63,421	41,150	155,008	20,974
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	21,086,832	1,590,738	114,525	62,056	39,800	92,711	19,872
27 (b) Investment in water rights (reported).....1940..dollars.....	1,210,263	142,874	5,403	1,365	1,350	62,297	1,102
28 Total investment in irrigation enterprises.....1930..dollars.....				68,858			
29 .....1920.....dollars.....				50,548			
30 Increase or decrease (-), 1930-1940.....percent.....				-7.9			
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	18.97	5.70	2.99	2.26	1.98	3.28	17.02
32 .....1930.....dollars.....				6.30			
33 .....1920.....dollars.....				3.76			
34 Average investment per acre irrigated.....1939..dollars.....	22.51	7.35	3.45	2.45	2.19	4.50	19.08
35 Estimated final investment in existing enterprises.....1940..dollars.....	23,452,200	1,782,077	126,468	82,121	59,850	155,028	20,974
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	19.03	5.78	3.10	2.85	2.77	3.25	17.02
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
	Primary		Sup.				
	Enterprises						
37 Enterprises reporting maintenance and operation.....1939..number.....	2,233	15	530	45	29	174	9
38 Area irrigated in these enterprises.....1939..acres.....	914,807	85,247	217,269	32,033	23,041	15,922	32,193
39 Cost of maintenance and operation.....1939..dollars.....	830,617	39,693	59,014	6,310	4,968	3,533	10,030
40 Average cost, per acre irrigated.....1939..dollars.....	0.91	0.47	0.27	0.20	0.22	0.22	0.31
41 Total annual charges (reported) ⁵.....1939..dollars.....	335,935	88,384	3,655				1,348
42 Average annual charge per acre irrigated.....1939..dollars.....	1.51	1.05	0.41				0.51
43 Area against which charges were assessed.....1939..acres.....	243,250	102,371	8,989				2,620
44 Average annual charge per acre assessed.....1939..dollars.....	1.38	0.86	0.41				0.51
45 Total charges collected ⁶.....1939..dollars.....	154,748	79,069	1,662				
46 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	1,922,138	2,740,606	359,500				
WATER DELIVERED TO IRRIGATORS, 1939							
47 Enterprises reporting water delivered.....1939..number.....	2,172	14	513	40	48	30	159
48 Area irrigated by these enterprises.....1939..acres.....	865,652	84,925	190,079	6,783	25,840	18,721	32,083
49 Water delivered.....1939..acre-feet.....	2,314,593	292,197	421,395	17,375	45,667	32,282	40,679
50 Average water delivered per acre irrigated.....1939..acre-feet.....	2.7	3.4	2.2	2.0	1.8	1.7	1.3
51 Average cost of water per acre irrigated.....1939..dollars.....	1.26	1.05	0.29	0.47	0.21	0.22	0.31
52 Average cost of water per acre-foot delivered.....1939..dollars.....	0.47	0.30	0.13	0.24	0.12	0.13	0.25
DRAINAGE OF IRRIGATED LAND							
53 Enterprises reporting land drained or needing drainage.....1939..number.....	42		1	1			
54 Irrigable area in these enterprises.....1939..acres.....	262,141		(?)	(?)			
55 Irrigated area in these enterprises.....1939..acres.....	196,299		(?)	(?)			
56 Area for which drains have been installed.....1939..acres.....	103,030		(?)	(?)			
57 Additional area needing drainage.....1939..acres.....	20,808						

*Schedules called for "number of farms," see explanation in text.
¹Data for 1930 and 1920 include a portion of the Newland Project, U. S. Bureau of Reclamation, therefore, percent of increase or decrease is not shown.
²Data for the intrastate tributaries of the Quinn River are not shown separately but are included in the Quinn River total.
³Data for the intrastate tributaries of the Truckee River (upper) are not shown separately but are included in the Truckee River (upper) total.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

GREAT BASIN (VIII)—Continued										
Lahontan Lake (VIII-B)—Continued										
Northern Great Basin (VIII-Ba)—Con- (Independent basins)			Sierra Nevada Slope (VIII-Bb)							
Intrastate basins in Oregon	Intrastate basin in Nevada (Black Rock Desert)	Intrastate basin in California (Madeline Plains)	Total (VIII-Bb)	Pyramid Lake				Carson River (upper) ¹		
				Total	Direct (1)	Truckee River (upper)				
						Total ³	Direct (2)			(5)
332	53	9	2,715	717	82	635	531	300	1	
129,224	6,885	3,672	314,994	49,426	2,924	46,502	32,242	43,099	2	
84,885	5,413	2,407	174,994	30,801	1,188	29,413	21,014	23,180	3	
294	295	.....	2,787	473	.....	473	131	168	4
44,075	1,187	1,266	137,243	18,352	1,736	16,616	11,097	19,751	5	
314,689	.....	.....	.....	.....	.....	39,028	30,417	74,797	6
302,864	.....	.....	.....	.....	.....	20,002	14,606	75,439	7
-58.9	.....	.....	.....	.....	.....	19.2	6.0	.....	8
175,187	10,318	4,030	401,136	57,406	5,488	51,918	32,903	44,659	9	
483,802	.....	.....	.....	.....	.....	47,770	38,971	170,446	10
600,738	.....	.....	.....	.....	.....	34,659	28,040	233,668	11
45,953	3,423	358	86,142	7,980	2,564	5,416	661	1,560	12	
169,116	.....	.....	.....	.....	.....	8,742	8,554	95,649	13
297,874	.....	.....	.....	.....	.....	14,657	13,434	158,229	14
174,702	8,672	4,030	363,251	54,094	4,250	49,844	32,903	44,153	15	
370,208	.....	.....	.....	.....	.....	43,424	34,625	124,239	16
446,777	.....	.....	.....	.....	.....	20,920	15,436	104,464	17
-52.8	.....	.....	.....	.....	.....	14.8	-5.0	.....	18
45,468	1,777	358	48,257	4,668	1,326	3,342	661	1,054	19	
55,522	.....	.....	.....	.....	.....	4,396	4,208	49,442	20
143,913	.....	.....	.....	.....	.....	918	830	29,025	21
74.0	79.5	91.1	86.7	91.4	68.8	93.3	98.0	97.6	22	
85.0	.....	.....	.....	.....	.....	89.9	87.8	60.2	23
67.8	.....	.....	.....	.....	.....	95.6	94.6	72.2	24
1,282,417	59,064	32,800	11,821,575	2,817,958	95,926	2,722,032	2,016,239	440,872	25	
1,212,105	56,689	32,800	11,749,254	2,791,025	95,926	2,695,099	1,999,362	436,885	26	
70,312	2,395	.....	78,321	26,933	.....	26,933	16,877	3,987	27
6,231,723	.....	.....	.....	.....	.....	1,814,690	1,572,525	7,210,361	28
5,799,574	.....	.....	.....	.....	.....	594,187	485,900	8,064,685	29
-79.4	.....	.....	.....	.....	.....	50.0	28.2	.....	30
7.34	6.81	8.14	32.54	52.09	22.57	54.61	61.28	9.99	31	
16.83	.....	.....	.....	.....	.....	41.79	45.42	58.04	32
12.98	.....	.....	.....	.....	.....	28.40	31.48	77.20	33
9.92	8.57	8.93	37.53	57.01	32.81	58.54	62.53	10.23	34	
1,301,577	63,109	32,800	12,391,841	3,178,029	321,176	2,856,853	2,150,660	510,302	35	
7.43	6.12	8.14	30.89	55.36	58.52	55.03	65.36	11.43	36	
			Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
			Enterprises		Enterprises		Enterprises		Enterprises	
217	34	4	459	9	71	10	61	41	111	3
120,331	5,446	3,362	295,903	67,507	45,264	1,563	43,701	30,336	39,796	2,313
31,876	5,325	300	163,563	21,562	44,482	3,126	41,356	34,396	10,719	1,457
0.26	0.98	0.09	0.55	0.32	0.98	2.00	0.95	1.13	0.27	0.63
2,055	293,927	59,085	56,546	2,956	53,590	31,449	2,352	2,000
0.35	1.56	0.88	1.65	4.51	1.60	1.25	0.13	1.00
5,879	204,664	82,175	35,275	655	34,620	25,666	17,614	2,000
0.35	1.44	0.72	1.60	4.51	1.55	1.23	0.13	1.00
1,682	124,271	56,492	31,508	31,508	23,906	1,494	1,940
359,500	1,226,620	1,536,679	129,240	1,066,179	129,240	1,066,179	14,798	1,066,179
212	31	9	493	9	80	13	67	44	99	3
112,337	6,265	3,672	301,688	67,507	48,484	2,924	45,560	31,630	38,509	2,313
293,432	18,414	3,475	899,567	213,175	202,573	8,715	193,858	162,710	188,602	2,378
2.6	2.9	0.9	9.0	3.2	4.2	3.0	4.3	5.1	4.4	1.0
0.26	1.06	0.09	1.15	0.89	1.38	2.00	1.35	1.17	0.27	1.13
0.10	0.36	0.09	0.35	0.28	0.33	0.67	0.32	0.23	0.06	1.10
.....	25	8	8	6	2
.....	204,982	33,666	33,666	24,904	(?)
.....	180,624	30,562	30,562	24,808	(?)
.....	82,968	12,512	12,512	8,113	(?)
.....	19,636	6,206	6,206	6,006	(?)

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.
⁷ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		GREAT BASIN (VIII)—Continued							
		Lahontan Lake (VIII-B)—Continued							
		Sierra Nevada Slope (VIII-Bb)—Continued							
		Walker Lake							
		Total	Direct (7)	Walker Lake		Walker River			
				Total		Direct		(8)	
IRRIGATED UNITS AND AREAS									
1	Irrigated units ^o.....1939..number.....	482	77	405		222			
2	Area irrigated.....1939..acres.....	112,052	3,646	108,406		44,133			
3	(a) Cropland harvested.....1939..acres.....	42,188	814	41,374		23,160			
4	(b) Crop failure.....1939..acres.....	66		66		60			
5	(c) Pasture.....1939..acres.....	69,798	2,832	66,966		20,913			
6	Area irrigated.....1929..acres.....			91,881					
7	.....1919..acres.....			152,625					
8	Increase or decrease (-), 1929-1939.....percent.....			18.0					
9	Irrigable area in enterprises.....1940..acres.....	125,085	7,371	117,714		49,881			
10	.....1930..acres.....			191,800					
11	.....1920 ¹ ..acres.....			400,232					
12	Excess of irrigable area over the area irrigated.....1940..acres.....	13,033	3,725	9,308		5,748			
13	.....1930..acres.....			99,919					
14	.....1920 ¹ ..acres.....			247,807					
15	Area works were capable of supplying with water.....1940..acres.....	122,583	5,154	117,429		49,596			
16	.....1930..acres.....			94,317					
17	.....1920..acres.....			179,562					
18	Increase or decrease (-), 1930-1940.....percent.....			24.5					
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	10,531	1,508	9,023		5,463			
20	.....1930..acres.....			2,436					
21	.....1920..acres.....			26,937					
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	91.4	70.7	92.3		89.0			
23	.....1929..percent.....			97.4					
24	.....1919..percent.....			85.0					
CAPITAL INVESTED TO JANUARY 1¹									
25	Total investment in irrigation enterprises.....1940..dollars.....	1,780,062	218,179	1,561,883		879,400			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	1,757,430	215,679	1,541,811		865,051			
27	(b) Investment in water rights (reported).....1940..dollars.....	22,572	2,500	20,072		14,349			
28	Total investment in irrigation enterprises.....1930..dollars.....			2,213,164					
29	.....1920..dollars.....			1,699,059					
30	Increase or decrease (-), 1930-1940.....percent.....			-29.4					
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	14.52	42.33	13.30		17.73			
32	.....1930..dollars.....			23.47					
33	.....1920..dollars.....			9.46					
34	Average investment per acre irrigated.....1939..dollars.....	15.89	59.84	14.41		19.93			
35	Estimated final investment in existing enterprises.....1940..dollars.....	1,843,062	272,179	1,570,883		888,000			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	14.73	36.93	13.34		17.80			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary Supplemental		Primary Supplemental		Primary Supplemental			
		Enterprises		Enterprises		Enterprises			
37	Enterprises reporting maintenance and operation.....1939..number.....	85	3	2	83	3	30		1
38	Area irrigated in these enterprises.....1939..acres.....	109,392	65,000	(²)	105,880	65,000	43,787	(²)	
39	Cost of maintenance and operation.....1939..dollars.....	28,950	19,972	(²)	24,949	19,972	7,367	(²)	
40	Average cost, per acre irrigated.....1939..dollars.....	0.26	0.31	(²)	0.24	0.31	0.17	(²)	
41	Total annual charges (reported) ^{3 4}.....1939..dollars.....	17,217	57,085	89	17,128	57,085	5,338		38,546
42	Average annual charge per acre irrigated.....1939..dollars.....	0.25	0.88	0.03	0.26	0.88	0.15		0.88
43	Area against which charges were assessed.....1939..acres.....	75,542	80,175	3,498	72,044	80,175	39,764		54,137
44	Average annual charge per acre assessed.....1939..dollars.....	0.23	0.71	0.03	0.24	0.71	0.13		0.71
45	Total charges collected ⁵.....1939..dollars.....	15,721	54,552	85	15,036	54,552	5,251		38,836
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	23,753	470,500		23,753	470,500			317,886
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	91	3	3	88	3	33		1
48	Area irrigated by these enterprises.....1939..acres.....	107,776	65,000	3,646	104,130	65,000	44,133	(²)	
49	Water delivered.....1939..acre-feet.....	221,951	210,450	6,754	215,197	210,450	97,994	(²)	
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.1	3.2	1.9	2.1	3.2	2.2	(²)	
51	Average cost of water per acre irrigated.....1939..dollars.....	0.25	0.88	0.03	0.25	0.88	0.18	(²)	
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.12	0.27	0.01	0.12	0.27	0.08	(²)	
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	8			8		6		
54	Irrigable area in these enterprises.....1939..acres.....	76,186			76,186		68,226		
55	Irrigated area in these enterprises.....1939..acres.....	66,563			66,563		60,363		
56	Area for which drains have been installed.....1939..acres.....	27,860			27,860		25,620		
57	Additional area needing drainage.....1939..acres.....	8,975			8,975		7,775		

^o Schedules called for "Number of farms," see explanation in text.

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,³ MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

GREAT BASIN (VIII)—Continued													
Lahontan Lake (VIII-B)—Continued													
Sierra Nevada Slope (VIII-Bb)—Continued							Central Great Basin and Eastern Nevada (VIII-Bc)						
Walker Lake—Continued				Intrastate streams in Nevada (Truckee and Carson Rivers, lower) (6)			Independent basins			Total (VIII-Bc)		Intrastate stream and tributaries in Nevada (Humboldt River) (1)+(7)+(10)	
Walker River—Continued													
West Walker River (9)	East Walker River (10)				Total	Honey Lake (12)	Intrastate basins in California						
150	33				496	245	251	1,695				507	
36,816	27,457				56,163	40,477	15,686	439,577				266,099	
16,086	2,128				44,797	26,613	7,615	271,267				178,231	
.....	6				505	505	.....	1,546				843	
20,730	25,323				7,912	21,430	13,359	24,664				107,025	
.....	.....				.....	.....	.....	44,327				.....
.....	.....				.....	.....	.....	64.1				.....
39,891	27,942				86,066	87,920	64,348	23,572		523,313		335,015	
.....	.....				.....	.....	49,319	.....		.....		.....
3,075	485				31,812	31,757	55,065	.....		83,736		48,916	
.....	.....				.....	.....	23,871	7,886		.....		.....
39,891	27,942				66,768	75,653	56,608	19,045		508,134		329,372	
.....	.....				.....	.....	49,069	.....		.....		.....
.....	.....				.....	.....	49,264	.....		.....		.....
.....	.....				.....	.....	15.4	.....		.....		.....
3,075	485				12,514	19,490	16,131	3,359		68,557		43,273	
.....	.....				.....	.....	24,405	.....		.....		.....
.....	.....				.....	.....	4,937	.....		.....		.....
92.3	98.3				81.3	74.2	71.5	82.4		86.5		86.9	
.....	.....				.....	.....	50.3	.....		.....		.....
.....	.....				.....	.....	90.0	.....		.....		.....
552,297	130,186				6,168,615	613,868	320,296	293,572		8,741,908		2,974,199	
546,979	129,781				6,168,815	589,039	295,677	293,362		7,752,840		2,232,727	
5,318	405				.....	24,829	24,619	210		989,068		741,472	
.....	.....				.....	.....	1,511,574	.....		.....		.....
.....	.....				.....	.....	414,068	.....		.....		.....
.....	.....				.....	.....	-78.8	.....		.....		.....
13.85	4.66				92.39	8.11	5.66	15.41		17.20		9.03	
.....	.....				.....	.....	30.81	.....		.....		.....
.....	.....				.....	.....	8.41	.....		.....		.....
15.00	4.74				113.70	10.93	7.91	18.72		19.89		10.40	
552,697	130,186				6,207,165	653,283	325,811	327,472		9,278,282		3,077,817	
13.86	4.66				72.12	7.43	5.06	13.89		17.73		9.19	
Primary	Sup.	Primary	Sup.		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises			Enterprises		Enterprises		Enterprises		Enterprises		
30	1	23	1	8	184	3	143	3	41	1,244	6	346	3
36,806	(8)	25,287	(8)	54,251	47,200	194	36,011	194	11,189	401,635	17,740	253,977	17,079
12,878	(8)	4,704	(8)	55,956	23,456	133	12,035	133	11,421	608,040	18,131	57,041	16,966
0.35	(8)	0.19	(8)	1.03	0.50	0.69	0.33	0.69	1.02	1.51	1.02	0.22	0.99
11,790	14,352	.....	4,187	199,540	18,272	.....	13,872	.....	4,400	38,353	23,299	6,497	28,534
0.40	0.90	.....	0.79	3.76	1.35	.....	1.81	.....	0.75	1.50	1.68	0.40	1.67
32,280	20,158	.....	5,880	61,687	14,346	.....	8,443	.....	5,903	29,597	20,196	16,894	19,874
0.37	0.71	.....	0.71	3.23	1.27	.....	1.64	.....	0.75	1.30	1.45	0.39	1.44
10,385	13,715	.....	4,001	66,703	8,845	.....	8,845	.....	.....	28,815	22,577	4,502	22,577
23,753	118,293	.....	34,511	1,026,627	47,000	.....	47,000	.....	.....	336,018	1,203,927	.....	1,203,570
30	1	25	1	4	219	3	157	3	62	1,166	5	302	3
34,375	(8)	25,622	(8)	53,274	53,645	194	39,644	194	14,001	373,885	17,418	244,895	17,079
82,809	(8)	34,394	(8)	181,455	124,988	347	69,923	347	55,063	996,631	79,022	601,313	79,502
2.4	(8)	1.3	(8)	3.4	2.3	1.8	1.6	1.8	3.9	2.7	4.5	2.5	4.6
0.40	(8)	0.18	(8)	3.75	0.71	0.69	0.62	0.69	1.02	1.88	1.67	0.27	1.68
0.16	(8)	0.13	(8)	1.10	0.31	0.38	0.35	0.38	0.26	0.71	0.37	0.11	0.37
(2)	2	.....	.....	52	5	.....	3	.....	52	16	.....	5	.....
(2)	.....	.....	.....	83,615	1,807	.....	695	.....	1,112	38,228	.....	32,603	.....
(2)	.....	.....	.....	53,013	865	.....	465	.....	400	16,744	.....	13,336	.....
(2)	.....	.....	.....	41,301	1,060	.....	660	.....	400	15,223	.....	15,000	.....
(2)	.....	.....	.....	3,800	555	.....	.....	.....	555	1,172	.....	390	.....

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relates to those enterprises only.
⁵ Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	GREAT BASIN (VIII)—Continued							
	Lahontan Lake (VIII-B)—Continued							
	Central Great Basin and Eastern Nevada (VIII-Bc)—Continued							
	Independent basins							
	Total	Amargosa River and Dry Lakes (22)	Intrastate basins in Nevada	Intrastate basins in California				
IRRIGATED UNITS AND AREAS								
1	Irrigated units ^a.....1939..number.....	1,188	34	345	809			
2	Area irrigated.....1939..acres.....	153,478	2,156	113,884	37,438			
3	(a) Cropland harvested.....1939..acres.....	93,036	672	57,031	35,333			
4	(b) Crop failure.....1939..acres.....	703	145	317	241			
5	(c) Pasture.....1939..acres.....	59,739	1,339	56,536	1,864			
6	Area irrigated.....1929..acres.....							
7	.....1919..acres.....							
8	Increase or decrease (-), 1929-1939.....percent.....							
9	Irrigable area in enterprises.....1940..acres.....	188,298	3,151	127,388	57,761			
10	.....1930..acres.....							
11	.....1920 ^b ..acres.....							
12	Excess of irrigable area over the area irrigated.....1940..acres.....	34,820	995	13,502	20,323			
13	.....1930..acres.....							
14	.....1920 ^b ..acres.....							
15	Area works were capable of supplying with water.....1940..acres.....	178,762	3,065	124,263	51,434			
16	.....1930..acres.....							
17	.....1920..acres.....							
18	Increase or decrease (-), 1930-1940.....percent.....							
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	25,284	909	10,379	13,986			
20	.....1930..acres.....							
21	.....1920..acres.....							
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	85.9	70.3	91.6	72.8			
23	.....1929..percent.....							
24	.....1919..percent.....							
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars.....	5,767,709	80,720	606,030	5,080,959			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	5,520,113	76,950	502,139	4,941,024			
27	(b) Investment in water rights (reported).....1940..dollars.....	247,596	3,770	103,891	139,935			
28	Total investment in irrigation enterprises.....1930..dollars.....							
29	.....1920..dollars.....							
30	Increase or decrease (-), 1930-1940.....percent.....							
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	32.26	26.34	4.88	98.79			
32	.....1930..dollars.....							
33	.....1920..dollars.....							
34	Average investment per acre irrigated.....1939..dollars.....	37.58	37.44	5.32	135.72			
35	Estimated final investment in existing enterprises.....1940..dollars.....	6,200,465	81,720	675,935	5,442,810			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	32.93	25.93	5.31	94.23			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Supplemental		Primary	Supplemental	Primary	Supplemental
		Enterprises			Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	898	3	30	283	1	685	2
38	Area irrigated in these enterprises.....1939..acres.....	147,698	661	1,782	110,053	(4)	35,823	(4)
39	Cost of maintenance and operation.....1939..dollars.....	550,999	1,165	4,493	35,472	(4)	511,034	(4)
40	Average cost, per acre irrigated.....1939..dollars.....	3.73	1.76	2.52	0.32	(4)	14.27	(4)
41	Total annual charges (reported) ^c.....1939..dollars.....	31,856	765		1,500		30,356	765
42	Average annual charge per acre irrigated.....1939..dollars.....	3.38	2.38		0.21		12.47	2.38
43	Area against which charges were assessed.....1939..acres.....	12,763	322		6,980		5,783	322
44	Average annual charge per acre assessed.....1939..dollars.....	2.50	2.38		0.21		5.25	2.38
45	Total charges collected ^d.....1939..dollars.....	24,313					24,313	
46	Indebtedness to December 31 (reported) ^e.....1939..dollars.....	336,018	357				336,018	357
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	864	2	29	229	1	606	1
48	Area irrigated by these enterprises.....1939..acres.....	128,990	(4)	1,777	90,498	(4)	36,715	(4)
49	Water delivered.....1939..acre-feet.....	392,318	(4)	13,402	180,510	(4)	198,406	(4)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	3.0	(4)	7.5	2.0	(4)	5.4	(4)
51	Average cost of water per acre irrigated.....1939..dollars.....	4.51	(4)	2.98	0.95	(4)	14.80	(4)
52	Average cost of water per acre-foot delivered.....1939..dollars.....	1.48	(4)	0.40	0.17	(4)	2.74	(4)
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....	11			7		4	
54	Irrigable area in these enterprises.....1939..acres.....	5,825			5,125		500	
55	Irrigated area in these enterprises.....1939..acres.....	3,408			3,353		55	
56	Area for which drains have been installed.....1939..acres.....	222			14		208	
57	Additional area needing drainage.....1939..acres.....	842			732		110	

^a Schedules called for "Number of farms," see explanation in text.

¹ Data for the intrastate tributaries of the Clark Fork are not shown separately but are included in the Clark Fork total.

² Data for the intrastate tributaries of the Spokane River are not shown separately but are included in the Spokane River total.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

COLUMBIA RIVER (IX)															
Upper Columbia River (IX-A)															
Total (IX)	Direct (IX-A)+(IX-C)	Kootenai River (1)			Clark Fork		Spokane River		Intrastate tributaries in Washington						
					Total ¹	Direct (2)	Total ²	Direct (12)							
80,728	1,743	26,856	1,373	210	5,042	650	2,468	2,442	17,763	1					
3,819,738	27,967	894,680	20,933	7,391	337,102	25,184	23,194	22,669	506,090	2					
3,308,507	25,463	756,192	20,193	6,680	275,655	22,464	22,143	21,800	431,321	3					
32,819	251	7,056	195	8	1,903	61	305	305	4,745	4					
478,412	2,253	131,432	545	703	59,444	2,659	746	564	69,994	5					
3,393,640	10,035	.....	.....	7,590	263,732	13,667	18,422	.....	.....	6	
3,873,245	24,563	.....	.....	5,962	286,290	3,188	20,614	16,453	.....	7		
12.6	178.7	.....	.....	-2.6	27.8	84.3	25.9	.....	.....	8	
5,001,483	36,921	1,198,649	26,988	10,796	450,910	43,382	27,613	27,065	682,342	9					
4,992,131	22,546	.....	.....	10,330	427,180	20,253	38,220	.....	.....	10	
6,336,801	49,432	.....	.....	14,423	603,088	15,834	50,860	40,391	.....	11		
1,161,745	10,954	303,969	6,055	3,405	113,808	18,198	4,419	4,396	176,282	12					
1,598,491	12,511	.....	.....	2,740	163,448	6,586	19,798	.....	.....	13	
2,463,556	24,698	.....	.....	8,441	316,798	12,646	30,246	23,938	.....	14		
4,426,367	33,337	1,050,194	24,336	9,561	399,561	35,810	27,321	26,773	589,415	15					
4,241,244	13,678	.....	.....	9,432	397,315	18,122	30,482	.....	.....	16	
4,968,518	32,615	.....	.....	9,724	444,928	5,766	27,366	21,675	.....	17		
4.4	143.7	.....	.....	1.4	0.6	97.6	-10.4	.....	.....	18	
606,629	5,370	155,514	3,403	2,170	62,459	10,626	4,127	4,104	83,355	19					
847,604	3,643	.....	.....	1,842	133,583	4,455	12,060	.....	.....	20	
1,095,273	8,052	.....	.....	3,742	158,638	2,598	6,742	5,222	.....	21		
86.3	83.9	85.2	86.0	77.3	84.4	70.3	84.9	84.7	85.9	22					
80.0	73.4	.....	.....	80.5	66.4	75.4	60.4	.....	.....	23	
78.0	75.3	.....	.....	61.5	64.3	55.1	75.4	75.9	.....	24		
206,523,302	3,662,839	67,479,267	3,262,987	227,899	13,301,442	791,478	3,083,290	3,070,500	47,603,649	25					
203,947,836	3,590,679	66,709,788	3,192,548	225,794	13,201,522	779,298	3,069,262	3,056,522	47,020,662	26					
2,575,466	72,160	769,479	70,439	2,105	99,920	12,190	14,028	13,978	582,987	27					
157,355,114	1,377,002	.....	.....	230,535	9,047,331	504,725	1,352,395	.....	.....	28	
145,672,382	2,240,216	.....	.....	221,976	8,421,384	209,549	2,214,417	1,637,743	.....	29		
31.2	166.0	.....	.....	-1.1	47.0	56.8	128.0	.....	.....	30	
46.66	109.87	64.25	134.08	23.84	33.29	22.10	112.85	114.69	80.76	31					
37.10	100.67	.....	.....	24.44	22.77	27.85	44.37	.....	.....	32	
29.32	68.69	.....	.....	22.83	18.93	36.22	80.95	75.56	.....	33		
54.07	130.97	75.42	155.88	30.83	39.46	31.43	132.93	135.45	94.07	34					
217,590,076	3,749,780	70,154,756	3,335,755	239,994	14,478,799	965,543	3,194,461	3,181,171	48,905,747	35					
43.51	96.34	58.53	123.60	22.23	32.11	22.26	115.69	117.54	71.67	36					
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.		
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises			
11,449	358	865	3,921	129	546	138	314	3	114	93	1,608	117	37		
3,693,481	992,044	26,075	866,972	34,921	19,626	6,895	320,817	19,461	23,989	381	22,478	22,029	497,156	15,460	38
4,762,706	245,951	250,654	1,743,150	13,942	211,109	6,395	243,620	3,699	16,853	75	145,108	143,725	1,136,918	10,343	39
1.29	0.25	6.61	2.01	0.40	10.76	0.93	0.76	0.19	0.70	0.20	6.46	6.52	2.29	0.66	40
4,599,324	244,825	104,494	1,666,228	29,523	99,735	4,283	236,146	26,394	14,695	370	174,845	174,845	1,151,219	3,129	41
1.58	0.25	12.36	2.62	1.40	12.46	2.15	1.43	1.36	1.29	1.00	8.27	8.27	2.61	1.81	42
3,224,168	993,977	11,157	726,201	45,442	10,538	2,419	200,088	36,502	15,251	370	22,956	22,956	490,198	8,940	43
1.43	0.25	9.37	2.23	0.65	9.46	1.77	1.18	0.72	0.96	1.00	7.62	7.62	2.35	0.35	44
4,172,856	113,837	92,193	1,131,182	36,044	88,025	3,668	157,769	13,022	9,276	352	170,558	170,558	711,162	23,022	45
65,947,558	5,054,961	320,963	32,798,680	1,344,886	320,953	13,000	10,964,172	498,508	497,525	1,028,544	1,028,544	20,452,011	846,378	46
11,676	332	907	4,164	131	579	166	1,626	12	362	4	128	102	1,665	119	47
3,456,855	1,144,260	27,302	862,668	194,867	20,386	7,391	325,025	17,394	24,869	386	22,974	22,449	486,892	177,493	48
13,867,957	1,867,297	112,647	3,238,330	717,326	59,886	25,113	847,481	18,841	66,302	513	93,232	91,634	2,182,618	698,485	49
4.0	1.6	4.1	3.8	3.7	4.4	3.4	2.6	1.1	2.7	1.3	4.1	4.1	4.5	3.9	50
1.51	0.27	10.18	2.40	1.20	11.46	1.17	0.91	1.51	0.98	1.12	8.16	8.26	2.76	0.74	51
0.38	0.16	2.47	0.64	0.38	2.60	0.34	0.35	1.39	0.37	0.84	2.01	2.02	0.62	0.19	52
495	22	97	4	5	49	6	1	1	38	53
1,705,259	860	589,817	173	561	147,906	76	(4)	(4)	441,142	54
1,240,294	587	382,263	110	487	86,873	28	(4)	(4)	294,800	55
467,652	486	179,397	128	100	2,569	35	(4)	(4)	176,586	56
54,628	214	21,073	6	70	2,730	10	(4)	(4)	18,261	57

*Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

¹Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

²Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 45, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER (IX)—Continued							
	Snake River (IX-B)							
	Total	Direct (IX-B)	Upper Snake River		Total	Direct (1)	Total	Direct
			Primary	Sup.					Primary	Sup.
IRRIGATED UNITS AND AREAS								
1	Irrigated units ^a.....1939...number....	45,392	14,507	11,192		2,458		
2	Area irrigated.....1939...acres.....	2,625,355	861,060	717,006		187,444		
3	(a) Cropland harvested.....1939...acres.....	2,296,208	817,723	654,845		174,870		
4	(b) Crop failure.....1939...acres.....	20,056	1,866	1,508		10		
5	(c) Pasture.....1939...acres.....	309,091	41,471	60,653		12,564		
6	Area irrigated.....1929...acres.....	2,339,264	720,770					
7	.....1919...acres.....	2,712,618	743,154					
8	Increase or decrease (-), 1929-1939.....percent.....	12.2	19.5					
9	Irrigable area in enterprises.....1940...acres.....	3,343,028	1,061,020	654,956		209,903		
10	.....1930...acres.....	3,130,120	866,077					
11	.....1920 ² ...acres.....	4,057,747	946,050					
12	Excess of irrigable area over the area irrigated.....1940...acres.....	717,673	199,960	137,950		22,459		
13	.....1930...acres.....	790,856	145,307					
14	.....1920 ² ...acres.....	1,945,129	202,896					
15	Area works were capable of supplying with water.....1940...acres.....	3,018,889	953,255	821,914		209,032		
16	.....1930...acres.....	2,773,621	841,587					
17	.....1920...acres.....	3,376,146	895,209					
18	Increase or decrease (-), 1930-1940.....percent.....	8.8	13.3					
19	Excess of area works were capable of supplying with water over area irrigated.....1940...acres.....	393,534	92,195	104,908		21,588		
20	.....1930...acres.....	434,357	120,817					
21	.....1920...acres.....	663,528	162,055					
22	Proportion which area irrigated is of area works were capable of supplying with water..... ³.....1939...percent.....	87.0	90.3	87.2		89.7		
23	.....1929...percent.....	84.3	85.6					
24	.....1919...percent.....	80.3	83.0					
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940...dollars....	125,320,432	48,642,397	20,498,750		6,297,840		
26	(a) Cost of irrigation works and equipment.....1940...dollars....	123,727,665	48,520,126	20,269,283		6,218,557		
27	(b) Investment in water rights (reported).....1940...dollars....	1,592,747	122,271	229,467		79,283		
28	Total investment in irrigation enterprises.....1930...dollars....	93,265,245	33,983,494					
29	.....1920...dollars....	93,625,117	37,228,741					
30	Increase or decrease (-), 1930-1940.....percent.....	34.4	43.1					
31	Average investment based on area works were capable of supplying with water, per acre.....1940...dollars....	41.51	51.03	24.94		30.13		
32	.....1930...dollars....	33.63	40.38					
33	.....1920...dollars....	27.73	41.59					
34	Average investment per acre irrigated.....1939...dollars....	47.73	56.49	28.59		33.60		
35	Estimated final investment in existing enterprises.....1940...dollars....	133,232,687	49,710,432	20,981,506		6,312,840		
36	Average investment based on estimated final investment and irrigable area, per acre.....1940...dollars....	39.85	46.85	24.54		30.08		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary
	Enterprises	Enterprises		Enterprises		Enterprises		Enterprises
37	Enterprises reporting maintenance and operation.....1939...number....	4,552	168	748	20	773	30	61
38	Area irrigated in these enterprises.....1939...acres.....	2,538,451	939,686	853,210	479,085	694,605	400,628	184,704
39	Cost of maintenance and operation.....1939...dollars....	2,570,462	214,344	1,234,793	17,576	424,407	19,533	197,162
40	Average cost, per acre irrigated.....1939...dollars....	1.01	0.23	1.45	0.04	0.61	0.05	1.07
41	Total annual charges (reported) ⁴.....1939...dollars....	2,558,179	203,496	1,320,276	14,644	507,276	17,897	232,475
42	Average annual charge per acre irrigated.....1939...dollars....	1.22	0.22	1.63	0.03	0.82	0.04	1.27
43	Area against which charges were assessed.....1939...acres.....	2,304,964	938,696	881,278	477,778	658,681	399,242	201,769
44	Average annual charge per acre assessed.....1939...dollars....	1.11	0.22	1.50	0.03	0.77	0.04	1.15
45	Total charges collected ⁴.....1939...dollars....	2,700,414	75,145	1,257,375	14,547	459,295	18,072	204,648
46	Indebtedness to December 31 (reported) ⁵.....1939...dollars....	28,943,619	3,689,525	6,921,574	.....	2,868,559	2,760,661	393,118
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939...number....	4,419	142	736	18	802	30	56
48	Area irrigated by these enterprises.....1939...acres.....	2,308,204	931,780	799,379	475,598	667,167	415,622	184,202
49	Water delivered.....1939...acre-feet..	9,576,457	1,082,943	3,333,094	572,110	3,285,386	469,592	893,681
50	Average water delivered per acre irrigated.....1939...acre-feet..	4.1	1.2	4.2	1.2	4.9	1.1	4.9
51	Average cost of water per acre irrigated.....1939...dollars....	1.10	0.22	1.58	0.03	0.80	0.05	1.29
52	Average cost of water per acre-foot delivered.....1939...dollars....	0.26	0.19	0.38	0.03	0.16	0.04	0.27
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939...number....	231	.....	63	.....	36	.....	8
54	Irrigable area in these enterprises.....1939...acres.....	1,066,065	.....	520,556	.....	84,215	.....	63,772
55	Irrigated area in these enterprises.....1939...acres.....	820,570	.....	396,542	.....	64,127	.....	46,540
56	Area for which drains have been installed.....1939...acres.....	282,130	.....	72,505	.....	9,673	.....	8,573
57	Additional area needing drainage.....1939...acres.....	28,351	.....	5,255	.....	5,927	.....	1,395

^a Schedules called for "Number of farms," see explanation in text.
¹ Data for the intrastate tributaries of the South Fork Snake River are not shown separately but are included in the South Fork Snake River total.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

COLUMBIA RIVER (IX)—Continued													
Snake River (IX-B)—Continued													
Upper Snake River—Continued													
South Fork Snake River						Henry's Fork						Intrastate tributaries in Idaho	
Total ¹	Direct (2)	Salt River (5)		Total	Direct (6)	Teton River (7)							
4,463	3,681	729		2,531	2,039	492						1,740	
281,467	220,823	52,170		172,862	125,342	47,520						75,233	
259,044	206,140	44,706		156,564	114,641	41,923						64,367	
187	61	126		254	40	214						1,057	
22,236	14,622	7,338		16,044	10,661	5,383						9,809	
221,542	163,238	36,863		174,960	.....	.....						.....
214,562	152,509	34,338		208,534	.....	.....						.....
27.0	35.3	41.5		-1.2	.....	.....						.....
329,049	256,161	61,678		198,955	141,046	57,909						117,049	
273,358	187,831	49,016		211,117	.....	.....						.....
311,654	209,494	57,288		325,114	.....	.....						.....
47,582	35,339	9,508		26,093	15,704	10,389						41,816	
51,816	24,593	12,153		36,157	.....	.....						.....
97,092	56,985	22,950		116,580	.....	.....						.....
315,126	245,729	59,352		185,449	132,411	53,038						112,307	
259,020	183,511	46,233		196,373	.....	.....						.....
278,873	194,352	46,234		286,514	.....	.....						.....
21.7	33.9	28.4		-5.6	.....	.....						.....
33,659	24,906	7,182		12,587	7,069	5,518						37,074	
37,478	20,273	9,370		21,413	.....	.....						.....
64,311	41,843	11,896		77,980	.....	.....						.....
89.3	89.9	87.9		93.2	94.7	89.6						67.0	
85.5	89.0	79.7		89.1	.....	.....						.....
76.9	78.5	74.3		72.8	.....	.....						.....
6,746,266	6,392,913	306,763		4,612,718	4,377,433	235,285						2,841,926	
6,681,542	6,342,852	293,735		4,574,150	4,346,534	227,616						2,795,034	
64,724	50,061	13,028		38,568	30,899	7,669						46,892	
3,584,906	3,342,586	111,368		1,925,652	.....	.....						.....
6,957,591	6,693,903	149,207		2,001,841	.....	.....						.....
88.2	91.3	175.4		139.5	.....	.....						.....
21.41	26.02	5.17		24.87	33.06	4.44						25.30	
13.84	18.21	2.41		9.81	.....	.....						.....
24.95	34.44	3.23		6.99	.....	.....						.....
23.97	28.95	5.88		26.68	34.92	4.95						37.77	
6,758,712	6,399,619	310,168		4,636,553	4,399,553	237,000						3,273,401	
20.54	24.98	5.03		23.30	31.19	4.09						27.97	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
379	8	213	3	144	4	167	13	77	11	90	2	166	4
271,894	167,798	214,030	160,165	49,562	4,267	165,157	99,867	124,035	99,473	41,122	(3)	72,850	195
95,126	4,763	85,182	4,378	8,439	60	57,534	9,424	50,758	9,014	6,776	(3)	74,585	178
0.35	0.03	0.40	0.03	0.17	0.01	0.35	0.09	0.41	0.09	0.16	(3)	1.02	0.91
152,195	4,776	140,262	4,419	11,383	20	79,412	8,507	70,104	8,507	9,308	.....	43,194	.....
0.67	0.03	0.76	0.03	0.31	(6)	0.52	0.09	0.59	0.09	0.26	.....	0.72	.....
237,240	167,556	193,257	160,080	39,731	4,110	158,123	99,317	121,828	99,317	36,295	.....	61,569	.....
0.64	0.03	0.73	0.03	0.29	(6)	0.50	0.09	0.58	0.09	0.26	.....	0.70	.....
157,128	4,278	148,383	4,278	8,745	.....	75,840	9,304	67,525	9,304	8,315	.....	21,679	.....
344,554	661	304,992	661	39,562	.....	163,156	2,760,000	134,261	2,760,000	28,895	.....	1,967,731	.....
400	10	215	4	159	5	171	12	77	9	94	3	175	4
252,284	167,869	201,362	160,226	42,448	4,277	160,382	118,150	116,121	117,706	44,261	444	70,299	195
1,382,331	200,878	1,238,721	193,698	113,932	880	782,585	102,860	690,856	102,260	91,729	600	226,789	367
5.5	1.2	6.2	1.2	2.7	0.2	4.9	0.9	5.9	0.9	2.1	1.4	3.2	1.9
0.65	0.03	0.75	0.03	0.27	0.01	0.51	0.09	0.59	0.09	0.26	1.04	0.67	0.91
0.12	0.02	0.12	0.02	0.10	0.07	0.10	0.10	0.10	0.10	0.12	0.77	0.21	0.49
4	.....	3	.....	1	.....	17	.....	7	.....	10	.....	7	.....
8,210	.....	8,050	.....	(3)	.....	6,831	.....	4,652	.....	2,179	.....	5,402	.....
7,000	.....	6,943	.....	(3)	.....	5,325	.....	4,172	.....	1,153	.....	5,262	.....
.....	.....	.....	.....	.....	.....	1,080	.....	100	.....	990	.....	20	.....
1,085	.....	1,065	.....	(3)	.....	1,213	.....	913	.....	300	.....	2,234	.....

¹ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
² Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.
³ Less than one cent.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE
[For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		COLUMBIA RIVER (IX)—Continued				
		Snake River (IX-B)—Continued				
		Lower Snake River				
		Total	Direct	Raft River	Goose Creek	Salmon Falls Creek
	(12)	(13)	(14)	(15)		
IRRIGATED UNITS AND AREAS						
1	Irrigated units*.....1939..number.....	33,442	12,049	196	313	294
2	Area irrigated.....1939..acres.....	1,833,410	673,616	14,007	19,144	30,940
3	(a) Cropland harvested.....1939..acres.....	1,577,435	642,853	12,526	18,125	29,152
4	(b) Crop failure.....1939..acres.....	15,145	1,856	60	86	160
5	(c) Pasture.....1939..acres.....	240,830	28,907	1,321	932	1,628
6	Area irrigated.....1929..acres.....	.....	.....	13,406	19,359	38,586
7	.....1919..acres.....	.....	.....	23,620	25,000	41,330
8	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	4.5	-1.1	-19.8
9	Irrigable area in enterprises.....1940..acres.....	2,380,854	851,117	21,360	21,603	50,056
10	.....1930..acres.....	.....	.....	37,941	25,424	49,434
11	.....1920 ² ..acres.....	.....	.....	42,906	50,000	87,260
12	Excess of irrigable area over the area irrigated.....1940..acres.....	547,444	177,501	7,353	2,459	19,116
13	.....1930..acres.....	.....	.....	24,535	6,065	10,868
14	.....1920 ² ..acres.....	.....	.....	19,286	25,000	45,930
15	Area works were capable of supplying with water.....1940..acres.....	2,093,618	744,223	16,405	20,221	48,104
16	.....1930..acres.....	.....	.....	23,366	25,424	49,284
17	.....1920.....acres.....	.....	.....	26,438	50,000	49,920
18	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	-29.8	-20.5	-2.4
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	260,208	70,607	2,398	1,077	17,164
20	.....1930..acres.....	.....	.....	9,960	6,065	10,718
21	.....1920.....acres.....	.....	.....	2,816	25,000	8,590
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	87.6	90.5	85.4	94.7	64.3
23	.....1929.....percent.....	.....	.....	57.4	76.1	78.3
24	.....1919.....percent.....	.....	.....	89.3	50.0	82.8
CAPITAL INVESTED TO JANUARY 1						
25	Total investment in irrigation enterprises.....1940..dollars.....	103,579,633	42,344,557	159,027	1,850,803	2,895,097
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	102,242,682	42,301,569	154,339	1,600,477	2,657,901
27	(b) Investment in water rights (reported).....1940..dollars.....	1,336,951	42,988	4,688	250,326	237,196
28	Total investment in irrigation enterprises.....1930..dollars.....	.....	.....	.....	1,508,520	2,588,895
29	.....1920.....dollars.....	.....	.....	100,928	393,755	4,152,745
30	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	213.1	22.7	11.4
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	49.47	56.90	9.69	91.53	60.18
32	.....1930.....dollars.....	.....	.....	2.17	59.33	52.73
33	.....1920.....dollars.....	.....	.....	3.82	7.88	83.19
34	Average investment per acre irrigated.....1939..dollars.....	56.50	62.86	11.35	96.68	93.57
35	Estimated final investment in existing enterprises.....1940..dollars.....	110,970,021	43,397,592	306,212	1,851,303	2,898,397
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	46.61	50.99	14.34	85.70	57.90
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
		Primary	Supplemental	Primary	Supplemental	
		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation.....1939..number.....	3,628	136	685	15	43
38	Area irrigated in these enterprises.....1939..acres.....	1,769,930	539,058	668,506	346,317	11,365
39	Cost of maintenance and operation.....1939..dollars.....	2,040,899	194,791	1,037,631	12,368	5,410
40	Average cost, per acre irrigated.....1939..dollars.....	1.18	0.36	1.55	0.04	0.48
41	Total annual charges (reported) ⁴.....1939..dollars.....	1,979,501	185,599	1,067,801	10,030	3,389
42	Average annual charge per acre irrigated.....1939..dollars.....	1.39	0.35	1.73	0.03	0.42
43	Area against which charges were assessed.....1939..acres.....	1,575,556	539,454	679,519	345,409	9,891
44	Average annual charge per acre assessed.....1939..dollars.....	1.26	0.34	1.60	0.03	0.34
45	Total charges collected ⁴.....1939..dollars.....	2,182,650	57,073	1,052,727	10,057	3,284
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	25,787,060	938,864	6,528,456	.....	25
WATER DELIVERED TO IRRIGATORS, 1939						
47	Enterprises reporting water delivered.....1939..number.....	3,466	112	680	14	39
48	Area irrigated by these enterprises.....1939..acres.....	1,568,124	516,158	615,177	346,180	8,019
49	Water delivered.....1939..acre-feet.....	6,021,530	633,251	2,439,403	416,323	17,276
50	Average water delivered per acre irrigated.....1939..acre-feet.....	3.8	1.2	4.0	1.2	2.2
51	Average cost of water per acre irrigated.....1939..dollars.....	1.22	0.36	1.67	0.03	0.62
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.32	0.30	0.42	0.03	0.30
DRAINAGE OF IRRIGATED LAND						
53	Enterprises reporting land drained or needing drainage.....1939..number.....	190	.....	55	.....	1
54	Irrigable area in these enterprises.....1939..acres.....	979,500	.....	456,784	.....	(3)
55	Irrigated area in these enterprises.....1939..acres.....	754,686	.....	350,002	.....	(3)
56	Area for which drains have been installed.....1939..acres.....	272,457	.....	63,932	.....	(3)
57	Additional area needing drainage.....1939..acres.....	22,969	.....	3,860	.....	.....

* Schedules called for "Number of farms," see explanation in text.

¹ Data for intrastate tributaries of the Grande Ronde River are not shown separately but are included in the Grande Ronde River total.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

1940, 1930, 1920; AND IRRIGATED UNITS,³ MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

COLUMBIA RIVER (IX)—Continued									
Snake River (IX-B)—Continued									
Lower Snake River—Continued									
Bruneau River (18)	Owyhee River						Grande Ronde River		
	Total	Direct	South Fork Owyhee River			Jordan Creek (26)	Total ¹	Direct	
			Total	Direct	East Fork Owyhee River (25)				
(19)	(23)	(24)	(25)	(26)	(46)				
162	1,345	976	232	40	192	137	1,298	569	1
20,952	126,991	58,004	53,688	26,972	26,716	15,289	64,822	17,604	2
14,984	101,348	50,215	39,502	23,263	16,239	11,631	48,591	15,543	3
140	4,803	1,542	1,398	971	427	1,863	7	7	4
5,828	20,840	6,247	12,788	2,738	10,060	1,805	15,224	2,054	5
21,161	80,054						57,655		6
22,598	104,830						79,257		7
-1.0	111.5						12.4		8
22,034	180,657	76,895	85,669	32,705	52,964	18,093	76,701	23,299	9
27,702	180,067						65,227		10
37,751	239,242						98,912		11
1,082	53,666	18,891	31,981	5,733	26,248	2,794	11,879	7,695	12
6,541	120,013						7,572		13
15,153	134,412						19,655		14
21,738	163,127	76,725	58,722	31,185	27,537	17,660	74,937	23,720	15
24,930	71,016						63,174		16
25,636	116,238						87,317		17
-12.8	115.6						18.6		18
786	26,136	18,721	5,734	4,213	821	2,381	10,115	6,116	19
3,769	10,962						5,519		20
3,038	11,408						8,060		21
96.4	82.9	75.6	91.4	86.5	97.0	86.5	86.5	74.2	22
84.9	84.6						91.3		23
88.1	90.2						90.8		24
188,119	11,774,350	10,400,282	862,538	94,939	767,599	511,530	625,226	151,627	25
186,048	11,770,090	10,399,363	860,217	94,739	765,478	510,510	621,682	150,361	26
2,071	4,260	919	2,321	200	2,121	1,020	3,544	1,246	27
571,321	3,280,445						386,759		28
574,955	1,411,424						476,998		29
-67.1	261.1						61.7		30
8.65	76.89	135.55	14.69	3.04	27.88	28.93	8.34	6.39	31
22.92	45.91						6.12		32
22.43	12.14						5.46		33
8.98	92.72	179.30	16.07	3.52	28.73	33.44	9.65	8.61	34
191,149	12,421,405	10,643,837	1,266,038	97,439	1,168,599	511,530	626,390	152,174	35
8.68	68.76	138.42	14.78	2.98	22.06	28.27	8.17	6.02	36
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
86	2	176	6	51	5	71	1	34	37
19,948	(3)	122,532	11,869	57,262	11,769	52,528	(3)	25,972	(3)
13,607	(3)	177,616	8,175	139,361	8,125	19,332	(3)	6,072	(3)
0.68	(3)	1.45	0.69	2.43	0.69	0.37	(3)	0.23	(3)
6,093		51,800	7,715	32,067	7,715	5,116		50	
1.35		0.81	0.66	0.63	0.66	0.78		0.25	
4,900		78,954	11,690	65,659	11,690	6,518		200	
1.24		0.66	0.66	0.49	0.66	0.78		0.25	
3,534		44,933		31,966					
		739,000		309,000					
63	5	151	3	58	3	37		9	
14,675	148	91,576	11,743	58,004	11,743	24,497		1,425	
30,961	198	487,262	21,210	287,581	21,210	182,118		3,502	
2.1	1.3	5.3	1.8	5.0	1.8	7.4		2.5	
0.49	1.52	0.62	0.68	0.64	0.68	0.52		0.42	
0.23	1.13	0.12	0.38	0.13	0.38	0.07		0.17	
4		3		3					
1,197		68,073		68,073					
1,118		50,632		50,632					
		14,787		14,787					
635		2,470		2,470					

³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER (IX)—Continued				
	Snake River (IX-B)—Continued				Independent intrastate basins in Idaho
	Lower Snake River—Continued				
	Intrastate tributaries in Idaho	Intrastate tributaries in Oregon	Intrastate tributaries in Washington		
IRRIGATED UNITS AND AREAS					
1	Irrigated units ⁶.....1939..number.....	15,092	2,355	338	758
2	Area irrigated.....1939..acres.....	686,001	192,367	4,570	74,939
3	(a) Cropland harvested.....1939..acres.....	547,952	156,500	4,303	63,928
4	(b) Crop failure.....1939..acres.....	5,105	2,906	22	3,403
5	(c) Pasture.....1939..acres.....	132,944	32,961	245	7,608
6	Area irrigated.....1929..acres.....				69,920
7	.....1919..acres.....				108,351
8	Increase or decrease (-), 1929-1939.....percent.....				7.2
9	Irrigable area in enterprises.....1940..acres.....	898,830	253,428	5,068	107,218
10	.....1930..acres.....				155,960
11	.....1920 ² ..acres.....				246,531
12	Excess of irrigable area over the area irrigated.....1940..acres.....	212,829	61,061	498	32,279
13	.....1930..acres.....				86,070
14	.....1920 ² ..acres.....				238,180
15	Area works were capable of supplying with water.....1940..acres.....	782,597	227,198	5,068	103,357
16	.....1930..acres.....				150,578
17	.....1920..acres.....				181,009
18	Increase or decrease (-), 1930-1940.....percent.....				-31.4
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	96,596	34,831	498	28,418
20	.....1930..acres.....				80,668
21	.....1920..acres.....				72,658
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	87.7	84.7	90.2	72.5
23	.....1929..percent.....				46.4
24	.....1919..percent.....				59.9
CAPITAL INVESTED TO JANUARY 1					
25	Total investment in irrigation enterprises.....1940..dollars.....	31,808,183	11,166,810	767,461	1,242,049
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	31,130,144	11,061,521	758,911	1,215,720
27	(b) Investment in water rights (reported).....1940..dollars.....	678,039	105,289	8,550	26,329
28	Total investment in irrigation enterprises.....1930..dollars.....				2,413,285
29	.....1920..dollars.....				3,801,739
30	Increase or decrease (-), 1930-1940.....percent.....				-48.5
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	40.64	49.15	151.43	12.02
32	.....1930..dollars.....				16.03
33	.....1920..dollars.....				21.00
34	Average investment per acre irrigated.....1939..dollars.....	46.37	58.05	167.93	16.57
35	Estimated final investment in existing enterprises.....1940..dollars.....	36,995,675	11,514,027	767,871	1,281,160
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	41.16	45.43	151.51	11.95
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	1,472	97	672	9
38	Area irrigated in these enterprises.....1939..acres.....	664,368	148,737	171,955	17,813
39	Cost of maintenance and operation.....1939..dollars.....	639,514	170,219	110,479	2,936
40	Average cost, per acre irrigated.....1939..dollars.....	0.96	1.14	0.64	0.16
41	Total annual charges (reported) ⁴.....1939..dollars.....	660,487	156,643	69,925	10,231
42	Average annual charge per acre irrigated.....1939..dollars.....	1.24	1.08	0.67	0.59
43	Area against which charges were assessed.....1939..acres.....	583,062	147,720	115,740	17,480
44	Average annual charge per acre assessed.....1939..dollars.....	1.13	1.06	0.60	0.59
45	Total charges collected ⁴.....1939..dollars.....	939,674	38,506	51,387	8,510
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	13,465,956	169,198	4,997,701	769,666
WATER DELIVERED TO IRRIGATORS, 1939					
47	Enterprises reporting water delivered.....1939..number.....	1,338	77	690	8
48	Area irrigated by these enterprises.....1939..acres.....	563,885	140,572	164,389	17,381
49	Water delivered.....1939..acre-feet.....	2,289,515	172,286	445,209	22,931
50	Average water delivered per acre irrigated.....1939..acre-feet.....	4.1	1.2	2.7	1.3
51	Average cost of water per acre irrigated.....1939..dollars.....	1.06	1.12	0.55	0.59
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.26	0.91	0.20	0.45
DRAINAGE OF IRRIGATED LAND					
53	Enterprises reporting land drained or needing drainage.....1939..number.....	109		8	1
54	Irrigable area in these enterprises.....1939..acres.....	394,413		56,658	(³) 2,370
55	Irrigated area in these enterprises.....1939..acres.....	306,577		44,093	(³) 1,757
56	Area for which drains have been installed.....1939..acres.....	172,894		20,607	(³)
57	Additional area needing drainage.....1939..acres.....	13,686		2,085	455

⁶Schedules called for "Number of farms," see explanation in text.

¹Data for the intrastate tributaries of the Klamath River are not shown separately but are included in the Klamath River total.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY 47

1940, 1930, 1920; AND IRRIGATED UNITS,^o MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

COLUMBIA RIVER (IX)—Continued										KLAMATH RIVER (X)					
Lower Columbia River (IX-C)															
Total	Direct (IX-C)	Walla Walla River (1)	Intrastate tributaries in Oregon	Intrastate tributaries in Washington	Total ¹	Direct (X)	Lost River (3)								
8,480	370	1,673	6,184	253	2,790	763	1,125							1	
299,703	7,034	37,596	242,617	12,456	271,038	95,090	81,296							2	
256,107	5,270	30,693	210,497	9,647	167,622	53,308	65,796							3	
5,707	56	570	4,831	250	1,624	947	575							4	
37,889	1,708	6,333	27,289	2,559	101,792	40,835	14,855							5	
		29,631	204,905		187,991	63,727	60,450							6	
		39,784	226,412		153,105	65,720	59,598							7	
		26.9	18.4		44.2	49.2	34.5							8	
459,806	11,933	46,443	386,969	14,461	384,003	120,374	109,517							9	
		36,088	350,736		316,239	122,584	77,170							10	
		54,614	498,183		362,793	128,763	194,748							11	
160,103	4,899	8,847	144,352	2,005	112,966	25,284	28,221							12	
		6,457	145,831		128,248	58,857	15,720							13	
		14,830	271,771		209,688	63,043	136,180							14	
357,284	9,001	45,001	289,439	13,843	310,560	106,598	98,847							15	
		31,526	276,897		264,949	98,922	75,857							16	
		47,745	339,296		205,374	76,075	95,304							17	
		42.7	4.5		17.2	7.8	30.3							18	
57,581	1,967	7,406	46,822	1,387	39,522	11,506	17,551							19	
		1,895	71,892		76,958	35,195	15,407							20	
		7,961	112,884		52,269	10,355	36,736							21	
83.9	78.1	83.5	83.8	90.0	87.3	89.2	82.2							22	
		94.0	74.0		71.0	64.4	79.7							23	
		83.3	66.7		74.5	86.4	61.5							24	
13,723,603	399,852	960,133	12,125,078	238,540	10,430,941	2,128,699	5,506,452							25	
13,510,363	398,131	892,701	11,985,386	234,145	10,206,193	2,098,726	5,361,854							26	
213,240	1,721	67,432	139,692	4,395	224,748	29,973	144,598							27	
		747,053	11,747,283		9,430,566	4,253,840	4,295,740							28	
		1,171,914	11,094,332		5,502,890	1,734,099	3,451,383							29	
		28.5	3.2		10.6	-50.0	28.2							30	
38.41	44.42	21.34	41.89	17.23	33.59	19.97	55.71							31	
		23.70	42.42		35.59	43.00	56.63							32	
		24.55	32.70		26.79	22.79	36.21							33	
45.79	56.85	25.54	49.98	19.15	38.49	22.39	67.73							34	
14,202,632	414,025	967,295	12,563,805	257,507	12,446,774	2,249,554	5,794,980							35	
30.89	34.70	20.83	32.47	17.81	32.41	18.69	52.91							36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
2,976	63	319	530	57	2,052	4	75	2	763	13	303	4	71	5	37
288,058	17,437	6,449	35,270	801	234,026	9,936	12,313	(3)	250,878	43,692	84,859	6,184	75,336	37,199	38
449,094	17,065	39,545	47,083	4,913	357,516	11,942	4,950	(3)	273,943	43,759	76,910	4,679	120,528	38,621	39
1.56	1.01	6.13	1.33	6.13	1.53	1.20	0.40	(3)	1.09	1.00	0.91	0.76	1.60	1.04	40
374,917	11,806	4,759	31,084		333,556	11,806	5,518		275,586	42,662	64,430	4,554	139,134	38,108	41
2.23	1.20	10.48	1.52		2.45	1.20	0.49		2.02	0.99	1.55	0.77	2.08	1.03	42
193,003	9,839	619	21,085		159,474	9,839	11,825		150,831	42,942	42,909	5,931	71,889	37,005	43
1.94	1.20	7.69	1.47		2.09	1.20	0.47		1.83	0.99	1.50	0.77	1.94	1.03	44
341,260	2,648	4,168	31,251		303,148		2,693		222,792	457	56,384	457	112,948		45
4,205,259	10,550		83,306		4,114,953		7,000		7,415,421	37,425	1,550,013		3,174,098	37,425	46
3,093	59	328	549	52	2,138	4	76	3	537	9	195	2	75	4	47
284,963	17,593	6,916	32,184	777	233,962	9,996	11,921	6,880	234,352	41,417	80,559	(3)	80,781	37,199	48
1,053,170	57,128	22,761	158,115	3,985	850,977	47,783	21,317	5,360	648,131	82,739	259,570	(3)	211,473	68,165	49
3.7	3.2	3.3	4.9	5.1	3.6	4.8	1.8	0.8	2.6	2.0	3.2	(3)	2.6	1.8	50
2.11	1.52	6.30	1.51	5.85	2.16	1.20	0.60	0.10	1.45	1.03	1.11	(3)	1.94	1.04	51
0.57	0.47	1.91	0.31	1.14	0.59	0.25	0.34	0.13	0.53	0.52	0.35	(5)	0.74	0.57	52
167		18	3		145		(3)	1	59		21		20		53
49,357		677	457		47,743		(3)		159,493		58,592		91,235		54
37,459		477	299		36,203		(3)		119,455		45,893		66,865		55
6,125		358	3		5,759		(3)		111,485		42,155		67,230		56
4,404		208	145		4,046		(3)		8,292		2,014		5,288		57

^oData are included only in totals because less than 3 enterprises reported in the 1940 Census.
¹Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
²Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, DELIVERED TO IRRIGATORS, AND DRAINAGE [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	PACIFIC OCEAN STREAMS (XI) (Exclusive of Gulf of California streams and Columbia and Klamath Rivers)							
	Streams north of the Columbia River		Streams between the Columbia and Klamath Rivers ¹		Streams between the Klamath River and San Francisco Bay		San Francisco Bay and tributaries other than Sacramento and San Joaquin Delta	
	(XI-A)	(XI-B)	(XI-C)	(XI-D)	(XI-E)	(XI-F)	(XI-G)	(XI-H)
IRRIGATED UNITS AND AREAS								
1	Irrigated units ².....1939..number.....	1,782	4,810	267	4,400			
2	Area irrigated.....1939..acres.....	22,486	71,895	8,229	116,592			
3	(a) Cropland harvested.....1939..acres.....	13,335	52,638	7,462	108,693			
4	(b) Crop failure.....1939..acres.....	4	97	57	1,856			
5	(c) Pasture.....1939..acres.....	9,147	19,160	710	5,953			
6	Area irrigated.....1929..acres.....	8,960	60,693	6,384	99,079			
7	.....1919..acres.....	6,160	40,703	3,466	76,947			
8	Increase or decrease (-), 1929-1939.....percent.....	151.0	18.5	28.9	17.6			
9	Irrigable area in enterprises.....1940..acres.....	44,930	88,277	11,184	165,735			
10	.....1930..acres.....	20,142	85,324	9,515	111,354			
11	.....1920 ³ ..acres.....	13,560	139,826	23,217	100,730			
12	Excess of irrigable area over the area irrigated.....1940..acres.....	22,444	16,362	2,955	49,233			
13	.....1930..acres.....	11,182	24,631	5,617	12,275			
14	.....1920 ³ ..acres.....	6,500	99,123	19,751	23,783			
15	Area works were capable of supplying with water.....1940..acres.....	40,932	84,754	10,950	163,185			
16	.....1930..acres.....	17,607	77,877	9,515	107,432			
17	.....1920..acres.....	9,860	56,469	14,823	86,779			
18	Increase or decrease (-), 1930-1940.....percent.....	132.5	8.8	15.1	51.9			
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	18,446	12,859	2,721	46,683			
20	.....1930..acres.....	8,647	17,184	3,131	8,353			
21	.....1920..acres.....	3,700	15,766	11,357	9,832			
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	54.9	84.8	75.2	71.4			
23	.....1929..percent.....	50.9	77.9	67.1	92.2			
24	.....1919..percent.....	62.5	72.1	23.4	86.7			
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars.....	1,043,463	5,305,670	418,622	9,346,396 ⁴			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	1,038,050	5,275,988	417,931	9,331,250			
27	(b) Investment in water rights (reported).....1940..dollars.....	5,413	29,682	691	15,146			
28	Total investment in irrigation enterprises.....1930..dollars.....	296,126	5,230,947	600,089	9,405,139			
29	.....1920..dollars.....	94,010	1,975,189	687,555	4,940,061			
30	Increase or decrease (-), 1930-1940.....percent.....	252.4	1.4	-30.2	-0.6			
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	25.49	62.60	38.23	57.27			
32	.....1930..dollars.....	16.82	67.17	63.07	87.55			
33	.....1920..dollars.....	9.53	34.98	46.38	56.93			
34	Average investment per acre irrigated.....1939..dollars.....	46.41	73.80	50.87	80.23			
35	Estimated final investment in existing enterprises.....1940..dollars.....	1,249,477	5,424,354	446,961	9,412,904			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	27.81	61.45	39.96	56.79			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Sup.	Primary	Sup.	Primary	Sup.	
		Enterprises		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation.....1939..number.....	727	1	877	.....	234	2,568	3
38	Area irrigated in these enterprises.....1939..acres.....	22,331	(⁵)	69,730	(⁵)	7,713	114,041	569
39	Cost of maintenance and operation.....1939..dollars.....	76,373	(⁵)	210,632	(⁵)	46,582	887,812	3,791
40	Average cost, per acre irrigated.....1939..dollars.....	3.42	(⁵)	3.02	(⁵)	6.04	7.79	6.67
41	Total annual charges (reported) ⁶.....1939..dollars.....	67,775	.....	213,245	.....	1,250	167,534	.....
42	Average annual charge per acre irrigated.....1939..dollars.....	4.63	.....	4.44	.....	3.63	9.45	.....
43	Area against which charges were assessed.....1939..acres.....	25,028	.....	52,436	.....	344	18,074	.....
44	Average annual charge per acre assessed.....1939..dollars.....	2.71	.....	4.07	.....	3.63	9.27	.....
45	Total charges collected ⁵.....1939..dollars.....	51,757	.....	271,460	.....	.....	4,752	.....
46	Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	235,340	.....	1,236,206	.....	.....	19,795	.....
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	696	1	908	1	245	2,643	2
48	Area irrigated by these enterprises.....1939..acres.....	19,366	(⁵)	66,826	(⁵)	7,767	115,523	(⁵)
49	Water delivered.....1939..acre-feet.....	47,962	(⁵)	211,659	(⁵)	13,667	192,418	(⁵)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.5	(⁵)	3.2	(⁵)	1.8	1.7	(⁵)
51	Average cost of water per acre irrigated.....1939..dollars.....	5.38	(⁵)	370	(⁵)	.....	8.22	(⁵)
52	Average cost of water per acre-foot delivered.....1939..dollars.....	2.17	(⁵)	1.17	(⁵)	3.43	4.93	(⁵)
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....	147	.....	26	.....	9	38	.....
54	Irrigable area in these enterprises.....1939..acres.....	6,008	.....	13,325	.....	526	15,973	.....
55	Irrigated area in these enterprises.....1939..acres.....	4,341	.....	12,379	.....	310	11,096	.....
56	Area for which drains have been installed.....1939..acres.....	1,018	.....	651	.....	52	7,724	.....
57	Additional area needing drainage.....1939..acres.....	278	.....	333	.....	24	5,212	.....

⁴ Schedules called for "Number of farms," see explanation in text.
⁵ Data for 1 enterprise on the Illinois River in California are included.
⁶ Data for the intrastate tributaries of the Sacramento River are not shown separately but are included in the Sacramento River total.
⁷ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1940, 1930, 1920; AND IRRIGATED UNITS,* MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER OF IRRIGATED LAND, 1939—Continued
and Arkansas and Louisiana]

PACIFIC OCEAN STREAMS (XI)—Continued (Exclusive of Gulf of California streams and Columbia and Klamath Rivers)				SACRAMENTO-SAN JOAQUIN DELTA AND TRIBUTARY STREAMS (XII)									
Pacific Ocean streams south of San Francisco Bay (XI-E)					Sacramento River								
Total	Streams between San Francisco Bay and Santa Maria River (XI-Ea)	Santa Maria River and streams south (XI-Eb)	Total (XII)	Delta direct (1)	Total ²	Direct (2)+(15)+(24)							
45,135	3,453	41,682	66,539	1,904	15,758	3,291	1						
813,182	176,954	636,228	3,383,882	245,691	779,368	298,879	2						
801,179	174,182	626,997	3,082,169	238,636	676,523	287,546	3						
3,319	927	2,392	11,521	1,012	5,468	837	4						
8,694	1,845	6,849	300,192	6,043	97,377	10,496	5						
773,623			3,157,132		696,924	277,407	6						
564,254			2,744,644		640,950	194,397	7						
5.1			7.5		11.8	7.7	8						
1,151,476	226,582	924,894	5,660,337	337,304	1,708,003	652,877	9						
1,033,942			5,393,666		1,554,698	578,410	10						
865,464			5,489,735		1,204,769	439,169	11						
338,294	49,628	288,666	2,286,455	91,613	928,635	353,998	12						
260,319			2,236,534		857,774	301,003	13						
302,210			2,755,091		563,819	244,772	14						
1,123,176	218,409	904,767	5,132,597	333,376	1,392,185	632,646	15						
982,076			4,795,836		1,176,770	530,983	16						
685,110			4,113,524		864,605	296,748	17						
16.7			7.0		18.3	19.1	18						
309,994	41,455	268,539	1,738,715	87,685	612,817	333,767	19						
188,453			1,638,704		479,846	253,576	20						
120,856			1,368,880		223,665	102,351	21						
72.4	81.0	70.3	66.1	73.7	56.0	47.2	22						
80.4			65.8		59.2	52.2	23						
82.4			66.7		74.1	65.5	24						
104,204,397	10,755,279	93,449,118	171,004,939	5,809,300	46,058,587	16,395,878	25						
96,516,782	10,743,132	85,773,650	167,409,547	5,807,746	44,633,577	16,311,224	26						
7,687,615	12,147	7,675,468	3,595,392	1,554	1,425,010	84,654	27						
98,090,593			164,628,093		48,750,541	17,502,425	28						
55,595,858			100,527,759		28,833,106	11,830,374	29						
6.2			3.9		-5.5	-6.3	30						
92.78	49.24	103.29	33.32	17.43	33.08	25.92	31						
101.96			34.33		41.43	32.96	32						
81.15			24.44		33.35	39.87	33						
128.14	60.78	146.88	50.39	23.64	59.10	54.86	34						
105,379,863	11,167,183	94,212,680	177,372,167	5,873,307	49,010,703	16,556,184	35						
91.52	49.29	101.86	31.34	17.41	28.69	25.36	36						
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.						
Enterprises		Enterprises		Enterprises		Enterprises							
8,407	178	2,562	28	5,845	150	16,122	7,261	684	11	4,704	59	781	7
753,397	51,302	173,537	2,320	579,660	48,982	3,246,911	384,497	170,538	22,950	743,682	16,164	291,775	1,075
6,342,202	256,025	1,158,765	16,445	5,183,437	239,580	11,642,315	1,357,520	504,342	6,701	2,624,323	12,144	1,010,414	2,569
8.42	4.99	6.68	7.09	8.94	4.89	3.59	3.53	2.96	0.29	3.93	0.75	3.46	2.38
4,644,323	215,902	56,102		4,588,221	215,902	5,990,229	34,892	315,488	5,329	1,361,910	15,360	502,157	
11.85	5.48	5.12		12.05	5.48	2.89	0.59	5.07	0.23	3.14	1.24	2.43	
462,339	39,718	28,690		433,359	39,718	3,034,228	55,230	87,196	22,743	843,583	12,387	276,215	
10.05	5.44	1.94		10.59	5.44	1.97	0.63	3.62	0.23	1.61	1.24	1.82	
3,467,817	381,106	40,354		3,427,463	381,106	5,163,621	22,140	282,500	5,323	1,211,911	15,400	476,378	
15,534,986	1,347,129	10,334		15,524,652	1,347,129	56,289,636	139,000	2,191,863		13,277,819	139,000	5,537,244	
4,628	180	2,614	30	6,014	150	16,169	7,313	772	8	4,751	55	795	7
802,032	34,607	176,210	2,327	625,822	32,280	3,202,911	377,491	210,047	22,943	713,535	16,264	287,962	1,075
1,508,811	63,751	370,444	5,454	1,138,367	58,297	8,756,250	693,453	493,991	21,184	2,522,009	20,679	1,194,556	3,087
1.9	1.8	2.1	2.3	1.8	1.8	2.7	1.8	2.4	0.9	3.5	1.3	4.1	2.9
9.60	7.12	6.66	7.09	10.43	7.12	4.02	3.73	3.28	0.28	3.61	1.63	2.97	2.38
5.10	3.86	3.17	3.02	5.73	3.94	1.47	2.03	1.40	0.31	1.02	1.28	0.71	0.83
385		148		217		452		196		155		51	
80,789		13,318		67,471		1,897,316		218,350		675,459		491,148	
60,687		11,786		48,901		1,181,659		158,807		273,956		213,341	
39,322		8,125		31,197		1,213,586		171,953		536,104		420,856	
3,595		1,350		2,245		60,237		9,522		22,804		1,887	

⁴ Revised.
⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁶ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁷ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 18.—DRAINAGE BASIN—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED UNITS,^a MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

[For the 17 western States and Arkansas and Louisiana]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA AND TRIBUTARY STREAMS (XII)—Continued					
		Sacramento River—Continued				Intrastate tributaries in California	
		Pit River			Goose Lake		
		Total	Direct	(3)			(4)
IRRIGATED UNITS AND AREAS							
1	Irrigated units ^b.....1939..number.....	746	487	259	48,877		
2	Area irrigated.....1939..acres.....	104,361	76,226	28,155	2,368,823		
3	(a) Crop land harvested.....1939..acres.....	78,537	54,252	24,285	2,167,010		
4	(b) Crop failure.....1939..acres.....	2	1	1	5,041		
5	(c) Pasture.....1939..acres.....	25,842	21,973	3,869	196,772		
6	Area irrigated.....1929..acres.....	69,768			2,460,208		
7	.....1919..acres.....	89,984			2,103,694	
8	Increase or decrease (-), 1929-1939.....percent.....	49.6			-3.7		
9	Irrigable area in enterprises.....1940..acres.....	146,114	98,305	47,809	3,615,030		
10	.....1930..acres.....	94,151			3,838,968	
11	.....1920 ¹ ..acres.....	129,984			4,294,966	
12	Excess of irrigable area over the area irrigated.....1940..acres.....	41,733	22,079	19,654	1,246,207		
13	.....1930..acres.....	24,383			1,378,760	
14	.....1920 ¹ ..acres.....	40,000			2,191,272	
15	Area works were capable of supplying with water.....1940..acres.....	137,970	91,070	46,900	3,407,036		
16	.....1930..acres.....	63,058			3,319,196	
17	.....1920..acres.....	107,478			3,248,919	
18	Increase or decrease (-), 1930-1940.....percent.....	66.1			-5.9		
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	33,589	14,844	18,745	1,038,213		
20	.....1930..acres.....	13,280			1,158,858	
21	.....1920..acres.....	17,494			1,145,225	
22	Proportion which area irrigated is of area works ¹ were capable of supplying with water.....1939..percent.....	75.7	83.7	60.0	69.5		
23	.....1929..percent.....	84.0			68.0	
24	.....1919..percent.....	83.7			64.8	
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	2,933,799	1,313,605	1,620,194	119,137,052		
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	2,868,688	1,257,865	1,610,823	116,908,224		
27	(b) Investment in water rights (reported).....1940..dollars.....	65,111	55,740	9,371	2,168,828		
28	Total investment in irrigation enterprises.....1930..dollars.....	982,284			115,877,552		
29	.....1920..dollars.....	799,913			71,691,653	
30	Increase or decrease (-), 1930-1940.....percent.....	198.7			2.8		
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	21.26	14.42	34.55	34.97		
32	.....1930..dollars.....	11.83			32.02	
33	.....1920..dollars.....	7.44			22.07	
34	Average investment per acre irrigated.....1939..dollars.....	28.11	17.23	57.55	50.29		
35	Estimated final investment in existing enterprises.....1940..dollars.....	2,997,469	1,374,030	1,623,439	122,488,157		
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	20.51	13.98	33.96	33.88		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	406	2	277	2	129	
38	Area irrigated in these enterprises.....1939..acres.....	93,201	(2)	67,743	(2)	25,458	10,734
39	Cost of maintenance and operation.....1939..dollars.....	52,970	(2)	36,100	(2)	16,870	2,332,681
40	Average cost, per acre irrigated.....1939..dollars.....	0.57	(2)	0.53	(2)	0.66	8,513,650
41	Total annual charges (reported) ³.....1939..dollars.....	24,577	15,360	12,535	15,360	12,042	4,312,831
42	Average annual charge per acre irrigated.....1939..dollars.....	0.98	1.24	0.73	1.24	1.51	2.73
43	Area against which charges were assessed.....1939..acres.....	31,598	12,387	23,223	12,387	8,375	2,103,449
44	Average annual charge per acre assessed.....1939..dollars.....	0.78	1.24	0.54	1.24	1.44	2.05
45	Total charges collected ³.....1939..dollars.....	21,001	15,400	6,970	15,400	14,031	3,669,210
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	61,360	139,000	45,000	139,000	16,360	40,819,954
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	343	2	222	2	121	10,616
48	Area irrigated by these enterprises.....1939..acres.....	88,774	(2)	65,299	(2)	23,475	2,279,329
49	Water delivered.....1939..acre-feet.....	210,804	(2)	146,868	(2)	63,936	5,740,250
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	(2)	2.2	(2)	2.7	2.5
51	Average cost of water per acre irrigated.....1939..dollars.....	0.61	(2)	0.57	(2)	0.71	4.21
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.26	(2)	0.25	(2)	0.26	1.67
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	38		35		3	101
54	Irrigable area in these enterprises.....1939..acres.....	13,474		13,244		230	1,003,507
55	Irrigated area in these enterprises.....1939..acres.....	10,550		10,411		139	748,896
56	Area for which drains have been installed.....1939..acres.....	8,400		8,400			505,529
57	Additional area needing drainage.....1939..acres.....	398		340		58	27,911

^a Schedules called for "Number of farms," see explanation in text.

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

[For the 17 western States and Arkansas and Louisiana]

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)</small>	TOTAL (19 States) ¹	Red River (of the North) and tributaries in North Dakota (I)	MISSOURI RIVER (II)					
			Total ²	Direct	Yellowstone River (II-A)			
					Total	Direct	Clarks Fork	
							Total ³	Direct	(6)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1 Enterprises.....1940..number.....	91,815	13	12,126	593	2,255	468	271	105
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	306	614	491	203	603	706	409	484
3 Diversion dams.....1940..total number.....	34,544	5	8,897	473	1,943	379	280	132
4 1930..total number.....	21,947		5,006	15	1,000	23	49	49
5 1920..total number.....	23,894		5,973	45	1,014	14	105	101
6 (a) Concrete and masonry.....1940..number.....	3,666		673		153	21	27	3
7 (b) Timber.....1940..number.....	4,595		1,046	55	240	54	72	36
8 (c) Earth and rock.....1940..number.....	18,032	5	5,351	233	955	158	86	34
9 (d) Other, mixed, and not reported.....1940..number.....	8,251		1,627	159	595	146	95	59
10 Main canals and laterals.....1940..total length, miles.....	127,533.7	23.9	31,131.1	1,189.2	8,162.6	1,812.7	823.3	230.9
11 1930..total length, miles.....	126,802	1	30,612	217	8,015	1,086	792	775
12 1920..total length, miles.....	159,864		39,599	665	8,933	1,167	1,021	942
13 (a) Earth.....1940..length, miles.....	122,857	23	30,575	1,182	8,107	1,797	822	230
14 (b) Lined.....1940..length, miles.....	4,676.7	0.9	256.1	7.2	55.6	15.7	1.3	0.9
15 1940..capacity, c.f.s. ⁴	612,021	365	148,255	4,673	32,036	7,785	3,045	1,414
16 1930..capacity, c.f.s. ⁴	547,314	2	130,173	1,613	29,539	5,949	4,152	4,108
17 1920..capacity, c.f.s. ⁴	631,079		167,991	1,617	32,064	5,508	3,353	3,177
18 Pipe lines ⁵.....1940..total length, miles.....	28,584.9	1.9	400.6	17.3	70.3	15.3	1.4	1.0
19 1930..total length, miles.....	17,363.1	1.2	101.1	0.7	4.9	1.0	0.7	0.7
20 1920..total length, miles.....	8,878.3		89.5	4.3	13.1	2.0		
21 (a) Concrete.....1940..length, miles.....	18,692.2	0.1	71.8	0.5	11.9	2.7	0.4	0.4
22 (b) Metal.....1940..length, miles.....	8,027.5	1.8	227.6	15.1	39.9	8.4	0.8	0.4
23 (c) Wood-stave.....1940..length, miles.....	1,236.5		37.8	1.7	13.8	2.4	0.2	0.2
24 (d) Other.....1940..length, miles.....	628.7		63.4		4.7	1.8		
25 Storage dams.....1940..total number.....	4,607	2	1,237	53	195	60	6	4
26 1930..total number.....	2,949		734	10	86	2	1	
27 1920..total number.....	3,931		1,246	22	160	11	5	5
28 (a) Concrete and masonry.....1940..number.....	406		33	1	3			
29 (b) Earth and rock.....1940..number.....	3,785	2	1,119	49	185	57	4	4
30 (c) Other, mixed, and not reported.....1940..number.....	493		85	3	7	3	2	
31 Reservoirs.....1940..total number.....	7,709	72	1,332	59	205	61	6	4
32 (a) 1-99 acre-feet capacity.....1940..number.....	5,749		747	44	117	37	3	3
33 (b) 100-999 acre-feet capacity.....1940..number.....	1,107	2	336	13	49	18		
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	850		249	2	39	6	3	1
35 1940..total capacity, ac.-ft. ⁶	33,787,382	720	6,715,271	13,595	945,935	42,364	32,568	1,568
36 1930..total capacity, ac.-ft. ⁶	5,122		743	8	90	2	1	
37 1920..total capacity, ac.-ft. ⁶	24,506,590		4,043,135	1,466	575,611	1,700	4,000	
38 Wells, flowing.....1940..number.....	4,641		79	13	20			
39 1930..number.....	4,811		21		6		1	1
40 1920..number.....	4,606		41		21	3		
41 1940..yield, g.p.m. ⁷	555,073		9,915	3,585	2,494			
42 1930..yield, g.p.m. ⁷	609,367		7,218		2,265		100	100
43 1920..yield, g.p.m. ⁷	935,057		4,271		194	69		
44 Wells, pumped.....1940..number.....	68,279		4,760	39	28	6		
45 1930..number.....	56,729		1,071		4			
46 1920..number.....	32,094		385		6			
47 1940..yield, g.p.m. ⁷	43,355,271		3,633,499	10,565	6,613	2,238		
48 1930..yield, g.p.m. ⁷	32,487,120		613,350		555			
49 1920..yield, g.p.m. ⁷	18,396,549		171,464		1,005			
50 Pumping plants.....1940..total number.....	78,293	16	5,738	190	229	114	4	4
51 1930..total number.....	59,344	8	1,198	16	55	27	2	2
52 Prime movers.....1940..capacity, hp.....	1,762,687	274	117,173	7,980	9,497	7,397	86	86
53 1930..capacity, hp.....	1,263,419	153	25,788	716	3,284	2,962	12	12
54 1920..capacity, hp.....	745,971		1,338	6,029	3,965	2,501	10	10
55 (a) Electric.....1940..number.....	50,433	1	1,338	32	32			
56 1940..capacity, hp.....	1,116,024	(⁸)	26,658	5,071	4,313	4,125		
57 (b) Internal-combustion.....1940..number.....	23,215	15	4,285	143	181	94	4	4
58 1940..capacity, hp.....	588,123	266	88,287	2,792	4,224	3,224	86	86
59 (c) Other.....1940..number.....	1,645		115	5	16	9		
60 1940..capacity, hp.....	56,540		2,228	117	960	949		
61 Pumps.....1940..total number.....	78,528	16	5,994	206	244	122	4	4
62 1930..number.....	61,445	8	1,279	16	68	36	2	2
63 1920..number.....	33,804		689	45	120	45	2	2
64 1940..capacity, g.p.m. ⁹	75,802,968	26,045	5,733,010	411,389	532,157	415,724	3,995	3,995
65 1930..capacity, g.p.m. ⁹	57,244,859	20,400	1,943,545	46,920	273,074	245,249	1,410	1,410
66 1920..capacity, g.p.m. ⁹	36,275,005		800,218	168,725	182,508	127,662	470	470
67 (a) Centrifugal.....1940..number.....	34,447	12	3,562	178	210	110	4	4
68 1940..capacity, g.p.m. ⁹	42,036,392	19,975	3,537,513	360,698	462,759	353,531	3,995	3,995
69 1940..average capacity, g.p.m. ⁹	1,220		963	2,026	2,204	3,214	999	999
70 (b) Turbine.....1940..number.....	38,204	7	2,202	17	11	6		
71 1940..capacity, g.p.m. ⁹	30,746,028	3,000	2,096,177	47,612	43,600	38,290		
72 1940..average capacity, g.p.m. ⁹	805	3,000		2,801	3,964	6,362		
73 (c) Plunger.....1940..number.....	4,887	1	128	9	15	1		
74 1940..capacity, g.p.m. ⁹	299,420	(⁸)	7,701	429	548	(⁸)		
75 1940..average capacity, g.p.m. ⁹	61	(⁸)	60	48	37	(⁸)		
76 (d) Other.....1940..number.....	990	2	102	2	8	5		
77 1940..capacity, g.p.m. ⁹	2,721,158	(⁸)	81,619	(⁸)	25,250	23,900		
78 Pumping lift, from all sources.....1940..average, feet.....	51	21	32	23	22	19	22	22
79 1930..average, feet.....	51	13	26	31	19	22	9	9
80 1920..average, feet.....	41		22	32	25	24	8	8
81 from pumped wells.....1940..average, feet.....	35		35	27	44	16		
82 from surface sources.....1940..average, feet.....	28	21	20	22	19	22		

¹ For the 17 western States and Arkansas and Louisiana. ² Data for 2 enterprises in Osage River Drainage Basin, Kans., are included with Missouri River total. ³ Data for the intrastate tributaries of the Clarks Fork are not shown separately but are included in the Clarks Fork total. ⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁵ Includes siphons and farm pipe lines reported. ⁶ Three reservoirs reported with no capacity. ⁷ Data for less than 3 enterprises shown with permission of the enterprises involved. ⁸ Total capacity of all reservoirs regardless of size. ⁹ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER (II)—Continued									
	Yellowstone River (II-A)—Continued									
	Big Horn River			Tongue River		Powder River			Intrastate tributaries in Montana	
	Total ⁵	Direct (8)	Shoshone River (17)	Little Horn River (18)	Total ⁶	Direct (20)	Total ⁷	Direct (22)		
ENTERPRISES AND IRRIGATION WORKS										
JANUARY 1										
1	Enterprises.....1940..number.....	737	108	80	32	245	174	234	44	300
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	897	1,702	1,783	1,025	379	314	338	212	286
3	Diversion dams.....1940..total number.....	491	75	26	25	217	175	259	35	317
4	.....1930..total number.....	308	23	24	8	84	34	62	9	474
5	.....1920..total number.....	311	55	38	2	183	43	152	18	249
6	(a) Concrete and masonry.....1940..number.....	49	6	8	.....	29	20	6	.....	21
7	(b) Timber.....1940..number.....	34	6	5	1	15	10	11	.....	54
8	(c) Earth and rock.....1940..number.....	243	30	6	17	129	107	223	35	116
9	(d) Other, mixed, and not reported.....1940..number.....	165	33	9	7	44	38	19	.....	126
10	Main canals and laterals.....1940..total length, miles.....	3,485.5	582.7	822.1	201.0	690.1	466.6	575.4	53.3	775.6
11	.....1930..total length, miles.....	3,605	544	877	44	500	163	385	26	1,637
12	.....1920..total length, miles.....	3,441	606	775	43	708	266	804	46	1,992
13	(a) Earth.....1940..length, miles.....	3,463	579	820	201	687	464	572	53	766
14	(b) Lined.....1940..length, miles.....	22.5	3.7	9.1	.....	3.1	2.6	3.4	0.3	9.6
15	.....1940..capacity, c.f.s. ⁸	13,298	2,381	2,611	404	2,943	1,856	2,255	211	2,709
16	.....1930..capacity, c.f.s. ⁸	12,194	1,703	3,529	30	1,482	629	1,025	118	5,337
17	.....1920..capacity, c.f.s. ⁹	9,877	2,387	3,079	46	2,508	1,333	2,620	183	8,198
18	Pipe lines ¹⁰.....1940..total length, miles.....	45.1	10.1	15.3	3.1	1.7	0.7	5.8	2.5	1.0
19	.....1930..total length, miles.....	2.2	.....	1.0	.....	1.0	.....	.....	.....	.....
20	.....1920..total length, miles.....	10.0	4.5	2.5	0.5	0.3	0.1	0.3	.....	0.5
21	(a) Concrete.....1940..length, miles.....	8.8	.....	7.3	.....	0.2	.....	.....	.....	.....
22	(b) Metal.....1940..length, miles.....	23.5	8.4	3.6	3.1	1.5	0.6	5.6	2.5	0.1
23	(c) Wood-stave.....1940..length, miles.....	10.2	1.5	2.4	.....	.....	.....	0.1	.....	0.9
24	(d) Other.....1940..length, miles.....	2.8	0.2	2.0	.....	.....	.....	0.1	.....	.....
25	Storage dams.....1940..total number.....	51	12	7	9	35	20	37	18	6
26	.....1930..total number.....	29	.....	4	2	11	5	12	3	31
27	.....1920..total number.....	31	2	9	.....	37	12	32	13	44
28	(a) Concrete and masonry.....1940..number.....	1	.....	1	.....	1	1	1	.....	.....
29	(b) Earth and rock.....1940..number.....	49	12	6	9	34	19	35	18	6
30	(c) Other, mixed, and not reported.....1940..number.....	1	.....	.....	.....	.....	.....	1	.....	.....
31	Reservoirs.....1940..total number.....	60	19	8	11	32	19	39	19	7
32	(a) 1-99 acre-feet capacity.....1940..number.....	25	13	2	5	23	17	25	14	4
33	(b) 100-999 acre-feet capacity.....1940..number.....	14	6	1	1	3	1	11	5	3
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	21	.....	5	5	6	1	3	.....	.....
35	.....1940..total capacity, ac.-ft. ¹¹	762,306	1,729	463,515	30,606	73,989	60,695	33,554	1,554	1,154
36	.....1930..total capacity, ac.-ft.....	41	2	5	3	13	3	13	4	20
37	.....1920..total capacity, ac.-ft.....	502,077	42	459,570	206	47,554	35	4,984	60	15,296
38	Wells, flowing.....1940..number.....	14	10	.....	.....	1	1	5	5	.....
39	.....1930..number.....	4	2	.....	.....	.....	.....	1	1	.....
40	.....1920..number.....	1	.....	.....	.....	.....	.....	17	15	.....
41	.....1940..yield, g.p.m.....	2,286	1,096	.....	.....	(12)	(12)	178	178	.....
42	.....1930..yield, g.p.m.....	1,965	950	.....	.....	.....	.....	200	200	.....
43	.....1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	125	119	.....
44	Wells, pumped.....1940..number.....	8	6	.....	.....	4	3	9	5	1
45	.....1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....	4
46	.....1920..number.....	1	1	.....	.....	2	.....	2	1	1
47	.....1940..yield, g.p.m.....	2,565	1,565	.....	.....	300	285	1,210	85	(12)
48	.....1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	555
49	.....1920..yield, g.p.m.....	950	950	.....	.....	.....	.....	15	10	40
50	Pumping plants.....1940..total number.....	42	20	3	2	42	33	22	10	5
51	.....1930..total number.....	5	5	.....	.....	7	6	3	.....	11
52	Prime movers.....1940..capacity, hp.....	952	246	8	(12)	581	454	393	200	88
53	.....1930..capacity, hp.....	83	83	.....	.....	118	96	93	.....	76
54	.....1920..capacity, hp.....	406	357	.....	.....	361	286	570	245	117
55	(a) Electric.....1940..number.....	14	11	2	.....	7	2	.....	.....	.....
56	.....1940..capacity, hp.....	131	105	(12)	.....	57	(12)	.....	.....	.....
57	(b) Internal-combustion.....1940..number.....	27	9	.....	2	34	30	17	5	5
58	.....1940..capacity, hp.....	819	141	.....	(12)	523	414	385	192	88
59	(c) Other.....1940..number.....	1	.....	1	.....	1	1	5	5	.....
60	.....1940..capacity, hp.....	(12)	.....	(12)	.....	(12)	(12)	8	8	.....
61	Pumps.....1940..total number.....	42	20	2	2	42	33	29	11	5
62	.....1930..number.....	5	5	.....	.....	7	6	4	.....	14
63	.....1920..number.....	25	20	.....	.....	18	16	19	15	11
64	.....1940..capacity, g.p.m.....	52,023	15,615	520	(12)	37,140	34,470	19,735	12,930	3,540
65	.....1930..capacity, g.p.m.....	4,240	4,240	.....	.....	6,335	5,900	6,505	.....	9,335
66	.....1920..capacity, g.p.m.....	11,900	8,840	.....	.....	19,275	14,575	14,670	14,265	8,631
67	(a) Centrifugal.....1940..number.....	36	15	1	2	36	28	19	6	5
68	.....1940..capacity, g.p.m.....	50,538	14,150	(12)	(12)	33,140	30,485	18,015	12,945	3,540
69	.....1940..average capacity, g.p.m.....	1,404	943	(12)	(12)	921	1,089	948	2,141	708
70	(b) Turbine.....1940..number.....	2	2	.....	.....	1	1	2	.....	.....
71	.....1940..capacity, g.p.m.....	(12)	(12)	.....	.....	(12)	(12)	(12)	.....	.....
72	.....1940..average capacity, g.p.m.....	(12)	(12)	.....	.....	(12)	(12)	(12)	.....	.....
73	(c) Plunger.....1940..number.....	2	1	1	.....	4	3	8	5	.....
74	.....1940..capacity, g.p.m.....	(12)	(12)	(12)	.....	300	285	190	85	.....
75	.....1940..average capacity, g.p.m.....	(12)	(12)	(12)	.....	75	95	24	17	.....
76	(d) Other.....1940..number.....	2	2	.....	.....	1	1	.....	.....	.....
77	.....1940..capacity, g.p.m.....	(12)	(12)	.....	.....	(12)	(12)	.....	.....	.....
78	Pumping lift, from all sources.....1940..average, feet.....	28	31	30	(12)	17	17	36	61	12
79	.....1930..average, feet.....	9	9	.....	.....	12	12	54	.....	15
80	.....1920..average, feet.....	38	40	.....	.....	18	15	30	16	12
81	from pumped wells.....1940..average, feet.....	41	54	.....	.....	26	33	75	110	(12)
82	from surface sources.....1940..average, feet.....	25	23	30	(12)	16	15	13	12	16

¹Data for 1 enterprise in Koya Paha River Basin are included with Missouri River. ²Data for the intrastate tributaries of the Little Missouri River are not shown but are included in the Koya Paha River total. ³Data for the intrastate tributaries of the White River are not shown separately but are included in the White River total. ⁴Data for the intrastate tributaries of the Tongue River total. ⁵Data for the intrastate tributaries of the Powder River are not shown separately but are included in the Powder River total. (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ¹⁰Includes siphons and farm Census.

CENSUS OF IRRIGATION — UNITED STATES SUMMARY

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WORKS, 1940, 1930, AND 1920—Continued
and Arkansas and Louisiana]

MISSOURI RIVER (II)—Continued														
Little Missouri River				Cheyenne River						White River		Niobrara River ¹	James River	
Total ²	Direct	Total	Direct ³	Belle Fourche River			South Fork Cheyenne River		Intrastate tributary in South Dakota (Cherry Creek) (47)	Total ⁴	Direct	Niobrara River ¹	James River	
				Total ⁵	Direct	Redwater Creek (42)	Total ⁶	Direct						
	(31)		(40)		(41)			(43)		(49)		(51)	(54)	
31	21	289	5	83	49	34	185	85	15	52	43	89	10	1
87	88	445	161	1,042	1,640	181	219	207	9	326	369	149	35	2
17	15	300	10	67	42	25	205	71	18	46	34	78		3
14		116		57			58	50		22		18		4
21		204		24			58	47		63		30		5
		14		7	6	1	7	7		2	2	14		6
		20		8		8	12	1		3	3	3		7
7	5	231	10	41	31	10	162	57	18	35	25	37		8
10	10	35		11	5	6	24	11		6	4	24		9
19.0	15.0	1,075.3	5.0	795.8	740.7	55.1	288.5	129.1	6.0	72.0	68.0	98.2		10
5		1,159		973			185	149		77		48		11
77		1,457	1,148	94			215	170		197		128		12
19	15	1,064	5	786	732	54	267	129	6	72	68	98		13
		11.3		8.8	8.7	1.1	1.5	0.1				0.2		14
98	65	1,962	13	1,019	862	157	915	307	15	255	234	246	17	15
54		2,060		1,474			585	536		100		43		16
160		6,438	5,210	397			831	806		237		212		17
0.3	0.2	9.7		7.5	7.0	0.5	1.6	0.7	0.6	20.0	18.7	3.0	1.4	18
2.0		8.4		7.2			0.2	0.2		5.5				19
0.1		7.0	6.8				0.2	0.2		0.4		0.1		20
		5.7		5.7	5.7							1.1		21
0.3	0.2	2.7		1.0	0.9	0.1	1.1	0.2	0.6	12.2	11.2	0.2	1.4	22
		0.7		0.2	0.2		0.5	0.5		7.3	7.0	1.2		23
		0.6		0.6	0.2	0.4				0.5	0.5	0.5		24
16	8	84		24	20	4	58	36	2	11	9	5	1	25
12		25		6			16	10		3		11		26
24		137	95	25			17	15		23		12		27
		1		1										28
15	7	80		21	18	3	57	36	2	9	7	5	1	29
1	1	3		2	1	1	1			2	2			30
21	9	95		28	22	6	64	37	3	12	10	5	1	31
16	6	78		25	19	6	50	25	3	4	4	5	1	32
5	3	15		2	2		13	11		5	3			33
		2		1	1		1	1		3	3			34
1,857	1,394	204,511		197,747	197,697	50	6,759	5,337	5	15,571	14,591	132	(12)	35
4		14		2			12	6		1		3		36
120		205,433		203,040			2,330	2,057		12,000		675		37
		9		6	2	4	3	3						38
		9		8			1	1						39
		4	4											40
		2,100		1,810	(12)	1,750	230	230						41
		3,005		2,975			30	30						42
		2,750	2,750											43
		4		1	1		3	2		5	4	13	7	44
		2	1							2				45
		144		(12)	(12)		140	(12)		1,290	1,235	13,840	509	46
		2,800	800	2,000						2,200				47
														48
														49
7	7	47	6	12	12		28	25	1	33	18	28	14	50
		2		3			3	3						51
88	88	964	138	265	265		539	491	(12)	494	353	616	213	52
		80		22			58	58						53
176		292	173	103			16	16		53		8		54
		1		1										55
		(12)		(12)	(12)									56
7	7	44	6	9	9		28	25	1	32	17	28	11	57
88	88	830	138	151	151		539	491	(12)	462	321	616	147	58
		2		(12)	(12)					(12)	1			59
		48	5	13	13		29	26	1	33	18	29	15	60
		5		2			3	3						61
4		19	14	4			1	1		3		1		62
7,600	7,600	52,824	7,200	15,104	15,104		30,500	28,830	(12)	26,976	16,145	24,655	6,925	63
		3,580		1,360			2,220	2,220						64
8,000		14,441	9,550	3,891			1,100	1,100		4,000		480		65
		7	5	10	10		29	26	1	32	18	24	10	66
7,600	7,600	52,220	7,200	14,500	14,500		30,500	28,830	(12)	26,970	16,145	19,025	6,723	67
1,086	1,086	1,160	1,440	1,450	1,450		1,052	1,109	(12)	843	897	793	672	68
												4		69
												4,630	200	70
												1,158	50	71
														72
		(12)		(12)	(12)					(12)			(12)	73
		(12)		(12)	(12)					(12)			(12)	74
		(12)		(12)	(12)					(12)			(12)	75
		(12)		(12)	(12)					(12)			(12)	76
														77
15	15	16	16	18	18		16	16	(12)	31	30	31	17	78
		32		35			31	31						79
		17	16	20			10	10		35		8		80
		26		(12)	(12)		22			46	36	50	25	81
15	15	16	16	17	17		15	16	(12)	27	29	18	15	82

separately but are included in the Little Missouri River total. ²Data for Belle Fourche (North Fork) in South Dakota for 1920 are included with Cheyenne River Direct. Big Horn River are not shown separately but are included in the Big Horn River total. ³Data for the intrastate tributaries of the Tongue River are not shown separately. ⁴Data for the intrastate tributaries of the South Fork Cheyenne River are not shown separately but are included in the South Fork Cheyenne River total. ⁵Total capacity pipe lines reported. ⁶Total capacity of all reservoirs regardless of size. ⁷Data are included only in totals because less than 3 enterprises reported in the 1940

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		MISSOURI RIVER (II)—Continued									
		Platte River (II-B)									
		Total	Direct (II-B)	North Platte River (II-Ba)						Intrastate tributaries in Wyoming	Intrastate tributary in Nebraska (Blue Creek) (22)
				Total	Direct (II-Ba)	Laramie River		Total ²	Direct (16)		
				Total ²	Direct (16)						
ENTERPRISES AND IRRIGATION WORKS JANUARY 1											
1	Enterprises.....1940..number.....	6,075	1,434	1,569	855	299	123	387	28		
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	504	263	829	919	964	1,574	555	420		
3	Diversion dams.....1940..total number.....	3,371	13	2,157	777	562	223	812	6		
4	1930..total number.....	2,028	3	1,124	41	426	120	471			
5	1920..total number.....	2,137	4	1,199	52	390	72	483			
6	(a) Concrete and masonry.....1940..number.....	327	4	165	48	12	3	101	4		
7	(b) Timber.....1940..number.....	312	2	258	48	20	2	190			
8	(c) Earth and rock.....1940..number.....	2,227	5	1,452	584	461	188	405	2		
9	(d) Other, mixed, and not reported.....1940..number.....	505	2	282	97	69	30	116			
10	Main canals and laterals.....1940..total length, miles.....	13,422.2	682.7	7,477.9	4,417.3	1,266.5	619.0	1,752.0	42.1		
11	1930..total length, miles.....	12,618	493	6,541	3,025	1,209	603	1,636			
12	1920..total length, miles.....	14,961	944	7,023	2,342	1,317	589	2,280			
13	(a) Earth.....1940..length, miles.....	13,292	681	7,423	4,376	1,262	618	1,743	42		
14	(b) Lined.....1940..length, miles.....	130.2	1.7	54.9	41.3	4.5	1.0	9.0	0.1		
15	1940..capacity, c.f.s. ³	72,454	4,347	28,684	18,714	5,474	3,929	4,347	149		
16	1930..capacity, c.f.s. ³	66,838	3,375	24,490	10,520	6,277	5,040	3,709			
17	1920..capacity, c.f.s. ³	67,344	1,776	27,254	10,486	6,411	2,198	4,811			
18	Pipe lines ⁴.....1940..total length, miles.....	188.9	39.6	33.9	28.5	1.8	1.0	3.5	0.1		
19	1930..total length, miles.....	52.9	1.0	27.2	24.7			2.5			
20	1920..total length, miles.....	50.8		3.6	0.7	0.4	0.3	2.5			
21	(a) Concrete.....1940..length, miles.....	45.2	1.2	14.8	13.8	0.8	0.5	0.2			
22	(b) Metal.....1940..length, miles.....	109.7	37.8	8.7	6.9	1.0	0.5	0.7	0.1		
23	(c) Wood-stave.....1940..length, miles.....	6.5	0.6	3.4	2.4			1.0			
24	(d) Other.....1940..length, miles.....	27.5		7.0	5.4			1.6			
25	Storage dams.....1940..total number.....	607	48	146	58	50	20	36	2		
26	1930..total number.....	371	2	119	7	20	5	76			
27	1920..total number.....	469	1	141	11	41	8	69			
28	(a) Concrete and masonry.....1940..number.....	17		8	1	5	2	2	1		
29	(b) Earth and rock.....1940..number.....	555	48	118	49	38	17	30	1		
30	(c) Other, mixed, and not reported.....1940..number.....	35		19	8	7	1	4			
31	Reservoirs.....1940..total number.....	636	47	166	79	44	21	40	3		
32	(a) 1-99 acre-feet capacity.....1940..number.....	309	45	103	58	25	9	19	1		
33	(b) 100-999 acre-feet capacity.....1940..number.....	166	2	28	10	8	7	10			
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	161		35	11	11	5	11	2		
35	1940..total capacity, ac.-ft. ⁵	4,608,419	526	3,839,231	3,430,095	326,235	312,189	73,681	9,220		
36	1930..total number.....	419	4	121	8	23	5	72			
37	1930..total capacity, ac.-ft. ⁵	2,570,939	189	1,772,184	1,338,520	249,223	236,500	66,022			
38	Wells, flowing.....1940..number.....	14		8	1	7	7				
39	1930..number.....										
40	1920..number.....	6		2				2			
41	1940..yield, g.p.m.....	1,260		751	(⁶)	750	750				
42	1930..yield, g.p.m.....										
43	1920..yield, g.p.m.....	270		40				40			
44	Wells, pumped.....1940..number.....	4,277	1,655	266	237	6	4	1	22		
45	1930..number.....	956	4	11	1			1			
46	1920..number.....	313	14	9	2	2		5			
47	1940..yield, g.p.m.....	3,353,350	1,411,279	241,862	221,266	1,998	1,593	(⁶)	18,323		
48	1930..yield, g.p.m.....	580,450	890	1,320	385			5			
49	1920..yield, g.p.m.....	143,904	10,551	4,330	3,180	1,150					
50	Pumping plants.....1940..total number.....	4,348	1,581	350	317	9	6	2	22		
51	1930..total number.....	904	6	41	21			15			
52	Prime movers.....1940..capacity, hp.....	80,575	30,596	7,107	6,071	54	43	(⁶)	970		
53	1930..capacity, hp.....	14,787	37	635	477			137			
54	1920..capacity, hp.....	3,889	180	410	311	6		83			
55	(a) Electric.....1940..number.....	1,129	113	34	31	1	1	1	1		
56	1940..capacity, hp.....	14,288	1,425	587	546	(⁶)	(⁶)	(⁶)	(⁶)		
57	(b) Internal-combustion.....1940..number.....	3,163	1,463	301	276	5	4		20		
58	1940..capacity, hp.....	65,679	29,002	6,354	5,375	40	32		939		
59	(c) Other.....1940..number.....	56	15	15	10	3	1	1	1		
60	1940..capacity, hp.....	608	169	166	150	13	(⁶)	(⁶)	(⁶)		
61	Pumps.....1940..total number.....	4,533	1,734	365	332	9	6	2	22		
62	1930..number.....	944	6	44	22			17			
63	1920..number.....	307	14	34	16	3	1	14			
64	1940..capacity, g.p.m.....	3,813,132	1,506,089	359,336	335,957	2,861	2,468	(⁶)	18,423		
65	1930..capacity, g.p.m.....	723,029	3,290	63,991	51,752			11,239			
66	1920..capacity, g.p.m.....	220,040	14,580	24,039	21,002	1,650	500	787			
67	(a) Centrifugal.....1940..number.....	2,418	935	248	240	6	5	2			
68	1940..capacity, g.p.m.....	1,942,891	780,430	252,669	248,276	2,318	1,918	(⁶)			
69	1940..average capacity, g.p.m.....	804	835	1,019	1,034	366	384	(⁶)			
70	(b) Turbine.....1940..number.....	1,987	759	91	71	1	1		19		
71	1940..capacity, g.p.m.....	1,816,445	703,025	95,125	76,175	(⁶)	(⁶)		18,400		
72	1940..average capacity, g.p.m.....	914	926	1,045	1,073	(⁶)	(⁶)		968		
73	(c) Plunger.....1940..number.....	52	14	9	5	1			3		
74	1940..capacity, g.p.m.....	3,308	934	1,564	1,536	(⁶)	(⁶)		23		
75	1940..average capacity, g.p.m.....	64	67	174	307	(⁶)	(⁶)		8		
76	(d) Other.....1940..number.....	76	26	17	16	1					
77	1940..capacity, g.p.m.....	50,488	21,700	9,978	9,970	(⁶)	(⁶)				
78	Pumping lift, from all sources.....1940..average, feet.....	33	31	27	24	19	19	(⁶)	74		
79	1930..average, feet.....	27	9	20	21						
80	1920..average, feet.....	22	31	21	22	13	10				
81	from pumped wells.....1940..average, feet.....	35	31	31	28	20	20	(⁶)	74		
82	from surface sources.....1940..average, feet.....	20	19	16	16	18	18	(⁶)			

¹Data for the intrastate tributaries of the Smoky Hill River are not shown separately but are included in the Smoky Hill River total.

²Data for the intrastate tributaries of the Laramie River are not shown separately but are included in the Laramie River total.

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER (II)—Continued				MISSISSIPPI RIVER (III) (Exclusive of the Missouri River)				
	Kansas River (II-C)—Con.	Intrastate tributaries in Montana	Intrastate tributaries in North Dakota	Intrastate tributaries in South Dakota	Total	Direct	Arkansas River (III-A)		
	Big Blue River						Total	Direct	
	(8)					(III)		(III-A)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	121	2,120	38	26	4,876	91	3,110	1,818
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	53	554	21	71	277	156	300	352
3	Diversion dams.....1940..total number.....	10	2,563	6	24	959	16	936	297
4	1930..total number.....		1,769		5	814	1	808	70
5	1920..total number.....		2,325		16	1,704	340	1,249	91
6	(a) Concrete and masonry.....1940..number.....	3	124		2	88		88	28
7	(b) Timber.....1940..number.....	1	407	1		58	8	50	29
8	(c) Earth and rock.....1940..number.....	4	1,555	5	22	472	8	458	139
9	(d) Other, mixed, and not reported.....1940..number.....	2	477			341		340	103
10	Main canals and laterals.....1940..total length, miles.....	9.1	6,840.6	2.0	36.3	4,838.6	66.1	4,423.7	2,586.5
11	1930..total length, miles.....		8,337		4	5,518	16	5,275	2,530
12	1920..total length, miles.....	1	12,927		60	8,266	356	7,691	3,185
13	(a) Earth.....1940..length, miles.....	9	6,790	2	36	4,794	66	4,374	2,576
14	(b) Lined.....1940..length, miles.....	0.1	50.6		0.3	54.6	0.1	49.7	12.5
15	1940..capacity, c.f.s. ²	172	35,247	54	106	49,858	455	48,217	27,817
16	1930..capacity, c.f.s. ²		29,423		54	49,701	719	46,577	24,297
17	1920..capacity, c.f.s. ²	5	58,362		124	41,974	869	39,166	11,676
18	Pipe lines ³.....1940..total length, miles.....	6.8	60.2	1.1	3.5	174.5	11.7	142.1	98.8
19	1930..total length, miles.....		21.6		0.5	114.9	13.2	100.0	6.7
20	1920..total length, miles.....	0.4	10.9		0.3	148.3	6.2	140.9	13.8
21	(a) Concrete.....1940..length, miles.....		6.7	0.1		61.9	0.9	60.3	59.2
22	(b) Metal.....1940..length, miles.....	6.1	20.9	0.9	3.5	78.8	10.8	58.7	26.2
23	(c) Wood-stave.....1940..length, miles.....	0.7	5.8			14.5		13.5	9.2
24	(d) Other.....1940..length, miles.....		26.8	0.1		19.3		9.6	4.2
25	Storage dams.....1940..total number.....	6	211	10	16	360	20	312	139
26	1930..total number.....		211		1	180	6	164	14
27	1920..total number.....		310		71	259		242	32
28	(a) Concrete and masonry.....1940..number.....	1	9		1	17		16	5
29	(b) Earth and rock.....1940..number.....	4	173	10	15	300	15	259	114
30	(c) Other, mixed, and not reported.....1940..number.....	1	29			43	5	37	20
31	Reservoirs.....1940..total number.....	8	239	10	16	425	24	357	177
32	(a) 1-99 acre-feet capacity.....1940..number.....	8	126	9	9	291	16	243	127
33	(b) 100-999 acre-feet capacity.....1940..number.....		73		6	68	2	61	18
34	(c) 1,000 and over acre-feet capacity.....1940..number.....		40	1	1	66	6	53	32
35	1940..total capacity, ac.-ft. ⁴	205	916,709	2,822	3,645	1,608,164	18,968	890,544	682,631
36	1930..total number.....		194		1	209	9	187	21
37	1930..total capacity, ac.-ft. ⁴		676,835		3	1,523,856	104	922,611	561,067
38	Wells, flowing.....1940..number.....	19	3		1	47		46	18
39	1930..number.....	1			5	7		6	
40	1920..number.....		10			27		24	2
41	1940..yield, g.p.m.....	370	104		(⁵)	4,263		3,729	2,175
42	1930..yield, g.p.m.....		8		1,940	993		945	
43	1920..yield, g.p.m.....		1,057			6,240		3,640	315
44	Wells, pumped.....1940..number.....	37	29	10	3	4,428		2,529	2,168
45	1930..number.....		28		1	2,216	6	1,343	458
46	1920..number.....		17			2,065		1,354	572
47	1940..yield, g.p.m.....	23,965	12,602	78	185	3,493,820		1,497,906	1,281,270
48	1930..yield, g.p.m.....		12,196		375	2,104,316	1,362	999,536	626,094
49	1920..yield, g.p.m.....		10,965			1,876,840		934,452	641,744
50	Pumping plants.....1940..total number.....	119	242	38	27	4,156	51	2,101	1,638
51	1930..total number.....		99		2	1,742	64	811	448
52	Prime movers.....1940..capacity, hp.....	2,729	4,174	239	401	145,750	1,570	55,196	45,074
53	1930..capacity, hp.....		4,973		21	78,378	1,038	29,527	22,414
54	1920..capacity, hp.....	30	2,391		110	73,738	2,846	34,404	27,146
55	(a) Electric.....1940..number.....	20	56		5	1,369	11	772	708
56	1940..capacity, hp.....	852	935	22	8	41,202	341	18,035	17,164
57	(b) Internal-combustion.....1940..number.....	96	177	24	24	2,516	39	1,174	836
58	1940..capacity, hp.....	1,884	2,919	184	393	103,070	1,227	36,554	27,514
59	(c) Other.....1940..number.....	3	9			251	1	155	94
60	1940..capacity, hp.....	13	320	33		1,478	(⁵)	607	398
61	Pumps.....1940..total number.....	122	254	38	27	4,190	54	2,125	1,651
62	1930..number.....		121		2	1,804	64	852	454
63	1920..number.....	2	147		6	1,715	74	872	526
64	1940..capacity, g.p.m.....	100,940	358,937	10,713	21,030	4,275,330	169,608	2,004,166	1,565,211
65	1930..capacity, g.p.m.....		198,895		1,437	2,418,236	62,630	1,144,006	697,559
66	1920..capacity, g.p.m.....	1,000	158,251		4,270	2,237,441	102,500	1,119,743	798,295
67	(a) Centrifugal.....1940..number.....	96	231	26	24	2,677	54	1,615	1,347
68	1940..capacity, g.p.m.....	81,340	340,722	10,135	20,645	2,984,989	169,608	1,652,662	1,363,573
69	1940..average capacity, g.p.m.....	847	1,475	390	869	1,115	3,141	1,023	1,012
70	(b) Turbine.....1940..number.....	20	5			1,214		325	194
71	1940..capacity, g.p.m.....	16,225	9,580			1,237,531		328,706	204,449
72	1940..average capacity, g.p.m.....	811	1,916			1,019		1,011	1,054
73	(c) Plunger.....1940..number.....	3	10	11	3	249		159	90
74	1940..capacity, g.p.m.....	1,085	394	478	185	9,362		3,815	2,506
75	1940..average capacity, g.p.m.....	362	39	43	62	38		24	28
76	(d) Other.....1940..number.....	3	8	1		50		26	20
77	1940..capacity, g.p.m.....	2,290	8,241	(⁵)		43,428		18,983	14,683
78	Pumping lift, from all sources.....1940..average, feet.....	37	16	17	27	57	13	43	41
79	1930..average, feet.....		20		27	54	15	49	68
80	1920..average, feet.....	18	16		24	45	12	42	47
81	from pumped wells.....1940..average, feet.....	75	18	26	74	62		45	43
82	from surface sources.....1940..average, feet.....	24	16	15	19	25	13	27	28

¹Data for the intrastate tributaries of the Canadian River are not shown separately but are included in the Canadian River total.

²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

³Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

WORKS, 1940, 1930, AND 1920—Continued
and Arkansas and Louisiana]

MISSISSIPPI RIVER (III)—Continued (Exclusive of the Missouri River)														
Arkansas River (III-A)—Continued							Red River (III-B)							
Two Butte and Bear Creeks (12)	Salt Fork Arkansas River (14)	Cimarron River (15)	Verdigris River (16)	Canadian River			Intrastate tributaries in Colorado	Intrastate tributaries in Kansas	Total	Direct (III-B)	Washita River (1)	Black River Ouachita River and Bartholomew Bayou (5)+(10)	Intrastate tributaries in Arkansas	
				Total ¹	Direct (18)	North Canadian River (27)								
16	9	86	6	216	71	49	763	192	799	780	16	3	876	1
251	105	139	4	357	77	36	235	96	267	273	32	106	217	2
4	3	49	8	106	32	1	429	48	4	4			3	3
		8	52	86	3		621	19	4					4
	1	12	52	264	1		831	2	14			1		5
			13	13	2		30	6						6
			5	5			14	2						7
4	2	16	72	26	1		192	33	4	4				8
		21	16	16	4		193	7						9
29.0	5.2	119.1		412.6	65.3	6.0	1,255.3	14.0	308.0	303.0	5.0		40.8	10
		58		561	13		2,035	85	202					11
		220		982	15		3,101	191	128					12
29	5	108		369	65	6	1,253	14	307	302	5		37	13
	0.2	11.1		23.6	0.3		2.3		1.0	1.0			3.8	14
133	87	439	3	3,167	181	37	16,171	400	1,156	1,134	21	1	30	15
		157		5,518	40		16,461	138	1,009					16
		642		8,123	59		17,861	835	163					17
0.5	0.3	0.2	0.5	16.1	2.8	11.9	19.5	6.2	9.9	7.2	2.7		10.8	18
		0.2		3.2	0.2		77.0	12.9	0.9					19
		0.2	0.3	19.0	4.2		104.8	2.8	0.4			0.4		20
		0.1					0.7	0.3	0.7	0.4	0.3			21
	0.3	0.1	0.5	14.9	2.8	10.6	11.0	5.7	8.1	5.8	2.3		1.2	22
0.5				0.2		0.1	3.6		1.0	1.0				23
				1.0		1.0	4.2	0.2	0.1		0.1			24
6	2	14	1	43	13	11	84	23	16	11	5		12	25
		5		24	2		111	7	4					26
		9		63	2		125	11	3					27
		2		1			2	6	1		1			28
6	2	11	1	31	13	3	78	16	15	11	4		11	29
		1		11		8	4	1					1	30
6	2	13	1	45	13	13	85	28	33	30	3		11	31
5	2	11	1	25	12	10	53	19	30	27	3		2	32
		2		13		3	20	8	1	1			4	33
1				7	1		12	1	2	2			5	34
30,061	(5)	691	(5)	105,751	2,092	1,146	54,093	7,101	681,831	681,826	5		16,821	35
		8	1	25	2		116	16	4					36
		3,536	9	147,045	2		174,662	36,292	600,013					37
3		20					1	4	1	1				38
		6					5	1						39
93		423					(5) 16	1,030	(5) 3	(5)				40
		500					870	75						41
							2,825		2,600					42
10	3	18		101	34	51	70	159	852	848	3	1	1,047	44
		5		12	12		127	732	63					45
		12	2	20	15		76	672	49					46
4,134	2,710	20,158		32,992	8,123	11,569	30,469	126,173	715,848	715,047	601	(5)	1,280,066	47
		1,330	1,450	1,705	1,705		55,872	313,085	58,830					48
		5,321	52	6,417	3,106		19,521	251,397	48,950					49
10	7	30	3	108	37	55	79	225	907	890	14	3	1,097	50
		5	6	15	15		96	241	72					51
256	99	813	10	1,364	391	402	1,221	6,369	39,565	39,369	162	34	49,419	52
		46	69	170	170		1,221	5,607	2,397					53
		221	9	289	193		372	6,397	3,444					54
	(5)	2	2	25	12	13	14	21	181		6		425	55
6		27	(5) 1	288	145	142	110	430	6,950	6,885	65		15,876	56
243	40	796	(5)	48	14	19	48	204	647	637	7	3	656	57
4	1	3		1,034	225	240	973	5,929	32,491	32,361	96	34	32,799	58
13	(5)	17		36	11	23	17		79	78			16	59
10	7	30	3	42	20	20	138		124	123	(5)		745	60
		9	3	110	39	53	77	237	911	894	14	3	1,100	61
		11	2	14	14		98	269	75					62
6,834	9,160	41,658	150	37,883	8,322	15,126	40,880	232,620	763,940	751,563	10,777	1,600	1,337,616	63
		1,480	1,450	2,385	2,385		75,607	365,655	64,324					64
		4,817	42	6,663	5,141		21,451	288,475	55,760					65
(5) 2	4	14	2	32	11	18	38	176	86	73	10	3	922	66
(5)	6,450	26,600	(5)	14,375	2,445	10,230	26,734	211,330	66,895	55,170	10,125	1,600	1,085,624	67
	1,612	1,900	(5)	449	222		704	1,201	778	756	81	533	1,189	68
4	2	14		33	11	10	21	57	792	731	81		157	69
3,100	(5)	15,050		22,425	6,475	4,400	13,312	67,670	691,435	691,135	300		217,390	70
775	(5)	1,075		680	589	440	634	1,187	945	945	300		1,385	71
4	1	2		45	17	25	15		89	86	3		1	72
34	(5)	(5)	(5)	1,053	402	496	134	(5) 1	5,565	5,213	352	(5)	(5)	73
8	(5)	(5)	(5)	23	24	20	9	(5)	63	61	117	(5)	(5)	74
							3		4					75
							700	3,600	45	45			24,400	76
88	27	40	11	79	83	90	32	38	91	92	40	25	59	77
		35	32	71	71		21	24	44					78
		26	19	79	88		27	30	76					79
93	43	55		88	98	100	36	47	95	95	93	(5)	60	80
68	15	20	11	27	20	34	20	27	26	26	24	30	23	81

¹Total capacity of all reservoirs regardless of size.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
³Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION
[For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		COLORADO RIVER (VI)—Continued							
		Upper Colorado River (VI-A)—Con.			Lower Colorado River (VI-B) (Exclusive of Imperial Valley)				
		Paria River (25)	Intrastate tributaries in Colorado	Intrastate tributaries in Utah	Total	Direct (VI-B)	Little Colorado River (VI-Ba)		Kanab Creek (1)
							Total ¹	Direct (VI-Ba)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	15	1,759	38	2,546	52	96	90	22
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	114	295	906	390	3,068	344	284	123
3	Diversion dams.....1940..total number.....	16	1,284	43	763	3	67	46	3
4	.....1930..total number.....		766	31		1	36	9	2
5	.....1920..total number.....		725	148		5	32	19	1
6	(a) Concrete and masonry.....1940..number.....		28	8	98		26	17	1
7	(b) Timber.....1940..number.....		148	2	10				
8	(c) Earth and rock.....1940..number.....	14	878	19	479		27	17	7
9	(d) Other, mixed, and not reported.....1940..number.....	2	230	14	176		14	12	1
10	Main canals and laterals.....1940..total length, miles.....	25.3	4,445.5	151.2	5,019.8	586.0	355.4	215.1	25.5
11	.....1930..total length, miles.....		4,439	127		2,592	281	116	5
12	.....1920..total length, miles.....		5,789	185		2,761	199	100	4
13	(a) Earth.....1940..length, miles.....	25	4,419	151	4,780	568	355	215	25
14	(b) Lined.....1940..length, miles.....	0.3	26.5	0.2	239.8	20.0	0.4	0.1	0.5
15	.....1940..capacity, c.f.s. ³	43	19,967	607	15,592	3,293	459	338	53
16	.....1930..capacity, c.f.s. ³		15,877	477		12,631	399	129	9
17	.....1920..capacity, c.f.s. ³		19,765	548		7,290	341	208	1
18	Pipe lines ⁴.....1940..total length, miles.....		27.8	0.4	789.8	15.3	2.4	2.2	
19	.....1930..total length, miles.....		14.4			12.6	2.1		
20	.....1920..total length, miles.....		32.2	1.0		0.4			1.3
21	(a) Concrete.....1940..length, miles.....		4.5		942.5	10.3	0.5	0.5	
22	(b) Metal.....1940..length, miles.....		14.0	0.2	122.7	0.9	1.9	1.7	
23	(c) Wood-stave.....1940..length, miles.....		3.0	0.2	3.3	0.1			
24	(d) Other.....1940..length, miles.....		6.3		21.3	4.0			
25	Storage dams.....1940..total number.....	3	288	19	257		53	40	9
26	.....1930..total number.....		234	10			33	7	1
27	.....1920..total number.....		210	117		1	14	9	
28	(a) Concrete and masonry.....1940..number.....		3	3	18				
29	(b) Earth and rock.....1940..number.....	3	277	15	240		59	38	9
30	(c) Other, mixed, and not reported.....1940..number.....		8	1	9		4	2	
31	Reservoirs.....1940..total number.....	4	295	21	428		64	42	9
32	(a) 1-99 acre-feet capacity.....1940..number.....	4	138	8	361		23	16	9
33	(b) 100-999 acre-feet capacity.....1940..number.....		120	10	34		23	19	
34	(c) 1,000 and over acre-feet capacity.....1940..number.....		35	3	33		18	7	
35	.....1940..total capacity, ac.-ft. ⁵	18	185,839	15,803	4,875,225		70,051	49,526	133
36	.....1930..total capacity, ac.-ft. ⁵		240	11		2	41	10	6
37	.....1920..total capacity, ac.-ft. ⁵		96,603	4,376		4	81,292	41,648	508
38	Wells, flowing.....1940..number.....				445	1	13	13	
39	.....1930..number.....					6			
40	.....1920..number.....				1		2	2	
41	.....1940..yield, g.p.m.....				47,490	(⁶)	4,000	4,000	
42	.....1930..yield, g.p.m.....					961			
43	.....1920..yield, g.p.m.....								
44	Wells, pumped.....1940..number.....		1		2,348	31	21	14	
45	.....1930..number.....					2			3
46	.....1920..number.....					4	2		
47	.....1940..yield, g.p.m.....		(⁶)		2,742,382	8,104	5,117	4,395	
48	.....1930..yield, g.p.m.....					1,700			17
49	.....1920..yield, g.p.m.....					1,650	1,000		
50	Pumping plants.....1940..total number.....		17		2,522	58	27	19	1
51	.....1930..total number.....		18			19			3
52	Prime movers.....1940..capacity, hp.....		228		110,456	2,685	348	284	(⁶)
53	.....1930..capacity, hp.....		1,464			2,995			2
54	.....1920..capacity, hp.....		855			487	1		
55	(a) Electric.....1940..number.....		6		3,601	15	3	3	1
56	.....1940..capacity, hp.....		50		84,921	1,569	19	13	(⁶)
57	(b) Internal-combustion.....1940..number.....		9		805	32	21	14	
58	.....1940..capacity, hp.....		172		24,562	1,106	311	269	
59	(c) Other.....1940..number.....		3		116	11	3	2	
60	.....1940..capacity, hp.....		6		973	10		(⁶)	
61	Pumps.....1940..total number.....		21		2,473	57	24	19	1
62	.....1930..number.....		21			27			3
63	.....1920..number.....		21			12	2		
64	.....1940..capacity, g.p.m.....		10,220		3,371,222	356,644	9,802	7,100	(⁶)
65	.....1930..capacity, g.p.m.....		49,267			378,350			17
66	.....1920..capacity, g.p.m.....		7,806			82,200	1,000		
67	(a) Centrifugal.....1940..number.....		12		676	35	18	14	1
68	.....1940..capacity, g.p.m.....		7,220		763,544	197,708	6,595	5,735	(⁶)
69	.....1940..average capacity, g.p.m.....		602		1,130	5,649	366	410	(⁶)
70	(b) Turbine.....1940..number.....		2		1,601	5	2	1	
71	.....1940..capacity, g.p.m.....		(⁶)		2,505,709	77,500	(⁶)	(⁶)	
72	.....1940..average capacity, g.p.m.....		(⁶)		1,565	15,500	(⁶)	(⁶)	
73	(c) Plunger.....1940..number.....				161	15	5	2	
74	.....1940..capacity, g.p.m.....				7,702	436	252	(⁶)	
75	.....1940..average capacity, g.p.m.....				48	29	50	(⁶)	
76	(d) Other.....1940..number.....				35	2	2	2	
77	.....1940..capacity, g.p.m.....				94,267	(⁶)	(⁶)	(⁶)	
78	Pumping lift, from all sources.....1940..average, feet.....		42		56	22	34	36	(⁶)
79	.....1930..average, feet.....								58
80	.....1920..average, feet.....					23	30		
81	from pumped wells.....1940..average, feet.....		(⁶)		58	31	31	31	
82	from surface sources.....1940..average, feet.....		44		32	15	57	74	(⁶)

¹Data for the intrastate tributaries of the Little Colorado River and Independent basin (6), Salt Lake and Rito Creek (N. Mex.), are not shown separately but are included in the Little Colorado River total.
²Data for the intrastate tributaries of the Virgin River are not shown separately but are included in the Virgin River total.
³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION-UNITED STATES SUMMARY

WORKS, 1940, 1930, AND 1920-Continued and Arkansas and Louisiana]

Table with columns: Virgin River, Gila River (VI-Bb), Intra-state tributaries in Arizona, Independent basins in Gila River, Intra-state tributary in Nevada (Las Vegas Valley), Intra-state tributary in Arizona (Williams River), Independent basins, Intra-state tributary in California (Imperial Valley). Rows include various numerical data points for different basins and years.

Includes siphons and farm pipe lines reported. Total capacity of all reservoirs regardless of size. Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION
[For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	Gulf of California (VII) (exclusive of Colorado River) Whitewater Draw and Vamori Wash, ¹ Arizona (1)+(2)	GREAT BASIN (VIII)							
		Total (VIII)	Bonneville Lake (VIII-A)						
			Total (VIII-A)	Total ²	Direct (1)	Bear River			
						Total ³	Direct (2)	Malad River (5)	
									Great Salt Lake
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	283	4,831	2,286	1,576	171	619	435	108
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	48	493	527	536	159	718	860	159
3	Diversion dams.....1940..total number.....	158	4,263	1,800	1,254	84	610	495	51
4	.....1930..total number.....	7	3,808	.....	1,123	.....	553	121	26
5	.....1920..total number.....	6	3,234	.....	1,128	.....	670	82	192
6	(a) Concrete and masonry.....1940..number.....	1	756	587	507	53	157	117	14
7	(b) Timber.....1940..number.....	.....	441	185	107	3	82	46	2
8	(c) Earth and rock.....1940..number.....	67	1,833	736	485	22	322	257	32
9	(d) Other, mixed, and not reported.....1940..number.....	90	1,133	292	154	6	79	65	3
10	Main canals and laterals.....1940..total length, miles.....	26.0	10,757.6	7,839.2	5,471.7	215.0	2,668.7	2,176.1	128.0
11	.....1930..total length, miles.....	7	12,753	.....	4,917	.....	2,226	808	112
12	.....1920..total length, miles.....	128	17,665	.....	6,999	.....	3,597	1,057	847
13	(a) Earth.....1940..length, miles.....	26	10,444	7,089	5,243	186	2,652	2,166	128
14	(b) Lined.....1940..length, miles.....	.....	313.6	250.2	228.7	29.0	16.7	10.1	.....
15	.....1940..capacity, c. f. s. ⁵	484	57,949	28,428	19,258	625	8,902	7,442	234
16	.....1930..capacity, c. f. s. ⁵	10	50,743	.....	17,692	.....	8,083	4,543	176
17	.....1920..capacity, c. f. s. ⁵	553	57,409	.....	19,501	.....	10,589	5,088	413
18	Pipe lines ⁶.....1940..total length, miles.....	4.9	984.7	179.5	152.5	28.8	18.2	11.7	4.7
19	.....1930..total length, miles.....	4.1	1,112.3	.....	69.3	.....	14.1	3.1	.....
20	.....1920..total length, miles.....	5.1	723.0	.....	108.9	.....	23.3	7.7	.....
21	(a) Concrete.....1940..length, miles.....	.....	706.1	42.6	41.9	19.9	4.9	1.9	2.5
22	(b) Metal.....1940..length, miles.....	4.9	186.5	62.3	45.2	6.0	6.9	4.8	1.4
23	(c) Wood-stave.....1940..length, miles.....	.....	35.8	24.2	17.4	.....	6.0	4.6	0.8
24	(d) Other.....1940..length, miles.....	.....	56.3	50.4	48.0	2.9	0.4	0.4	.....
25	Storage dams.....1940..total number.....	6	462	291	180	9	59	45	9
26	.....1930..total number.....	4	409	.....	137	.....	50	5	5
27	.....1920..total number.....	51	449	.....	158	.....	104	7	59
28	(a) Concrete and masonry.....1940..number.....	.....	53	41	34	.....	7	5	2
29	(b) Earth and rock.....1940..number.....	6	395	245	142	9	50	39	6
30	(c) Other, mixed, and not reported.....1940..number.....	.....	14	5	4	.....	2	1	1
31	Reservoirs.....1940..total number.....	18	766	378	210	37	63	46	13
32	(a) 1-99 acre-feet capacity.....1940..number.....	18	543	235	116	36	30	21	7
33	(b) 100-999 acre-feet capacity.....1940..number.....	.....	138	92	70	.....	25	20	4
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	.....	85	51	24	1	8	5	2
35	.....1940..total capacity, ac.-ft. ⁷	74	3,781,538	3,038,679	2,503,568	3,934	1,468,970	1,449,832	3,775
36	.....1930..total capacity, ac.-ft. ⁷	90	787	.....	154	.....	61	1	5
37	.....1920..total capacity, ac.-ft. ⁷	140	1,922,757	.....	402,788	.....	35,988	50	2,411
38	Wells, flowing.....1940..number.....	6	1,698	1,313	893	188	121	12	94
39	.....1930..number.....	11	2,175	.....	719	.....	111	.....	21
40	.....1920..number.....	10	1,610	.....	452	.....	171	.....	59
41	.....1940..yield, g. p. m. ⁸	765	118,489	86,934	69,486	7,886	6,705	600	5,035
42	.....1930..yield, g. p. m. ⁸	430	153,800	.....	35,525	.....	4,545	.....	750
43	.....1920..yield, g. p. m. ⁸	503	128,522	.....	42,248	.....	12,635	.....	7,687
44	Wells, pumped.....1940..number.....	142	1,306	305	100	48	25	15	8
45	.....1930..number.....	210	2,707	.....	107	.....	88	.....	5
46	.....1920..number.....	209	870	.....	68	.....	57	2	.....
47	.....1940..yield, g. p. m. ⁸	45,537	653,078	129,711	36,343	16,226	11,588	4,770	4,818
48	.....1930..yield, g. p. m. ⁸	62,457	1,321,396	.....	31,786	.....	20,926	.....	600
49	.....1920..yield, g. p. m. ⁸	72,787	273,094	.....	16,067	.....	11,597	902	.....
50	Pumping plants.....1940..total number.....	150	1,458	402	193	49	75	61	7
51	.....1930..total number.....	214	2,686	.....	182	.....	140	28	1
52	Prime movers.....1940..capacity, hp.....	2,070	39,973	15,142	12,857	450	3,987	3,464	171
53	.....1930..capacity, hp.....	2,025	62,344	.....	10,537	.....	4,126	781	6
54	.....1920..capacity, hp.....	2,403	20,803	.....	10,490	.....	3,016	2,208	.....
55	(a) Electric.....1940..number.....	2	977	316	187	45	84	54	5
56	.....1940..capacity, hp.....	(⁹)	30,316	13,789	12,348	406	3,639	3,374	165
57	(b) Internal-combustion.....1940..number.....	133	399	78	25	4	10	7	2
58	.....1940..capacity, hp.....	2,045	9,144	1,035	259	44	98	90	(⁹)
59	(c) Other.....1940..number.....	15	82	8	.....	.....	.....	.....	.....
60	.....1940..capacity, hp.....	15	513	308	250	.....	250	.....	.....
61	Pumps.....1940..total number.....	144	1,448	404	192	49	76	61	7
62	.....1930..number.....	215	2,788	.....	219	.....	151	31	1
63	.....1920..number.....	209	820	.....	175	.....	111	32	.....
64	.....1940..capacity, g. p. m. ⁸	63,344	1,514,746	877,780	767,228	16,217	168,913	151,835	4,878
65	.....1930..capacity, g. p. m. ⁸	59,507	3,205,814	.....	863,960	.....	200,215	47,384	600
66	.....1920..capacity, g. p. m. ⁸	73,967	1,033,964	.....	701,160	.....	118,285	80,025	.....
67	(a) Centrifugal.....1940..number.....	65	477	274	143	34	61	51	4
68	.....1940..capacity, g. p. m. ⁸	27,696	522,634	359,394	295,402	8,972	136,680	121,680	3,700
69	.....1940..average capacity, g. p. m. ⁸	426	1,096	1,312	2,066	264	2,241	2,386	925
70	(b) Turbine.....1940..number.....	48	826	103	30	14	10	7	2
71	.....1940..capacity, g. p. m. ⁸	31,230	519,532	68,193	20,405	7,145	9,685	7,625	(⁹)
72	.....1940..average capacity, g. p. m. ⁸	651	829	643	680	510	988	1,089	(⁹)
73	(c) Plunger.....1940..number.....	28	119	12	7	.....	1	.....	1
74	.....1940..capacity, g. p. m. ⁸	2,468	7,941	654	533	.....	(⁹)	.....	(⁹)
75	.....1940..average capacity, g. p. m. ⁸	88	67	50	78	.....	(⁹)	.....	(⁹)
76	(d) Other.....1940..number.....	3	26	14	12	1	3	3	.....
77	.....1940..capacity, g. p. m. ⁸	1,950	464,639	451,549	450,888	(⁹)	22,530	22,530	.....
78	Pumping lift, from all sources.....1940..average, feet.....	57	67	38	40	45	38	35	49
79	.....1930..average, feet.....	48	71	.....	40	.....	42	35	12
80	.....1920..average, feet.....	44	41	.....	37	.....	40	37	.....
81	from pumped wells.....1940..average, feet.....	57	76	39	42	46	42	33	66
82	from surface sources.....1940..average, feet.....	56	35	36	37	12	36	36	6

¹ 1930 and 1920 data are designated as "Whitewater Draw and tributaries" and do not include Vamori Wash.
² Data for the intrastate tributaries of the Great Salt Lake Basin are not shown separately but are included in the Great Salt Lake Basin total.
³ Data for the intrastate tributaries of the Bear River are not shown separately but are included in the Bear River total.
⁴ Data for the intrastate tributaries of the Quim River are not shown separately but are included in the Quim River total.
⁵ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

WORKS, 1940, 1930, AND 1920—Continued
and Arkansas and Louisiana]

GREAT BASIN (VIII)—Continued															
Bonneville Lake (VIII-A)—Continued							Lahontan Lake (VIII-B)								
Intrastate tributary in Utah (Sevier River) (14)+(18)	Independent basins						Total (VIII-E)	Northern Great Basin (VIII-Ba) (Independent basins)							
	Total	Deep Creek (Box Elder County, Utah) (19)	Deep Creek (Tooele County, Utah) (22)	Snake Valley (23)	Intrastate basins in Utah	Intrastate basin in Nevada (Thousand Spring Creek) (21)		Total (VIII-Ba)	Cowhead and Warner Lakes (9)	Quinn River		Surprise Valley (16)	Smoke Creek (18)	Intrastate basins in Oregon	
										Total†	Direct				
351	359	15	19	54	259	12	2,545	595	57	57	39	178	14	243	1
769	251	313	149	300	242	408	462	511	704	491	534	266	88	719	2
310	296	2	33	65	129	7	2,463	775	81	78	35	95	4	493	3
194			3							65				634	4
95			3							5				435	5
37	42	1		13	28		169	46	9	4	2			31	6
40	38		11	11	16		256	123	8	2	2	12		95	7
132	119		22	37	53	7	1,197	344	47	49	15	83	4	149	8
101	37	1		4	32		841	262	17	23	16			218	9
1,306.7	560.8	56.0	50.0	74.0	329.8	51.0	3,418.4	822.4	73.6	117.0	55.0	67.0	9.0	463.8	10
1,487			37							74				582	11
2,586			36							38				894	12
1,297	549	56	50	64	328	51	3,355	820	72	117	55	67	9	463	13
9.7	11.8			10.0	1.8		63.4	2.4	1.6					0.8	14
6,760	2,410	101	67	281	1,774	187	29,521	6,706	657	964	850	697	15	4,040	15
6,088			37							306				3,924	16
7,782			50							98				4,358	17
15.4	11.6		0.4	2.3	2.8	6.1	805.2	7.1	2.7			0.4		1.8	18
5.1										4.4				1.3	19
9.0														0.7	20
0.2	0.5				0.3	0.2	663.5	1.5	1.2			0.1		0.2	21
8.7	8.4		0.4	2.3	1.3	4.4	124.2	5.1	1.5			0.3		1.1	22
5.6	1.2				0.2	1.0	11.6	0.5						0.5	23
0.9	1.5				1.0	0.5	5.9								24
76	35	5	3	2	23	2	171	42	14			1	2	13	25
51			1							2				19	26
50										1				97	27
3	4		1		3		12	2						2	28
73	30	5	2	2	19	2	150	38	14			1	2	9	29
	1				1		9	2						2	30
83	85	6	8	6	63	2	388	47	13			5	2	13	31
51	68	6	8	5	49		308	20	1			4	2	6	32
13	9				9		46	12	4			1		5	33
19	8			1	5	2	34	15	8					2	34
465,872	69,239	50	28	4,102	52,359	(⁶)	742,859	58,671	15,202			222	(⁶)	23,839	35
47			2							2				15	36
511,227			1							1,003				104,251	37
362	58	1	2		55		385	271	2			127	62	54	38
106														18	39
258														41	40
17,604	1,944	(⁶)	(⁶)		1,783		29,565	20,783	(⁶)			3,141	3,069	1,893	41
10,423														4,487	42
38,863														751	43
14	191	3	1	2	184	1	1,001	37		16	16	1	4	10	44
3										4				10	45
3										10				5	46
7,069	86,299	140	(⁶)	(⁶)	84,974	(⁶)	523,367	11,844		3,798	3,798	(⁶)	466	7,737	47
2,170										850				9,160	48
178										50				1,850	49
16	193	3	1	2	186	1	1,056	44	4	17	17	2	4	11	50
8										3				13	51
267	2,018	7	(⁶)	(⁶)	1,993	(⁶)	24,831	462	87	117	117	(⁶)	19	210	52
122										51				154	53
117										4				209	54
5	144				144		661	4						3	55
95	1,356				1,356		16,517	53				(⁶)	1	50	56
9	44	1	1	2	39	1	321	26	4	12	12	1	1	8	57
146	630	(⁶)	(⁶)	(⁶)	607	(⁶)	8,109	394	87	111	111	(⁶)	(⁶)	160	58
2	5	2			3		74	14		5	5			3	59
(⁶)	32	(⁶)			30		205	15		6	6			3	60
16	196	3	1	3	188	1	1,044	44	4	17	17	2	4	11	61
5										3				14	62
10										5				15	63
19,068	91,484	140	(⁶)	(⁶)	90,159	(⁶)	638,966	28,334	12,400	3,898	3,898	(⁶)	476	10,600	64
5,770										1,700				12,900	65
16,318														4,111	66
7	124	1	1	1	120	1	203	17	4	7	7	(⁶)	2	3	67
7,525	56,487	(⁶)	(⁶)	(⁶)	55,202	(⁶)	163,250	18,400	12,400	1,550	1,550	(⁶)	(⁶)	2,900	68
1,075	455	(⁶)	(⁶)	(⁶)	460	(⁶)	804	1,106	3,100	221	221	(⁶)	(⁶)	967	69
7	66				66		723	13		5	5			8	70
11,160	34,628				34,628		453,839	9,870		2,170	2,170			7,700	71
1,594	525				525		627	759		434	434			962	72
(⁶)	5	2			5		106	14		5	5			3	73
(⁶)	118	(⁶)	(⁶)	(⁶)	1	(⁶)	7,287	264		178	178			26	74
(⁶)	24	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	69	19		36	36			9	75
(⁶)	1				(⁶)	1	13,090								76
31	37	117	(⁶)	(⁶)	35	(⁶)	84	35	9	43	43	(⁶)	20	42	78
27										43				22	79
30										25				26	80
40	36	117	(⁶)	(⁶)	35	(⁶)	88	40		43	43	(⁶)	16	45	81
13	65	(⁶)	(⁶)	(⁶)			33	18	9			(⁶)	32	12	82

⁶ Includes siphons and farm pipe lines reported.
⁷ Total capacity of all reservoirs regardless of size.
⁸ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁹ Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION
[For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		GREAT BASIN (VIII)—Continued							
		Lahontan Lake (VIII-B)—Continued							
		Northern Great Basin (VIII-Ba)—Con. (Independent basins)			Sierra Nevada Slope (VIII-Bb)				
		Intrastate basin in Nevada (Black Rock Desert) (12)	Intrastate basin in California (Madeline Plains) (17)	Total (VIII-Bb)	Pyramid Lake		Truckee River (upper)		Carson River (upper) ¹ (5)
			Total	Direct (1)	Total ²	Direct (2)			
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	37	9	567	89	13	76	52	125
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	234	446	641	608	327	656	633	353
3	Diversion dams.....1940..total number.....	22	2	527	91	4	87	52	129
4	.....1930..total number.....						65	31	52
5	.....1920..total number.....						54	23	143
6	(a) Concrete and masonry.....1940..number.....	2		78	16	1	15	10	17
7	(b) Timber.....1940..number.....	6		94	7		7	5	22
8	(c) Earth and rock.....1940..number.....	11	1	246	43	3	40	18	55
9	(d) Other, mixed, and not reported.....1940..number.....	3	1	109	25		25	19	35
10	Main canals and laterals.....1940..total length, miles.....	81.0	11.0	1,659.6	321.0	21.1	299.9	212.8	176.0
11	.....1930..total length, miles.....						350	306	677
12	.....1920..total length, miles.....						172	145	531
13	(a) Earth.....1940..length, miles.....	81	11	1,634	316	21	295	209	174
14	(b) Lined.....1940..length, miles.....			25.6	5.0	0.1	4.9	3.8	2.0
15	.....1940..capacity, c.f.s. ³	241	92	10,799	3,250	146	3,104	2,466	1,577
16	.....1930..capacity, c.f.s. ³						3,137	2,939	4,272
17	.....1920..capacity, c.f.s. ³						2,465	426	3,905
18	Pipe lines ⁴.....1940..total length, miles.....	2.2		81.6	8.2	1.6	6.6	2.3	10.3
19	.....1930..total length, miles.....						0.7	0.6	21.3
20	.....1920..total length, miles.....						0.9	0.7	4.6
21	(a) Concrete.....1940..length, miles.....			38.3	0.6	0.6			1.5
22	(b) Metal.....1940..length, miles.....	2.2		28.8	4.0	1.0	3.0	2.2	8.8
23	(c) Wood-stave.....1940..length, miles.....			9.1	3.1		3.1	0.1	
24	(d) Other.....1940..length, miles.....			5.4	0.5		0.5		
25	Storage dams.....1940..total number.....	4	8	67	16		16	4	15
26	.....1930..total number.....						5		14
27	.....1920..total number.....						5	2	13
28	(a) Concrete and masonry.....1940..number.....			3	1		1		
29	(b) Earth and rock.....1940..number.....	4	8	61	15		15	4	15
30	(c) Other, mixed, and not reported.....1940..number.....			3					
31	Reservoirs.....1940..total number.....	6	8	73	16	2	14	2	13
32	(a) 1-99 acre-feet capacity.....1940..number.....	3	4	34	15	2	13	2	1
33	(b) 100-999 acre-feet capacity.....1940..number.....	2		27					11
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	1	4	12	1		1		1
35	.....1940..total capacity, ac.-ft. ³	4,341	15,023	429,067	5,197	(?)	5,163	(?)	7,201
36	.....1930..total capacity, ac.-ft. ³						2		16
37	.....1920..total capacity, ac.-ft. ³						1,100		296,913
38	Wells, flowing.....1940..number.....	26		21					1
39	.....1930..number.....						3		34
40	.....1920..number.....								3
41	.....1940..yield, g.p.m.....	12,430		887					(?)
42	.....1930..yield, g.p.m.....						81		244
43	.....1920..yield, g.p.m.....								22
44	Wells, pumped.....1940..number.....	6		58	5		5	5	16
45	.....1930..number.....						2	1	13
46	.....1920..number.....						1		1
47	.....1940..yield, g.p.m.....	55		44,807	4,020		4,020	4,020	22,453
48	.....1930..yield, g.p.m.....						1,125	225	18,910
49	.....1920..yield, g.p.m.....						250		50
50	Pumping plants.....1940..total number.....	6		83	6		6	6	27
51	.....1930..total number.....						3	2	31
52	Prime movers.....1940..capacity, hp.....	6		1,954	46		46	46	803
53	.....1930..capacity, hp.....						47	22	1,130
54	.....1920..capacity, hp.....						4	4	134
55	(a) Electric.....1940..number.....			47	4		4	4	17
56	.....1940..capacity, hp.....			1,336	14		14	14	471
57	(b) Internal-combustion.....1940..number.....			27					8
58	.....1940..capacity, hp.....			488					248
59	(c) Other.....1940..number.....	6		9	2		2	2	2
60	.....1940..capacity, hp.....	6		130	(?)		(?)	(?)	(?)
61	Pumps.....1940..total number.....	6		82	6		6	6	27
62	.....1930..number.....						3	2	32
63	.....1920..number.....						1		13
64	.....1940..capacity, g.p.m.....	60		136,893	4,042		4,042	4,042	58,903
65	.....1930..capacity, g.p.m.....						1,350	450	73,465
66	.....1920..capacity, g.p.m.....						250		1,650
67	(a) Centrifugal.....1940..number.....			46	5		5	5	16
68	.....1940..capacity, g.p.m.....			79,313	4,020		4,020	4,020	23,975
69	.....1940..average capacity, g.p.m.....			1,724	804		804	804	1,498
70	(b) Turbine.....1940..number.....			26					11
71	.....1940..capacity, g.p.m.....			46,628					34,928
72	.....1940..average capacity, g.p.m.....			1,793					3,175
73	(c) Plunger.....1940..number.....	6		6	1		1	1	
74	.....1940..capacity, g.p.m.....	60		161	(?)		(?)	(?)	
75	.....1940..average capacity, g.p.m.....	10		27	(?)		(?)	(?)	
76	(d) Other.....1940..number.....			4					
77	.....1940..capacity, g.p.m.....			10,791					
78	Pumping lift, from all sources.....1940..average, feet.....	30		34	12		12	12	29
79	.....1930..average, feet.....						20	10	31
80	.....1920..average, feet.....						8		12
81	from pumped wells.....1940..average, feet.....	40		34	10		10	10	30
82	from surface sources.....1940..average, feet.....	25		34	25		25	25	29

¹Data for 1930 and 1920 include a portion of the Newland Project, U. S. Bureau of Reclamation.

²Data for the intrastate tributaries of the Truckee River (upper) are not shown separately but are included in the Truckee River (upper) total.

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁴Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - UNITED STATES SUMMARY

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WORKS, 1940, 1930, AND 1920—Continued
and Arkansas and Louisiana]

GREAT BASIN (VIII)—Continued																			
Lahontan Lake (VIII-B)—Continued																			
Sierra Nevada Slope (VIII-Bb)—Continued									Central Great Basin and Eastern Nevada (VIII-Bc)										
Walker Lake					Walker River	Intrastate streams in Nevada (Truckee and Carson Rivers, lower) (6)	Independent basins			Total (VIII-Bc)	Intrastate stream and tributaries in Nevada (Humboldt River) (1)+(7)+(10)	Independent basins							
Total	Direct (7)	Total	Direct (8)	West Walker River (9)			East Walker River (10)	Total	Honey Lake (12)			Intrastate basins in California	Total	Amargosa River and Dry Lakes (22)				Intrastate basins in Nevada	Intrastate basins in California
99	3	96	35	33	28	10	244	179	65	1,363	360	1,017	36	321	660	1			
1,238	1,718	1,223	1,417	1,209	998	6,677	310	316	293	367	900	176	85	367	78	2			
98	1	97	30	38	29	3	206	179	27	1,161	759	402	2	384	16	3			
.....	.....	58	.....	.....	.....	.....	.....	55	.....	618	618	.....	.....	.....	.....	4
.....	.....	77	.....	.....	.....	.....	.....	152	.....	715	715	.....	.....	.....	.....	5
21	.....	21	7	14	.....	.....	24	17	7	45	40	5	.....	1	4	6
7	.....	7	1	6	.....	.....	1	57	2	39	16	23	.....	23	.....	7
46	1	45	7	16	22	1	101	87	14	607	313	294	2	268	4	8			
24	.....	24	15	2	7	1	24	20	4	470	390	80	.....	72	8	9	
417.7	15.1	402.6	170.0	152.6	80.0	414.0	330.9	201.0	129.9	936.4	579.0	357.4	10.0	299.3	48.1	10			
.....	.....	325	.....	.....	.....	.....	.....	84	.....	1,303	1,303	.....	.....	.....	.....	11
.....	.....	821	.....	.....	.....	.....	.....	435	.....	1,573	1,573	.....	.....	.....	.....	12
411	15	396	164	152	80	414	319	199	120	901	578	323	8	289	26	13			
6.7	0.1	6.6	6.0	0.6	.....	.....	11.9	2.0	9.9	35.4	1.0	34.4	2.0	10.3	22.1	14	
2,663	143	2,520	1,043	958	519	2,088	1,221	775	446	12,016	8,540	3,476	88	2,483	906	15			
.....	.....	1,698	.....	.....	.....	.....	.....	784	.....	5,253	5,253	.....	.....	.....	.....	16
.....	.....	2,192	.....	.....	.....	.....	.....	2,446	.....	1,204	1,204	.....	.....	.....	.....	17
3.1	2.7	0.4	0.4	15.4	44.6	3.0	41.6	716.5	14.1	702.4	3.4	30.9	668.1	18		
.....	2.7	0.2	3.8	15.3	19		
.....	4.1	15.7	20		
2.7	2.7	0.6	35.6	35.6	623.7	0.7	623.0	2.6	1.2	619.2	21		
.....	4.3	3.0	6.0	90.3	11.1	79.2	0.8	29.7	48.7	22		
0.4	0.4	0.4	6.0	2.0	23		
.....	4.5	0.5	0.3	0.2	0.2	24		
8	1	7	1	3	3	1	27	24	3	62	13	49	7	35	7	25			
.....	.....	2	.....	.....	.....	.....	.....	7	.....	.....	13	.....	.....	.....	.....	26
.....	.....	14	.....	.....	.....	.....	.....	9	.....	.....	12	.....	.....	.....	.....	27
6	1	7	1	3	3	1	22	2	3	7	3	4	1	.....	3	28		
.....	.....	.....	.....	.....	.....	.....	.....	19	.....	51	9	42	6	32	4	29
.....	.....	.....	.....	.....	.....	.....	.....	3	.....	4	1	3	.....	3	.....	30
8	1	7	1	3	3	6	35	30	5	268	19	249	10	77	162	31			
3	.....	3	.....	3	.....	.....	15	13	2	254	14	240	10	70	160	32
3	.....	3	.....	3	.....	.....	13	11	2	7	.....	7	.....	7	.....	33
94,280	(?)	81,280	(?)	280	1,000	273,600	46,769	46,686	2,103	255,121	241,062	14,059	8	2,657	11,394	34			
.....	.....	3	.....	.....	.....	.....	.....	9	.....	.....	21	.....	.....	.....	.....	35
.....	.....	92,002	.....	.....	.....	.....	.....	32,476	.....	.....	105,611	.....	.....	.....	.....	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37
14	.....	14	1	13	.....	.....	3	3	1	93	7	86	20	64	2	38
.....	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	39
.....	.....	26	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	40
785	.....	785	(?)	735	.....	.....	17	55	(?)	7,895	203	7,692	4,490	2,975	(?)	41
.....	.....	576	.....	.....	.....	.....	.....	.....	.....	.....	85	.....	.....	.....	.....	42
.....	.....	242	.....	.....	.....	.....	.....	.....	.....	.....	805	.....	.....	.....	.....	43
3	.....	3	3	.....	.....	.....	34	27	7	906	30	876	11	27	838	44
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	28	.....	.....	.....	.....	45
.....	.....	71	.....	.....	.....	.....	.....	2	.....	.....	18	.....	.....	.....	.....	46
900	.....	900	900	.....	.....	.....	17,434	12,874	4,560	466,716	6,770	459,946	2,515	3,798	453,633	47
.....	.....	.....	.....	.....	.....	.....	.....	4,750	.....	.....	13,035	.....	.....	.....	.....	48
.....	.....	5	.....	.....	.....	.....	.....	555	.....	.....	2,540	.....	.....	.....	.....	49
3	3	3	6	41	34	7	929	31	898	12	28	658	50		
65	.....	65	65	.....	.....	.....	422	618	150	22,415	239	22,176	188	173	21,815	52
.....	.....	.....	.....	.....	.....	.....	.....	145	.....	.....	627	.....	.....	.....	.....	53
.....	.....	2	.....	.....	.....	.....	6	18	4	610	71	.....	.....	.....	.....	54
(?)	(?)	(?)	(?)	.....	.....	.....	422	389	85	15,128	40	15,088	(?)	.....	603	55
(?)	(?)	(?)	(?)	.....	.....	.....	18	15	3	268	20	248	8	23	217	56
.....	.....	.....	.....	.....	.....	.....	215	150	65	7,227	189	7,038	155	162	6,721	58
.....	.....	.....	.....	.....	.....	.....	5	5	.....	51	6	45	2	5	38	59
3	.....	3	3	.....	.....	.....	14	14	.....	60	10	50	(?)	11	36	60
.....	.....	.....	.....	.....	.....	.....	6	40	33	918	31	887	12	32	843	61
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29	.....	.....	.....	.....	62
6,900	6,900	6,900	43,084	23,964	19,304	4,660	471,139	6,950	464,189	2,885	4,398	456,906	64		
.....	5,500	11,770	65		
.....	4,640	22,485	66		
3	.....	3	3	.....	.....	.....	3	19	4	140	16	124	2	9	113	67
6,900	6,900	6,900	32,313	12,105	9,945	2,260	65,137	4,712	60,425	(?)	1,910	58,015	68		
2,300	.....	2,300	2,300	.....	.....	.....	10,771	637	656	565	294	487	(?)	212	513	69
.....	.....	.....	.....	.....	.....	.....	.....	15	12	3	.....	.....	.....	.....	.....	70
.....	.....	.....	.....	.....	.....	.....	11,700	9,300	2,400	396,841	(?)	395,091	2,225	1,310	391,556	71
.....	.....	.....	.....	.....	.....	.....	780	775	800	580	(?)	579	318	584	72	72
.....	.....	.....	.....	.....	.....	.....	5	5	.....	86	13	73	3	16	54	73
.....	.....	.....	.....	.....	.....	.....	139	139	.....	6,862	488	6,374	160	748	5,466	74
.....	.....	.....	.....	.....	.....	.....	28	28	.....	80	38	87	53	47	101	75
.....	.....	.....	.....	.....	.....	.....	3	1	.....	8	.....	8	.....	3	5	76
.....	.....	.....	.....	.....	.....	.....	10,771	(?)	(?)	2,299	.....	2,299	.....	430	1,869	77
10	.....	10	10	.....	.....	.....	24	43	37	85	36	93	103	48	95	78
.....	.....	.....	.....	.....	.....	.....	.....	50	.....	.....	31	.....	.....	.....	.....	79
.....	.....	10	.....	.....	.....	.....	.....	20	.....	.....	30	.....	.....	.....	.....	80
5	.....	5	5	.....	.....	.....	43	32	85	93	35	95	111	52	96	81
13	.....	13	13	.....	.....	.....	24	43	.....	36	38	36	20	44	25	82

⁵ Data for less than 3 enterprises shown with permission of the enterprise involved.
⁶ Total capacity of all reservoirs regardless of size.
⁷ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION
[For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER (IX)							
	Total (IX)	Direct (IX-A)+(IX-C)	Upper Columbia River (IX-A)				Clark Fork	
			Total (IX-A)	Direct (IX-A)	Kootenai River (1)	Total ¹	Direct (2)	
								Total	Direct	Total	Direct
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940. number.....	13,154	928	4,441	586	170	1,730	360
2	Average size of enterprise based on area works were capable of supplying with water.....1940. acres.....	337	36	236	42	56	231	94
3	Diversion dams.....1940. total number.....	11,208	264	3,470	189	168	2,040	397
4	.....1930. total number.....	6,247	2	.....	.....	.....	403	15
5	.....1920. total number.....	6,494	9	.....	.....	.....	715	6
6	(a) Concrete and masonry.....1940. number.....	1,066	8	128	4	6	30	10
7	(b) Timber.....1940. number.....	1,748	101	743	56	78	395	104
8	(c) Earth and rock.....1940. number.....	5,698	129	1,616	107	56	1,002	204
9	(d) Other, mixed, and not reported.....1940. number.....	2,696	26	983	22	28	613	79
10	Main canals and laterals.....1940. total length, miles.....	27,535.0	196.7	7,712.4	158.0	152.5	3,773.6	363.5
11	.....1930. total length, miles.....	26,919	51	.....	.....	.....	3,398	133
12	.....1920. total length, miles.....	32,799	199	.....	.....	.....	4,239	86
13	(a) Earth.....1940. length, miles.....	26,453	141	7,027	125	144	3,718	372
14	(b) Lined.....1940. length, miles.....	1,082.0	55.7	685.4	33.0	8.5	55.6	11.5
15	.....1940. capacity, c.f.s. ⁴	121,457	830	24,788	604	485	11,165	1,442
16	.....1930. capacity, c.f.s. ⁴	115,083	205	.....	.....	.....	7,112	507
17	.....1920. capacity, c.f.s. ⁴	134,536	632	.....	.....	.....	14,618	1,989
18	Pipe lines ⁵.....1940. total length, miles.....	3,181.4	584.4	2,193.5	450.9	10.0	59.2	24.6
19	.....1930. total length, miles.....	1,616.2	148.4	.....	.....	.....	35.8	2.8
20	.....1920. total length, miles.....	1,125.2	164.7	.....	.....	.....	27.8	2.5
21	(a) Concrete.....1940. length, miles.....	794.9	64.5	594.2	48.3	.....	4.7	0.1
22	(b) Metal.....1940. length, miles.....	1,427.7	378.9	901.0	296.2	4.1	40.5	16.0
23	(c) Wood-stave.....1940. length, miles.....	821.7	127.2	591.0	103.0	5.9	12.3	6.9
24	(d) Other.....1940. length, miles.....	137.1	13.8	107.3	3.4	.....	1.7	1.6
25	Storage dams.....1940. total number.....	590	32	207	20	12	111	28
26	.....1930. total number.....	414	1	.....	.....	.....	58	3
27	.....1920. total number.....	603	18	.....	.....	.....	103	1
28	(a) Concrete and masonry.....1940. number.....	85	3	27	1	.....	11	4
29	(b) Earth and rock.....1940. number.....	388	25	141	19	4	73	15
30	(c) Other, mixed, and not reported.....1940. number.....	117	4	39	.....	8	27	9
31	Reservoirs.....1940. total number.....	614	24	207	18	10	120	30
32	(a) 1-99 acre-feet capacity.....1940. number.....	350	20	116	14	9	64	25
33	(b) 100-999 acre-feet capacity.....1940. number.....	131	4	43	4	.....	33	5
34	(c) 1,000 and over acre-feet capacity.....1940. number.....	133	.....	48	.....	1	23	.....
35	.....1940. total capacity, ac.-ft. ⁶	7,517,123	1,696	1,405,800	1,631	3,107	236,657	845
36	.....1930. total capacity, ac.-ft. ⁶	353	1	.....	.....	.....	53	2
37	.....1920. total capacity, ac.-ft. ⁶	6,316,670	50	.....	.....	.....	159,601	3,560
38	Wells, flowing.....1940. number.....	374	16	46	1	.....	39	1
39	.....1930. number.....	293	1	.....	.....	.....	37	.....
40	.....1920. number.....	176	8	.....	.....	.....	11	.....
41	.....1940. yield, g.p.m.....	65,579	4,070	11,905	(?)	.....	9,600	(?)
42	.....1930. yield, g.p.m.....	62,451	300	.....	.....	.....	3,798	.....
43	.....1920. yield, g.p.m.....	27,135	4,390	.....	.....	.....	3,333	.....
44	Wells, pumped.....1940. number.....	1,972	353	620	200	3	34	14
45	.....1930. number.....	1,663	11	.....	.....	.....	17	7
46	.....1920. number.....	752	175	.....	.....	.....	3	.....
47	.....1940. yield, g.p.m.....	687,639	74,599	225,886	43,764	740	9,998	3,888
48	.....1930. yield, g.p.m.....	464,026	11,325	.....	.....	.....	5,903	1,200
49	.....1920. yield, g.p.m.....	277,555	58,401	.....	.....	.....	80	.....
50	Pumping plants.....1940. total number.....	4,447	690	1,644	416	9	121	36
51	.....1930. total number.....	3,251	.....	.....	.....	.....	40	5
52	Prime movers.....1940. capacity, hp.....	105,911	9,075	41,973	7,048	44	10,145	313
53	.....1930. capacity, hp.....	77,271	6,625	.....	.....	.....	329	53
54	.....1920. capacity, hp.....	62,451	6,493	.....	.....	.....	283	.....
55	(a) Electric.....1940. number.....	9,089	590	1,388	379	.....	62	16
56	.....1940. capacity, hp.....	84,555	7,873	33,970	6,686	.....	9,578	103
57	(b) Internal-combustion.....1940. number.....	1,237	99	210	36	7	52	16
58	.....1940. capacity, hp.....	13,042	1,202	2,338	362	37	394	130
59	(c) Other.....1940. number.....	121	81	46	81	2	7	4
60	.....1940. capacity, hp.....	8,214	5,665	.....	.....	(?)	173	80
61	Pumps.....1940. total number.....	4,439	687	1,640	417	10	118	33
62	.....1930. number.....	3,434	228	.....	.....	.....	41	5
63	.....1920. number.....	1,745	359	.....	.....	.....	27	.....
64	.....1940. capacity, g.p.m.....	4,608,862	211,394	936,702	132,272	2,545	155,663	18,028
65	.....1930. capacity, g.p.m.....	3,583,854	215,538	.....	.....	.....	20,765	1,930
66	.....1920. capacity, g.p.m.....	2,522,910	233,881	.....	.....	.....	12,447	.....
67	(a) Centrifugal.....1940. number.....	3,632	559	1,390	358	6	86	21
68	.....1940. capacity, g.p.m.....	4,002,160	189,697	865,397	121,610	1930	129,379	9,930
69	.....1940. average capacity, g.p.m.....	1,102	339	623	340	322	1,504	473
70	(b) Turbine.....1940. number.....	338	45	96	27	.....	7	5
71	.....1940. capacity, g.p.m.....	348,633	15,041	43,913	8,179	.....	13,012	7,540
72	.....1940. average capacity, g.p.m.....	1,031	334	457	303	.....	1,859	1,508
73	(c) Plunger.....1940. number.....	308	71	124	28	2	16	3
74	.....1940. capacity, g.p.m.....	22,359	5,415	10,482	2,091	(?)	1,112	280
75	.....1940. average capacity, g.p.m.....	73	76	85	75	(?)	70	93
76	(d) Other.....1940. number.....	161	12	30	4	2	9	4
77	.....1940. capacity, g.p.m.....	236,710	1,181	16,910	392	(?)	12,160	278
78	Pumping lift, from all sources.....1940. average, feet.....	39	62	60	74	19	33	27
79	.....1930. average, feet.....	47	78	.....	.....	.....	29	30
80	.....1920. average, feet.....	50	66	.....	.....	.....	32	.....
81	from pumped wells.....1940. average, feet.....	39	59	53	60	15	30	36
82	from surface sources.....1940. average, feet.....	40	66	66	86	21	34	20

¹ Data for the intrastate tributaries of the Clark Fork are not shown separately but are included in the Clark Fork total.² Data for the intrastate tributaries of the Spokane River are not shown separately but are included in the Spokane River total.³ Data for the intrastate tributaries of the South Fork Snake River are not shown separately but are included in the South Fork Snake River total.⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION
 [For the 17 western States]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER (IX)—Continued										
	Snake River (IX-B)—Continued										
	Lower Snake River—Continued										
	Raft River (13)	Goose Creek (14)	Salmon Falls Creek (15)	Bruneau River (18)	Total (23)	Direct (23)	Owyhee River			Jordan Creek (26)	
						South Fork Owyhee River					
						Total (24)	Direct (24)	East Fork Owyhee River (25)			
ENTERPRISES AND IRRIGATION WORKS JANUARY 1											
1	Enterprises.....1940..number.....	57	26	28	109	202	63	79	39	40	60
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	288	778	1,718	199	758	1,218	743	800	688	295
3	Diversion dams.....1940..total number.....	68	90	96	232	383	61	193	104	89	129
4	.....1930..total number.....	51	20	41	122	360					
5	.....1920..total number.....	101	35	40	141	348					
6	(a) Concrete and masonry.....1940..number.....	10	4		4	4					
7	(b) Timber.....1940..number.....	7	1		10	9					
8	(c) Earth and rock.....1940..number.....	21	25	64	155	309	52	147	88	59	110
9	(d) Other, mixed, and not reported.....1940..number.....	30	60	32	63	58	5	42	13	29	11
10	Main canals and laterals.....1940..total length, miles.....	107.0	98.0	137.0	151.2	957.0	415.7	406.0	265.0	141.0	135.3
11	.....1930..total length, miles.....	99	137	347	206	426					
12	.....1920..total length, miles.....	163	170	352	262	679					
13	(a) Earth.....1940..length, miles.....	107	98	109	151	943	402	406	265	141	135
14	(b) Lined.....1940..length, miles.....			28.0	0.2	14.0	13.7				0.3
15	.....1940..capacity, c.f.s. ³	415	613	1,013	545	3,940	2,143	1,123	406	717	674
16	.....1930..capacity, c.f.s. ³	413	532	1,207	686	1,409					
17	.....1920..capacity, c.f.s. ³	642	100	1,857	826	2,508					
18	Pipe lines ⁴.....1940..total length, miles.....	1.1	0.2	3.0		24.1	22.8	1.1	0.8	0.3	0.2
19	.....1930..total length, miles.....	0.7			0.5	1.6					
20	.....1920..total length, miles.....			0.1	0.8	2.5					
21	(a) Concrete.....1940..length, miles.....					10.0	9.7	0.3		0.3	
22	(b) Metal.....1940..length, miles.....	0.7	0.2	1.0		5.9	5.1	0.8	0.8		
23	(c) Wood-stave.....1940..length, miles.....	0.4				8.2	8.0				0.2
24	(d) Other.....1940..length, miles.....			2.0							
25	Storage dams.....1940..total number.....	15	3	3	4	33	14	14	2	12	5
26	.....1930..total number.....	1	2	1	2	24					
27	.....1920..total number.....	2		6	18	27					
28	(a) Concrete and masonry.....1940..number.....	7		1		3	1	2	1	1	
29	(b) Earth and rock.....1940..number.....	6	3	2	2	23	10	6	1	7	5
30	(c) Other, mixed, and not reported.....1940..number.....	2			2	7	3	4		4	
31	Reservoirs.....1940..total number.....	16	4	4	4	38	17	16	2	14	5
32	(a) 1-99 acre-feet capacity.....1940..number.....	14	3	1	2	5	3				2
33	(b) 100-999 acre-feet capacity.....1940..number.....	1		1	2	24	10	12	1	11	2
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	1	1	2		9	4	4	(?)	1	1
35	.....1940..total capacity, ac.-ft. ³	1,883	75,007	211,601	575	823,905	724,546	64,821	(?)	46,621	34,538
36	.....1930..total capacity, ac.-ft. ³	3	1	1	4	24					
37	.....1920..total capacity, ac.-ft. ³	367	74,000	182,650	5,235	396,951					
38	Wells, flowing.....1940..number.....	1		4	66	3	3				
39	.....1930..number.....				24	1					
40	.....1920..number.....			3	38	4					
41	.....1940..yield, g.p.m.....	(?)		290	7,440	25	25				
42	.....1930..yield, g.p.m.....				7,378	10					
43	.....1920..yield, g.p.m.....			1,900	1,628	787					
44	Wells, pumped.....1940..number.....	28	1	1		3	2	1	1		
45	.....1930..number.....					1					
46	.....1920..number.....				1	3					
47	.....1940..yield, g.p.m.....	15,920	(?)	(?)		980	(?)	(?)	(?)		
48	.....1930..yield, g.p.m.....					20					
49	.....1920..yield, g.p.m.....				27	265					
50	Pumping plants.....1940..total number.....	21	1	1	1	31	29	2	2		
51	.....1930..total number.....				2	76					
52	Prime movers.....1940..capacity, hp.....	618	(?)	(?)	(?)	3,705	3,697	(?)	(?)		
53	.....1930..capacity, hp.....				451	566					
54	.....1920..capacity, hp.....			6	457	1,318					
55	(a) Electric.....1940..number.....				1	16	16				
56	.....1940..capacity, hp.....			(?)		3,386	3,386				
57	(b) Internal-combustion.....1940..number.....	20	1		1	5	3	2			
58	.....1940..capacity, hp.....	570	(?)		(?)	49	41	(?)	(?)		
59	(c) Other.....1940..number.....	1				10	10				
60	.....1940..capacity, hp.....	(?)				270	270				
61	Pumps.....1940..total number.....	27	1	1	1	23	21	2	2		
62	.....1930..number.....				3	78					
63	.....1920..number.....			1	7	61					
64	.....1940..capacity, g.p.m.....	15,470	(?)	(?)	(?)	169,339	169,089	(?)	(?)		
65	.....1930..capacity, g.p.m.....					32,130	36,924				
66	.....1920..capacity, g.p.m.....			440		27,465	80,503				
67	(a) Centrifugal.....1940..number.....	18	1			20	18	2	2		
68	.....1940..capacity, g.p.m.....	8,500	(?)			161,507	161,257	(?)	(?)		
69	.....1940..average capacity, g.p.m.....	472	(?)			8,076	8,959	(?)	(?)		
70	(b) Turbine.....1940..number.....	9		1		3	3				
71	.....1940..capacity, g.p.m.....	6,970		(?)		7,832	7,832				
72	.....1940..average capacity, g.p.m.....	774		(?)		2,611	2,611				
73	(c) Plunger.....1940..number.....										
74	.....1940..capacity, g.p.m.....										
75	.....1940..average capacity, g.p.m.....										
76	(d) Other.....1940..number.....				(?)	1					
77	.....1940..capacity, g.p.m.....										
78	Pumping lift, from all sources.....1940..average, feet.....	38	(?)	(?)	(?)	26	28	(?)	(?)		
79	.....1930..average, feet.....					18					
80	.....1920..average, feet.....			15	24	28					
81	from pumped wells.....1940..average, feet.....	39	(?)	(?)		19	(?)	(?)	(?)		
82	from surface sources.....1940..average, feet.....	30			(?)	27	29	(?)	(?)		

¹Data for the intrastate tributaries of the Klamath River are not shown separately but are included in the Klamath River total.

²Data for the intrastate tributaries of the Grande Ronde River are not shown separately but are included in the Grande Ronde River total.

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁴Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

WORKS, 1940, 1930, AND 1920—Continued
and Arkansas and Louisiana]

COLUMBIA RIVER (IX)—Continued														KLAMATH RIVER (X)		
Snake River (IX-B)—Continued						Lower Columbia River (IX-C)					Total ¹	Direct	Lost River			
Lower Snake River—Continued					Independent intrastate basins in Idaho	Total	Direct	Walla Walla River	Intrastate tributaries in Oregon	Intrastate tributaries in Washington						
Grande Ronde River	Intrastate tributaries in Idaho	Intrastate tributaries in Oregon	Intrastate tributaries in Washington													
Total ²	Direct (46)						(IX-C)	(1)				(X)	(3)			
453	290	1,778	739	35	163	3,399	342	653	2,317	87	929	341	83	1		
165	103	440	307	145	634	105	26	69	125	159	334	313	1,191	2		
362	117	1,449	1,239	30	171	2,211	75	387	1,685	64	670	180	11	3		
175								126	1,369		472	411	13	4		
207								236	1,195		505	452	8	5		
33	18	95	104	8	31	473	4	188	278	3	29	7	6	6		
110	24	165	155		21	392	45	65	235	47	155	71		7		
179	69	950	681	17	85	853	22	111	711	9	292	55	1	8		
40	6	239	299	5	34	493	4	23	461	5	194	47		9		
410.3	176.6	5,054.4	1,634.6	30.7	478.2	3,425.4	36.7	255.0	3,072.7	59.0	1,904.3	593.0	494.7	10		
923								230	2,922		1,698	964	436	11		
629								1,364	2,739		1,726	1,214	303	12		
405	175	4,989	1,604	29	478	3,208	16	245	2,893	54	1,865	584	488	13		
5.3	1.6	65.4	30.6	1.7	0.2	217.4	22.7	10.0	179.7	5.0	39.3	9.0	6.7	14		
2,181	861	19,922	7,218	75	2,421	10,657	226	1,312	8,705	414	9,179	3,767	2,355	15		
1,551								652	7,650		5,900	2,965	1,008	16		
1,894								1,453	7,838		8,878	5,778	1,889	17		
5.9	5.0	147.7	13.8	58.4	2.6	620.1	133.5	59.2	413.6	13.8	52.8	16.4	5.0	18		
								20.5	169.8		21.1	17.7	2.2	19		
1.1								80.0	76.9		22.1	20.8	0.6	20		
0.2	0.2	50.6	6.0	4.9		99.3	16.2	35.0	48.1		4.6	1.0	0.8	21		
4.9	4.1	21.1	2.2	17.6	2.6	434.5	82.7	15.6	327.1	9.1	43.8	14.4	3.3	22		
0.8	0.7	71.1	5.6	35.2		55.8	24.2	7.8	29.2	4.6	3.4	0.8	0.6	23		
		4.9		0.7		20.5	10.4	0.8	9.2	0.1	1.0	0.2	0.3	24		
15	6	93	50	3	3	72	12		59	1	52	12	9	25		
10									45		20	10	3	26		
19									58		41	23	13	27		
1		16	7		1	10	2		8		5	3	1	28		
7	4	65	35	3	2	38	6		31	5	40	5	7	29		
7	2	12	8			24	4		20		7	4	1	30		
14	9	108	56	1	3	64	6		58		60	16	9	31		
11	9	64	27	1	2	53	6		47		39	10	2	32		
1		13	17			4			4		11	1	4	33		
2		31	12		1	7			7		10	5	3	34		
49,404	50	1,229,812	358,586	(?)	38,015	256,625	65		256,560		1,165,143	552,578	540,071	35		
5									22		32	23	2	36		
41,766									203,863		1,110,362	549,256	560,000	37		
		98	3	7	29	34	15	13	6		3	3		38		
								18	8		28	3		39		
								34	6		4	3		40		
		10,840	250	7,140	6,600	11,105	2,720	7,495	890		42	42		41		
								10,725	375		241	200		42		
								6,080	80		35			43		
70	67	148	29	3	54	934	153	282	488	11	56	24	4	44		
58								264	264		14	14		45		
20								124	42		16	14	2	46		
20,849	20,713	63,245	8,086	450	98,190	204,781	30,835	58,083	115,095	768	29,509	22,000	1,775	47		
20,144								56,042	47,041		21,442	21,442		48		
4,203								51,835	2,756		5,975	4,375	1,600	49		
86	80	263	57	16	51	1,826	274	341	1,171	40	223	74	93	50		
67								322	475		98	59	26	51		
366	342	5,187	800	465	1,843	13,476	2,027	1,557	9,536	356	6,854	1,941	3,062	52		
367								1,613	3,878		6,522	3,342	2,480	53		
189								1,148	1,672		3,996	3,148	786	54		
43	37	188	27	11	45	1,030	211	300	499	20	154	49	82	55		
108	98	2,805	486	440	1,746	5,709	1,187	1,261	3,198	63	5,939	1,496	2,858	56		
41	40	66	25	4	6	762	63	648	15	57	19	9	57	57		
204	200	567	238	24	97	7,599	840	292	6,245	222	740	400	78	58		
4	3	9	4	1		34		24	5		12	6		59		
44	44	1,815	76	(?)		168		4	93	71	175	45	(?)	60		
87	79	266	53	15	51	1,828	270	345	1,174	39	224	75	93	61		
67								329	496		123	69	38	62		
35								155	147		83	62	16	63		
34,464	34,033	312,935	35,766	6,188	270,704	655,627	79,062	74,156	492,689	9,720	506,460	163,350	244,339	64		
23,504								66,590	261,573		508,985	233,843	207,742	65		
10,743								40,265	92,604		174,184	142,484	21,100	66		
78	73	167	41	13	38	1,498	201	320	951	26	153	48	65	67		
33,148	32,798	75,846	27,510	6,170	228,554	571,928	68,087	69,783	425,701	8,357	366,620	101,800	176,534	68		
425	449	460	671	475	6,015	382	339	218	448	321	2,396	2,121	2,716	69		
3	1	46	5		13	111	18	15	77	1	32	13		70		
776	(?)	64,961	7,590		42,150	64,932	6,862	4,175	53,595	(?)	53,595	16,660	34,935	71		
259	(?)	1,412	1,518		3,242	585	381	278	696	(?)	1,675	1,282	2,055	72		
3	3	3	4	1		186	43	5	111	7	24	7	5	73		
155	155	118	136	(?)		11,174	3,324	33	7,567	250	997	380	182	74		
52	52	39	34	(?)		67	77	7	68	36	42	54	36	75		
3	2	60	3	1		53	8	5	35	5	15	7	6	76		
385	(?)	171,010	530	(?)		7,593	789	165	5,826	813	85,248	44,510	32,688	77		
17	16	24	24	55	17	28	46	28	25	15	26	31	22	78		
18								26	30		33	36	33	79		
12								24	34		25	28	22	80		
17	16	27	25	40	20	36	57	30	31	22	37	57	65	81		
20	13	20	24	62	11	22	31	18	21	12	23	21	19	82		

⁵Corresponding reservoir not reported.

⁶Total capacity of all reservoirs regardless of size.

⁷Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued
[For the 17 western States and Arkansas and Louisiana]

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		PACIFIC OCEAN STREAMS (XI) (Exclusive of Gulf of California streams and Columbia and Klamath Rivers)						
		Streams north of the Columbia River (XI-A)	Streams between the Columbia and Klamath Rivers ¹ (XI-B)	Streams between the Klamath River and San Francisco Bay (XI-C)	San Francisco Bay and tributaries other than Sacramento and San Joaquin Delta (XI-D)	Pacific Ocean streams south of San Francisco Bay (XI-E)		
						Total	Streams between San Francisco Bay and Santa Maria River (XI-Ea)	Santa Maria River and streams south (XI-Eb)
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
1	Enterprises.....1940..number.....	774	987	262	2,725	9,310	2,734	6,576
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	53	86	42	60	121	80	138
3	Diversion dams.....1940..total number.....	74	432	16	47	281	140	141
4	.....1930..total number.....	.....	405	26	24	176	.....	.....
5	.....1920..total number.....	.....	335	21	26	204	.....	.....
6	(a) Concrete and masonry.....1940..number.....	2	42	6	25	85	28	57
7	(b) Timber.....1940..number.....	31	123	.....	4	18	14	4
8	(c) Earth and rock.....1940..number.....	23	182	7	10	145	79	66
9	(d) Other, mixed, and not reported.....1940..number.....	18	85	3	8	33	19	14
10	Main canals and laterals.....1940..total length, miles.....	154.0	1,068.5	14.4	80.5	630.2	152.0	478.2
11	.....1930..total length, miles.....	.....	1,188	47	35	1,218	.....	.....
12	.....1920..total length, miles.....	.....	1,066	391	85	1,411	.....	.....
13	(a) Earth.....1940..length, miles.....	135	1,030	13	68	218	110	108
14	(b) Lined.....1940..length, miles.....	19.0	38.5	1.4	12.5	412.2	42.0	370.2
15	.....1940..capacity, c.f.s. ²	1,032	2,328	184	611	3,840	610	3,230
16	.....1930..capacity, c.f.s. ².....	.....	1,813	59	317	3,195	.....	.....
17	.....1920..capacity, c.f.s. ².....	.....	2,216	134	381	9,669	.....	.....
18	Pipe lines ³.....1940..total length, miles.....	308.6	118.6	67.0	892.5	13,046.0	1,408.2	11,637.8
19	.....1930..total length, miles.....	.....	16.3	60.5	422.5	8,699.6	.....	.....
20	.....1920..total length, miles.....	.....	23.7	33.3	264.6	4,186.4	.....	.....
21	(a) Concrete.....1940..length, miles.....	6.1	8.0	22.7	574.6	8,589.9	941.6	7,648.3
22	(b) Metal.....1940..length, miles.....	287.4	92.9	43.5	306.3	4,136.1	428.6	3,707.5
23	(c) Wood-stave.....1940..length, miles.....	14.0	17.0	0.7	8.4	107.0	18.6	88.4
24	(d) Other.....1940..length, miles.....	1.1	0.7	0.1	3.2	213.0	19.4	193.6
25	Storage dams.....1940..total number.....	17	45	5	21	246	70	176
26	.....1930..total number.....	.....	20	16	11	130	.....	.....
27	.....1920..total number.....	.....	28	15	9	93	.....	.....
28	(a) Concrete and masonry.....1940..number.....	5	10	2	3	67	14	53
29	(b) Earth and rock.....1940..number.....	6	23	2	14	164	50	114
30	(c) Other, mixed, and not reported.....1940..number.....	6	12	1	4	15	6	9
31	Reservoirs.....1940..total number.....	21	43	10	63	1,012	208	804
32	(a) 1-99 acre-feet capacity.....1940..number.....	20	40	10	60	959	198	761
33	(b) 100-999 acre-feet capacity.....1940..number.....	1	.....	.....	2	32	9	23
34	(c) 1,000 and over acre-feet capacity.....1940..total number.....	.....	3	.....	1	21	1	20
35	.....1940..total capacity, ac.-ft. ⁴	264	21,714	190	2,446	377,187	7,214	369,973
36	.....1930..total number.....	.....	16	6	43	579	.....	.....
37	.....1930..total capacity, ac.-ft. ⁴.....	.....	45,948	207	8,217	271,997	.....	.....
38	Wells, flowing.....1940..number.....	7	4	.....	2	199	19	180
39	.....1930..number.....	.....	1	1	9	148	.....	.....
40	.....1920..number.....	.....	4	1	74	722	.....	.....
41	.....1940..yield, g.p.m.....	1,507	53	.....	(⁵)	18,635	2,410	16,225
42	.....1930..yield, g.p.m.....	.....	2	5	1,085	22,335	.....	.....
43	.....1920..yield, g.p.m.....	.....	10,000	.....	13,075	164,409	.....	.....
44	Wells, pumped.....1940..number.....	242	37	196	3,103	11,354	3,219	8,135
45	.....1930..number.....	.....	13	207	3,100	10,092	.....	.....
46	.....1920..number.....	.....	23	93	2,451	7,304	.....	.....
47	.....1940..yield, g.p.m.....	24,146	4,345	109,026	1,204,661	6,166,881	2,135,973	4,030,908
48	.....1930..yield, g.p.m.....	.....	6,292	91,092	91,092	5,526,095	.....	.....
49	.....1920..yield, g.p.m.....	.....	11,499	30,819	705,510	3,131,557	.....	.....
50	Pumping plants.....1940..total number.....	564	362	312	3,325	12,067	3,429	8,638
51	.....1930..total number.....	.....	91	295	3,114	9,292	.....	.....
52	Prime movers.....1940..capacity, hp.....	2,897	5,246	3,328	67,134	311,022	73,699	237,323
53	.....1940..capacity, hp.....	.....	4,817	2,841	61,205	253,519	.....	.....
54	.....1920..capacity, hp.....	.....	789	1,163	36,219	132,877	.....	.....
55	(a) Electric.....1940..number.....	449	172	151	2,944	9,049	2,845	6,204
56	.....1940..capacity, hp.....	1,704	1,491	1,699	59,573	244,429	63,943	180,486
57	(b) Internal-combustion.....1940..number.....	105	181	156	340	2,183	545	1,638
58	.....1940..capacity, hp.....	1,118	1,536	1,567	7,394	64,826	9,940	55,186
59	(c) Other.....1940..number.....	10	9	5	41	235	39	196
60	.....1940..capacity, hp.....	35	2,219	42	167	1,767	116	1,651
61	Pumps.....1940..total number.....	571	364	312	3,311	11,994	3,402	8,592
62	.....1930..number.....	.....	92	314	3,193	9,793	.....	.....
63	.....1920..number.....	.....	121	143	3,102	9,274	.....	.....
64	.....1940..capacity, g.p.m.....	79,743	194,352	192,322	1,353,663	6,804,216	2,267,067	4,537,149
65	.....1930..capacity, g.p.m.....	.....	99,809	171,166	1,212,738	5,867,238	.....	.....
66	.....1920..capacity, g.p.m.....	.....	41,852	56,454	662,987	3,770,476	.....	.....
67	(a) Centrifugal.....1940..number.....	390	306	269	443	2,475	809	1,666
68	.....1940..capacity, g.p.m.....	66,477	186,848	172,394	209,141	1,432,150	506,126	926,024
69	.....1940..average capacity, g.p.m.....	170	611	641	472	579	626	556
70	(b) Turbine.....1940..number.....	18	7	35	2,641	7,918	2,364	5,554
71	.....1940..capacity, g.p.m.....	970	3,160	19,725	1,131,406	5,286,589	1,746,755	3,519,834
72	.....1940..average capacity, g.p.m.....	54	451	564	428	665	739	634
73	(c) Plunger.....1940..number.....	137	40	7	194	1,485	214	1,271
74	.....1940..capacity, g.p.m.....	8,475	3,176	193	11,280	79,748	11,511	68,237
75	.....1940..average capacity, g.p.m.....	62	79	28	58	54	54	54
76	(d) Other.....1940..number.....	26	11	1	33	116	15	101
77	.....1940..capacity, g.p.m.....	3,821	1,168	(⁵)	7,836	25,729	2,675	23,054
78	Pumping lift, from all sources.....1940..average, feet.....	26	22	30	96	78	64	84
79	.....1930..average, feet.....	.....	27	26	102	71	.....	.....
80	.....1920..average, feet.....	.....	28	22	55	58	.....	.....
81	from pumped wells.....1940..average, feet.....	32	24	33	100	79	67	84
82	from surface sources.....1940..average, feet.....	22	22	27	46	54	40	75

¹Data for 1 enterprise on the Illinois River in California are included.²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.³Includes siphons and farm pipe lines reported.⁴Total capacity of all reservoirs regardless of size.⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 19.—DRAINAGE BASIN—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued
[For the 17 western States and Arkansas and Louisiana]

ITEM (For definitions and explanations, see text. Major basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A composite map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA AND TRIBUTARY STREAMS (XII)							Intrastate tributaries in California
		Total (XII)	Delta direct (1)	Sacramento River					
				Total ¹ (2) + (15) + (24)	Direct (2)	Pit River			
						Total (3)	Direct (3)	Goose Lake (4)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	25,406	818	5,343	890	477	336	141	19,245
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	202	408	261	711	289	271	333	177
3	Diversion dams.....1940..total number.....	1,497	3	1,229	24	631	453	178	265
4	.....1930..total number.....	781		599	4	194			182
5	.....1920..total number.....	1,128		859	6	322			269
6	(a) Concrete and masonry.....1940..number.....	395	1	200	5	65	59	6	134
7	(b) Timber.....1940..number.....	313		283	5	178	113	65	30
8	(c) Earth and rock.....1940..number.....	478	2	388	10	168	126	42	88
9	(d) Other, mixed, and not reported.....1940..number.....	371		358	4	220	155	65	13
10	Main canals and laterals.....1940..total length, miles.....	15,202.8	476.8	4,877.8	1,520.2	574.9	430.2	144.7	9,848.2
11	.....1930..total length, miles.....	13,314		4,817		372			8,497
12	.....1920..total length, miles.....	19,428		6,829		1,278			12,899
13	(a) Earth.....1940..length, miles.....	14,145	417	4,623		1,502		423	9,105
14	(b) Lined.....1940..length, miles.....	1,057.8	59.8	254.8		18.2		7.2	743.2
15	.....1940..capacity, c.f.s. ²	72,735	6,246	24,800	9,161	3,477	2,498	979	41,689
16	.....1930..capacity, c.f.s. ²	84,374		19,097		8,033			45,277
17	.....1920..capacity, c.f.s. ²	79,142		23,514		5,803			55,628
18	Pipe lines ³.....1940..total length, miles.....	7,437.1	192.9	1,075.1	156.7	17.8	15.6	2.2	6,169.1
19	.....1930..total length, miles.....	4,819.4		796.1		1.6			4,023.3
20	.....1920..total length, miles.....	1,757.8		361.2		2.9			1,396.6
21	(a) Concrete.....1940..length, miles.....	6,487.8	146.6	635.4	104.4	1.2	1.2		5,705.8
22	(b) Metal.....1940..length, miles.....	766.6	39.0	320.6	36.8	9.6	7.4	2.2	407.0
23	(c) Wood-stave.....1940..length, miles.....	131.0	4.9	81.6	3.9	6.8	6.8		44.5
24	(d) Other.....1940..length, miles.....	51.7	2.4	37.5	11.6	0.2	0.2		11.8
25	Storage dams.....1940..total number.....	358	1	166	6	75	61	14	191
26	.....1930..total number.....	218		140		32			78
27	.....1920..total number.....	285		200	3	63			85
28	(a) Concrete and masonry.....1940..number.....	47		30	1	1			17
29	(b) Earth and rock.....1940..number.....	287	1	127	3	73	59	14	159
30	(c) Other, mixed, and not reported.....1940..number.....	24		9	2	1	1		15
31	Reservoirs.....1940..total number.....	1,310	2	201	11	83	66	17	1,107
32	(a) 1-99 acre-feet capacity.....1940..number.....	1,183	2	105	10	32	24	8	1,081
33	(b) 100-999 acre-feet capacity.....1940..number.....	42		34	1	23	23		8
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	80		62		28	19	9	18
35	.....1940..total capacity, ac.-ft. ⁴	2,681,435	(5)	1,624,173	266	243,241	165,185	78,056	1,057,260
36	.....1930..total capacity, ac.-ft.....	949		176	3	40			773
37	.....1920..total capacity, ac.-ft.....	2,100,255		949,274	121	132,588			1,150,981
38	Wells, flowing.....1940..number.....	47		33	1	21	15	6	14
39	.....1930..number.....	72		39		14			33
40	.....1920..number.....	181		36		14			145
41	.....1940..yield, g.p.m.....	3,403		1,878	(5)	223	148	75	1,825
42	.....1930..yield, g.p.m.....	14,400		3,830		1,185			10,770
43	.....1920..yield, g.p.m.....	51,785		2,957		693			48,828
44	Wells, pumped.....1940..number.....	32,418	349	5,409	869	29	23	6	26,660
45	.....1930..number.....	31,744		5,450	147	4			26,294
46	.....1920..number.....	14,657		3,508	514	4			11,149
47	.....1940..yield, g.p.m.....	20,042,293	231,857	3,606,277	603,650	7,315	5,605	1,710	16,204,159
48	.....1930..yield, g.p.m.....	16,730,369		2,932,411	142,430	252			13,797,958
49	.....1920..yield, g.p.m.....	6,384,882		1,473,602	279,456	395			4,911,280
50	Pumping plants.....1940..total number.....	34,882	1,154	6,087	1,207	90	83	7	27,641
51	.....1930..total number.....	32,490		6,147		45			26,343
52	.....1940..capacity, hp.....	552,193	23,056	106,366	42,431	887	831	56	422,771
53	.....1930..capacity, hp.....	468,661		104,346	38,297	449			364,315
54	.....1920..capacity, hp.....	201,074		64,163	28,625	440			136,911
55	(a) Electric.....1940..number.....	30,014	898	5,053	889	58	55	3	24,063
56	.....1940..capacity, hp.....	473,865	19,538	91,006	38,733	553	550	3	363,321
57	(b) Internal-combustion.....1940..number.....	4,780	254	1,011	214	24	20	4	3,515
58	.....1940..capacity, hp.....	77,579	3,497	15,155	3,680	301	248	53	58,927
59	(c) Other.....1940..number.....	88	2	23	4	8			63
60	.....1940..capacity, hp.....	749	(5)	205	18	33	33		523
61	Pumps.....1940..total number.....	34,831	1,161	6,101	1,213	90	83	7	27,569
62	.....1930..number.....	33,129		5,289	872	46			26,840
63	.....1920..number.....	14,849		3,898	807	36			10,951
64	.....1940..capacity, g.p.m.....	29,694,592	2,604,039	8,580,254	4,909,095	108,997	107,256	1,741	18,510,299
65	.....1930..capacity, g.p.m.....	23,856,244		8,309,204	4,996,652	46,760			15,547,040
66	.....1920..capacity, g.p.m.....	11,584,371		4,184,240	2,616,658	32,886			7,400,131
67	(a) Centrifugal.....1940..number.....	15,189	900	3,279	710	53		5	11,010
68	.....1940..capacity, g.p.m.....	15,532,893	2,091,141	5,724,260	3,815,666	74,246	73,311	935	7,737,492
69	.....1940..average capacity, g.p.m.....	1,024	2,323	1,746	5,374	1,280	1,383	187	703
70	(b) Turbine.....1940..number.....	18,312		2,703	473	19	18		15,376
71	.....1940..capacity, g.p.m.....	13,494,822	464,710	2,403,618	671,138	34,520	33,720	(5)	10,626,494
72	.....1940..average capacity, g.p.m.....	737	1,994	889	1,419	1,817	1,873	(5)	691
73	(c) Plunger.....1940..number.....	1,188	11	70	9	11	10	1	1,107
74	.....1940..capacity, g.p.m.....	97,833	327	5,025	266	121	115	(5)	92,341
75	.....1940..average capacity, g.p.m.....	82	30	72	30	11	12	(5)	83
76	(d) Other.....1940..number.....	142	17	49	21	2			76
77	.....1940..capacity, g.p.m.....	549,184	47,851	447,351	422,025	(5)	(5)		53,972
78	Pumping lift, from all sources.....1940..average, feet.....	42	18	36	31	18	17	24	44
79	.....1930..average, feet.....	42		30	17	13			45
80	.....1920..average, feet.....	32		26	24	18			34
81	from pumped wells.....1940..average, feet.....	43	31	38	35	29	31	24	44
82	from surface sources.....1940..average, feet.....	20	11	23	20	13	13	22	26

¹Data for the intrastate tributaries of the Sacramento River are not shown separately but are included in the Sacramento River total.
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
³Includes siphons and farm pipe lines reported.
⁴Total capacity of all reservoirs regardless of size.
⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 20.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

ITEM (For definitions and explanations, see text)	TOTAL (19 States, exclusive of Florida) ¹	Arizona		Arkansas	
		Primary	Supplemental	Primary	Supplemental
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*					
1 All farms.....1940..number.....	1,897,845	18,468		216,674	
2 ..1930..number.....	2,062,813	14,173		242,334	
3 Irrigated farms.....1940..number.....	291,655	10,339		1,529	
4 ..1930..number.....	265,147	8,522		1,096	
5 Increase or decrease (-), 1930-1940.....percent.....	10.0	21.3		39.5	
Operated by—					
6 (a) Owners and managers.....1940..number.....	221,639	8,787		958	
7 ..1930..number.....	203,825	6,750		625	
8 (b) Tenants.....1940..number.....	70,016	1,552		571	
9 ..1930..number.....	61,322	1,773		471	
10 Land in all farms.....1940..acres.....	629,050,311	25,651,092		18,044,542	
11 Land in irrigated farms.....1940..acres.....	112,601,431	5,274,470		592,920	
12 Average per farm.....1940..acres.....	386	510		388	
13 (a) Operated by owners and managers.....1940..acres.....	97,502,649	5,051,817		394,572	
14 Average per farm.....1940..acres.....	440	575		412	
15 (b) Operated by tenants.....1940..acres.....	15,098,782	222,653		198,348	
16 Average per farm.....1940..acres.....	216	143		347	
17 Approximate land area.....1940..acres.....	1,225,056,640	72,691,200		33,744,000	
IRRIGATED AND IRRIGABLE AREAS					
18 Area irrigated.....1939..acres.....	21,003,739	653,263		161,601	
19 (a) Cropland harvested.....1939..acres.....	18,300,138	592,305		158,833	
20 (b) Crop failure.....1939..acres.....	259,188	3,321		133	
21 (c) Pasture.....1939..acres.....	2,444,413	57,637		2,635	
22 Area irrigated.....1929..acres.....	19,547,544	575,590		151,787	
23 ..1919..acres.....	19,191,716	467,565		143,946	
24 Increase or decrease (-), 1929-1939.....percent.....	7.4	13.5		6.5	
25 Irrigable area in enterprises.....1940..acres.....	31,905,949	1,104,645		314,929	
26 ..1930..acres.....	30,599,470	1,085,627		225,992	
27 ..1920 ² ..acres.....	35,890,821	813,153		246,480	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	10,302,210	451,382		153,328	
29 ..1930..acres.....	11,051,926	510,037		74,205	
30 Area works were capable of supplying with water.....1940..acres.....	28,055,248	844,212		287,765	
31 ..1930..acres.....	26,101,890	824,152		209,942	
32 ..1920..acres.....	26,020,477	627,303		179,013	
33 Increase or decrease (-), 1930-1940.....percent.....	7.5	2.4		37.1	
34 Excess, capability of works over area irrigated.....1940..acres.....	7,051,509	190,949		126,164	
35 ..1930..acres.....	6,554,346	248,562		58,155	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	18.7	12.4		27.3	
37 ..1929..percent.....	25.0	19.3		41.8	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	74.9	77.4		56.2	
39 ..1929..percent.....	74.9	69.8		72.3	
CAPITAL INVESTED TO JANUARY 1					
40 Total investment in all enterprises.....1940..dollars.....	1,052,049,201	83,526,608		5,766,895	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	1,025,672,714	82,990,947		5,766,895	
42 (b) Investment in water rights (reported).....1940..dollars.....	26,376,487	535,661		.....
43 Total investment in all enterprises.....1930..dollars.....	892,755,790	73,328,197		6,836,648	
44 ..1920..dollars.....	697,637,328	33,498,094		7,183,322	
45 Increase or decrease (-), 1930-1940.....percent.....	17.8	13.9		-15.6	
Average investment, based on area works were capable of supplying with water, per acre.....					
46 ..1940..dollars.....	37.50	98.94		20.04	
47 ..1930..dollars.....	34.20	88.97		32.56	
48 ..1920..dollars.....	26.81	53.40		40.13	
49 Average investment per acre irrigated.....1939..dollars.....	50.09	127.86		35.69	
50 Estimated final investment in existing enterprises.....1940..dollars.....	1,126,545,687	108,980,519		5,878,930	
51 ..1930..dollars.....	1,015,108,210	91,913,550		6,844,092	
52 ..1920..dollars.....	819,778,005	34,615,064		7,283,522	
53 Increase or decrease (-), 1930-1940.....percent.....	11.0	18.6		-14.1	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	35.99	98.66		18.67	
55 ..1930..dollars.....	33.17	84.66		30.28	
56 ..1920 ² ..dollars.....	22.84	42.57		29.55	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
Enterprises reporting maintenance and operation.....1939..number.....					
57	72,457	10,161		1,229	
58 Area irrigated in these enterprises.....1939..acres.....	20,193,761	2,983,963		153,346	
59 Cost of maintenance and operation.....1939..dollars.....	43,172,526	2,828,094		835,891	
60 Average cost, per acre irrigated.....1939..dollars.....	2.14	0.95		5.45	
61 ..1929..dollars.....	2.77	4.57		7.03	
62 Total annual charges (reported) ⁴.....1939..dollars.....	32,876,404	1,408,263		34,409	
63 Average annual charge per acre irrigated.....1939..dollars.....	2.40	0.59		7.05	
64 Area against which charges were assessed.....1939..acres.....	16,570,704	2,592,476		4,879	
65 Average annual charge per acre assessed.....1939..dollars.....	1.98	0.54		7.05	
66 Total charges collected ⁴.....1939..dollars.....	27,552,300	1,148,062		23,818	
67 Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	360,304,925	26,335,349		.....
WATER DELIVERED TO IRRIGATORS					
68 Enterprises reporting water delivered.....1939..number.....	72,899	10,105		1,259	
69 Area irrigated in these enterprises.....1939..acres.....	19,377,064	2,986,061		158,767	
70 Water delivered in these enterprises.....1939..acre-feet.....	52,982,775	4,206,532		441,289	
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.7	1.4		2.8	
72 Average cost of water per acre irrigated.....1939..dollars.....	2.60	1.10		5.42	
DRAINAGE OF IRRIGATED LAND					
73 Enterprises reporting land drained or needing drainage.....1939..number.....	3,587	18		96	
74 Irrigable area in these enterprises.....1939..acres.....	9,553,069	418,539		34,894	
75 Irrigated area in these enterprises.....1939..acres.....	6,224,568	271,680		14,700	
76 Area for which drains have been installed.....1939..acres.....	3,861,305	93,803		26,078	
77 Additional area needing drainage.....1939..acres.....	897,912	107,651		2,016	

* Census of Agriculture.
¹ For the 17 western States and Arkansas and Louisiana.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Revised.

CENSUS OF IRRIGATION-UNITED STATES SUMMARY

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

Table with columns for California, Colorado, Florida, Idaho, Kansas, Louisiana, and Montana. Rows include various agricultural metrics and sub-sections for Enterprises, with numerical data and a right-hand column for row identifiers.

Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 62 to 67, inclusive, relate to those enterprises only. Data are included only in total because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 20.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

ITEM (For definitions and explanations, see text)	Nebraska		Nevada		New Mexico	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS¹						
1 All farms.....1940..number....	121,062		3,573		34,105	
2 ..1930..number....	129,456		3,442		31,404	
3 Irrigated farms.....1940..number....	6,913		3,264		15,811	
4 ..1930..number....	4,602		3,031		14,347	
5 Increase or decrease (-), 1930-1940.....percent....	50.2		7.7		10.2	
6 Operated by—						
7 (a) Owners and managers.....1940..number....	3,342		2,811		13,396	
8 ..1930..number....	2,276		2,056		11,477	
9 (b) Tenants.....1940..number....	3,571		453		2,415	
10 ..1930..number....	2,326		375		2,870	
11 Land in all farms.....1940..acres....	47,343,961		3,785,106		38,880,427	
12 ..1930..acres....	3,577,439		3,624,536		7,408,397	
13 Average per farm.....1940..acres....	517		1,110		469	
14 (a) Operated by owners and managers.....1940..acres....	2,600,098		3,420,873		6,501,491	
15 Average per farm.....1940..acres....	778		1,219		485	
16 (b) Operated by tenants.....1940..acres....	977,341		197,663		907,506	
17 Average per farm.....1940..acres....	274		436		376	
17 Approximate land area.....1940..acres....	49,057,920		70,273,280		77,767,040	
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939..acres....	610,379		739,863		554,039	
19 (a) Cropland harvested.....1939..acres....	579,535		459,863		512,441	
20 (b) Crop failure.....1939..acres....	10,717		5,298		21,069	
21 (c) Pasture.....1939..acres....	20,127		274,702		20,529	
22 Area irrigated.....1929..acres....	532,617		486,648		527,033	
23 ..1919..acres....	442,690		561,447		538,377	
24 Increase or decrease (-), 1929-1939.....percent....	14.6		52.0		5.1	
25 Irrigable area in enterprises.....1940..acres....	1,095,567		915,689		807,656	
26 ..1930..acres....	763,039		983,717		741,245	
27 ..1920 ¹ ..acres....	766,768		1,382,036		961,879	
28 Excess of irrigable area over the area irrigated..1940..acres....	485,188		175,826		253,617	
29 ..1930..acres....	230,422		497,069		214,212	
30 Area works were capable of supplying with water..1940..acres....	992,957		841,304		731,990	
31 ..1930..acres....	703,641		736,249		656,669	
32 ..1920..acres....	562,468		704,708		696,119	
33 Increase or decrease (-), 1930-1940.....percent....	41.1		14.3		11.5	
34 Excess, capability of works over area irrigated..1940..acres....	382,578		101,441		177,951	
35 ..1930..acres....	171,024		249,601		129,636	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	17.1		20.4		7.5	
37 ..1929..percent....	32.3		15.7		10.5	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	61.5		87.9		75.7	
39 ..1929..percent....	75.7		66.1		80.3	
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940..dollars....	39,056,207		16,906,790		32,735,997	
41 (a) Cost of irrigation works and equipment.....1940..dollars....	36,749,216		15,827,667		32,290,856	
42 (b) Investment in water rights (reported).....1940..dollars....	306,991		1,079,223		445,141	
43 Total investment in all enterprises.....1930..dollars....	21,386,319		15,457,931		19,834,380	
44 ..1920..dollars....	13,909,185		14,754,280		18,210,412	
45 Increase or decrease (-), 1930-1940.....percent....	82.6		9.4		65.0	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	39.33		20.10		44.72	
47 ..1930..dollars....	30.39		21.00		30.20	
48 ..1920..dollars....	24.73		20.94		26.16	
49 Average investment per acre irrigated.....1939..dollars....	63.99		22.85		59.09	
50 Estimated final investment in existing enterprises..1940..dollars....	41,995,361		18,129,554		36,773,139	
51 ..1930..dollars....	21,465,772		18,489,603		21,942,450	
52 ..1920..dollars....	18,030,154		22,648,747		20,440,646	
53 Increase or decrease (-), 1930-1940.....percent....	95.6		-1.9		67.6	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	38.33		19.80		45.53	
55 ..1930..dollars....	28.13		18.80		29.60	
56 ..1920 ¹ ..dollars....	23.51		16.39		21.25	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
57 Enterprises reporting maintenance and operation..1939..number....	2,367	262	1,327	10	2,018	49
58 Area irrigated in these enterprises.....1939..acres....	602,582	171,448	688,722	84,722	516,916	5,083
59 Cost of maintenance and operation.....1939..dollars....	639,682	119,770	293,859	38,705	1,082,768	10,142
60 Average cost, per acre irrigated.....1939..dollars....	1.39	0.70	0.43	0.46	2.09	2.00
61 ..1929..dollars....	1.54	0.91	0.81	.....	2.15	.....
62 Total annual charges (reported) ² 3.....1939..dollars....	674,403	96,342	304,084	87,619	966,767	.....
63 Average annual charge per acre irrigated.....1939..dollars....	1.40	0.63	1.51	1.04	2.47	.....
64 Area against which charges were assessed.....1939..acres....	521,282	153,282	218,138	102,049	483,407	.....
65 Average annual charge per acre assessed.....1939..dollars....	1.29	0.63	1.39	0.86	2.00	.....
66 Total charges collected ².....1939..dollars....	575,579	833	128,223	79,069	1,037,433	.....
67 Indebtedness to December 31 (reported) ³.....1939..dollars....	20,456,809	1,270,559	1,194,066	2,740,249	16,715,813	.....
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939..number....	2,222	208	1,116	9	1,960	51
69 Area irrigated in these enterprises.....1939..acres....	573,110	171,519	627,502	84,622	474,184	5,097
70 Water delivered in these enterprises.....1939..acre-feet..	1,105,696	89,845	1,871,256	291,980	1,438,686	7,732
71 Average water delivered per acre irrigated.....1939..acre-feet..	1.9	0.5	3.0	3.5	3.0	1.5
72 Average cost of water per acre irrigated.....1939..dollars....	1.73	0.73	0.76	1.05	2.80	2.00
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939..number....	69	.....	36	.....	162	.....
74 Irrigable area in these enterprises.....1939..acres....	338,461	.....	244,984	.....	331,233	.....
75 Irrigated area in these enterprises.....1939..acres....	284,658	.....	180,044	.....	231,795	.....
76 Area for which drains have been installed.....1939..acres....	47,960	.....	97,576	.....	240,614	.....
77 Additional area needing drainage.....1939..acres....	10,305	.....	21,153	.....	8,732	.....

¹ Census of Agriculture.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

North Dakota	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming		
73,962	179,687	61,829	72,454	419,002	25,411	61,666	15,018	1	
77,975	203,866	55,153	83,157	495,489	27,159	70,904	16,011	2	
479	275	16,159	967	19,568	22,612	17,426	8,637	3	
113	89	11,987	763	10,861	23,947	15,949	7,908	4	
323.9	177.8	41.9	26.7	80.2	-5.2	9.3	18.2	5	
309	205	13,345	586	12,181	19,583	14,069	6,427	6	
85	69	9,339	453	6,056	20,886	13,129	5,426	7	
170	70	2,814	381	7,387	3,029	3,357	2,210	8	
28	30	2,048	310	4,805	2,851	2,820	1,882	9	
37,936,136	34,803,317	17,988,307	39,473,694	137,683,372	7,302,007	15,181,815	28,025,979	10	
344,988	190,582	9,730,104	1,021,659	11,619,780	4,956,058	2,108,197	12,915,523	11	
720	693	540	1,037	594	219	121	1,495	12	
262,654	155,752	7,988,948	863,702	9,672,335	4,647,567	1,762,907	11,959,992	13	
850	760	697	1,474	794	237	345,290	1,861	14	
82,434	34,840	761,156	157,957	1,947,445	310,491	345,290	955,531	15	
485	498	270	415	264	103	103	432	16	
44,834,660	44,341,120	61,664,000	46,983,040	168,732,160	52,701,440	42,865,280	62,403,940	17	
21,615	4,160	1,049,176	60,198	1,045,224	1,176,116	615,013	1,486,498	18	
21,507	3,603	790,925	50,424	961,765	980,881	520,424	1,193,997	19	
12	148	13,781	2,286	12,589	38,487	6,113	16,550	20	
96	409	244,470	7,488	70,870	156,748	88,476	275,951	21	
9,392	1,573	898,713	67,107	798,917	1,324,125	499,283	1,236,155	22	
12,072	2,999	986,162	100,662	586,120	1,371,651	529,999	1,207,962	23	
130.1	164.5	16.7	-10.3	30.8	-11.2	23.2	20.3	24	
39,558	13,494	1,441,417	123,961	2,180,796	1,432,533	837,096	2,277,046	25	
24,860	7,344	1,478,128	122,510	1,586,876	1,739,869	915,379	1,958,147	26	
57,476	11,742	1,925,987	188,382	1,687,447	2,359,244	836,795	2,564,668	27	
17,943	9,394	392,241	63,763	1,135,572	256,417	222,083	790,548	28	
15,468	5,771	579,415	55,403	787,959	415,744	416,096	721,992	29	
36,522	8,624	1,261,081	121,847	1,773,812	1,357,714	731,527	1,913,527	30	
24,006	7,331	1,156,210	109,550	1,177,415	1,542,475	631,511	1,655,008	31	
34,235	9,872	1,344,046	150,914	1,150,542	1,700,550	637,151	1,831,039	32	
52.1	17.6	8.9	11.2	50.7	-12.0	15.8	15.6	33	
14,907	4,464	211,905	61,649	728,588	181,998	116,514	427,029	34	
14,614	5,758	259,497	42,443	378,498	218,350	132,228	418,853	35	
6.3	2.2	12.0	5.9	9.0	23.7	29.2	11.5	36	
16.6	2.7	14.2	17.7	42.1	32.0	26.0	12.4	37	
59.2	48.2	83.2	49.4	58.9	86.6	84.1	77.7	38	
39.1	21.5	77.6	61.3	67.9	85.8	79.1	74.7	39	
1,755,489	272,186	50,961,251	5,395,610	66,441,376	41,896,532	56,415,196	41,522,801	40	
1,752,962	269,618	50,999,668	5,383,865	66,884,261	39,590,175	55,678,678	41,057,813	41	
2,627	2,568	561,583	11,745	557,115	2,306,357	736,518	464,988	42	
1,267,314	160,099	39,754,548	4,502,117	49,022,164	35,669,819	40,561,895	35,153,187	43	
1,857,116	151,325	28,929,151	5,465,248	35,072,739	32,037,351	29,299,011	34,326,328	44	
38.5	70.0	31.5	19.8	35.5	17.5	39.1	18.1	45	
48.07	31.56	40.41	44.28	37.46	30.86	77.12	21.70	46	
52.79	21.94	33.46	41.10	41.64	23.13	64.23	21.24	47	
54.25	15.65	21.52	36.21	30.48	18.84	45.98	18.75	48	
81.22	65.43	48.67	89.63	63.67	35.62	91.73	27.93	49	
1,785,539	299,486	53,884,430	5,432,934	67,319,032	43,380,966	58,141,097	48,539,663	50	
1,343,911	167,909	60,039,939	5,174,410	59,555,624	37,857,011	53,232,477	41,970,416	51	
2,072,786	162,775	41,585,742	5,500,748	39,860,871	33,835,641	37,684,591	51,500,288	52	
32.9	78.4	10.8	5.0	13.8	14.6	9.2	15.7	53	
45.14	22.19	37.38	43.83	30.87	30.28	69.46	21.32	54	
64.06	22.86	40.62	42.24	38.01	21.76	58.15	21.43	55	
36.06	13.66	21.59	29.20	23.62	14.34	45.03	20.08	56	
		<u>Primary</u>	<u>Sup.</u>	<u>Primary</u>	<u>Sup.</u>	<u>Primary</u>	<u>Sup.</u>	<u>Primary</u>	<u>Sup.</u>
		<u>Enterprises</u>		<u>Enterprises</u>		<u>Enterprises</u>		<u>Enterprises</u>	
73	107	5,192	86	184	3,299	1,870	124	3,745	2,977
21,290	3,889	982,940	97,643	56,426	1,002,202	51,197	322,055	602,414	22,296
30,072	12,973	1,157,018	71,049	71,988	3,855,224	32,666	881,814	94,981	11,314
1.41	3.35	1.18	0.73	1.28	3.86	0.64	0.77	2.78	0.51
1.97	7.02	1.41	1.33	4.74	1.00	4.14
18,909	530	921,724	72,521	131,490	3,855,789	230,915	1,079,113	142,478	1,542,453
0.99	0.74	1.77	0.76	2.68	5.61	4.69	1.02	3.04	1.81
23,426	719	587,585	98,976	73,040	1,087,092	165,650	1,128,306	360,590	573,094
0.61	0.74	1.57	0.73	1.80	3.56	1.39	0.96	2.69	0.35
14,749	920,593	8,987	83,883	3,671,948	58,500	1,106,871	207,916	1,062,485
1,337,848	15,890	13,560,102	709,666	4,600,023	34,699,264	1,342,124	4,329,234	9,437,183	21,764,676
74	105	5,354	73	170	3,610	17	1,874	3,851	131
21,302	3,974	925,920	80,999	52,345	1,017,411	22,807	1,049,965	590,627	184,534
39,309	5,671	3,020,606	176,182	58,797	2,404,098	32,212	2,654,225	2,548,581	704,152
1.8	1.4	3.8	2.2	1.1	2.4	1.4	2.5	4.3	3.8
1.27	3.34	1.35	0.94	2.72	4.85	1.39	1.03	3.35	0.75
9	11	275	16	99	204	210
26,826	898	338,991	74,840	857,141	324,771	448,702
15,277	342	265,771	36,072	397,227	283,314	300,362
11,552	429	126,808	25,906	553,850	90,837	178,212
242	106	18,786	5,809	106,897	28,418	18,673

¹ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
² Annual charges and indebtedness were reported only by enterprises serving 5 or more units, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 21.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

ITEM (For definitions and explanations, see text)	TOTAL (19 States, excl. Florida) ¹	Arizona	Arkansas	California	Colorado	Florida	Idaho
FARM VALUES, 1940^a							
1 Land and buildings, all farms.....dollars..	12,803,166,043	153,676,675	456,848,156	2,166,452,648	368,343,847	324,377,874	339,194,391
2 Land and buildings, irrigated farms.....dollars..	3,467,116,512	115,309,610	17,067,803	1,591,824,377	268,377,191	77,635,579	236,628,170
Operated by—							
3 (a) Owners and managers.....dollars..	2,784,524,630	99,320,601	11,711,544	1,336,867,338	173,643,424	74,622,653	173,589,977
4 (b) Tenants.....dollars..	682,591,882	15,989,009	5,356,259	254,957,039	94,733,767	3,212,926	63,038,193
5 Average, land and buildings, per farm.....dollars..	11,887.73	11,152.88	11,162.72	16,860.61	9,016.23	19,720.19	7,014.52
6 per acre in farms.....dollars..	30.79	21.86	28.79	113.13	21.43	130.57	41.86
7 Buildings, irrigated farms reporting value.....number...	273,133	9,673	1,464	76,626	28,812	3,320	28,940
8 Total reported.....dollars..	629,915,422	16,497,968	3,211,708	250,220,347	59,423,593	10,683,687	53,585,575
9 Average, per irrigated farm reporting.....dollars..	2,306.26	1,705.57	2,193.79	3,182.41	2,062.46	3,278.22	1,851.42
10 per acre on all irrigated farms.....dollars..	5.59	3.13	5.42	17.76	4.75	18.26	9.43
11 Buildings, nonirrigated farms reporting value.....number...	1,539,992	7,587	208,576	46,019	20,248	51,691	13,009
12 Total reported.....dollars..	1,925,590,118	6,593,469	113,101,840	129,487,709	25,423,820	57,327,920	18,705,158
13 Average, per nonirrigated farm reporting.....dollars..	1,250.39	869.05	542.26	2,813.79	1,255.62	1,111.19	1,437.86
14 per acre on all nonirrigated farms.....dollars..	3.73	0.32	6.48	7.87	1.34	7.41	4.05
15 Implements and machinery, irrigated farms reporting value.....number...	247,513	8,031	1,436	66,427	26,692	2,850	26,475
16 Total reported.....dollars..	283,024,144	7,461,726	3,417,847	99,181,718	25,650,123	4,685,626	28,818,259
17 Average, per irrigated farm reporting.....dollars..	1,143.47	929.12	2,380.12	1,490.09	960.97	1,644.04	1,088.51
18 per acre, on all irrigated farms.....dollars..	2.51	1.41	5.76	7.05	2.05	7.86	5.07
19 Implements and machinery, nonirrigated farms reporting value.....number...	1,357,101	6,357	166,473	35,025	18,137	41,615	11,466
20 Total reported.....dollars..	812,696,204	2,499,372	33,998,616	33,155,391	13,371,491	15,696,720	13,326,972
21 Average, per acre, on all nonirrigated farms.....dollars..	1.57	0.12	1.95	2.02	0.70	2.03	2.89
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940...number.....	² 91,697	1,911	1,298	39,975	8,713	3,628	3,625
23 ..1930...number.....	² 75,551	1,270	1,043	38,117	6,509	.....	3,222
24 ..1920...number.....	63,286	1,388	944	24,115	6,634	.....	3,629
25 Average size of enterprise based on irrigable area.....							
26 ..1940...acres.....	340	578	242	201	484	52	775
27 ..1930...acres.....	404	854	217	212	688	.....	864
28 ..1920 ³ ...acres.....	567	586	261	324	787	.....	1,042
29 Diversion dams.....1940...number.....	34,544	602	6	2,714	4,792	3	3,209
30 Main canals and laterals.....1940...length, miles.....	127,533.7	4,178.2	77.9	19,799.1	19,864.0	74.0	13,602.1
31 ..1930...length, miles.....	126,802	3,974	51	18,602	21,381	.....	14,344
32 ..1920...length, miles.....	159,864	3,368	86	27,384	27,593	.....	17,298
33 ..1940...capacity, c.f.s. ⁴	612,021	13,256	270	91,776	139,780	1,947	71,510
34 ..1930...capacity, c.f.s. ⁴	547,314	13,697	1,845	84,944	123,652	.....	76,763
35 ..1920...capacity, c.f.s. ⁴	631,079	11,707	1,205	115,237	119,558	.....	86,273
36 Pipe lines ⁵.....1940...length, miles.....	28,584.9	344.3	13.0	22,690.2	245.1	4,259.9	299.9
37 Storage dams.....1940...number.....	4,607	199	27	709	1,015	5	260
38 Reservoirs.....1940...number.....	7,709	333	24	2,652	1,071	7	290
39 ..1930...number.....	5,122	378	10	1,769	765	.....	155
40 ..1920...number.....	7,538	340	16	3,030	979	.....	249
41 ..1940...capacity, acre-feet.....	33,787,382	4,860,898	31,992	3,561,621	2,071,522	19,419	3,795,272
42 ..1930...capacity, acre-feet.....	24,508,590	3,410,975	7,342	3,225,675	1,924,982	.....	3,645,373
43 ..1920...capacity, acre-feet.....	21,246,436	1,510,856	20	1,091,394	2,406,372	.....	3,493,511
44 Wells, flowing.....1940...number.....	4,641	288	.....	436	866	4,631	375
45 ..1930...number.....	4,811	215	.....	449	621	.....	220
46 ..1920...number.....	4,606	310	.....	1,415	476	.....	142
47 ..1940...yield, g.p.m.....	555,073	22,878	.....	34,767	54,859	994,828	40,165
48 ..1930...yield, g.p.m.....	609,367	13,772	.....	65,768	39,644	.....	30,108
49 ..1920...yield, g.p.m.....	935,057	14,547	.....	287,187	20,139	.....	15,133
50 Wells, pumped.....1940...number.....	68,279	1,858	1,534	48,568	2,878	1,666	309
51 ..1930...number.....	56,729	1,398	1,190	46,737	654	.....	121
52 ..1920...number.....	32,094	999	1,089	25,401	527	.....	53
53 ..1940...yield, g.p.m.....	43,355,271	2,508,337	1,812,647	28,297,969	1,929,798	482,144	225,164
54 ..1930...yield, g.p.m.....	32,467,120	1,832,352	1,641,448	24,266,167	237,903	.....	34,601
55 ..1920...yield, g.p.m.....	16,386,549	1,042,590	1,470,147	10,608,476	210,094	.....	17,749
56 Pumping plants.....1940...number.....	78,293	1,970	1,639	52,217	2,806	2,321 ⁶	665
57 ..1930...number.....	59,344	1,378	1,194	40,729	516	.....	393
58 ..1920...number.....	29,458	744	1,041	21,561	406	.....	143
59 Prime movers.....1940...capacity, hp.....	1,762,697	102,733	76,048	968,351	49,157	29,568	44,537
60 ..1930...capacity, hp.....	1,283,419	57,633	66,980	820,767	11,204	.....	33,754
61 ..1920...capacity, hp.....	748,971	22,014	58,332	388,200	8,635	.....	28,364
62 Pumps.....1940...capacity, g.p.m.....	75,802,998	2,992,986	2,013,697	39,147,470	2,263,375	2,104,450	2,719,305
63 ..1930...capacity, g.p.m.....	57,244,859	2,125,293	1,775,788	33,240,589	437,250	.....	2,113,513
64 ..1920...capacity, g.p.m.....	36,275,005	1,048,030	1,854,097	16,773,692	299,726	.....	1,397,681
65 Pumping lift, from all sources.....1940...average, feet.....	51	60	61	55	32	20	26
66 ..1930...average, feet.....	51	46	68	53	25	.....	32
67 ..1920...average, feet.....	41	44	50	41	23	.....	29
68 from pumped wells.....1940...average, feet.....	55	62	64	57	33	21	29
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶							
68 Enterprises reporting pay roll.....number.....	4,349	67	8	892	788	3	456
69 Irrigated area in these enterprises.....acres.....	13,559,338	515,128	4,027	2,949,047	2,695,030	542	1,932,890
70 Wages and salaries paid and payable.....dollars..	16,071,522	1,444,641	12,823	4,901,580	1,167,624	5,288	1,316,975
71 Persons employed during week ending April 29.....number...	24,006	1,546	44	4,425	3,068	5	2,275

^aCensus of Agriculture. ¹For the 17 western States and Arkansas and Louisiana. ²Includes 60 interstate projects for census of 1940 and 34 interstate projects for census of 1930 counted as independent enterprises for each State into which they extend. For actual number of enterprises see table 1. ³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁵Includes siphons and farm pipe lines reported. ⁶Pay roll and number of employees reported only by enterprises serving 5 or more units.

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TABLE 21.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

ITEM (For definitions and explanations, see text)	Kansas	Louisiana	Montana	Nebraska	Nevada	New Mexico	North Dakota
FARM VALUES, 1940*							
1 Land and buildings, all farms.....dollars..	1,421,387,464	353,873,506	350,178,461	1,137,808,013	47,594,384	187,525,814	490,197,358
2 Land and buildings, irrigated farms.....dollars..	22,721,389	45,182,979	163,836,136	92,846,541	46,392,883	82,618,776	4,371,806
3 Operated by—							
4 (a) Owners and managers.....dollars..	16,409,622	28,353,724	129,225,314	54,397,486	42,128,655	67,593,251	3,236,068
5 (b) Tenants.....dollars..	6,311,767	16,829,255	34,610,822	38,449,055	4,264,228	15,026,525	1,135,738
6 Average, land and buildings, per farm.....dollars..	14,398.85	6,420.77	10,859.42	13,430.72	14,213.51	5,225.46	9,126.94
per acre in farms.....dollars..	26.08	42.36	10.23	25.95	12.80	11.15	12.67
7 Buildings, irrigated farms reporting value.....number...	1,497	6,779	14,813	6,898	3,079	14,236	469
8 Total reported.....dollars..	3,942,540	8,019,180	33,750,271	17,318,057	8,971,907	14,976,063	1,200,510
9 Average, per irrigated farm reporting.....dollars..	2,633.63	1,182.94	2,278.42	2,565.56	2,913.90	1,051.99	2,559.72
10 per acre on all irrigated farms.....dollars..	4.53	7.52	2.11	4.84	2.48	2.02	3.48
11 Buildings, nonirrigated farms reporting value.....number...	144,152	138,349	25,333	109,386	246	17,255	68,151
12 Total reported.....dollars..	253,889,232	83,374,445	32,860,604	239,435,747	368,450	13,277,393	139,174,486
13 Average, per nonirrigated farm reporting.....dollars..	1,761.26	602.64	1,297.15	2,188.91	1,497.76	769.48	2,042.15
14 per acre on all nonirrigated farms.....dollars..	5.37	9.34	1.08	5.47	2.29	0.42	3.70
15 Implements and machinery, irrigated farms reporting value.....number...	1,464	6,220	13,990	6,597	2,861	13,043	459
16 Total reported.....dollars..	1,982,911	7,291,697	16,967,155	9,398,048	3,612,624	6,937,641	616,899
17 Average, per irrigated farm reporting.....dollars..	1,361.28	1,172.30	1,212.81	1,424.59	1,230.07	531.91	1,344.01
18 per acre, on all irrigated farms.....dollars..	2.29	6.84	1.06	2.63	1.00	0.84	1.79
19 Implements and machinery, nonirrigated farms reporting value.....number...	136,732	116,411	24,144	106,087	177	15,179	66,987
20 Total reported.....dollars..	113,269,775	28,513,155	26,226,447	88,247,037	108,639	8,275,033	76,259,370
21 Average, per acre, on all nonirrigated farms.....dollars..	2.39	3.19	0.86	2.02	0.68	0.26	2.03
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940.....number.....	1,066	2,566	5,555	2,717	1,464	2,503	80
23 ..1930.....number.....	300	2,352	4,461	721	1,245	1,965	23
24 ..1920.....number.....	209	1,373	6,035	470	1,015	2,391	30
25 Average size of enterprise based on irrigable area.....1940.....acres.....	138	307	464	399	621	320	482
26 ..1930.....acres.....	317	361	586	1,041	789	1,081	1,081
27 ..1920.....acres.....	491	620	717	1,631	1,362	402	1,916
28 Diversion dams.....1940.....number.....	102	105	6,136	351	1,896	1,072	19
29 Main canals and laterals.....1940.....length, miles.....	292.5	2,421.0	15,702.5	3,331.3	2,897.2	4,647.9	159.2
30 ..1930.....length, miles.....	285	2,226	15,957	3,465	4,155	4,466	87
31 ..1920.....length, miles.....	418	3,243	22,496	3,325	4,368	5,932	151
32 ..1940.....capacity, c.f.s. ²	3,347	10,335	66,745	14,256	22,930	16,821	616
33 ..1930.....capacity, c.f.s. ²	2,079	11,386	53,253	13,108	16,986	17,479	1,072
34 ..1920.....capacity, c.f.s. ²	1,667	11,889	94,429	11,665	10,554	23,432	836
35 Pipe lines ³.....1940.....length, miles.....	24.1	63.6	148.1	126.1	104.7	36.5	3.8
36 Storage dams.....1940.....number.....	40	114	468	156	122	141	14
37 Reservoirs.....1940.....number.....	80	75	517	164	200	502	14
38 ..1930.....number.....	19	85	282	40	209	240	8
39 ..1920.....number.....	36	74	468	59	134	328	9
40 ..1940.....capacity, acre-feet.....	32,584	34,199	1,301,422	2,306,159	696,005	3,280,550	3,946
41 ..1930.....capacity, acre-feet.....	66,293	13,909	857,057	199,185	529,369	2,945,220	1,466
42 ..1920.....capacity, acre-feet.....	381	7,632	1,571,720	197,890	504,428	2,960,718	1,110
43 Wells, flowing.....1940.....number.....	24	502	44	19	322	268	.....
44 ..1930.....number.....	1	807	40	.....	274	340	.....
45 ..1920.....number.....	6	41	.....	.....	123	556	.....
46 ..1940.....yield, g.p.m.....	1,453	12,696	9,834	370	39,835	181,076	.....
47 ..1930.....yield, g.p.m.....	75	31,961	4,106	.....	19,131	223,257	.....
48 ..1920.....yield, g.p.m.....	500	6,255	4,608	.....	21,942	376,222	.....
49 Wells, pumped.....1940.....number.....	1,638	1,504	102	2,412	167	1,487	11
50 ..1930.....number.....	772	1,369	49	537	147	680	.....
51 ..1920.....number.....	710	812	22	34	129	461	.....
52 ..1940.....yield, g.p.m.....	863,663	1,526,613	33,883	2,053,184	50,938	1,143,276	378
53 ..1930.....yield, g.p.m.....	323,500	1,953,811	18,653	428,058	54,162	481,898	.....
54 ..1920.....yield, g.p.m.....	266,797	1,607,637	11,065	24,701	6,798	265,618	.....
55 Pumping plants.....1940.....number.....	1,222	2,326	651	2,664	192	1,558	83
56 ..1930.....number.....	281	1,790	198	610	157	702	13
57 ..1920.....number.....	198	1,250	253	51	64	472	4
58 Prime movers.....1940.....capacity, hp.....	26,796	85,574	29,110	53,572	2,262	40,110	1,253
59 ..1930.....capacity, hp.....	6,221	86,413	9,095	10,991	2,671	14,483	216
60 ..1920.....capacity, hp.....	6,946	85,628	10,341	959	409	8,488	2,068
61 Pumps.....1940.....capacity, g.p.m.....	1,231,482	6,453,487	1,309,014	2,528,669	141,065	1,309,005	104,158
62 ..1930.....capacity, g.p.m.....	393,526	5,914,799	523,494	536,752	115,648	555,063	24,900
63 ..1920.....capacity, g.p.m.....	297,975	4,968,666	453,231	73,686	35,266	304,789	51,250
64 Pumping lift, from all sources.....1940.....average, feet.....	35	32	21	32	31	44	17
65 ..1930.....average, feet.....	26	37	22	29	31	40	24
66 ..1920.....average, feet.....	30	32	20	24	22	40	38
67 from pumped wells.....1940.....average, feet.....	38	45	24	34	31	46	25
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁴							
68 Enterprises reporting pay roll.....number.....	10	107	269	72	66	218	8
69 Irrigated area in these enterprises.....acres.....	41,116	230,726	827,767	471,792	169,818	330,218	19,090
70 Wages and salaries paid and payable.....dollars..	16,235	502,320	1,501,148	308,746	160,642	718,210	14,611
71 Persons employed during week ending April 29.....number.....	75	802	1,904	688	275	1,773	21

*Census of Agriculture.
¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
³Includes siphons and farm pipe lines reported.
⁴Pay roll and number of employees reported only by enterprises serving 5 or more units.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 21.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

ITEM (For definitions and explanations, see text)	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming
FARM VALUES, 1940^a							
1 Land and buildings, all farms.....dollars..	831,140,748	476,817,354	505,452,178	2,589,978,936	154,358,365	593,366,445	158,971,294
2 Land and buildings, irrigated farms.....dollars..	3,251,114	152,701,476	9,972,519	248,746,614	137,529,004	121,212,949	106,524,175
Operated by—							
3 (a) Owners and managers.....dollars..	2,631,046	131,641,303	7,699,778	194,702,077	122,156,713	100,900,376	88,316,333
4 (b) Tenants.....dollars..	620,068	21,060,173	2,272,741	54,044,537	15,372,291	20,312,573	18,207,842
5 Average, land and buildings, per farm.....dollars..	11,822.23	9,449.93	10,312.84	12,711.91	6,082.12	6,955.87	12,333.47
6 per acre in farms.....dollars..	17.06	17.49	9.76	21.41	27.74	57.50	8.25
7 Buildings, irrigated farms reporting value.....number..	268	14,822	935	16,696	19,759	17,135	8,429
8 Total reported.....dollars..	878,415	33,570,300	2,173,503	32,848,639	32,425,080	36,111,810	20,788,956
9 Average, per irrigated farm reporting.....dollars..	3,277.67	2,264.90	2,324.60	1,967.46	1,641.08	2,107.49	2,466.36
10 per acre on all irrigated farms.....dollars..	4.61	3.85	2.13	2.83	6.54	17.13	1.61
11 Buildings, nonirrigated farms reporting value.....number..	173,242	45,667	67,742	383,227	2,211	63,476	6,117
12 Total reported.....dollars..	140,637,553	81,675,283	131,578,350	385,420,914	3,630,811	118,408,326	6,546,528
13 Average, per nonirrigated farm reporting.....dollars..	811.80	1,788.50	1,942.35	1,005.72	1,642.16	1,865.43	1,397.18
14 per acre on all nonirrigated farms.....dollars..	4.06	8.82	3.42	3.06	1.55	9.06	0.57
15 Implements and machinery, irrigated farms reporting value.....number..	245	13,395	908	16,549	19,084	15,795	7,742
16 Total reported.....dollars..	324,257	15,346,736	1,164,804	20,123,937	10,761,346	13,082,573	10,873,844
17 Average, per irrigated farm reporting.....dollars..	1,323.50	1,145.71	1,282.82	1,216.02	563.89	828.27	1,404.53
18 per acre, on all irrigated farms.....dollars..	1.70	1.76	1.14	1.73	2.17	6.21	0.84
19 Implements and machinery, nonirrigated farms reporting value.....number..	152,490	38,054	65,569	337,993	1,681	52,582	5,578
20 Total reported.....dollars..	78,124,476	29,261,195	58,804,590	160,620,276	1,179,592	43,018,574	4,436,003
21 Average, per acre, on all nonirrigated farms.....dollars..	2.26	3.16	1.53	1.27	0.50	3.29	0.29
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940.....number.....	120	5,884	274	4,040	2,401	4,120	3,385
23 ..1930.....number.....	77	4,066	121	1,728	2,714	2,986	2,631
24 ..1920.....number.....	33	4,710	292	1,371	2,403	2,692	3,564
25 Average size of enterprise based on irrigable area.....1940.....acres.....	112	244	448	536	590	203	669
26 ..1930.....acres.....	95	363	1,004	903	637	306	743
27 ..1920.....acres.....	356	409	645	1,231	982	311	720
28 Diversion dams.....1940.....number.....	8	5,097	258	244	1,973	1,755	4,205
29 Main canals and laterals.....1940.....length, miles.....	42.2	8,518.0	1,049.3	5,936.1	9,004.5	4,248.6	11,762.1
30 ..1930.....length, miles.....	24	8,177	1,082	4,879	9,237	3,635	10,775
31 ..1920.....length, miles.....	57	9,071	1,258	4,473	11,677	5,615	12,051
32 ..1940.....capacity, c.f.s. ³	277	37,290	1,948	24,813	34,579	15,104	46,366
33 ..1930.....capacity, c.f.s. ³	77	25,906	1,995	21,626	30,648	14,987	35,811
34 ..1920.....capacity, c.f.s. ³	344	28,897	5,427	23,261	29,447	16,242	39,009
35 Pipe lines ⁴.....1940.....length, miles.....	24.4	665.2	17.3	923.1	172.5	2,612.7	70.3
36 Storage dams.....1940.....number.....	21	247	74	194	362	125	319
37 Reservoirs.....1940.....number.....	20	257	82	542	438	114	334
38 ..1930.....number.....	7	120	5	325	413	78	214
39 ..1920.....number.....	8	265	119	368	476	205	374
40 ..1940.....capacity, acre-feet.....	900	2,212,315	209,785	1,405,024	3,417,704	1,165,527	3,379,957
41 ..1930.....capacity, acre-feet.....	293	1,698,428	203,124	935,085	1,093,252	699,807	3,051,745
42 ..1920.....capacity, acre-feet.....	52	1,905,037	212,264	392,969	1,600,505	477,789	2,911,748
43 Wells, flowing.....1940.....number.....	76	19	19	100	1,216	50	36
44 ..1930.....number.....	59	13	13	61	1,663	42	7
45 ..1920.....number.....	1	65	4	135	1,256	60	6
46 ..1940.....yield, g.p.m.....	3,396	5,377	39,508	83,838	21,192	3,830	2,205
47 ..1930.....yield, g.p.m.....	6,535	4,825	36,020	104,670	27,290	14,925	46
48 ..1920.....yield, g.p.m.....	100	11,968	2,750	62,364	96,371	1,041	94
49 Wells, pumped.....1940.....number.....	77	901	16	3,396	286	1,041	11
50 ..1930.....number.....	18	558	1	1,102	346	1,019	16
51 ..1920.....number.....	19	208	1	901	520	520	60,522
52 ..1940.....yield, g.p.m.....	15,486	209,289	1,039	2,213,200	122,528	287,327	8,280
53 ..1930.....yield, g.p.m.....	2,715	136,669	375	614,395	120,333	306,800	8,280
54 ..1920.....yield, g.p.m.....	3,643	47,026	800	538,565	39,059	227,744	8,020
55 Pumping plants.....1940.....number.....	116	2,275	119	4,674	411	2,487	224
56 ..1930.....number.....	25	1,091	8	1,828	429	1,951	61
57 ..1920.....number.....	22	573	25	1,369	250	975	57
58 Prime movers.....1940.....capacity, hp.....	1,037	29,527	2,060	195,061	14,216	37,131	4,152
59 ..1930.....capacity, hp.....	229	21,257	92	95,933	11,381	33,187	912
60 ..1920.....capacity, hp.....	184	13,769	498	80,511	11,392	22,929	1,304
61 Pumps.....1940.....capacity, g.p.m.....	59,280	1,510,958	103,050	9,916,225	835,862	953,751	208,559
62 ..1930.....capacity, g.p.m.....	8,855	1,022,213	4,027	6,494,999	877,942	993,303	86,905
63 ..1920.....capacity, g.p.m.....	7,668	600,045	23,320	6,625,988	783,588	636,552	39,725
64 Pumping lift, from all sources.....1940.....average, feet.....	36	27	20	69	35	47	30
65 ..1930.....average, feet.....	33	27	27	55	36	59	21
66 ..1920.....average, feet.....	59	28	21	45	25	60	31
67 from pumped wells.....1940.....average, feet.....	48	35	55	82	38	43	46
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁵							
68 Enterprises reporting pay roll.....number.....		194	18	102	689	205	184
69 Irrigated area in these enterprises.....acres.....		501,227	44,939	680,299	1,009,119	499,904	637,201
70 Wages and salaries paid and payable.....dollars..		621,247	60,964	1,628,198	518,607	784,904	392,047
71 Persons employed during week ending April 29.....number..		1,094	114	1,698	2,689	937	578

* Census of Agriculture.

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.² Not revised.³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.⁴ Includes siphons and farm pipe lines reported.⁵ Pay roll and number of employees reported only by enterprises serving 5 or more units.

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TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES

[Yields for irrigated crops based on farms reporting entire crop irrigated; yields for nonirrigated crops based on farms reporting no irrigation for such crops. This table is presented in two sections, the second section beginning on p. 86. For the 17 western States and Arkansas and Louisiana.]

ITEM (For definitions: "Farms reporting," etc., see text)	TOTAL (19 States, excl. Florida)		ARIZONA		ARKANSAS		CALIFORNIA	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Corn:								
1 Corn for all purposes.....farms reporting.....1939..	57,314	1,009,806	3,031	2,230	31	174,375	3,771	2,543
2	643,384	23,970,766	16,473	18,437	709	2,236,199	63,159	25,535
3	1929..	476,900	34,478,394	12,335	15,549	519	1,865,244	51,303
4 Harvested for grain.....farms reporting.....1939..	42,711	896,722	2,423	1,950	30	170,085	1,747	1,057
5	455,838	19,724,466	10,197	14,292	694	2,184,828	36,302	10,671
6	1929..	348,563	29,133,788	6,305	11,201	510	1,756,458	28,197
7	29.7	40.3	14.1	8.6	16.0	15.4	36.0	19.1
8 Cut for silage.....farms reporting.....1939..	7,614	40,800	223	44	.....	100	1,263	359
9	99,845	934,224	3,482	862	.....	2,050	17,410	5,807
10	1929..	49,639	468,800	2,873	431	.....	2,278	13,979
11	7.71	2.66	8.40	2.18	.....	4.56	10.40	6.50
12 Hogged or grazed off, or								
13 cut for fodder.....farms reporting.....1939..	10,428	151,728	455	313	1	7,325	887	1,209
14	88,301	3,312,068	2,794	3,283	15	49,221	9,447	9,057
15	1929..	78,698	4,875,796	3,157	3,917	9	106,506	9,127
Sorghums:								
16 Sorghums for all purposes,								
17 except sirup.....farms reporting.....1939..	15,239	556,805	1,309	155	3	34,172	3,130	343
18	313,909	12,994,923	21,890	1,793	91	98,131	69,104	12,391
19	1929..	110,163	7,491,603	12,734	4,147	11	53,152	54,481
20 Harvested for grain.....farms reporting.....1939..	6,518	194,240	818	13	.....	1,948	2,873	269
21	144,516	4,451,208	13,667	180	.....	5,849	62,759	11,083
22	1929..	71,371	3,413,532	7,321	1,080	.....	2,929	50,940
23	30.4	10.4	34.0	6.2	.....	14.0	34.9	19.8
24 Cut for silage (green								
25 wt.) ¹.....farms reporting.....1939..	1,488	29,959	160	7	2	157	234	10
26	32,638	722,104	4,532	109	81	3,216	3,312	219
27	1929..	7.44	3.92	10.16	2.02	4.47	5.76	10.51
28 Cut for hay or fodder								
29 (dry wt.) ¹.....farms reporting.....1939..	8,762	466,103	386	140	1	32,690	271	66
30	136,755	7,821,611	3,691	1,504	10	88,966	3,033	1,089
31	1929..	38,792	4,078,071	5,413	3,067	11	50,223	3,541
32	2.03	1.13	1.94	1.09	1.90	1.32	1.93	1.82
Small grains:								
33 Mixed grains (other than a								
34 flax and wheat mixture)								
35 threshed.....farms reporting.....1939..	4,221	20,069	52	3	.....	182	78	131
36	51,874	538,134	810	27	.....	1,484	2,111	9,642
37	1929..	25,427	466,682	479	318	7	1,046	2,225
38	34.2	14.4	28.0	11.6	.....	10.4	20.8	18.5
39 Oats threshed or cut and								
40 fed unthreshed.....farms reporting.....1939..	38,824	383,194	277	74	5	18,255	1,074	2,133
41	494,494	9,654,551	4,470	2,111	196	214,592	31,294	132,915
42	1929..	421,893	10,991,800	2,689	2,071	129	90,888	14,351
43 Oats threshed.....farms reporting.....1939..	35,676	325,480	196	52	4	6,293	589	1,619
44	454,331	8,862,926	3,549	1,681	176	142,774	22,906	120,258
45	1929..	382,491	10,079,911	1,575	1,692	124	32,270	8,671
46	38.3	22.4	34.9	12.4	54.5	29.4	41.7	27.3
47 Oats cut and fed un-								
48 threshed.....farms reporting.....1939..	3,815	69,537	90	23	1	12,584	502	582
49	40,163	791,625	921	430	20	71,818	8,386	12,657
50	1929..	39,402	911,889	1,124	379	5	58,618	5,680
51 Barley threshed.....farms reporting.....1939..	45,750	206,479	759	28	.....	1,018	3,059	7,268
52	978,270	6,891,679	25,769	452	.....	9,874	347,409	898,205
53	1929..	665,985	8,087,639	7,601	629	.....	141	196,993
54	34.6	16.6	34.5	11.1	.....	14.8	34.1	23.2
55 Rye threshed.....farms reporting.....1939..	1,139	65,331	5	5	.....	138	44	136
56	17,367	2,107,178	76	319	.....	1,317	1,503	7,146
57	1929..	12,335	1,642,388	8	171	.....	216	813
58	16.4	8.5	19.6	4.5	.....	11.8	15.4	8.0
59 Flax threshed.....farms reporting.....1939..	1,147	21,469	107	.....	.....	4	402	40
60	98,170	656,064	4,917	.....	.....	254	75,612	4,142
61	1929..	7,462	2,422,236	.....	.....	.....	.....	7
62	18.1	6.5	23.1	.....	.....	9.7	19.0	11.5
63 Any wheat threshed.....farms reporting.....1939..	57,477	412,363	1,319	61	.....	3,204	1,088	3,987
64	905,531	36,287,769	23,748	824	.....	33,612	77,396	511,699
65	1929..	1,017,921	48,043,322	13,843	1,605	.....	16,535	115,386
66 Winter wheat threshed.....farms reporting.....1939..	12,797	281,060	1,034	19	.....	3,204	709	3,294
67	353,846	23,919,166	19,158	272	.....	33,612	63,327	428,985
68	1929..	266,617	28,681,059	11,056	671	.....	16,467	101,449
69	23.2	13.4	25.5	8.6	.....	10.5	25.3	16.2
70 Spring wheat threshed.....farms reporting.....1939..	46,273	142,327	293	42	.....	.....	383	723
71	551,685	12,368,603	4,590	552	.....	.....	14,069	82,714
72	1929..	751,304	19,362,263	2,767	934	.....	68	13,937
73	28.3	10.6	25.0	9.4	.....	.....	19.1	15.8
74 Rice (rough or paddy)								
75 threshed.....farms reporting.....1939..	8,447	68	.....	.....	1,428	.....	431	.....
76	848,292	171	.....	.....	153,085	.....	104,931	.....
77	1929..	724,997	12,073	.....	145,690	896	80,720	1,724
78	51.5	22.5	.....	.....	50.0	.....	75.2	.....
Miscellaneous crops:								
79 Irish potatoes.....farms reporting.....1939..	39,498	527,246	172	130	3	111,652	1,691	1,496
80	359,737	417,440	898	361	2	39,910	55,612	2,619
81	1929..	252,805	538,361	784	1,023	26	29,189	23,238
82 Sweetpotatoes and yams.....farms reporting.....1939..	221.0	74.3	167.2	39.9	175.0	74.6	328.5	120.0
83	1,844	202,115	101	.....	.....	59,387	854	108
84	10,546	184,509	644	(^b)	9	26,125	7,083	498
85	1929..	10,634	153,295	524	25	.....	22,229	7,690
86	113.1	65.6	106.0	.....	41.2	.....	68.0	114.1
87 Cotton.....farms reporting.....1939..	15,538	619,624	2,001	1	41	150,633	5,315	4
88	762,217	12,750,177	183,327	5	855	2,055,920	316,267	25
89	1929..	893,745	26,110,274	210,475	703	239	3,446,246	292,747
90	1.16	0.41	1.09	0.20	0.67	0.66	1.38	0.18

¹ 1929 data for sorghums cut for silage included with sorghums cut for hay or fodder.

² Less than 1 acre reported.

³ Running square bales of lint cotton, counting round as half bales.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

	ITEM (For definitions: "Farms reporting," etc., see text)	COLORADO		IDAHO		KANSAS		LOUISIANA	
		Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
1	Corn:								
2	Corn for all purposes.....farms reporting.....1939..	11,271	8,856	5,790	761	138	83,133	55	129,584
3	acres.....1939..	146,282	569,039	40,752	4,675	1,529	2,737,398	647	1,629,868
4	1929..	132,898	1,395,641	22,856	8,988	6,327	6,636,174	527	1,188,832
5	Harvested for grain.....farms reporting.....1939..	7,120	5,348	4,560	440	90	66,520	54	127,944
6	acres.....1939..	74,755	406,761	30,840	2,436	1,105	2,091,257	844	1,602,473
7	1929..	88,169	1,173,937	16,137	3,574	6,017	5,642,917	480	1,169,218
8	average yield (bu.).....1939..	28.4	6.3	43.6	20.1	21.1	15.2	20.2	14.0
9	Cut for silage.....farms reporting.....1939..	2,387	979	765	47	16	6,227	.....	122
10	acres.....1939..	40,063	38,447	5,810	469	214	211,096	.....	2,675
11	1929..	19,837	26,593	3,068	964	81	184,183	.....	1,986
12	average yield (tons).....1939..	6.19	1.41	9.91	3.88	5.78	2.88	.....	4.83
13	Hogged or grazed off, or								
14	cut for fodder.....farms reporting.....1939..	2,881	3,649	800	316	39	20,648	1	2,678
15	acres.....1939..	31,494	123,831	4,102	1,770	210	435,035	3	24,720
16	1929..	24,892	195,091	3,651	4,450	229	809,074	47	17,828
17	Sorghums:								
18	Sorghums for all purposes,								
19	except sirup.....farms reporting.....1939..	2,164	8,085	24	17	877	93,469	.....	5,820
20	acres.....1939..	35,171	468,790	98	180	29,148	2,377,733	.....	12,081
21	1929..	5,668	274,111	7	27	5,758	1,538,491	11	3,360
22	Harvested for grain.....farms reporting.....1939..	1,949	768	4	6	512	38,138	.....	529
23	acres.....1939..	14,382	128,312	12	69	15,325	826,126	.....	1,190
24	1929..	1,240	34,680	.....	.....	4,887	722,630	11	845
25	average yield (bu.).....1939..	18.9	5.7	12.9	6.4	23.1	9.8	.....	15.6
26	Cut for silage (green								
27	wt.) ¹.....farms reporting.....1939..	155	290	2	.....	141	11,228	.....	102
28	acres.....1939..	2,698	11,942	14	.....	3,350	254,515	.....	2,068
29	1929..	3.69	1.16	4.29	.....	8.63	4.61	.....	7.12
30	Cut for hay or fodder								
31	(dry wt.) ¹.....farms reporting.....1939..	1,457	7,387	18	12	536	67,246	.....	5,236
32	acres.....1939..	18,111	323,536	72	111	10,473	1,297,092	.....	8,823
33	1929..	4,428	239,421	7	27	671	815,861	.....	2,515
34	average yield (tons).....1939..	1.81	0.59	2.82	1.14	2.75	1.43	.....	1.48
35	Small grains:								
36	Mixed grains (other than a								
37	flax and wheat mixture)								
38	threshed.....farms reporting.....1939..	352	107	2,026	151	2	3,124	.....	29
39	acres.....1939..	5,346	6,761	20,692	3,180	20	81,401	.....	65
40	1929..	5,393	6,863	4,636	3,715	72	23,797	.....	461
41	average yield (bu.).....1939..	24.6	5.9	44.0	24.9	7.0	12.0	.....	14.6
42	Oats threshed or cut and								
43	fed unthreshed.....farms reporting.....1939..	6,817	2,102	8,490	4,215	44	60,841	3	4,170
44	acres.....1939..	85,285	54,913	72,689	109,978	509	1,198,260	12	59,197
45	1929..	96,028	98,899	55,928	78,550	695	1,128,532	8	15,343
46	Oats threshed.....farms reporting.....1939..	8,103	1,408	8,263	4,018	29	55,543	1	1,511
47	acres.....1939..	75,553	33,020	69,988	106,079	337	1,117,391	8	43,011
48	1929..	87,267	74,951	52,841	71,395	672	1,040,435	.....	7,716
49	average yield (bu.).....1939..	31.3	14.4	44.7	33.1	16.4	18.7	25.0	33.8
50	Oats cut and fed un-								
51	threshed.....farms reporting.....1939..	904	776	338	334	15	6,883	2	2,696
52	acres.....1939..	9,732	21,883	2,701	3,899	172	80,869	4	16,186
53	1929..	8,761	23,948	3,087	7,155	23	88,117	8	7,627
54	Barley threshed.....farms reporting.....1939..	10,329	4,111	9,054	3,732	150	24,393	.....	3
55	acres.....1939..	202,459	193,630	86,748	117,251	3,555	595,957	.....	28
56	1929..	185,299	438,968	69,988	63,428	3,219	575,004	.....	72
57	average yield (bu.).....1939..	31.4	7.2	41.1	28.7	13.3	10.9	.....	13.9
58	Rye threshed.....farms reporting.....1939..	261	957	100	170	3	4,207	.....	5
59	acres.....1939..	3,336	34,848	912	2,202	33	62,897	.....	22
60	1929..	1,086	62,985	626	3,057	4	14,425	.....	154
61	average yield (bu.).....1939..	17.9	6.6	19.2	11.4	5.8	10.5	.....	12.7
62	Flax threshed.....farms reporting.....1939..	3	14	239	189	.....	4,100	.....	.....
63	acres.....1939..	21	462	2,733	7,649	.....	95,369	.....	.....
64	1929..	19	659	50	77	.....	19,756	.....	.....
65	average yield (bu.).....1939..	7.7	3.5	14.0	8.8	.....	100,017	.....	.....
66	Any wheat threshed.....farms reporting.....1939..	9,140	7,252	15,147	7,970	313	100,017	.....	8
67	acres.....1939..	170,313	855,599	177,506	701,890	17,523	9,196,627	.....	34
68	1929..	170,381	1,368,533	284,542	1,010,033	8,086	12,072,935	.....	15
69	Winter wheat threshed.....farms reporting.....1939..	3,903	5,922	668	5,364	313	99,997	.....	8
70	acres.....1939..	97,280	793,555	14,330	548,266	17,523	9,194,360	.....	34
71	1929..	63,321	1,140,193	11,808	691,431	8,026	12,026,265	.....	15
72	average yield (bu.).....1939..	23.2	8.8	27.9	24.3	17.8	12.2	.....	17.7
73	Spring wheat threshed.....farms reporting.....1939..	5,802	1,805	14,676	.....	.....	40	.....	.....
74	acres.....1939..	73,033	72,044	163,176	163,624	.....	2,267	.....	.....
75	1929..	107,060	228,340	272,734	318,602	60	46,670	.....	.....
76	average yield (bu.).....1939..	22.3	6.0	35.8	18.8	.....	4.4	.....	.....
77	Rice (rough or paddy)								
78	threshed.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	5,778	66
79	acres.....1939..	.....	.....	.....	.....	.....	.....	404,036	165
80	1929..	.....	.....	.....	.....	.....	.....	394,614	7,808
81	average yield (bu.).....1939..	.....	.....	.....	.....	.....	.....	44.0	22.5
82	Miscellaneous crops:								
83	Irish potatoes.....farms reporting.....1939..	5,013	1,204	10,880	4,435	86	52,101	20	45,921
84	acres.....1939..	66,324	4,438	119,033	6,209	390	23,294	11	39,449
85	1929..	74,866	14,826	68,276	8,333	1,000	41,310	48	27,418
86	average yield (bu.).....1939..	162.5	54.6	220.1	68.2	126.8	78.4	44.4	55.7
87	Sweetpotatoes and yams.....farms reporting.....1939..	64	18	15	.....	66	2,165	24	70,423
88	acres.....1939..	56	4	39	.....	165	2,831	21	85,649
89	1929..	40	1	11	6	83	3,500	107	65,472
90	average yield (bu.).....1939..	83.1	38.0	108.9	.....	76.5	81.5	61.6	76.0
91	Cotton.....farms reporting.....1939..	.....	.....	.....	.....	.....	21	20	114,271
92	acres.....1939..	.....	.....	.....	.....	.....	417	183	1,086,502
93	1929..	.....	.....	.....	.....	.....	2,448	210	1,945,144
94	average yield (bales) ².....1939..	.....	.....	.....	.....	.....	0.37	0.91	0.66

¹1929 data for sorghums cut for silage included with sorghums cut for hay or fodder.²Running square bales of lint cotton, counting round as half bales.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

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TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929, BY STATES—Continued

ITEM (For definitions: "Farms reporting," etc., see text)	MONTANA		NEBRASKA		NEVADA		NEW MEXICO	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Corn:								
1 Corn for all purposes.....farms reporting.....1939..	2,297	5,516	4,739	98,664	416	2	9,755	7,581
2 ..acres.....1939..	25,929	118,456	160,250	6,144,718	3,877	1	56,782	119,797
3 ..1929..	5,091	128,760	124,902	9,391,292	1,579	72	41,857	206,500
4 Harvested for grain.....farms reporting.....1939..	1,578	2,045	4,364	86,136	281	1	8,982	5,975
5 ..acres.....1939..	16,146	32,496	145,065	4,909,638	1,966	(1)	49,298	92,398
6 ..1929..	1,320	20,739	112,009	8,477,956	1,076	64	35,509	180,992
7 ..average yield (bu.).....1939..	28.8	12.1	31.7	13.7	31.7	(1)	23.1	9.1
8 Cut for silage.....farms reporting.....1939..	192	192	363	13,789	77	.....	156	74
9 ..acres.....1939..	3,406	4,343	7,631	344,706	1,141	.....	2,607	1,792
10 ..1929..	462	1,092	744	68,730	193	.....	1,212	1,203
11 ..average yield (tons).....1939..	6.42	1.73	6.54	1.99	9.08	.....	6.12	1.67
12 Hugged or grazed off, or								
13 cut for fodder.....farms reporting.....1939..	689	4,031	520	27,048	95	1	854	2,025
14 ..acres.....1939..	6,376	81,617	7,554	890,372	771	1	4,857	25,607
15 ..1929..	3,319	106,929	12,149	844,606	310	8	5,136	24,305
Sorghums:								
16 Sorghums for all purposes,								
17 except sirup.....farms reporting.....1939..	86	513	1,156	74,645	47	1	1,829	5,102
18 ..acres.....1939..	838	8,323	18,233	1,542,683	268	2	30,694	392,403
19 ..1929..	7	859	294	137,578	115	3	7,589	325,294
20 Harvested for grain.....farms reporting.....1939..	11	3	275	21,162	24	1	456	2,242
21 ..acres.....1939..	62	47	4,033	351,572	160	2	5,741	170,906
22 ..1929..	.....	1	.....	3,692	81	.....	1,584	181,759
23 ..average yield (bu.).....1939..	12.2	15.9	24.3	10.0	23.5	25.0	34.6	13.5
24 Cut for silage (green								
25 wt.) ².....farms reporting.....1939..	10	15	235	8,776	7	.....	143	111
26 ..acres.....1939..	97	271	3,959	121,793	28	.....	3,369	7,109
27 ..1929..	4.86	1.97	9.31	4.34	12.75	.....	6.91	1.81
28 Cut for hay or fodder								
29 (dry wt.) ².....farms reporting.....1939..	69	499	779	64,146	20	.....	1,360	4,500
30 ..acres.....1939..	679	8,005	10,241	1,069,318	80	.....	21,574	214,388
31 ..1929..	7	858	284	133,886	34	3	6,005	143,535
32 ..average yield (tons).....1939..	2.49	1.06	2.30	1.37	3.39	.....	2.24	0.86
Small grains:								
33 Mixed grains (other than a								
34 flax and wheat mixture)								
35 threshed.....farms reporting.....1939..	221	261	7	2,477	20	.....	137	122
36 ..acres.....1939..	4,441	7,213	129	58,939	243	.....	1,075	5,983
37 ..1929..	4,171	30,829	582	94,987	411	3	745	705
38 ..average yield (bu.).....1939..	33.2	15.1	22.2	10.5	27.0	.....	9.4	9.4
39 Oats threshed or cut and								
40 fed unthreshed.....farms reporting.....1939..	5,809	9,607	1,282	56,730	227	1	1,468	925
41 ..acres.....1939..	102,200	222,178	17,589	1,313,701	3,875	7	13,851	14,624
42 ..1929..	74,168	227,796	21,204	2,368,553	3,343	25	10,150	20,591
43 Oats threshed.....farms reporting.....1939..	5,610	8,411	1,201	52,909	206	.....	972	549
44 ..acres.....1939..	98,282	182,627	16,337	1,218,738	3,582	.....	10,446	9,949
45 ..1929..	69,027	163,431	20,376	2,296,890	2,962	25	7,184	13,644
46 ..average yield (bu.).....1939..	41.1	21.1	29.1	14.6	32.7	.....	26.6	15.1
47 Oats cut and fed un-								
48 threshed.....farms reporting.....1939..	304	2,196	108	5,478	25	1	524	403
49 ..acres.....1939..	3,918	39,551	1,252	94,963	293	7	3,405	4,675
50 ..1929..	5,141	64,365	828	71,663	381	.....	2,966	6,947
51 Barley threshed.....farms reporting.....1939..	3,533	5,278	1,550	40,732	723	1	755	207
52 ..acres.....1939..	53,967	127,167	30,667	999,610	14,707	10	9,340	3,310
53 ..1929..	57,356	185,987	34,501	608,655	5,390	50	3,483	4,305
54 ..average yield (bu.).....1939..	35.0	18.4	30.8	12.4	33.8	31.1	24.0	11.4
55 Rye threshed.....farms reporting.....1939..	107	1,429	130	15,809	29	1	53	107
56 ..acres.....1939..	1,656	44,569	2,431	377,661	189	14	455	4,031
57 ..1929..	1,108	65,917	746	243,297	347	54	86	525
58 ..average yield (bu.).....1939..	17.5	10.3	13.9	9.2	16.0	2.0	16.4	8.2
59 Flax threshed.....farms reporting.....1939..	336	1,384	.....	33	.....	.....	1	.....
60 ..acres.....1939..	8,748	62,411	.....	642	.....	.....	4	.....
61 ..1929..	6,415	355,686	32	19,687	.....	.....	.....	.....
62 ..average yield (bu.).....1939..	9.6	3.6	.....	5.4	.....	.....	20.0	.....
63 Any wheat threshed.....farms reporting.....1939..	6,274	19,615	390	57,895	830	2	4,377	1,884
64 ..acres.....1939..	182,715	2,892,161	9,194	3,134,977	12,400	3	20,500	248,128
65 ..1929..	139,951	4,278,637	13,253	3,686,714	13,434	95	24,411	295,397
66 Winter wheat threshed.....farms reporting.....1939..	638	6,133	317	55,743	272	.....	1,581	1,351
67 ..acres.....1939..	19,926	753,455	8,260	3,037,591	4,742	.....	9,978	244,058
68 ..1929..	13,011	611,010	10,731	3,484,806	3,817	27	6,255	281,695
69 ..average yield (bu.).....1939..	24.3	16.7	18.3	11.1	29.7	.....	17.6	11.3
70 Spring wheat threshed.....farms reporting.....1939..	5,909	16,917	80	3,160	583	2	2,899	551
71 ..acres.....1939..	142,789	2,136,706	934	97,366	7,658	3	10,522	4,070
72 ..1929..	126,940	3,667,627	2,522	191,908	9,617	68	18,156	13,502
73 ..average yield (bu.).....1939..	24.0	11.1	14.7	6.8	27.5	10.0	13.9	6.2
74 Rice (rough or paddy)								
75 threshed.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
76 ..acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
77 ..1929..	.....	.....	.....	.....	.....	.....	.....	.....
78 ..average yield (bu.).....1939..	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous crops:								
79 Irish potatoes.....farms reporting.....1939..	4,232	8,215	2,471	44,687	689	21	386	410
80 ..acres.....1939..	7,497	6,162	38,180	33,794	1,977	17	1,104	1,179
81 ..1929..	8,880	11,793	16,507	84,401	3,661	31	1,298	2,799
82 ..average yield (bu.).....1939..	112.1	53.2	237.5	44.7	155.0	50.8	116.0	27.9
83 Sweetpotatoes and yams.....farms reporting.....1939..	.....	3	55	534	7	.....	347	9
84 ..acres.....1939..	.....	1	136	354	10	.....	1,609	28
85 ..1929..	.....	5	18	238	2	.....	1,510	99
86 ..average yield (bu.).....1939..	.....	20.0	58.5	74.2	45.5	.....	125.3	24.8
87 Cotton.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	2,506	331
88 ..acres.....1939..	.....	.....	.....	.....	.....	.....	83,132	6,569
89 ..1929..	.....	.....	.....	.....	.....	.....	125,323	11,377
90 ..average yield (bales) ³.....1939..	.....	.....	.....	.....	.....	.....	1.18	0.30

¹Less than 1 acre reported.
²1929 data for sorghums cut for silage included with sorghums cut for hay or fodder.
³Running square bales of lint cotton, counting round as half bales.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

ITEM (For definitions: "Farms reporting," etc., see text)	NORTH DAKOTA		OKLAHOMA		OREGON		SOUTH DAKOTA	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Corn:								
1 Corn for all purposes.....farms reporting.....1939..	126	42,473	9	108,804	1,593	10,081	418	52,337
2 .....acres.....1939..	1,910	1,072,085	210	1,787,694	10,818	57,061	7,265	2,676,901
3 Harvested for grain.....farms reporting.....1939..	198	1,004,410	168	3,069,477	5,429	57,777	4,688	5,090,121
4 .....acres.....1939..	41	15,860	9	104,789	1,252	5,145	152	40,873
5 .....1929..	481	346,119	210	1,718,601	6,506	25,009	2,119	1,962,235
6 .....average yield (bu.).....1939..	37.3	137,751	168	2,912,969	3,763	21,097	1,619	3,491,690
7 .....1929..	45	19.1	22.6	14.7	38.8	29.3	20.1	20.8
8 Cut for silage.....farms reporting.....1939..	21	5,804	.....	426	150	2,539	81	5,230
9 .....acres.....1939..	362	146,058	.....	8,251	1,111	20,908	1,509	103,942
10 .....1929..	.....	70,276	.....	11,789	856	21,249	152	56,539
11 .....average yield (tons).....1939..	6.03	2.49	.....	3.89	8.32	6.29	4.08	3.45
12 Hogged or grazed off, or cut for fodder.....farms reporting.....1939..	79	29,414	.....	5,780	267	3,523	226	20,427
13 .....acres.....1939..	967	579,618	.....	60,782	1,201	11,144	3,437	610,724
14 .....1929..	153	796,383	.....	144,719	810	15,431	2,917	1,541,922
Sorghums:								
15 Sorghums for all purposes, except sirup.....farms reporting.....1939..	25	10,792	13	84,998	15	27	149	38,849
16 .....acres.....1939..	227	164,076	200	1,466,674	89	72	2,608	1,069,287
17 .....1929..	.....	5,214	58	1,441,230	14	81	6	15,649
18 Harvested for grain.....farms reporting.....1939..	.....	64	8	37,048	6	4	9	5,633
19 .....acres.....1939..	.....	948	61	628,961	17	7	81	150,843
20 .....1929..	.....	41	47	747,577	.....	4	.....	386
21 .....average yield (bu.).....1939..	.....	12.5	25.0	8.6	29.1	12.6	9.0	8.6
22 Cut for silage (green wt.) ¹.....farms reporting.....1939..	3	750	.....	1,257	3	5	18	1,377
23 .....acres.....1939..	37	12,249	.....	32,108	40	26	414	31,428
24 .....1929..	4.73	2.12	.....	3.38	9.88	7.58	3.71	2.05
25 Cut for hay or fodder (dry wt.) ¹.....farms reporting.....1939..	22	10,115	9	63,003	7	19	130	36,465
26 .....acres.....1939..	190	180,979	139	804,605	32	39	2,113	887,016
27 .....1929..	.....	5,173	11	693,653	14	77	6	16,263
28 .....average yield (tons).....1939..	1.68	1.33	1.73	0.89	1.84	2.05	1.82	1.20
Small grains:								
29 Mixed grains (other than a flax and wheat mixture) threshed.....farms reporting.....1939..	6	531	.....	4,870	184	2,980	2	776
30 .....acres.....1939..	82	21,372	.....	124,188	3,908	79,961	54	26,371
31 .....1929..	69	99,472	20	18,797	986	34,696	113	103,113
32 .....average yield (bu.).....1939..	42.6	15.2	.....	12.1	27.4	24.2	31.5	19.7
33 Oats threshed or cut and fed unthreshed.....farms reporting.....1939..	67	48,292	5	57,771	1,739	11,313	136	43,392
34 .....acres.....1939..	1,048	1,535,766	122	1,317,480	33,059	227,106	1,671	1,633,531
35 .....1929..	630	1,862,781	15	907,924	19,659	204,059	5,756	2,329,234
36 Oats threshed.....farms reporting.....1939..	63	46,357	5	45,040	1,638	11,034	124	42,353
37 .....acres.....1939..	1,026	1,457,546	122	1,174,293	31,645	223,386	1,060	1,597,042
38 .....1929..	591	1,734,870	5	762,918	17,539	195,877	5,445	2,266,454
39 .....average yield (bu.).....1939..	41.2	22.7	37.4	17.9	40.8	30.8	26.3	27.0
40 Oats cut and fed unthreshed.....farms reporting.....1939..	6	4,450	.....	14,131	136	463	16	1,824
41 .....acres.....1939..	22	78,220	.....	143,187	1,414	3,720	311	36,489
42 .....1929..	39	127,911	10	145,106	1,120	8,182	311	62,780
43 Barley threshed.....farms reporting.....1939..	75	41,272	2	23,115	2,156	5,462	226	36,770
44 .....acres.....1939..	1,150	1,624,523	28	494,263	44,694	114,646	3,983	1,403,200
45 .....1929..	1,633	2,833,316	30	71,044	23,075	55,284	5,690	2,055,456
46 .....average yield (bu.).....1939..	36.7	17.2	.....	16.1	36.9	25.8	21.3	16.1
47 Rye threshed.....farms reporting.....1939..	.....	17,570	.....	3,542	185	908	2	19,301
48 .....acres.....1939..	.....	778,734	.....	113,058	4,569	18,013	22	623,488
49 .....1929..	63	948,987	.....	7,573	6,198	14,236	25	229,728
50 .....average yield (bu.).....1939..	.....	7.8	.....	9.7	15.4	11.9	9.8	8.4
51 Flax threshed.....farms reporting.....1939..	6	8,706	.....	126	34	253	.....	6,088
52 .....acres.....1939..	61	311,991	.....	3,661	536	5,164	.....	146,863
53 .....1929..	331	1,338,630	.....	98	3	1,050	389	668,930
54 .....average yield (bu.).....1939..	10.6	5.1	.....	8.7	9.6	10.8	.....	8.9
55 Any wheat threshed.....farms reporting.....1939..	129	66,696	6	51,248	2,392	12,422	157	40,681
56 .....acres.....1939..	3,343	6,895,456	160	4,158,070	36,328	686,132	1,930	2,096,352
57 .....1929..	2,193	9,967,177	255	4,575,903	49,210	1,026,031	2,931	3,536,389
58 Winter wheat threshed.....farms reporting.....1939..	.....	285	6	51,248	296	9,996	28	1,961
59 .....acres.....1939..	.....	11,586	160	4,158,070	5,947	578,048	337	89,131
60 .....1929..	.....	45,836	255	4,549,153	5,575	920,502	81	82,565
61 .....average yield (bu.).....1939..	.....	10.3	16.0	14.1	25.9	21.5	10.7	10.6
62 Spring wheat threshed.....farms reporting.....1939..	129	65,594	.....	.....	2,135	3,554	131	39,316
63 .....acres.....1939..	3,343	6,883,870	.....	.....	30,381	108,084	1,593	2,007,221
64 .....1929..	2,193	9,921,341	.....	.....	26,150	105,529	2,850	3,453,824
65 .....average yield (bu.).....1939..	24.8	10.0	.....	.....	28.9	17.5	11.4	8.3
66 Rice (rough or paddy) threshed.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
67 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
68 .....1929..	.....	.....	.....	.....	.....	.....	.....	.....
69 .....average yield (bu.).....1939..	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous crops:								
70 Irish potatoes.....farms reporting.....1939..	190	43,141	7	72,423	2,578	12,348	278	22,061
71 .....acres.....1939..	510	140,995	33	26,629	20,957	11,272	518	23,959
72 .....1929..	40	121,012	39	38,525	8,083	24,956	355	55,565
73 .....average yield (bu.).....1939..	151.0	84.5	204.1	72.2	230.5	106.9	82.2	77.7
74 Sweetpotatoes and yams.....farms reporting.....1939..	.....	.....	9	12,066	5	3	.....	7
75 .....acres.....1939..	.....	.....	37	9,940	2	7	.....	3
76 .....1929..	.....	.....	40	15,958	53	13	.....	4
77 .....average yield (bu.).....1939..	.....	.....	138.0	47.6	91.0	15.0	.....	53.7
78 Cotton.....farms reporting.....1939..	.....	.....	13	86,863	.....	.....	.....	.....
79 .....acres.....1939..	.....	.....	347	1,671,134	.....	.....	.....	.....
80 .....1929..	.....	.....	434	4,147,794	.....	.....	.....	.....
81 .....average yield (bales) ².....1939..	.....	.....	0.78	0.31	.....	.....	.....	.....

¹ 1929 data for sorghums cut for silage included with sorghums cut for hay or fodder.
² Running square bales of lint cotton, counting round as half bales.

TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

ITEM (For definitions: "Farms reporting," etc., see text)	TEXAS		UTAH		WASHINGTON		WYOMING	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Corn:								
1 Corn for all purposes.....farms reporting.....1939..	4,928	274,766	4,149	295	3,118	5,657	1,661	2,246
2 .....acres.....1939..	45,573	4,654,902	18,829	2,368	15,753	21,889	26,158	93,795
3 .....1929..	31,112	4,219,635	11,729	2,674	11,627	21,028	11,855	147,064
4 Harvested for grain.....farms reporting.....1939..	4,466	280,621	1,877	153	2,427	826	1,248	974
5 .....acres.....1939..	40,132	4,282,232	8,085	1,126	11,237	3,504	17,657	38,280
6 .....1929..	27,714	4,049,492	6,023	1,271	7,219	2,702	6,283	69,714
7 .....average yield (bu.).....1939..	23.5	16.0	26.3	16.5	36.3	21.8	24.3	7.4
8 Cut for silage.....farms reporting.....1939..	148	1,048	1,196	37	404	1,715	172	78
9 .....acres.....1939..	1,841	29,818	6,921	250	3,047	9,548	3,290	2,910
10 .....1929..	783	7,056	2,175	74	2,369	7,357	865	452
11 .....average yield (tons).....1939..	6.47	2.72	9.59	4.74	10.40	9.03	6.74	1.65
12 Hogged or grazed off, or								
13 cut for fodder.....farms reporting.....1939..	445	18,271	1,319	131	461	3,326	409	1,613
14 .....acres.....1939..	3,600	342,852	4,823	982	1,469	6,837	5,211	52,605
15 .....1929..	2,615	164,067	3,531	1,329	1,939	10,969	4,707	76,898
Sorghums:								
16 Sorghums for all purposes,								
17 except sirup.....farms reporting.....1939..	4,148	198,978	75	31	33	17	156	791
18 .....acres.....1939..	103,032	5,360,523	249	168	101	60	1,878	19,553
19 .....1929..	23,185	3,626,277	210	152	10	39	15	2,338
20 Harvested for grain.....farms reporting.....1939..	923	75,217	5	.....	8	.....	.....	14
21 .....acres.....1939..	28,204	2,173,903	25	.....	7	.....	.....	210
22 .....1929..	5,205	1,695,508	64	26	1	13	.....	17
23 .....average yield (bu.).....1939..	25.2	11.3	32.2	.....	27.9	.....	.....	2.8
24 Cut for silage (green								
25 wt.) ¹.....farms reporting.....1939..	324	5,920	18	.....	4	2	29	12
26 .....acres.....1939..	10,151	244,738	116	.....	49	22	391	291
27 .....1929..	5.47	3.65	9.25	.....	9.45	8.18	4.22	1.68
28 Cut for hay or fodder								
29 (dry wt.) ¹.....farms reporting.....1939..	3,487	173,741	53	31	24	15	133	772
30 .....acres.....1939..	64,677	2,941,882	108	168	45	38	1,487	19,052
31 .....1929..	17,980	1,970,769	156	126	9	26	15	2,321
32 .....average yield (tons).....1939..	1.87	1.02	3.92	1.24	2.69	1.42	2.02	0.61
33 Small grains:								
34 Mixed grains (other than a								
35 flax and wheat mixture)								
36 threshed.....farms reporting.....1939..	64	3,693	828	31	67	557	175	44
37 .....acres.....1939..	2,168	105,975	6,930	689	755	9,559	3,820	1,354
38 .....1929..	94	24,415	2,280	604	812	8,805	3,232	5,079
39 .....average yield (bu.).....1939..	21.5	11.9	31.8	13.4	37.4	27.5	28.6	10.8
40 Oats threshed or cut and								
41 fed unthreshed.....farms reporting.....1939..	414	53,205	5,916	254	1,783	8,933	3,268	971
42 .....acres.....1939..	8,997	1,434,405	32,100	1,547	22,872	157,726	62,655	24,514
43 .....1929..	4,591	1,326,549	43,469	3,998	13,075	126,124	56,985	101,478
44 Oats threshed.....farms reporting.....1939..	265	39,164	5,650	235	1,658	8,190	3,099	804
45 .....acres.....1939..	7,099	1,263,642	30,505	1,324	22,063	151,005	59,345	19,160
46 .....1929..	3,721	1,144,389	41,794	3,686	11,771	109,196	50,926	80,200
47 .....average yield (bu.).....1939..	26.7	25.4	37.8	29.0	54.8	43.7	33.4	13.9
48 Oats cut and fed un-								
49 threshed.....farms reporting.....1939..	155	15,501	318	23	139	972	232	217
50 .....acres.....1939..	1,898	170,763	1,595	223	809	6,721	3,310	5,354
51 .....1929..	870	182,160	1,675	312	1,304	16,828	6,069	21,278
52 Barley threshed.....farms reporting.....1939..	327	8,506	9,577	770	945	3,034	2,530	779
53 .....acres.....1939..	7,982	194,059	75,507	8,480	11,240	80,788	49,087	20,156
54 .....1929..	1,239	192,623	32,462	5,614	7,592	44,352	48,554	86,203
55 .....average yield (bu.).....1939..	22.6	13.8	41.4	25.4	41.0	31.9	32.3	17.7
56 Rye threshed.....farms reporting.....1939..	10	363	81	41	78	473	51	269
57 .....acres.....1939..	209	15,391	621	1,005	481	13,366	874	9,097
58 .....1929..	10	2,579	753	2,243	197	11,545	265	29,430
59 .....average yield (bu.).....1939..	8.5	6.8	18.0	5.3	21.0	10.8	17.3	5.5
60 Flax threshed.....farms reporting.....1939..	14	318	.....	.....	4	212	1	2
61 .....acres.....1939..	365	7,001	.....	.....	171	10,449	2	6
62 .....1929..	.....	.....	.....	.....	.....	.....	223	17,657
63 .....average yield (bu.).....1939..	13.7	10.1	.....	.....	3.1	8.6	7.0	10.0
64 Any wheat threshed.....farms reporting.....1939..	763	25,873	10,544	2,039	2,031	10,655	2,577	1,854
65 .....acres.....1939..	66,846	2,677,218	71,532	127,225	21,273	1,942,661	32,824	128,901
66 .....1929..	3,065	2,966,446	89,918	175,781	52,677	2,242,365	34,385	305,938
67 Winter wheat threshed....farms reporting.....1939..	763	25,873	1,887	1,525	177	8,010	205	1,057
68 .....acres.....1939..	66,846	2,677,218	20,334	118,080	1,716	1,179,142	3,982	83,703
69 .....1929..	2,997	2,959,289	20,108	165,211	4,230	1,146,403	3,897	127,921
70 .....average yield (bu.).....1939..	15.5	10.1	24.1	15.7	30.1	25.2	16.5	9.3
71 Spring wheat threshed....farms reporting.....1939..	.....	.....	8,976	602	1,868	4,886	2,409	1,087
72 .....acres.....1939..	.....	.....	51,198	9,145	19,557	763,719	28,842	45,198
73 .....1929..	68	7,157	69,810	10,570	48,447	1,095,962	30,488	178,017
74 .....average yield (bu.).....1939..	.....	.....	30.1	18.3	36.3	17.8	22.4	6.7
75 Rice (rough or paddy)								
76 threshed.....farms reporting.....1939..	810	2	.....	.....	.....	.....	.....	.....
77 .....acres.....1939..	186,230	6	.....	.....	.....	.....	.....	.....
78 .....1929..	103,973	1,643	.....	.....	.....	.....	.....	.....
79 .....average yield (bu.).....1939..	55.8	(²)	.....	.....	.....	.....	.....	.....
80 Miscellaneous crops:								
81 Irish potatoes.....farms reporting.....1939..	709	86,797	5,589	147	2,754	19,324	1,740	733
82 .....acres.....1939..	7,904	36,378	12,703	432	17,762	16,189	8,322	4,174
83 .....1929..	8,300	31,486	10,371	427	19,143	24,765	7,890	12,062
84 .....average yield (bu.).....1939..	93.4	54.0	162.2	44.4	249.5	127.2	181.3	36.5
85 Sweetpotatoes and yams.....farms reporting.....1939..	282	57,897	10	.....	1	3	.....	1
86 .....acres.....1939..	725	59,068	8	.....	2	1	.....	(²)
87 .....1929..	529	44,123	12	.....	9	5	.....	.....
88 .....average yield (bu.).....1939..	103.8	51.7	92.4	.....	15.0	108.0	.....	(²)
89 Cotton.....farms reporting.....1939..	5,642	267,490	.....	.....	.....	.....	.....	.....
90 .....acres.....1939..	178,106	7,927,605	.....	.....	.....	.....	.....	.....
91 .....1929..	264,317	16,549,251	.....	.....	.....	.....	.....	.....
92 .....average yield (bales) ³.....1939..	0.84	0.33	.....	.....	.....	.....	.....	.....

¹ 1929 data for sorghums cut for silage included with sorghums cut for hay or fodder.² Less than 1 acre reported.³ Running square bales of lint cotton, counting round as half bales.

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

[Yields for irrigated crops based on farms reporting entire crop irrigated; yields for nonirrigated crops based on farms reporting no irrigation for such crops. This table is presented in two sections, the first section beginning on p. 81. For the 17 western States and Arkansas and Louisiana]

ITEM (For definitions: "Farms reporting," etc., see text)	TOTAL (19 States, excl. Florida)		ARIZONA		ARKANSAS		CALIFORNIA	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Miscellaneous crops—Continued:								
1 Sugar beets for sugar.....farms reporting.....1939..	29,213	764	3				1,643	176
2 ..acres.....1939..	626,190	20,200	293				143,376	8,337
3 ..1929..	501,951	26,467					35,045	4,799
4 ..average yield (tons)..1939..	13.07	9.77	15.72				16.12	11.43
5 Hops.....farms reporting.....1939..	324	559					91	27
6 ..acres.....1939..	12,896	16,868					5,643	711
7 ..1929..	4,811	18,474					1,648	2,496
8 ..average yield (lb.)..1939..	1,422	851					1,434	1,154
9 Broomcorn.....farms reporting.....1939..	57	5,521	3				212	8
10 ..acres.....1939..	774	195,643	75				210	8
11 ..1929..	186	288,187	18	5			190	8
12 ..average yield (lb.)..1939..	420	226	132				319	372
13 Popcorn.....farms reporting.....1939..	618	9,300	1	1			411	29
14 ..acres.....1939..	2,479	10,543	1	2			282	108
15 ..1929..	743	14,760	4	1			241	11
16 ..average yield (bu.)..1939..	24.3	12.1	20.0	4.5			11.0	21.9
17 Root and grain crops (other than corn and annual legumes) hogged or grazed off.....farms reporting.....1939..	1,503	30,965	185	29			443	325
18 ..acres.....1939..	20,162	647,354	2,703	903			2,154	6,191
19 ..1929..	8,899	23,187	485	1			20	523
20 Alfalfa seed.....farms reporting.....1939..	219,149	355,985	34,221	10			237	20,375
21 ..acres.....1939..	137,754	8,072,931	14,459	81,499			49,340	8,765
22 ..1929..	2.2	1.5	2.8	0.2			1.3	3.1
23 ..average yield (bu.)..1939..								
24 Land in bearing and nonbearing fruit orchards, vineyards, and planted nut trees (nurseries excluded).....farms reporting.....1939..	86,576	211,532	2,118	619	3		41,214	49,608
25 ..acres.....1939..	1,374,458	857,670	22,607	1,051	10		1,084,850	330,181
26 ..1929..	1,494,637	1,085,412	19,775	2,186	80		1,172,171	431,276
27 Annual legumes:								
28 Soybeans, total.....farms reporting.....1939..	227	101,315	8		6		36,496	3
29 ..acres.....1939..	1,977	1,205,367	80		468		595,217	47
30 ..1929..	1,031	321,886	1		19		54,288	
31 Cowpeas, total.....farms reporting.....1939..	275	273,986	3		5		87,115	46
32 ..acres.....1939..	1,802	2,190,282	29		113		760,929	343
33 ..1929..	4,422	422,321	21	29	10		130,181	48
34 Peanuts, total.....farms reporting.....1939..	345	139,392	13		1		32,608	110
35 ..acres.....1939..	3,448	569,852	21	1			55,356	1,116
36 ..1929..	627	369,940	21	7	2		28,628	96
37 Vetches, velvetbeans, mung and horse beans.....farms reporting.....1939..	432	23,026					1,396	249
38 ..acres.....1939..	6,662	301,858					12,694	5,264
39 Navy, pea bean, Great Northern, kidney, lima, pinto, and other dry field and seed beans, and lentils.....farms reporting.....1939..	19,745	15,569	884	732			1,019	3,575
40 ..acres.....1939..	449,298	495,243	3,515	11,994			1,262	179,313
41 ..1929..	427,996	715,723	1,307	4,264			1,595	189,381
42 ..average yield (bu.)..1939..	23.2	5.5	9.2	3.4			6.0	24.0
43 Lima beans (dry) ¹.....farms reporting.....1939..	975	578	34	12				941
44 ..acres.....1939..	71,277	52,805	78	162				71,199
45 ..1929..	28.1	14.7	7.2	3.0				28.1
46 ..average yield (bu.)..1939..								
47 Other dry field and seed beans ¹.....farms reporting.....1939..	3,698	1,767	857	720				2,841
48 ..acres.....1939..	111,551	66,478	3,437	11,822				108,114
49 ..1929..	21.1	9.4	9.2	3.4				21.5
50 Dry field and seed peas.....farms reporting.....1939..	4,265	3,623	63	4				19
51 ..acres.....1939..	76,506	154,754	63	36				61
52 ..1929..	19.3	17.4	3.3	0.8				3.6
53 ..average yield (bu.) ² ..1939..								
54 Hay crops, exclusive of sorghums:								
55 All hay.....acres..... ³ 1939..	6,447,922	16,707,869	138,793	10,998	490		1,258,709	928,667
56 ..1929..	6,758,431	19,147,810	103,861	17,581	166		637,223	979,321
57 Annual legumes saved for hay.....farms reporting.....1939..	919	121,357	13	5	8		48,334	246
58 ..acres.....1939..	10,524	928,119	82	42	152		363,720	3,402
59 ..1929..	19,833	404,114	5	11	54		112,916	1,756
60 ..average yield (tons)..1939..	1.76	0.97	1.44	0.31	0.95		1.01	2.20
61 Alfalfa hay.....farms reporting.....1939..	136,096	149,219	3,504	258			8,728	22,983
62 ..acres.....1939..	3,651,869	2,239,829	122,656	1,868			94,939	686,656
63 ..1929..	4,096,381	4,114,304	91,763	4,295	20		49,320	719,610
64 ..average yield (tons)..1939..	2.64	1.39	2.47	0.99			2.25	4.27
65 Sweetclover hay.....farms reporting.....1939..	3,934	28,316	58	12			667	255
66 ..acres.....1939..	57,840	505,718	662	40			4,933	3,768
67 ..1929..	29,279	596,758	137	140			30,661	435
68 ..average yield (tons)..1939..	1.45	1.07	2.22	0.68			1.08	2.68
69 Clover or timothy hay, alone or mixed.....farms reporting.....1939..	13,757	29,742	29	10			2,429	577
70 ..acres.....1939..	534,059	354,071	278	66			20,489	24,274
71 ..1929..	734,137	1,101,483	415	177	24		128,798	34,505
72 ..average yield (tons)..1939..	1.37	1.60	1.07	0.71			1.07	1.62
73 Small grain hay.....farms reporting.....1939..	17,862	116,832	656	251			10,930	6,041
74 ..acres.....1939..	241,831	2,024,609	10,957	3,813			77,721	97,135
75 ..1929..	219,342	2,383,440	7,504	5,234	15		41,998	115,877
76 ..average yield (tons)..1939..	1.47	1.04	1.50	0.57			0.82	1.66
77 All other tame hay.....farms reporting.....1939..	7,199	177,347	179	117			15,411	1,158
78 ..acres.....1939..	303,283	2,276,147	3,069	1,593			121,799	40,159
79 ..1929..	356,211	1,131,968	2,361	2,431	8		132,160	46,945
80 ..average yield (tons)..1939..	1.25	1.06	1.23	1.10			1.10	1.44
81 Wild hay.....farms reporting.....1939..	11,555	205,644	51	91			20,370	635
82 ..acres.....1939..	1,648,149	7,879,395	1,089	3,576			161,946	73,239
83 ..1929..	1,303,248	9,415,743	1,676	5,293	45		141,370	60,193
84 ..average yield (tons)..1939..	0.93	0.73	1.21	0.73			1.07	1.31

¹Separate reports only for Arizona and California.

²Average yields were computed by using acreages grown alone in all States except California, Idaho, Oregon, and Washington, where total acreages were used.

³Data for 1939 include lespedeza hay, not shown separately.

⁴Data for 1929 are for "Sweet, crimson, and Japan (lespedeza) clover."

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TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

ITEM (For definitions: "Farms reporting," etc., see text)	COLORADO		IDAHO		KANSAS		LOUISIANA	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Miscellaneous crops—Continued:								
1 Sugar beets for sugar.....farms reporting.....1939..	6,872	37	5,873	25	252	1		
2	138,485	304	70,627	177	6,957	20		
3	206,245	3,590	47,163	651	5,000	1,149		
4	11.04	4.81	13.85	12.49	7.89	1.25		
5 Hops.....farms reporting.....1939..			3					
6			96					
7								
8			1,125					
9 Broomcorn.....farms reporting.....1939..	6	390	2	1		257		287
10	19	45,313	9	10		11,564		100
11	130	64,118	11		8	49,864		47
12	387	162	778	60		176		334
13 Popcorn.....farms reporting.....1939..	173	56	133	4	10	2,250		1,115
14	452	82	1,077	4	10	2,981		406
15	231	391	233	3		3,473		66
16	25.2	7.0	28.3	14.5	11.1	11.6		17.9
17 Root and grain crops (other than corn and annual legumes) hogged or grazed off.....farms reporting.....1939..	156	151	136	95	22	1,495		430
18	2,023	7,462	917	1,321	657	57,456		1,085
19 Alfalfa seed.....farms reporting.....1939..	889	106	2,068	754	117	8,699		13
20	15,220	1,891	41,082	17,830	4,486	106,016		761
21	13,384	796,592	32,989	733,456	3,971	725,651		11,811
22	1.4	1.0	1.6	1.1	1.6	1.4		1.0
23 Land in bearing and nonbearing fruit orchards, vineyards, and planted nut trees (nurseries excluded).....farms reporting.....1939..	4,858	527	3,235	1,508	78	8,648	8	12,157
24	23,442	933	16,167	1,791	372	25,874	25	48,731
25	29,612	2,886	32,575	4,414	115	66,426	38	25,713
Annual legumes:								
26 Soybeans, total.....farms reporting.....1939..	89	17	4			4,776	27	52,706
27	487	111	24			39,627	235	516,638
28	170	413	75	86	30	18,650	99	216,549
29 Cowpeas, total.....farms reporting.....1939..	40	25		1	2	857	53	48,881
30	315	202		1	12	8,630	170	372,301
31	1,421	62				3,801	44	74,591
32 Peanuts, total.....farms reporting.....1939..	1				1	18		25,807
33	(¹)				1	19		33,095
34		1	47	63		114	3	13,404
35 Vetches, velvetbeans, mung and horse beans.....farms reporting.....1939..	2	1	15	3		47		6,008
36	2	(¹)	157	49		371		57,408
37 Navy, pea bean, Great Northern, kidney, lima, pinto, and other dry field and seed beans, and lentils.....farms reporting.....1939..	5,367	2,412	3,421	441	1	25		392
38	92,302	148,686	77,456	21,681	4	57		614
39	40,138	335,446	116,813	16,806		22,595	1	1,080
40	19.4	3.5	30.0	6.8	10.0	4.4		8.3
41 Lima beans (dry) ².....farms reporting.....1939..								
42								
43								
44 Other dry field and seed beans ².....farms reporting.....1939..								
45								
46								
47 Dry field and seed peas.....farms reporting.....1939..	1,077	76	1,232	526		2		4
48	29,290	532	19,262	29,908		6		4
49	15.2	5.7	22.0	15.9		3.8		
Hay crops, exclusive of sorghums:								
50 All hay.....acres..... ⁴ 1939..	1,077,563	202,127	817,303	303,243	16,141	1,152,013	287	297,220
51	1,262,506	356,068	833,394	317,341	21,746	1,930,555	256	160,897
52 Annual legumes saved for hay.....farms reporting.....1939..	174	26	27	59	1	2,785	73	27,585
53	3,148	332	264	747	3	21,290	272	141,633
54	15,506	1,268	290	389	37	9,986	211	66,115
55	1.35	0.66	2.16	1.11	3.00	1.19	2.36	1.14
56 Alfalfa hay.....farms reporting.....1939..	19,427	1,994	23,263	7,577	432	30,937		1,733
57	534,255	44,518	613,177	160,857	15,415	360,336		27,914
58	717,934	92,042	630,694	135,811	21,044	708,578	11	11,800
59	1.84	0.97	2.64	1.18	1.58	1.56		2.43
60 Sweetclover hay.....farms reporting.....1939..	875	160	309	320	3	1,732		244
61	16,179	2,344	3,589	5,011	39	20,123		1,710
62	11,222	3,098	1,987	843	208	20,873		24,062
63	1.22	0.72	1.24	1.24	1.00	1.14		1.21
64 Clover or timothy hay, alone or mixed.....farms reporting.....1939..	1,777	320	4,289	2,265		1,408		505
65	126,308	7,176	90,610	34,897		14,413		10,126
66	163,144	18,050	113,236	67,851		181,851	2	3,523
67	1.32	0.75	1.33	1.24		1.04		0.94
68 Small grain hay.....farms reporting.....1939..	2,028	2,364	1,215	4,750	22	3,825	1	359
69	24,694	63,850	11,179	62,603	348	53,092	5	2,107
70	24,206	99,000	6,735	73,469	142	20,028	5	1,049
71	1.09	0.46	1.47	1.26	0.94	0.65	1.00	1.06
72 All other tame hay.....farms reporting.....1939..	1,033	952	407	707	29	9,462		2,592
73	63,109	22,858	16,346	11,559	275	79,213		26,351
74	57,389	54,114	17,396	6,651	155	70,785	27	36,808
75	1.22	0.66	1.09	1.09	3.06	1.28		1.24
76 Wild hay.....farms reporting.....1939..	1,859	1,513	1,169	941	4	30,557		4,615
77	309,880	61,049	82,138	27,569	61	584,930		31,072
78	273,105	88,496	63,116	32,327	160	918,454		17,540
79	0.83	0.72	1.13	0.95	0.89	1.00		1.38

¹Less than 1 acre reported.

²Separate reports only for Arizona and California.

³Average yields were computed by using acreages grown alone in all States except California, Idaho, Oregon, and Washington, where total acreages were used.

⁴Data for 1939 include lespedeza hay, not shown separately.

⁵Data for 1929 are for "Sweet, crimson, and Japan (lespedeza) clover."

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

ITEM (For definitions: "Farms reporting," etc., see text)	MONTANA		NEBRASKA		NEVADA		NEW MEXICO	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Miscellaneous crops—Continued:								
1 Sugar beets for sugar.....farms reporting.....1939..	2,738	6	2,486	151	8	.....	24	.....
2 .....acres.....1939..	71,527	45	65,926	2,073	1,654	.....	308	.....
3 .....1929..	33,724	1,192	78,767	5,159	.....	.....	388	1
4 .....average yield (tons).....1939..	12.34	1.13	11.87	6.65	9.96	.....	5.99	.....
5 Hops.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
6 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
7 .....1929..	.....	.....	.....	.....	.....	.....	.....	.....
8 .....average yield (lb.).....1939..	.....	.....	.....	.....	.....	.....	.....	.....
9 Broomcorn.....farms reporting.....1939..	1	.....	.....	12	.....	.....	14	724
10 .....acres.....1939..	1	.....	.....	26	.....	.....	321	53,220
11 .....1929..	.....	.....	.....	159	.....	.....	11	38,625
12 .....average yield (lb.).....1939..	42	.....	.....	378	.....	.....	329	263
13 Popcorn.....farms reporting.....1939..	55	78	69	1,444	.....	.....	10	3
14 .....acres.....1939..	54	64	249	1,315	.....	.....	24	6
15 .....1929..	81	7	63	8,486	.....	.....	6	62
16 .....average yield (bu.).....1939..	23.8	10.3	19.7	11.9	.....	.....	25.1	20.8
17 Root and grain crops (other than corn and annual legumes) hogged or grazed off.....farms reporting.....1939..	42	83	15	1,467	48	2	119	217
18 .....acres.....1939..	396	2,786	125	33,567	293	25	1,993	7,975
19 Alfalfa seed.....farms reporting.....1939..	1,004	913	175	6,005	72	.....	249	9
20 .....acres.....1939..	21,001	26,247	3,076	69,215	1,461	.....	7,991	48
21 .....1929..	5,651	734,414	1,068	1,138,017	1,159	145,609	3,418	98,179
22 .....average yield (bu.).....1939..	2.9	1.9	1.8	1.1	2.3	.....	2.0	2.1
23 Land in bearing and nonbearing fruit orchards, vineyards, and planted nut trees (nurseries excluded).....farms reporting.....1939..	1,202	353	210	5,776	405	16	4,372	486
24 .....acres.....1939..	4,017	582	421	10,001	752	10	13,027	1,176
25 .....1929..	6,084	1,701	307	28,836	1,282	95	10,951	2,132
Annual legumes:								
26 Soybeans, total.....farms reporting.....1939..	10	1	17	1,346	.....	.....	26	17
27 .....acres.....1939..	57	20	73	10,003	.....	.....	121	120
28 .....1929..	176	195	8	2,587	.....	.....	171	132
29 Cowpeas, total.....farms reporting.....1939..	.....	.....	.....	13	.....	.....	12	13
30 .....acres.....1939..	.....	.....	.....	97	.....	.....	25	40
31 .....1929..	.....	.....	.....	.....	.....	.....	1,297	650
32 Peanuts, total.....farms reporting.....1939..	.....	.....	.....	4	.....	.....	173	35
33 .....acres.....1939..	.....	.....	.....	1	.....	.....	1,833	258
34 .....1929..	.....	.....	.....	25	.....	.....	981	197
35 Vetches, velvetbeans, mung and horse beans.....farms reporting.....1939..	3	2	.....	.....	1	.....	36	22
36 .....acres.....1939..	51	31	.....	.....	50	.....	31	36
37 Navy, pea bean, Great Northern, kidney, lima, pinto, and other dry field and seed beans, and lentils.....farms reporting.....1939..	709	25	1,130	62	2	.....	2,381	3,849
38 .....acres.....1939..	13,769	43	14,643	576	22	.....	18,021	175,670
39 .....1929..	39,738	7,672	2,225	4,648	14	2	12,143	155,114
40 .....average yield (bu.).....1939..	22.6	5.1	25.7	3.3	13.9	.....	13.1	3.3
41 Lima beans (dry) ¹.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
42 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
43 .....average yield (bu.).....1939..	.....	.....	.....	.....	.....	.....	.....	.....
44 Other dry field and seed beans ¹.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
45 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
46 .....average yield (bu.).....1939..	.....	.....	.....	.....	.....	.....	.....	.....
47 Dry field and seed peas.....farms reporting.....1939..	571	72	.....	.....	.....	.....	664	450
48 .....acres.....1939..	13,522	1,857	.....	.....	.....	.....	2,035	808
49 .....average yield (bu.) ².....1939..	20.6	18.9	.....	.....	.....	.....	7.8	4.0
Hay crops, exclusive of sorghums:								
50 All hay.....acres..... ³ 1939..	882,352	832,636	98,443	3,126,080	389,916	5,068	146,139	53,961
51 .....1929..	932,263	1,145,163	108,912	4,211,996	357,861	6,062	117,065	56,422
52 Annual legumes saved for hay.....farms reporting.....1939..	14	9	8	732	.....	.....	84	19
53 .....acres.....1939..	226	107	99	5,160	.....	.....	423	58
54 .....1929..	295	609	19	2,311	126	.....	159	458
55 .....average yield (tons).....1939..	1.48	1.29	1.03	1.17	.....	.....	0.93	0.90
56 Alfalfa hay.....farms reporting.....1939..	9,660	5,707	2,482	32,770	2,214	3	9,168	705
57 .....acres.....1939..	366,609	167,195	57,043	444,863	127,044	49	120,674	4,890
58 .....1929..	413,211	326,854	84,579	1,054,506	146,155	613	94,900	6,697
59 .....average yield (tons).....1939..	1.96	1.13	2.35	1.13	2.28	0.59	2.59	1.19
60 Sweetclover hay.....farms reporting.....1939..	697	3,462	100	2,010	26	.....	151	37
61 .....acres.....1939..	13,368	80,114	1,193	27,372	372	.....	1,880	221
62 .....1929..	6,976	63,186	723	76,745	197	15	305	294
63 .....average yield (tons).....1939..	1.40	1.08	1.26	0.84	1.38	.....	1.12	0.70
64 Clover or timothy hay, alone or mixed.....farms reporting.....1939..	2,158	1,322	14	254	155	1	383	180
65 .....acres.....1939..	108,267	41,082	121	3,942	19,739	990	3,701	2,883
66 .....1929..	175,167	96,536	648	175,114	35,192	80	5,755	5,039
67 .....average yield (tons).....1939..	1.33	1.03	1.15	0.90	1.22	.....	1.27	0.89
68 Small grain hay.....farms reporting.....1939..	1,039	6,315	259	5,567	289	8	807	874
69 .....acres.....1939..	14,586	144,137	3,375	119,671	8,425	473	6,990	11,098
70 .....1929..	9,760	285,777	685	37,188	3,534	789	4,791	17,833
71 .....average yield (tons).....1939..	1.30	0.89	0.93	0.56	1.31	0.48	1.17	0.81
72 All other tame hay.....farms reporting.....1939..	650	2,258	122	11,558	201	1	772	809
73 .....acres.....1939..	38,058	48,792	3,530	125,269	19,148	10	7,151	21,481
74 .....1929..	24,916	36,150	1,201	97,179	30,930	175	4,499	9,573
75 .....average yield (tons).....1939..	1.22	0.87	0.99	0.96	1.29	1.00	1.18	0.55
76 Wild hay.....farms reporting.....1939..	2,135	7,696	357	29,938	732	20	249	466
77 .....acres.....1939..	341,238	351,219	33,092	2,399,803	215,188	3,546	5,309	13,330
78 .....1929..	301,938	336,051	21,057	2,768,953	141,727	4,390	6,656	16,428
79 .....average yield (tons).....1939..	0.94	0.77	0.82	0.64	0.98	1.18	1.01	0.59

¹ Separate reports only for Arizona and California.
² Average yields were computed by using acreages grown alone in all States except California, Idaho, Oregon, and Washington, where total acreages were used.
³ Data for 1939 include lespedeza hay, not shown separately.
⁴ Data for 1929 are for "Sweet, crimson, and Japan (lespedeza) clover."

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TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

ITEM (For definitions: "Farms reporting," etc., see text)	NORTH DAKOTA		OKLAHOMA		OREGON		SOUTH DAKOTA	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Miscellaneous crops—Continued:								
1 Sugar beets for sugar.....farms reporting.....1939..	139	227	.....	.....	382	.....	321	1
2 .....acres.....1939..	3,839	8,609	.....	.....	6,574	.....	6,903	17
3 .....1929..	1,403	6,846	.....	.....	.....	.....	10,949	384
4 .....average yield (tons).....1939..	13.91	8.08	.....	.....	14.94	.....	8.72	2.35
5 Hops.....farms reporting.....1939..	.....	.....	.....	.....	39	518	.....	.....
6 .....acres.....1939..	.....	.....	.....	.....	2,887	15,762	.....	.....
7 .....1929..	.....	.....	.....	.....	1,081	15,246	.....	.....
8 .....average yield (lb.).....1939..	.....	.....	.....	.....	1,206	841	.....	.....
9 Broomcorn.....farms reporting.....1939..	1	7	.....	2,967	3	.....	.....	10
10 .....acres.....1939..	1	111	.....	60,362	17	.....	.....	152
11 .....1929..	.....	.....	.....	124,990	3	.....	.....	11
12 .....average yield (lb.).....1939..	30	575	.....	268	635	.....	.....	307
13 Popcorn.....farms reporting.....1939..	4	326	.....	225	11	23	18	276
14 .....acres.....1939..	13	301	.....	447	23	23	19	558
15 .....1929..	.....	4	.....	443	3	33	.....	1,392
16 .....average yield (bu.).....1939..	11.2	10.3	.....	14.7	34.8	21.1	28.4	12.4
17 Root and grain crops (other than corn and annual legumes) hogged or grazed off.....farms reporting.....1939..	1	112	2	8,089	75	856	7	455
18 .....acres.....1939..	3	2,111	16	198,150	612	12,182	24	17,548
19 Alfalfa seed.....farms reporting.....1939..	11	1,065	19	3,514	501	163	104	711
20 .....acres.....1939..	203	14,299	563	78,411	8,513	2,818	1,487	8,742
21 .....1929..	.....	287,080	316	181,469	2,451	247,064	899	878,291
22 .....average yield (bu.).....1939..	1.7	1.3	2.3	1.8	1.7	1.0	1.7	1.2
23 Land in bearing and nonbearing fruit orchards, vineyards, and planted nut trees (nurseries excluded).....farms reporting.....1939..	15	226	36	18,561	3,308	18,119	81	730
24 .....acres.....1939..	10	164	134	44,638	26,306	101,951	157	705
25 .....1929..	.....	1,455	46	74,850	32,319	119,985	171	5,625
Annual legumes:								
26 Soybeans, total.....farms reporting.....1939..	1	186	.....	2,280	.....	4	1	178
27 .....acres.....1939..	2	2,830	.....	20,749	.....	4	3	1,480
28 .....1929..	.....	502	.....	21,371	20	281	2	2,167
29 Cowpeas, total.....farms reporting.....1939..	.....	1	2	32,659	1	.....	.....	3
30 .....acres.....1939..	.....	1	7	222,503	20	3	.....	19
31 .....1929..	205	1,236	.....	52,529	11	286	.....	31
32 Peanuts, total.....farms reporting.....1939..	.....	1	2	14,519	.....	.....	1	.....
33 .....acres.....1939..	.....	(¹)	(¹)	69,098	.....	.....	1	.....
34 .....1929..	.....	.....	1	103,187	.....	.....	.....	.....
35 Vetches, velvetbeans, mung and horse beans.....farms reporting.....1939..	.....	.....	.....	689	103	10,817	.....	3
36 .....acres.....1939..	.....	.....	.....	6,918	976	179,744	.....	55
37 Navy, pea bean, Great Northern, kidney, lima, pinto, and other dry field and seed beans, and lentils.....farms reporting.....1939..	13	38	.....	580	51	100	6	16
38 .....acres.....1939..	151	50	.....	1,456	524	691	5	22
39 .....1929..	484	1,480	.....	1,231	95	7,529	5	1,764
40 .....average yield (bu.).....1939..	16.9	8.4	.....	4.9	9.8	6.2	14.0	5.9
41 Lima beans (dry) ².....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
42 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
43 .....average yield (bu.).....1939..	.....	.....	.....	.....	.....	.....	.....	.....
44 Other dry field and seed beans ².....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
45 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
46 .....average yield (bu.).....1939..	.....	.....	.....	.....	.....	.....	.....	.....
47 Dry field and seed peas.....farms reporting.....1939..	.....	14	.....	77	81	1,034	.....	1
48 .....acres.....1939..	.....	227	.....	1,125	1,582	30,653	.....	1
49 .....average yield (bu.) ³.....1939..	.....	16.4	.....	3.2	17.8	16.1	.....	10.0
Hay crops, exclusive of sorghums:								
50 All hay.....acres..... ⁴ 1939..	7,040	2,808,846	1,364	1,038,984	495,146	562,513	23,070	2,420,386
51 .....1929..	3,336	2,684,204	532	886,183	478,340	627,351	26,734	3,461,219
52 Annual legumes saved for hay.....farms reporting.....1939..	.....	50	.....	10,839	91	5,610	1	65
53 .....acres.....1939..	.....	415	.....	83,336	1,300	67,975	3	531
54 .....1929..	10	3,352	.....	42,972	259	52,368	.....	1,449
55 .....average yield (tons).....1939..	.....	1.11	.....	0.71	1.99	1.95	1.00	1.07
56 Alfalfa hay.....farms reporting.....1939..	87	6,291	44	13,646	7,987	7,162	484	12,408
57 .....acres.....1939..	1,719	103,702	1,359	232,353	203,802	79,857	13,896	174,651
58 .....1929..	1,613	286,467	515	181,270	198,870	50,665	22,615	856,575
59 .....average yield (tons).....1939..	2.00	1.02	1.46	1.63	2.83	1.91	1.78	1.03
60 Sweetclover hay.....farms reporting.....1939..	32	14,223	.....	564	193	557	100	2,789
61 .....acres.....1939..	701	294,935	.....	5,322	1,999	4,380	1,208	42,564
62 .....1929..	244	288,641	.....	7,181	602	2,640	91	67,708
63 .....average yield (tons).....1939..	1.40	1.07	.....	0.97	1.72	1.55	1.22	1.02
64 Clover or timothy hay, alone or mixed.....farms reporting.....1939..	1	353	.....	381	2,040	4,744	13	345
65 .....acres.....1939..	9	6,061	.....	3,725	43,265	44,060	374	6,094
66 .....1929..	19	68,110	5	23,774	57,040	72,274	1,142	70,816
67 .....average yield (tons).....1939..	1.56	0.97	.....	1.04	1.57	1.71	1.27	0.74
68 Small grain hay.....farms reporting.....1939..	7	9,501	.....	5,453	2,166	18,849	102	5,264
69 .....acres.....1939..	76	168,211	.....	55,985	31,147	274,914	1,245	143,935
70 .....1929..	291	332,780	.....	25,248	26,536	312,372	238	78,018
71 .....average yield (tons).....1939..	1.56	0.88	.....	0.75	1.53	1.41	0.88	0.59
72 All other tame hay.....farms reporting.....1939..	13	28,828	1	25,593	640	4,943	107	19,484
73 .....acres.....1939..	528	536,754	5	293,454	33,438	52,070	1,527	276,092
74 .....1929..	.....	125,986	5	124,052	32,990	66,312	115	49,137
75 .....average yield (tons).....1939..	1.38	1.02	1.20	0.98	1.38	1.70	1.23	1.07
76 Wild hay.....farms reporting.....1939..	18	40,660	.....	14,114	1,094	2,516	99	32,579
77 .....acres.....1939..	4,007	1,698,768	.....	353,775	180,195	39,257	4,817	1,776,519
78 .....1929..	1,159	1,779,868	7	481,686	163,043	70,720	2,533	2,337,516
79 .....average yield (tons).....1939..	1.49	0.74	.....	0.95	1.00	1.13	0.88	0.61

¹ Less than 1 acre reported.

² Separate reports only for Arizona and California.

³ Average yields were computed by using acreages grown alone in all States except California, Idaho, Oregon, and Washington, where total acreages were used.

⁴ Data for 1939 include lespedeza hay, not shown separately.

⁵ Data for 1929 are for "Sweet, crimson, and Japan (lespedeza) clover."

CENSUS OF IRRIGATION—UNITED STATES SUMMARY

TABLE 22.—SPECIFIED CROPS GROWN ON IRRIGATED AND NONIRRIGATED LANDS—FARMS REPORTING AND AVERAGE YIELDS, 1939; AND ACREAGES, 1939 AND 1929; BY STATES—Continued

ITEM (For definitions: "Farms reporting," etc., see text)	TEXAS		UTAH		WASHINGTON		WYOMING	
	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated	Irrigated	Nonirrigated
Miscellaneous crops—Continued:								
1 Sugar beets for sugar.....farms reporting.....1939..	14	.....	6,090	29	628	104	1,740	7
2 .....acres.....1939..	84	.....	48,279	119	11,883	366	49,475	133
3 .....1929..	.....	.....	39,537	567	134	1,372	43,596	757
4 .....average yield (tons)..1939..	9.76	.....	13.67	7.82	17.26	14.74	11.22	3.30
5 Hops.....farms reporting.....1939..	.....	.....	.....	.....	191	14	.....	.....
6 .....acres.....1939..	.....	.....	.....	.....	4,270	395	.....	.....
7 .....1929..	.....	.....	.....	.....	2,082	732	.....	.....
8 .....average yield (lb.)..1939..	.....	.....	.....	.....	1,498	786	.....	.....
9 Broomcorn.....farms reporting.....1939..	7	953	3	1	8	.....	1	.....
10 .....acres.....1939..	168	24,572	6	3	68	.....	1	.....
11 .....1929..	.....	10,069	.....	.....	.....	.....	.....	.....
12 .....average yield (lb.)..1939..	575	197	167	133	701	.....	200	.....
13 Popcorn.....farms reporting.....1939..	36	3,034	10	.....	40	13	19	12
14 .....acres.....1939..	269	2,044	8	.....	132	8	40	12
15 .....1929..	4	112	19	.....	88	7	.....	11
16 .....average yield (bu.)..1939..	11.9	12.7	22.2	.....	24.5	22.8	18.4	4.3
17 Root and grain crops (other than corn and annual legumes) hogged or grazed off.....farms reporting.....1939..	179	15,774	101	15	81	551	9	53
18 .....acres.....1939..	3,213	472,986	467	148	364	2,329	165	2,442
19 Alfalfa seed.....farms reporting.....1939..	176	250	1,697	411	81	98	728	276
20 .....acres.....1939..	5,896	3,393	36,765	10,609	1,162	1,928	15,647	6,782
21 .....1929..	1,284	48,935	44,395	506,311	150	228,374	3,295	394,636
22 .....average yield (bu.)..1939..	2.7	2.3	1.9	1.1	1.9	1.1	2.1	1.7
23 Land in bearing and nonbearing fruit orchards, vineyards, and planted nut trees (nurseries excluded).....farms reporting.....1939..	5,090	57,292	3,700	113	8,015	25,976	234	25
24 .....acres.....1939..	72,866	149,255	15,060	273	93,805	31,789	450	19
25 .....1929..	52,825	134,756	18,421	954	117,278	41,230	587	152
Annual legumes:								
26 Soybeans, total.....farms reporting.....1939..	21	3,304	2	.....	1	.....	11	2
27 .....acres.....1939..	261	18,334	20	.....	50	.....	49	10
28 .....1929..	27	4,496	143	2	.....	.....	90	141
29 Cowpeas, total.....farms reporting.....1939..	111	104,397	.....	.....	.....	.....	.....	.....
30 .....acres.....1939..	768	825,242	.....	.....	.....	.....	.....	.....
31 .....1929..	1,257	158,873	40	.....	.....	.....	67	11
32 Peanuts, total.....farms reporting.....1939..	44	66,389	.....	.....	.....	.....	.....	.....
33 .....acres.....1939..	476	411,951	.....	.....	.....	.....	.....	.....
34 .....1929..	22	224,285	54	.....	.....	.....	.....	.....
35 Vetches, velvetbeans, mung and horse beans.....farms reporting.....1939..	2	1,223	2	.....	19	1,890	.....	.....
36 .....acres.....1939..	21	7,873	6	.....	114	17,673	.....	.....
37 Navy, pea bean, Great Northern, kidney, lima, pinto, and other dry field and seed beans, and lentils.....farms reporting.....1939..	146	4,067	309	72	97	75	1,553	128
38 .....acres.....1939..	1,095	15,495	3,565	2,878	1,363	2,154	43,550	4,625
39 .....1929..	188	5,407	1,373	573	89	4,400	24,002	6,135
40 .....average yield (bu.)..1939..	6.6	3.9	14.4	4.1	18.1	15.0	22.4	2.6
41 Lima beans (dry) ¹.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
42 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
43 .....1929..	.....	.....	.....	.....	.....	.....	.....	.....
44 .....average yield (bu.)..1939..	.....	.....	.....	.....	.....	.....	.....	.....
45 Other dry field and seed beans ¹.....farms reporting.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
46 .....acres.....1939..	.....	.....	.....	.....	.....	.....	.....	.....
47 .....average yield (bu.)..1939..	.....	.....	.....	.....	.....	.....	.....	.....
48 Dry field and seed peas.....farms reporting.....1939..	1	41	107	3	47	1,163	84	4
49 .....acres.....1939..	(²)	106	448	8	634	84,531	1,099	27
49 .....average yield (bu.) ³ ..1939..	(²)	4.6	17.3	.....	24.1	18.9	16.9	7.7
Hay crops, exclusive of sorghums:								
50 All hay.....acres..... ⁴ 1939..	62,858	1,053,764	452,517	48,297	182,097	714,923	727,736	196,355
51 .....1929..	30,075	570,714	598,096	74,571	166,110	656,721	737,857	297,236
52 Annual legumes saved for hay.....farms reporting.....1939..	37	24,005	92	2	42	873	8	.....
53 .....acres.....1939..	332	229,184	468	43	291	7,090	69	.....
54 .....1929..	159	98,104	111	40	188	8,234	648	124
55 .....average yield (tons)..1939..	1.50	0.55	1.93	0.95	2.20	1.90	1.13	.....
56 Alfalfa hay.....farms reporting.....1939..	1,853	4,235	18,229	1,548	8,553	10,364	5,726	1,111
57 .....acres.....1939..	51,730	62,017	352,421	35,259	130,346	165,041	253,057	33,855
58 .....1929..	25,079	25,140	501,219	49,487	133,174	95,350	293,435	104,498
59 .....average yield (tons)..1939..	2.94	1.91	2.03	1.05	3.17	1.44	1.68	0.75
60 Sweetclover hay.....farms reporting.....1939..	23	275	495	36	97	983	500	158
61 .....acres.....1939..	173	2,314	3,524	293	735	9,579	8,430	2,687
62 ⁵ 1929..	43	1,828	1,515	101	770	1,944	3,824	6,252
63 .....average yield (tons)..1939..	3.29	1.23	1.52	1.83	1.97	1.55	1.22	0.76
64 Clover or timothy hay, alone or mixed.....farms reporting.....1939..	7	205	728	27	911	14,484	875	84
65 .....acres.....1939..	69	1,888	15,469	445	25,279	144,497	76,286	2,183
66 .....1929..	59	3,671	30,785	1,958	18,408	159,007	99,691	15,140
67 .....average yield (tons)..1939..	1.04	1.11	1.51	1.28	1.96	2.11	1.16	0.83
68 Small grain hay.....farms reporting.....1939..	99	3,822	851	166	1,565	22,397	715	1,950
69 .....acres.....1939..	2,391	52,154	5,073	2,401	11,764	270,741	12,451	74,159
70 .....1929..	807	58,672	1,871	2,585	9,305	316,063	8,040	48,639
71 .....average yield (tons)..1939..	1.16	0.69	1.37	0.84	1.59	1.41	1.22	0.51
72 All other tame hay.....farms reporting.....1939..	488	44,345	592	64	315	8,078	432	664
73 .....acres.....1939..	8,022	520,222	13,362	1,308	9,949	79,526	45,607	18,215
74 .....1929..	3,748	192,406	12,235	2,230	1,508	48,047	119,783	15,368
75 .....average yield (tons)..1939..	1.56	1.00	1.23	1.09	1.68	1.63	0.88	0.62
76 Wild hay.....farms reporting.....1939..	13	12,189	1,399	328	114	2,952	1,627	1,297
77 .....acres.....1939..	137	185,113	62,200	8,548	3,793	38,449	331,836	65,256
78 .....1929..	180	190,893	50,360	18,170	2,757	28,096	213,636	107,215
79 .....average yield (tons)..1939..	1.73	0.95	1.15	1.12	1.37	1.15	0.79	0.63

¹Separate reports only for Arizona and California.

²Less than 1 acre reported.

³Average yields were computed by using acreages grown alone in all States except California, Idaho, Oregon, and Washington, where total acreages were used.

⁴Data for 1939 include lespedeza hay, not shown separately.

⁵Data for 1929 are for "Sweet, crimson, and Japan (lespedeza) clover."

**STATE REPORTS WITH STATISTICS
FOR COUNTIES (Section D)**

CENSUS OF IRRIGATION - ARIZONA

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	* 72,691,200	72,838,400	72,838,400	72,838,400	¹ 72,838,400	72,857,600	72,857,600
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	18,468	18,824	14,173	9,975	9,227	5,809	1,426
Land in all farms.....acres.....	25,651,092	14,018,540	10,526,627	5,802,126	1,246,613	1,935,327	1,297,033
Farms irrigated: ²							
Farms.....number.....	10,339	10,060	8,523	6,605	4,841	2,981	1,075
Increase or decrease (-) over preceding census.....percent.....	³ 21.3	.....	29.0	38.4	52.4	177.3	.....
Proportion of all farms.....percent.....	56.0	53.4	60.1	66.2	52.5	51.3	75.1
Land in farms.....acres.....	5,274,470	(*)	2,963,784	(*)	(*)	(*)	(*)
Proportion of all farm land.....percent.....	20.6	(*)	28.3	(*)	(*)	(*)	(*)
Area irrigated.....acres.....	⁵ 575,464	⁶ 430,056	⁷ 448,806	(*)	(*)	185,396	65,821
Increase or decrease (-) over preceding census.....percent.....	⁸ 28.2	.....	.....	.....	.....	181.7	.....
Proportion of total land area of State.....percent.....	0.8	0.6	0.6	.....	.....	0.3	0.1
Proportion of all farm land.....percent.....	2.2	3.1	4.3	.....	.....	9.1	5.1
Value of irrigated farms (land and buildings).....dollars..	115,309,610	(*)	149,154,077	(*)	(*)	(*)	(*)
Average per farm.....dollars..	11,152.88	(*)	17,500.19	(*)	(*)	(*)	(*)
Average per acre.....dollars..	21.86	(*)	49.99	(*)	(*)	(*)	(*)
Value of farm implements and machinery.....dollars..	7,461,725	(*)	8,136,633	(*)	(*)	(*)	(*)
Average per farm.....dollars..	721.71	(*)	954.67	(*)	(*)	(*)	(*)
Average per acre.....dollars..	1.41	(*)	2.73	(*)	(*)	(*)	(*)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number.....	1,911	(*)	1,270	1,388	1,269	(*)	(*)
Farms irrigated.....number.....	15,375	(*)	(*)	(*)	(*)	(*)	(*)
Area irrigated.....acres.....	653,263	(*)	575,590	467,565	320,051	(*)	(*)
Area existing works were capable of supplying with water.....acres.....	844,212	(*)	824,152	627,303	387,655	(*)	(*)
Area irrigable.....acres.....	1,104,645	(*)	1,085,627	¹⁰ 813,153	¹⁰ 944,090	(*)	(*)
Additional area existing works were capable of supplying with water.....acres.....	190,949	(*)	248,562	159,738	67,604	(*)	(*)
Additional irrigable area in enterprises not supplied with water.....acres.....	451,382	(*)	510,037	¹⁰ 345,588	¹⁰ 624,039	(*)	(*)
Investment in irrigation enterprises.....dollars..	83,526,608	(*)	73,328,197	33,498,094	17,677,966	4,438,352	465,000
Increase or decrease (-) over preceding census.....percent.....	³ 13.9	(*)	118.9	89.5	298.3	854.5	.....
Average per acre based on area works were capable of supplying with water.....dollars..	98.94	(*)	88.97	53.40	45.60	(*)	(*)
Increase or decrease (-) over preceding census.....percent.....	³ 11.2	(*)	66.6	17.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	108,980,519	(*)	91,913,550	34,615,064	24,828,868	(*)	(*)
Average per acre based on irrigable area in enterprises.....dollars..	98.66	(*)	84.66	¹⁰ 42.57	¹⁰ 26.30	(*)	(*)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	5.00	(*)	4.57	3.27	0.93	(*)	(*)

¹ Decrease due to the building of the Roosevelt and Laguna Reservoirs. ² Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ³ Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁴ Not available. ⁵ Irrigated land from which crops were harvested plus 104,092 acres of irrigated land used only for pasture. ⁶ Irrigated land from which crops were harvested. ⁷ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁸ Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁹ Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹⁰ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹¹ The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from those shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	18,468	25,651,092	525,974	471,372	104,092	153,676,675	5.99	23,091,437	0.90	9,961,098	0.39
Owners and managers.....	16,328	24,496,794	431,695	384,543	90,208	134,460,964	5.49	20,705,102	0.85	8,520,061	0.35
Tenants.....	2,140	1,154,298	94,279	86,829	13,884	19,215,711	16.65	2,386,335	2.07	1,441,037	1.25
Irrigated farms, total.....	10,339	5,274,470	478,521	471,372	104,092	115,309,610	21.86	16,497,968	3.13	7,461,725	1.41
Owners and managers.....	8,787	5,051,817	390,677	384,543	90,208	99,320,601	19.66	14,664,418	2.90	6,296,260	1.25
Tenants.....	1,552	222,653	87,844	86,829	13,884	15,989,009	71.81	1,833,550	8.24	1,165,466	5.23
Wholly irrigated farms.....	8,662	4,661,868	450,045	450,045	73,867	102,833,437	22.06	13,863,525	2.97	6,786,836	1.46
Owners and managers.....	7,418	4,461,543	365,105	365,105	63,124	88,340,200	19.80	12,388,925	2.78	5,695,258	1.26
Tenants.....	1,244	200,325	84,940	84,940	8,743	14,493,237	72.35	1,474,600	7.36	1,091,578	5.45
Partly irrigated farms.....	1,677	612,602	28,476	21,327	30,225	12,476,173	20.37	2,634,443	4.30	674,890	1.10
Owners and managers.....	1,369	590,274	25,572	19,438	25,084	10,980,401	18.60	2,275,493	3.85	601,002	1.02
Tenants.....	308	22,328	2,904	1,889	5,141	1,495,772	66.99	358,950	16.08	73,888	3.31
Nonirrigated farms, total.....	8,129	20,376,622	47,453	.....	.....	38,367,065	1.88	6,593,469	0.32	2,499,372	0.12

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION — ARIZONA

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
Total.....	Number 1,911	Acres 1,104,645	Acres 844,212	Acres 653,263	Acres 575,590	Acres 467,565	Percent 13.5	Acres 622,490	Acres 633,565	Acres 615,199	Acres-foot 3.4	Dollars 6.15	Dollars 1.79
Primary sources:													
Streams, gravity.....	550	153,986	97,538	71,075	162,621	189,782	-56.3	50,848	58,945	45,224	2.9	2.38	0.83
Streams, pumped.....	44	2,189	1,851	1,055	8,123	6,671	-87.0	993	1,055	993	3.1	2.99	0.98
Streams, gravity and pumped.....	11	57,961	56,692	47,614	53	.....	(²)	47,604	47,614	47,604	4.4	3.39	0.78
Wells, pumped.....	867	231,187	201,201	144,175	104,637	39,694	37.8	136,124	138,419	135,376	3.7	9.10	2.43
Wells, flowing.....	90	2,737	2,674	1,947	1,107	1,558	75.8	1,704	1,418	1,214	2.6	1.05	3.99
Wells, pumped and flowing.....	11	532	457	374	258	558	45.0	325	324	275	2.9	5.79	1.99
Lakes, gravity.....	1	(³)	(³)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakes, pumped.....	4	488	481	100	.....	5	.....	100	100	100	1.1	6.45	5.92
Springs.....	83	5,079	4,437	3,061	3,056	2,578	0.2	2,347	2,596	2,307	2.4	5.74	2.35
Springs and streams.....	16	647	647	551	.....	.....	.....	25	502	22	1.1	7.27	6.40
Stored storm water.....	4	70	70	40	755	510	-94.7	20	40	20	1.2	1.50	1.20
City water.....	2	(³)	(³)	(³)	.....	.....	.....	.....	(³)	.....	.....	.....	.....
Sewage.....	3	455	455	395	342	195	15.5	340	395	340	5.3	3.53	0.67
Streams, gravity; wells, pumped...	46	526,879	459,100	368,375	292,681	217,799	25.9	367,901	367,846	367,586	3.1	5.47	1.77
Streams, gravity; wells, flowing...	6	3,730	3,530	3,447	40	525	(²)	3,447	3,447	3,447	2.2	2.68	1.21
Streams, pumped; wells, pumped...	4	110,098	7,664	4,605	.....	.....	.....	4,605	4,605	4,605	4.0	3.05	0.77
Waste water, seepage or drainage...	3	182	180	178	.....	.....	.....	1	3	1	3.0	6.00	2.00
Other mixed.....	23	8,280	7,100	6,166	1,887	7,690	226.8	6,085	6,156	6,085	2.5	4.15	1.65
Other and not reported.....	.....	.....	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:⁴													
Streams, gravity and/or storage...	5	91,125	91,125	58,139	.....	.....	.....	58,097	53	53	1.0	1.89	1.92
Streams, pumped.....	1	(⁵)	(⁵)	(⁵)	80	.....	(⁵)	(⁵)	.....	.....	.....	.....	.....
Wells, pumped.....	120	35,957	21,452	15,210	1,592	.....	855.4	13,350	13,905	12,114	1.5	2.95	1.92
Wells, flowing.....	17	742	742	445	53	.....	739.6	442	445	442	3.0	0.90	0.31

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Percent not shown when more than 1,000. ³Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ⁵Data are not shown because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940		1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919		
	Amount	Pro- por- tion of total	Amount	Pro- por- tion of total	Average per acre ²		Irrigated area reporting	Average per acre	Irrigated area reporting	Average per acre		Irrigated area reporting	Average per acre	
Total.....	Dollars 83,526,608	Percent 100.0	Dollars 73,323,197	Percent 100.0	Dollars 88.97	Dollars 9.97	Acres 630,942	Dollars 5.00	Acres 561,605	Dollars 4.57	Dollars 0.43	Acres 362,828	Dollars 3.27	
Primary sources:														
Streams, gravity.....	3,932,570	4.7	40.32	20,016,538	27.3	75.80	-35.48	58,585	1.40	156,393	3.20	-1.80	111,223	2.27
Streams, pumped.....	38,096	(³)	19.53	1,459,527	2.0	117.89	-98.36	1,055	2.93	8,074	9.83	-6.90	6,082	8.12
Streams, gravity and pumped.....	8,195,261	9.8	144.81	2,550	(³)	36.43	.....	47,614	2.48	43	3.49	-1.01	.....	.....
Wells, pumped.....	9,594,076	11.5	47.68	8,747,182	11.9	58.70	-11.02	136,156	7.98	99,740	10.76	-2.78	18,733	13.15
Wells, flowing.....	186,401	0.2	69.71	111,500	0.2	63.07	6.64	1,418	1.36	968	0.27	1.09	734	3.64
Wells, pumped and flowing.....	34,487	(³)	75.46	28,750	(³)	65.64	9.82	324	5.15	165	10.64	-5.49	558	13.64
Lakes, gravity.....	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakes, pumped.....	2,530	(⁵)	5.26	.....	.....	.....	.....	100	6.45	.....	.....	.....	5	10.00
Springs.....	220,820	0.3	49.77	177,191	0.2	47.58	2.19	2,596	3.82	1,991	1.98	1.84	1,525	3.88
Springs and streams.....	11,725	(⁵)	18.12	.....	.....	.....	.....	502	1.19	.....	.....	.....	.....	.....
Stored storm water.....	14,480	(⁵)	206.86	64,450	0.1	35.35	171.51	40	13.27	731	1.98	11.29	.....	.....
City water.....	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....
Sewage.....	13,850	(⁵)	30.66	50,116	0.1	146.54	-115.88	395	3.65	1	.....	.....	90	1.89
Streams, gravity; wells, pumped...	64,903,401	65.7	119.59	37,553,267	51.2	104.64	14.95	367,846	4.69	291,769	3.06	1.63	216,397	2.70
Streams, gravity; wells, flowing...	109,978	0.1	31.16	5,500	(³)	137.50	-106.34	3,447	0.61	40	3.75	-3.14	495	2.40
Streams, pumped; wells, pumped...	3,457,092	4.1	451.08	.....	.....	.....	.....	4,605	9.96	.....	.....	.....	.....	.....
Waste water, seepage or drainage...	328	(⁵)	1.82	.....	.....	.....	.....	3	5.33	.....	.....	.....	.....	.....
Other mixed.....	294,173	0.4	41.43	5,049,225	6.9	160.04	-118.61	6,156	3.33	1,600	5.69	-2.36	6,986	4.99
Other and not reported.....	.....	.....	.....	601	(³)	16.69	.....	.....	.....	30	9.17	.....	.....	.....
Supplemental sources:⁵														
Streams, gravity and/or storage...	1,996,810	2.4	21.91	.....	.....	.....	.....	53	1.89	.....	.....	.....	.....	.....
Streams, pumped.....	(⁶)	(⁶)	(⁶)	10,200	(³)	104.08	(⁶)	.....	.....	80	14.63	.....	.....	.....
Wells, pumped.....	472,510	0.6	22.03	48,900	0.1	30.47	-8.44	13,965	3.59	1,592	2.44	1.15	.....	.....
Wells, flowing.....	41,160	(⁵)	55.47	3,000	(³)	53.57	1.90	445	1.02	53	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ⁶Data are not shown because less than 3 enterprises reported in the 1940 Census.

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—						
	1940		1930	1920			Increase or decrease (-) 1930-40 primary enterprises	1940		1930	1920		Increase or decrease (-) 1930-40 primary enterprises
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises		
AREA IRRIGATED	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>		
Total.....	653,263	73,806	575,590	467,565	13.5	Commercial.....	12,945	.....	76,500	20,000	83.2	
Individual and partnership... Cooperative, incorporated.... Cooperative, unincorporated.... Irrigation district..... Commercial..... Bureau of Reclamation ² Office of Indian Affairs ³ State..... City and/or sewage..... Other.....	131,320 71,766 11,153 77,164 2,635 265,042 84,183 (²) (²)	15,547 215 58,044	73,836 58,733 117,869 32,600 278,584 13,555 111 301 1	80,511 114,482 300 14,500 248,814 8,733 200 25	77.9 41.2 -34.5 -61.7 -4.9 521.0 (²) (²)	Bureau of Reclamation ² Office of Indian Affairs ³ State..... City and/or sewage..... Other.....	237,669 115,898 (²) (²)	90,943	296,738 93,592 186 301 2	269,691 10,833 220 25	0.3 23.8 (²) (²)		
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						IRRIGABLE AREA⁴							
Total.....	844,212	113,331	824,152	627,303	2.4	Total.....	1,104,645	127,860	1,085,627	813,153	1.6		
Individual and partnership... Cooperative, incorporated.... Cooperative, unincorporated.... Irrigation district..... Commercial..... Bureau of Reclamation ² Office of Indian Affairs ³ State..... City and/or sewage..... Other.....	184,482 79,999 12,532 140,687	21,751 637	107,220 58,427 191,186	185,331 130,903 300	72.1 58.4 -26.4	Individual and partnership... Cooperative, incorporated.... Cooperative, unincorporated.... Irrigation district..... Commercial..... Bureau of Reclamation ² Office of Indian Affairs ³ State..... City and/or sewage..... Other.....	235,867 87,056 12,932 156,786 261,245 299,058 251,701 (²) (²)	22,360 14,557 65,181 214,666 100,600 90,943 223,948 196 301 10	141,045 157,949 65,181 214,666 31,000 314,691 20,058 300 285	288,510 53.4 -27.0 -12.0 12.4 (²) (²) (²)			

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²Data for 2 "State" and 1 "City and/or sewage" enterprises are included with "Commercial" enterprises in the 1940 Census. ³U. S. Dept. of the Interior. ⁴For 1920 relates to total area. Irrigable area for that year was not reported. For explanation of areas, see text, p. 97.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 1,911	Number 124	Acres 1,104,645	Acres 844,212	Dollars 95.33	Dollars 4.92	Dollars 22.14	Dollars 3.51	Number 15,375	Acres 653,263	Acres 592,305	Acres 3,321	Acres 57,637
Individual and partnership... Cooperative, incorporated.... Cooperative, unincorporated.... Irrigation district..... Commercial..... U. S. Bureau of Reclamation ² U. S. Office of Indian Affairs..... State..... City and/or sewage..... Other.....	1,808 32 29 14 2 3 20 2 1	36 29 20 14 2 3 20 2 1	235,867 87,056 12,932 156,786 61,245 299,058 251,701 (²) (²)	184,482 79,999 12,532 140,687 12,945 297,669 115,898 (²) (²)	27.89 37.35 17.09 103.09 271.56 126.69 141.55 (²) (²)	6.57 1.95 1.78 6.54 1.96 4.88 4.34 (²) (²)	23.43 4.10 21.96	3.52 0.45	2,048 1,808 295 1,142 420 6,597 3,465 (²) (²)	131,320 71,766 11,153 77,164 12,635 58,044 84,183 (²) (²)	104,316 85,965 7,144 75,470 12,499 252,585 74,314 (²) (²)	1,909 828 57 100 427 (²) (²)	25,093 5,801 3,181 1,637 436 12,447 9,442 (²) (²)

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 2 "State" and 1 "City and/or sewage" enterprises are included with "Commercial" enterprises. For explanation of areas and investment, see text, p. 97.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment						Investment in water rights		
Total.....	Dollars 83,526,608	Dollars 81,015,378	Dollars 2,511,230	Dollars 82,990,947	Dollars 535,661	Dollars 73,328,197	Dollars 33,498,094	Percent 13.9	Dollars 95.97	Dollars 22.16	Dollars 8,404,800	Dollars 25,453,911
Individual and partnership... Cooperative, incorporated.... Cooperative, unincorporated.... Irrigation district..... Commercial..... U. S. Bureau of Reclamation ² U. S. Office of Indian Affairs..... State..... City and/or sewage..... Other.....	5,667,378 3,012,125 215,179 14,961,006 3,515,383 39,708,470 16,447,067 (²) (²)	5,155,438 3,009,515 215,179 14,961,006 3,515,383 37,711,790 16,447,067 (²) (²)	511,940 2,610 1,996,680	5,654,437 2,990,622 214,149 14,502,865 3,515,383 39,708,470 16,405,021 (²) (²)	12,941 21,503 1,030 458,141 37,691,293 42,046	5,913,408 3,171,406 1,337,962 13,721,792 4,857,759 20,277,919 9,728,963 27,000 50,000	5,598,625 3,174,406 3,174,406 100,000 3,693,400 20,277,919 585,029 71,500	-4.2 141.2 9.0 228.8 5.4 69.1 (²) (²)	27.95 37.62 17.17 106.34 271.56 126.69 141.91 (²) (²)	23.54 4.10 21.96	4,508 26,219 141 640,849 231,284 5,052,269 2,649,530 (²) (²)	392,544 54,875 20,700 793,000 21,005,000 24,092 23,163,700 (²) (²)

¹Only for enterprises serving 5 or more farms. ²Data for 2 "State" and 1 "City and/or sewage" enterprises are included with "Commercial" enterprises. ³1930 investment includes cost of all power facilities financed by water users; 1940 total eliminates cost of certain power facilities and includes expenditures on Bartlett Dam and other facilities by the Bureau of Reclamation since 1930 of \$6,844,000. For explanation of investment, see text, p. 97.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ³	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ⁴	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrig-able 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Acres	Dollars	Dollars	
Total.....	47	816,070	611,533	42,592,133	70.03	69.67	4	990,222	923,519	43.87	656,600	2,826,685	1,943,983
Partnership.....	2	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	.....	.....	.....	.....	10,800	10,618	7,709
Cooperative, incorporated.....	13	49,583	45,383	227,866	5.02	5.02	1	(⁷)	.....	(⁷)	91,542	264,074	180,624
Cooperative, unincorporated.....	1	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	.....	.....	.....	.....	8,651	8,266	4,586
Irrigation district.....	11	151,433	136,234	8,639,026	57.00	63.41	3	990,222	923,519	43.87	154,960	669,814	831,690
Commercial.....	(⁶)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	.....	.....	.....	.....	(⁶)	(⁶)	(⁶)
Bureau of Reclamation ⁸	2	299,058	297,669	20,045,158	68.59	67.34	.....	.....	.....	.....	292,229	1,451,918	809,138
Office of Indian Affairs ⁹	18	250,627	114,878	12,926,217	129.50	112.52	.....	.....	.....	.....	98,398	221,995	110,236
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises not shown because less than 3 enterprises reported. ⁴Based on primary enterprises only; no supplemental enterprises reported. ⁵Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁶Data for "Commercial" enterprises are included with "Cooperative, incorporated" enterprises in the 1940 Census. ⁷Data for 1 "Cooperative, incorporated" enterprise are included with "Irrigation District" enterprises in the 1940 Census. ⁸U. S. Dept. of the Interior. ⁹Data for less than 3 enterprises shown with permission of the enterprises involved. ¹⁰Represents indebtedness of irrigation districts and a water-user association to the U. S. Government and to non-Federal agencies. ¹¹Represents construction costs of irrigation works less cancellations and repayments. ¹²For explanation of areas and investment, see text, p. 97.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹			
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29	
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939				
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number	
Total.....	630,942	3,101,467	14,463	50,715	4.92	3.51	67	1,441,641	1,516	
Individual and partnership.....	120,047	788,588	14,383	50,679	6.57	3.52	2	64,320	71	
Cooperative, incorporated.....	71,766	140,150	80	36	1.95	0.45	25	75,072	142	
Cooperative, unincorporated.....	6,530	11,642	.....	.....	1.78	.....	10	4,939	22
Irrigation district.....	77,164	504,923	.....	.....	6.54	.....	12	194,536	204
Commercial.....	³ 12,385	³ 24,499	.....	.....	³ 1.98	.....	1	(²)	(²)
U. S. Bureau of Reclamation ⁵	265,042	1,293,376	.....	.....	4.88	.....	⁴ 2	855,966	653
U. S. Office of Indian Affairs.....	78,008	338,289	.....	.....	4.34	.....	15	349,808	451
State.....	(³)	(³)	.....	.....	(³)	.....	.....	.....	.....
City and/or sewage.....	(³)	(³)	.....	.....	(³)	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 1 "Commercial" enterprise are included with "Individual and partnership" enterprises in the 1940 Census. ³Data for 2 "State" and 1 "City and/or sewage" enterprises are included with "Commercial" enterprises in the 1940 Census. ⁴Data for less than 3 enterprises shown with permission of the enterprises involved. ⁵For explanation of areas and investment, see text, p. 97.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capac-ity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles		Ac.-ft.	Miles	G.p.m.	G.p.m.		Hp.		G.p.m.		
Total.....	602	199	13,258	3,986	192.2	333	4,860,898	344.3	268	23,878	³ 1,858	2,506,337	1,970	102,733	1,969	2,982,986
Individual and partnership....	471	150	2,246	401	7.7	283	6,614	127.1	259	19,853	1,314	1,349,115	1,415	56,066	1,414	1,509,940
Cooperative, incorporated.....	24	8	1,212	308	3.2	8	41,517	16.0	9	3,025	66	106,780	67	4,053	67	114,600
Cooperative, unincorporated....	20	2	247	91	0.5	3	1,986	0.7	.....	.....	13	21,150	14	657	14	21,700
Irrigation district.....	6	5	1,165	514	115.0	5	203,500	28.4	.....	.....	183	463,942	189	18,380	189	607,937
Commercial.....	1	⁴ 5	⁴ 618	152	.....	⁴ 5	⁴ 2,312	⁴ 5.0	.....	.....	⁴ 15	⁴ 35,700	⁴ 15	⁴ 2,425	⁴ 15	⁴ 35,700
Bureau of Reclamation ⁵	5	6	5,709	1,537	53.1	6	3,392,000	104.4	.....	.....	166	347,400	173	14,735	173	470,700
Office of Indian Affairs ⁶	75	23	2,061	983	12.7	23	1,212,969	62.7	.....	.....	³ 101	184,250	97	6,417	97	232,409
State.....	.....	(⁴)	(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³Includes batteries of wells pumped by 1 pump. ⁴Data for 2 "State" enterprises are included with "Commercial" enterprises in the 1940 Census. ⁵U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
Total.....	Number 602	Number 199	Number 267	Number 78	Earth and rock.....	Number 321	Number 167	Number	Number 57
Concrete or masonry.....	84	17	34	9	Other and mixed.....	1 185	11	1 197	4
Timber.....	5	.....	4	.....	Not reported.....	7	4	32	8

¹Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940, AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	1,969	100.0	2,992,986	100.0	60	Total, 1940.....	1,970	100.0	102,733	100.0
Electric motor.....	962	48.8	1,930,064	64.5	85	Centrifugal pump.....	490	24.9	10,786	10.5
Centrifugal.....	111	5.6	264,530	8.8	44	Electric.....	124	6.3	4,581	4.4
Turbine.....	638	42.5	1,661,668	55.5	96	Internal-combustion.....	355	18.0	6,028	5.9
Plunger.....	7	0.4	191	(¹)	11.1	Other.....	11	0.6	177	0.2
Other.....	6	0.3	3,675	0.2	75	Turbine pump.....	1,172	59.5	80,428	78.3
Internal-combustion engine.....	746	37.9	650,764	21.7	47	Electric.....	845	42.9	63,561	61.9
Centrifugal.....	362	18.4	212,612	7.1	30	Internal-combustion.....	322	16.3	16,701	16.2
Turbine.....	317	16.1	424,350	14.2	64	Other.....	5	0.3	166	0.2
Plunger.....	48	2.4	3,702	0.1	79	Plunger pump.....	128	6.5	460	0.4
Other.....	19	1.0	10,100	0.3	47	Electric.....	8	0.4	29	(¹)
Other kinds of motive power.....	65	3.3	13,124	0.5	48	Internal-combustion.....	59	3.0	335	0.3
Centrifugal.....	10	0.5	5,980	0.2	29	Other.....	61	3.1	96	0.1
Turbine.....	5	0.3	6,500	0.3	61	Other and mixed types of pumps.....	180	9.1	11,059	10.8
Plunger.....	47	2.3	677	(¹)	52	Electric.....	101	5.1	9,957	9.7
Other.....	3	0.2	67	(¹)	30	Internal-combustion.....	60	3.0	1,081	1.1
Mixed kinds of motive power.....	196	10.0	399,034	13.3	61	Other.....	² 19	1.0	21	(¹)
Centrifugal.....	55	2.8	165,120	5.5	36	Total, 1930.....	³ 1,378	.....	57,633	.....
Turbine.....	100	5.1	231,950	7.7	75	Increase or decrease (-) 1930-1940.....	592	.....	45,100	.....
Plunger.....	37	1.9	1,774	0.1	66					
Other.....	4	0.2	190	(¹)	88					
Total, 1930.....	1,364	.....	2,125,293	.....	46					
Increase or decrease (-) 1930-1940..	605	.....	867,693	.....	14					

¹Less than one-tenth of 1 percent.

²Includes 1 water wheel, capacity not reported.

³Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 344.3	Miles ² 189.3	Percent 81.9	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	1.3	21.5	94.0
1 to 12 inches.....	95.4	14.0	581.4	13 to 24 inches.....	0.3	20.3	-91.6
13 to 24 inches.....	125.0	57.0	198.9	Over 24 inches.....	1.4		
Over 24 inches.....	45.4					Clay and other:	
Metal:				1 to 12 inches.....	2.3	0.4	-175.0
1 to 12 inches.....	48.1	52.5	-8.4	13 to 24 inches.....	7.5	.....	.....
13 to 24 inches.....	4.0	5.6	214.3	Over 24 inches.....			
Over 24 inches.....	13.6						

¹Includes siphons and farm pipe lines reported.

²Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

³Includes 18.0 miles of concrete and metal pipe lines, not segregated by size.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	18	26	31	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	418,539	568,254	¹ 362,928	(a) Enterprises reporting lands drained and/or needing drainage...percent..	34.5	² 21.6	¹ 6.6
Area irrigated in these enterprises.....acres...	271,680	(²)	(²)	(b) All irrigation enterprises.....percent..	14.4	21.4	5.4
Area for which drains have been installed...acres...	93,803	123,013	25,173	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	107,651	47,155	71,357	(a) Irrigable area reporting.....percent..	48.1	29.9	¹ 25.2
				(b) Irrigated area reporting.....percent..	74.2	(²)	(²)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ²Not available. ³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,526,462	2,667,698	1,839,669	2,302,963	2,586,474	1,402,101	223,499	81,224	437,588
Area irrigated by these enterprises.....acres.....	331,864	462,576	358,383	291,101	452,170	283,376	40,763	10,405	75,007
Average water per acre irrigated.....acre-feet..	7.6	5.8	5.1	7.9	5.7	4.9	5.5	7.8	5.8
Total water delivered to irrigators.....acre-feet..	1,127,438	1,214,751	876,016	901,135	1,011,736	690,063	226,303	203,015	185,933
Area irrigated by these enterprises.....acres.....	347,296	387,286	291,637	281,498	348,751	233,469	65,798	36,535	58,168
Average water per acre irrigated.....acre-feet..	3.2	3.1	3.0	3.2	2.9	3.0	3.4	5.3	3.2
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	928,852	.....	.....	509,007	.....	.....	419,845	.....	.....
Area irrigated by these enterprises.....acres.....	275,173	.....	.....	170,937	.....	.....	104,236	.....	.....
Average water per acre irrigated.....acre-feet..	3.4	.....	.....	3.0	.....	.....	4.0	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Area irrigated by these enterprises.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average water per acre irrigated.....acre-feet..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total water delivered to irrigators.....acre-feet..	58,156	.....	.....	.....	.....	.....	58,156	.....	.....
Area irrigated by these enterprises.....acres.....	58,109	.....	.....	.....	.....	.....	58,109	.....	.....
Average water per acre irrigated.....acre-feet..	1.0	.....	.....	.....	.....	.....	1.0	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	21,888	.....	.....	.....	.....	.....	21,888	.....	.....
Area irrigated by these enterprises.....acres.....	13,792	.....	.....	.....	.....	.....	13,792	.....	.....
Average water per acre irrigated.....acre-feet..	1.6	.....	.....	.....	.....	.....	1.6	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
Total.....	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	653,263	100.0	73,806	575,590	100.0	467,565	100.0
Appropriation ²	167,874	25.7	107	129,084	22.4	323,986	69.3
Underground.....	136,941	21.3	15,584	93,825	16.3	41,624	8.9
Appropriation and underground.....	324,459	49.7	58,115	.....	.....	.....	.....
Adjudicated by court.....	5,942	0.9	.....	335,137	58.2	84,976	18.2
Other mixed and not reported.....	16,047	2.4	.....	17,544	3.1	16,977	3.6

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).
²"Appropriation" includes water rights published in the 1930 and 1920 census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," "Certificate or license from State," and "Riparian."

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 265,042 acres which were irrigated in 1939 within the Salt River Project and the Valley and Yuma Auxiliary Divisions of the Yuma Project. These projects are indicated as separate enterprises under the Bureau of Reclamation and their statistics are not duplicated under any other type of enterprise. Areas totalling 50,044 acres irrigated in 1939 with a supplemental water supply from the Salt River Project are reported as receiving a primary water supply through other types of enterprises, mostly irrigation districts.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 relates to expenditures on the above projects and reflects construction costs incurred by the Bureau of Reclamation and certain non-Federal expenditures for irrigation facilities. There are excluded

from the totals in these tables certain investments in power facilities both by the Bureau of Reclamation and non-Federal agencies which do not come within the Census definition of irrigation investments. In the category excluded are construction expenditures by the Bureau of Reclamation within Arizona on Boulder Dam, together with expenditures by the Bureau and other agencies at Parker Dam, and on other structures; none of the costs of which will be repaid directly by irrigators. Neither are there included in the tabulated expenditures by the Bureau of Reclamation costs of the Imperial Dam of the All-American Canal Project which will serve lands in Arizona and California; nor are costs of the Gila Project in Arizona included in the tabulated statistics. These latter projects were under construction in 1939 but not supplying water to irrigators.

CENSUS OF IRRIGATION - ARIZONA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	1,768	94	1,447	111	58	40	15	3
2	Irrigated farms, 1939.....number...	15,375	1,447	268	552	1,761	3,297	8,050	
3	Area irrigated, 1939.....acres.....	653,263	110,544	13,355	48,709	46,968	104,997	328,690	
4	(a) From which crops were harvested.....acres.....	592,305	88,692	10,581	43,645	41,596	100,697	307,994	
5	(b) On which crops failed.....acres.....	3,321	1,201	287	436	1,310	24	63	
6	(c) Irrigated pasture.....acres.....	57,637	20,651	2,487	4,628	4,062	4,276	21,533	
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	81,015,378	208,113	4,443,792	526,732	11,375,213	3,365,417	12,537,437	48,528,674
8	(a) Cost of irrigation works and equipment.....dollars..	90,481,984	207,655	4,434,682	525,617	10,924,173	3,352,833	12,550,396	48,486,628
9	(b) Investment in water rights.....dollars.....	533,394	458	9,110	1,115	451,040	12,584	17,041	42,046
10	Area works were capable of supplying with water.....acres.....	844,212	10,825	145,689	17,550	82,254	56,978	147,616	383,300
11	Average investment per acre irrigated.....dollars.....	124.02	40.20	40.20	39.44	233.53	71.85	119.69	147.61
12	Average investment per acre which the works could supply with water.....dollars..	95.97	19.23	30.50	30.01	138.29	59.07	85.14	126.61
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	1,380	27	1,171	82	48	36	13	3
14	(a) Area irrigated in these enterprises.....acres.....	630,942	99,976	12,233	45,280	45,317	99,446	328,690	
15	(b) Cost of maintenance and operation.....dollars.....	3,101,467	432	730,844	56,855	276,578	119,690	432,312	1,554,766
16	(c) Average cost per irrigated acre reporting.....dollars..	4.92	7.31	4.65	4.56	2.64	4.35	4.73	
17	Total annual charges ³.....dollars.....	2,826,295	425	344,939	215,745	633,383	1,631,743		
18	Average charge per irrigated acre reporting.....dollars..	5.42	2.18	7.20	4.76	6.37	4.96		
19	Area against which charges were assessed.....acres.....	655,350	195	77,584	67,309	133,402	377,860		
20	Average annual charge per acre assessed.....dollars.....	4.31	2.18	4.45	3.21	4.75	4.32		
21	Total charges collected ³.....dollars.....	1,943,583	348	242,270	167,306	614,855	918,804		
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ⁴.....number.....	46	2	1	5	21	14	3	
23	(a) Area irrigated in these enterprises.....acres.....	478,077	22,980	26,310	100,097	328,690			
24	(b) Indebtedness.....dollars.....	12,589,633	2,490,781	1,578,674	7,669,966	30,840,128			
25	(c) Average indebtedness per acre irrigated.....dollars..	89.09	108.39	60.00	76.63	93.83			
26	(d) Cost of irrigation works and equipment.....dollars..	73,247,085	10,084	9,955,861	2,344,116	12,450,396	48,486,628		
27	(e) Investment in water rights.....dollars.....	509,070	450,499	1,984	14,541	42,046			
28	(f) Total investment.....dollars.....	73,756,155	10,084	10,406,360	2,346,100	12,464,937	48,528,674		
29	(g) Maintenance and operation.....dollars.....	2,219,836	135,544	97,614	431,912	1,554,766			
30	(h) Total annual charges ³.....dollars.....	2,681,606	268,262	156,793	624,808	1,631,743			
31	(i) Total charges collected ³.....dollars.....	1,879,500	229,993	123,188	607,515	918,804			
32	(j) Area against which annual charges were assessed.....acres.....	603,671	51,780	45,529	128,502	377,860			
33	(k) Average indebtedness per acre assessed.....dollars..	70.03	48.10	34.34	57.43	81.62			
34	(l) Average charges per acre assessed.....dollars.....	4.44	5.18	3.44	4.86	4.32			
35	(m) Average charges per acre irrigated.....dollars.....	5.68	11.67	6.10	6.61	4.96			
36	Enterprises reporting arrearage ⁴.....number.....	4	1	2	1	1			
37	(a) Area assessed in these enterprises.....acres.....	22,571	22,571						
38	(b) Total arrearage.....dollars.....	990,222	990,222						
39	(c) Average arrearage per acre assessed.....dollars.....	43.87	43.87						
40	(d) Indebtedness.....dollars.....	1,213,075	1,213,075						
TYPE, 1940									
41	Individual and partnership.....number.....	1,669	91	1,438	107	30	3		
42	Cooperative (incorporated and unincorporated).....number...	58	6	4	23	18	7		
43	Irrigation district.....number.....	14	1		9	3			
44	Commercial.....number.....	2			2				
45	U. S. Bureau of Reclamation.....number.....	2							
46	U. S. Office of Indian Affairs.....number.....	20	2		2	10	5		
47	All other.....number.....	3	3						
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....number.....	67	2		16	32	14	3	
49	Wages and salaries paid and payable for 1939.....dollars..	1,444,641	4,885		126,773	91,373	331,091	890,519	
50	Persons employed during week ending April 29, 1939.....number...	1,546	9		129	202	423	784	
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....number.....	550	18	395	61	45	25	6	
52	Streams, pumped.....number.....	44	7	37					
53	Wells, pumped.....number.....	867	58	767	31	3	7	1	
54	Wells, pumped and flowing; or wells flowing.....number...	101	1	94	6				
55	Lakes, gravity or pumped.....number.....	5	1	4					
56	Streams and springs; or springs.....number.....	99	3	82	6	7	1		
57	Mixed, streams and wells.....number.....	67	3	40	6	3	6	3	
58	Other mixed or stored storm water.....number.....	35	3	28	1		2		
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)									
		Total	No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	143	12	117	12	1			2
2	Irrigated farms, 1939.....number...	2,091	117	31	9				1,934
3	Area irrigated, 1939.....acres.....	73,806	14,161	1,601					58,044
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	2,511,230	81,481	387,899	45,170				1,996,680
5	(a) Cost of irrigation works and equipment.....dollars..	2,508,963	81,481	385,632	45,170				1,996,680
6	(b) Investment in water rights.....dollars.....	2,267							
7	Area works were capable of supplying with water.....acres.....	113,331	3,202	16,927	2,259				90,943
8	Average investment per acre irrigated.....dollars.....	34.02	27.39	28.21					34.40
9	Average investment per acre which the works could supply with water.....dollars..	22.16	25.45	22.92	20.00				21.96

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
² Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - ARIZONA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT						
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	\$10,000,000 and more	
91	1,302	204	137	22	8	2 1	1,435	187	114	24	6	2 2	1
.....	1,536	676	1,809	2,569	3,459	5,326	1,808	564	1,479	2,883	1,862	6,779	2
.....	28,189	35,250	86,702	74,844	208,819	218,159	53,136	43,223	86,315	66,044	121,738	282,807	3
.....	22,373	28,987	69,916	66,984	197,333	206,712	33,974	35,966	78,082	61,695	121,377	261,211	4
.....	1,274	698	1,262	24	63	.....	1,739	300	795	397	24	63	5
.....	4,842	5,565	15,524	7,836	11,423	12,447	17,423	6,954	7,438	3,952	337	21,533	6
208,113	1,605,120	1,513,129	5,004,216	6,039,036	37,098,219	29,547,545	1,466,682	1,467,197	3,439,271	5,750,410	29,527,389	40,364,429	7
207,655	1,597,193	1,511,033	4,992,940	6,023,586	36,602,032	29,547,545	1,456,912	1,465,261	3,426,520	5,737,660	28,073,248	40,322,383	8
458	7,927	2,096	11,276	15,450	496,187	.....	9,770	1,936	12,751	12,750	454,141	42,046	9
10,325	45,507	49,503	113,023	84,131	298,353	242,670	79,861	56,335	105,367	82,401	191,747	329,501	10
.....	56.34	42.93	57.72	80.69	177.66	134.82	27.60	33.94	39.85	87.07	234.33	142.73	11
19.23	35.27	30.57	44.28	71.78	124.34	121.66	18.37	26.04	32.64	69.79	148.78	122.87	12
27	1,014	181	131	18	8 1	2 1	1,078	166	106	22	6	2 2	13
.....	23,362	31,405	83,733	64,464	208,819	219,159	40,771	40,345	84,788	60,493	121,738	282,807	14
432	146,605	202,820	500,997	147,895	923,194	1,179,624	168,500	216,560	472,969	193,769	608,635	1,441,014	15
.....	6.28	6.46	5.98	2.29	4.42	5.38	4.13	5.37	5.58	3.20	5.00	5.10	16
.....	1,230	12,316	105,363	212,066	1,200,285	1,294,975	7,059	29,130	102,027	284,838	928,382	1,474,900	17
.....	1.38	2.85	3.72	3.53	5.75	5.91	0.82	2.46	2.83	4.71	7.63	5.21	18
.....	1,020	5,082	39,013	75,740	292,625	242,670	9,314	13,036	37,548	85,838	182,113	328,501	19
.....	1.21	2.42	2.70	2.80	4.10	5.33	0.76	2.23	2.72	3.32	5.10	4.49	20
.....	499	5,788	73,688	171,881	1,080,378	511,349	3,730	22,921	90,659	198,746	906,512	721,015	21
2 2	.....	6	17	13	7	2 1	2	7	11	18	6	2 2	22
.....	908	12,180	49,169	196,661	219,159	.....	6,989	24,257	42,286	121,738	282,807	23	
10,084	96,534	443,806	2,986,593	20,934,324	18,118,292	.....	28,860	237,939	2,120,464	11,289,108	28,913,262	24	
.....	106.31	36.44	60.74	106.45	82.67	.....	4.13	9.81	50.15	92.73	102.24	25	
10,094	279,148	2,025,878	5,553,686	35,830,744	29,547,545	.....	55,253	529,829	4,266,372	28,073,248	40,322,383	26	
.....	199	3,434	9,250	496,187	.....	.....	583	8,050	4,250	154,141	42,046	27	
10,094	279,347	2,029,312	5,562,936	36,326,931	29,547,545	.....	55,836	537,879	4,270,622	28,527,389	40,364,429	28	
.....	4,253	56,078	113,808	866,073	1,179,624	.....	12,589	31,669	125,929	608,635	1,441,014	29	
.....	1,254	61,471	177,742	1,143,164	1,294,975	.....	18,312	69,529	190,583	928,382	1,474,900	30	
.....	99	49,013	138,661	1,080,378	611,349	.....	16,858	62,555	172,560	906,512	721,015	31	
.....	768	20,370	59,196	280,467	242,670	.....	7,402	24,972	60,683	182,113	328,501	32	
.....	113.00	21.52	45.55	74.64	74.60	.....	1.80	9.14	30.16	61.99	88.02	33	
.....	5.54	3.02	3.00	4.08	5.33	.....	2.47	2.78	3.14	5.10	4.49	34	
.....	5.54	5.26	4.07	5.81	5.91	.....	2.82	2.88	5.19	7.63	5.21	35	
.....	.....	2	2	.....	.....	.....	.....	1	1	2	.....	.....	36
.....	.....	22,571	990,222	.....	.....	.....	.....	22,571	990,222	.....	.....	.....	37
.....	.....	43.87	.....	.....	.....	.....	.....	43.87	.....	.....	.....	.....	38
.....	.....	1,213,075	.....	.....	.....	.....	.....	1,213,075	.....	.....	.....	.....	39
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
91	1,291	186	97	4	.....	.....	1,416	165	88	.....	.....	.....	41
.....	9	12	26	9	2	.....	17	14	18	9	.....	.....	42
1	.....	.....	5	5	3	.....	.....	1	3	7	.....	.....	43
.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	1	.....	44
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	45
2	.....	5	8	4	1	.....	1	4	5	8	.....	.....	46
.....	2	.....	1	.....	.....	.....	1	2	.....	.....	.....	.....	47
2 2	2	6	30	18	8	2 1	5	13	19	22	6	2 2	48
4,885	28,351	45,278	215,915	405,516	741,695	.....	3,110	17,275	44,405	163,971	439,632	775,248	49
9	35	208	275	432	587	.....	5	27	102	349	345	718	50
18	442	44	39	7	.....	.....	487	36	13	14	.....	.....	51
7	35	1	1	.....	.....	.....	42	2	.....	.....	.....	.....	52
58	579	134	87	7	2	.....	646	128	87	5	1	.....	53
1	95	5	.....	.....	.....	.....	95	4	2	.....	.....	.....	54
1	4	.....	.....	.....	.....	.....	4	1	.....	.....	.....	.....	55
3	87	8	1	.....	.....	.....	91	5	2	1	.....	.....	56
3	37	9	4	7	6	1	44	6	7	3	5	.....	57
3	23	3	5	1	.....	.....	26	5	3	1	.....	.....	58
ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT						
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	\$10,000,000 and more	
12	74	45	11	.....	2 1	.....	121	17	4	.....	2 1	.....	1
.....	84	59	14	.....	1,934	.....	129	17	11	.....	1,934	.....	2
.....	3,022	7,000	5,740	.....	58,044	.....	10,451	3,569	1,742	.....	58,044	.....	3
81,481	131,798	172,966	128,305	.....	1,996,680	.....	227,757	141,968	144,825	.....	1,996,680	.....	4
81,481	131,031	171,466	128,305	.....	1,996,680	.....	226,990	140,468	144,825	.....	1,996,680	.....	5
.....	787	1,500	.....	.....	.....	.....	787	1,500	.....	.....	.....	.....	6
3,202	5,040	8,127	6,019	.....	90,943	.....	14,544	4,443	3,401	.....	90,943	.....	7
.....	43.61	24.71	22.35	.....	34.40	.....	21.79	39.78	63.14	.....	34.40	.....	8
25.45	26.15	21.28	21.32	.....	21.96	.....	15.66	31.95	42.58	.....	21.96	.....	9

¹ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

² Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - ARIZONA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
		No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
10 Enterprises reporting maintenance and operation.....number...	127	0	110	10	1			
11 (a) Area irrigated in these enterprises.....acres...	14,463		12,886	1,577				
12 (b) Cost of maintenance and operation.....dollars...	50,715	15	46,142	4,558				
13 (c) Average cost per irrigated acre reporting.....dollars...	3.51		3.58	2.89				
14 Total annual charges ².....dollars.....	(9)				(9)			
15 Average charge per irrigated acre reporting.....dollars.....	(9)				(9)			
16 Area against which charges were assessed.....acres.....	(9)				(9)			
17 Average annual charge per acre assessed.....dollars.....	(9)				(9)			
18 Total charges collected ².....dollars.....	(9)				(9)			
INDEBTEDNESS AND ARREARAGE, 1939								
19 Enterprises reporting indebtedness ³.....number.....	6				6			
TYPE, 1940								
20 Individual and partnership.....number.....	139	11	115	12	1			
21 Cooperative (incorporated and unincorporated).....number.....	3	1	2					
22 U. S. Bureau of Reclamation.....number.....	1							1
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939								
23 Streams, pumped.....number.....	1		1					
24 Wells, pumped or flowing.....number.....	137	12	114	10	1			
25 Streams, gravity or storage.....number.....	5		2	2				1

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³Data are not shown because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.—Dec.		Jan.—Mar.		Apr.—June		July—Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Colorado River														
Grand Canyon.....	Coconino.....	Feet 6,866	Inches 18.91	+1.92	Inches 2.67	-1.50	Inches 4.16	-0.37	Inches 1.40	-0.52	Inches 10.68	+4.71	Degrees F. 49.8	Degrees F. +1.7
Kingman.....	Mohave.....	3,326	20.34	+9.53	3.19	+0.67	3.66	-0.05	0.99	-0.23	12.50	+9.14	61.2	-0.3
Mount Trumbull.....	Mohave.....	(²)	19.95	+7.29	2.85	0.00	4.20	+0.93	1.34	-0.49	11.56	+6.85	(²)	(²)
Yuma.....	Yuma.....	138	7.35	+3.88	0.88	-0.20	1.11	-0.09	0.00	-0.16	5.36	+4.33	73.4	+1.5
Chinle Creek														
Chin Lee.....	Apache.....	5,538	5.12	-3.22	1.00	-0.75	1.08	-0.29	1.04	-0.10	2.00	-2.08	53.4	+3.2
Little Colorado River														
Flagstaff.....	Coconino.....	6,907	14.72	-8.08	3.63	-1.31	3.62	-4.08	0.65	-2.15	6.82	-0.54	46.6	+2.1
Jeddito.....	Navajo.....	6,700	6.21	-5.93	1.64	-1.42	1.59	-1.32	0.64	-0.92	2.34	-2.27	53.0	+2.6
St. Johns.....	Apache.....	5,650	6.98	-5.19	0.50	-1.89	2.35	+0.11	1.13	-0.37	3.00	-3.04	53.8	+1.6
Winslow.....	Navajo.....	4,948	5.32	-3.47	0.53	-1.28	1.54	-0.12	0.83	-0.26	2.42	-1.81	55.3	+0.4
Upper Gila River														
Florence.....	Pinal.....	1,500	8.08	-1.80	1.99	-0.59	2.05	-0.96	0.38	-0.39	3.66	+0.14	70.1	+1.0
Safford.....	Graham.....	2,900	(²)	(²)	(²)	(²)	2.22	+0.14	³ 0.74	-0.03	4.30	-0.23	64.3	+1.7
San Francisco River														
Clifton.....	Greenlee.....	3,465	8.10	-5.33	1.52	-1.29	1.82	-1.18	0.23	-1.07	4.53	-1.79	69.2	+3.0
San Pedro River														
Benson.....	Cochise.....	3,585	8.31	-2.76	1.00	-0.81	1.19	-0.86	0.60	-0.14	5.52	-0.95	62.3	-1.9
Santa Cruz River														
Tucson.....	Pima.....	2,423	7.08	-4.20	1.02	-1.50	2.64	+0.20	0.04	-0.96	3.38	-1.94	68.0	+0.7
Salt River														
Phoenix.....	Maricopa.....	1,108	9.49	+1.71	1.14	-1.03	1.22	-1.03	0.17	-0.42	6.96	+4.19	71.4	+1.7
Verde River														
Prescott.....	Yavapai.....	5,372	18.04	-2.48	3.65	-0.74	4.12	-2.05	0.43	-1.67	9.84	+1.98	54.2	+1.3
Seligman.....	Yavapai.....	5,219	⁴ 20.04	+9.00	⁴ 2.41	0.00	1.67	-0.88	0.55	-0.46	15.41	+10.34	52.8	-0.2
Lower Gila River														
Ajo.....	Pima.....	1,763	8.34	-0.82	1.38	-0.93	1.46	-0.85	0.00	-0.56	5.50	+1.52	71.2	+0.3
Gila Bend.....	Maricopa.....	737	5.27	-0.64	0.90	-0.79	0.69	-1.09	0.00	-0.40	3.68	+1.64	73.0	+0.8
Whitewater Draw														
Douglas.....	Cochise.....	3,973	³ 10.48	-2.53	2.16	-0.34	1.63	-0.31	³ 0.12	-0.80	6.57	-1.08	62.9	+0.5

¹Departure from normal.

²Data not available.

³Does not include data for June 1939.

⁴Does not include data for November 1938.

CENSUS OF IRRIGATION - ARIZONA

CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940-Continued

No acres ¹	ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT						
	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	\$10,000,000 and more	
6	67	44	10	.....	.....	.....	109	15	3	.....	.....	.....	10
.....	2,858	6,865	4,740	.....	.....	.....	10,152	2,569	1,742	.....	.....	.....	11
15	9,791	23,600	17,309	.....	.....	.....	26,097	10,689	13,929	.....	.....	.....	12
.....	3.43	3.44	3.65	.....	.....	.....	2.57	4.16	8.00	.....	.....	.....	13
.....	.....	(3)	.....	.....	.....	.....	.....	.....	(3)	.....	.....	.....	14
.....	.....	(3)	.....	.....	.....	.....	.....	.....	(3)	.....	.....	.....	15
.....	.....	(3)	.....	.....	.....	.....	.....	.....	(3)	.....	.....	.....	16
.....	.....	(3)	.....	.....	.....	.....	.....	.....	(3)	.....	.....	.....	17
.....	.....	(3)	.....	.....	.....	.....	.....	.....	(3)	.....	.....	.....	18
.....	.....	6 1	.....	.....	.....	.....	.....	.....	6 1	.....	.....	.....	19
11	73	44	11	.....	.....	.....	118	17	4	.....	.....	.....	20
1	1	1	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	21
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	22
.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	23
12	69	45	11	.....	.....	.....	116	17	4	.....	.....	.....	24
.....	4	.....	.....	.....	1	.....	4	.....	.....	.....	1	.....	25

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
² Detailed data not shown because less than 3 enterprises reported in the 1940 Census.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation.—The average annual precipitation for Arizona for the calendar year of 1939 was 12.88 inches which is 1.01 inches below the mean for the last 45 years, as reported by the U. S. Weather Bureau. The greatest annual amount was 26.65 inches at Bright Angel R. S., Coconino County. The least annual amount was 4.49 inches at Leupp, Coconino County. The average snowfall was 19.3 inches. There were 220 clear days, 87 partly cloudy, and 58 cloudy days. The average number of days with measurable precipitation was 47.

The average precipitation for the water year (October 1938 through September 1939) at 17 stations listed in State table 18 with complete records, and which are representative of the major drainage basins in Arizona, was 10.45 inches, a departure of -1.15 from the average normal precipitation at these stations.

The 1939 precipitation was generally below normal from January through July, and also in October and December. During the early part of September unprecedented heavy rains fell in the western half of the State, resulting in flood conditions on the Williams and lower Colorado Rivers; there was considerable damage to highways and bridges in the area of the heaviest rains. Contrasted with these excessive rains in the west was a drought condition in the northeast portion of the State, which continued throughout

the growing season and resulted in an acute feed shortage in the Navajo country.

The February snowfall, which was the heaviest of record for the month, was exceptionally dry and did not furnish potential run-off moisture. The heavy rains of September resulted in some run-off in the Verde River, but water storage in the reservoirs of the Salt and Gila Rivers was not increased and the total available storage at the end of the year was the lowest since 1929.

Conditions were favorable generally for crops in irrigated districts, particularly for cotton. Nonirrigated crops, however, suffered for lack of moisture.

Temperature.—The 1939 temperatures averaged normal for Arizona as a whole, although new records for both heat and cold were established during the year. February was the coldest for all years of record, and December the warmest since 1896; many localities having record high temperatures for the latter month.

The average annual temperature for the State was 60.6°, which is 0.1° above the mean for the last 45 years. The highest annual mean was 75.2° at Mohawk. The lowest annual mean was 43.3° at Bright Angel R. S. The highest temperature recorded was 120° at Parker on July 13 and at Maricopa on July 14. The lowest temperature recorded was -23° at Alpine on February 3.

CENSUS OF IRRIGATION - ARIZONA

DRAINAGE BASIN TABLE I--AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	COLORADO RIVER			
		Total	Direct ¹	San Juan River	
				Chinle Creek ²	
			(1)	(3)	
IRRIGATED FARMS AND AREAS					
1 Irrigated farms.....1939..number....	15,375	14,876	1,550		546
2 Area irrigated.....1939..acres.....	653,263	640,110	56,181		3,940
3 (a) Cropland harvested.....1939..acres.....	592,305	585,378	55,519		3,680
4 (b) Crop failure.....1939..acres.....	3,321	2,717	44		260
5 (c) Pasture.....1939..acres.....	57,637	52,015	618		
6 Area irrigated.....1929..acres.....	575,590	572,289	54,732		
7 .....1919..acres.....	467,565	461,694	48,326		
8 Increase or decrease (-), 1929-1939.....percent....	13.5	11.9	2.6		
9 Irrigable area in enterprises.....1940..acres.....	1,104,645	1,046,181	174,048		12,928
10 .....1930..acres.....	1,065,627	1,060,057	203,105		
11 .....1920 ⁵ ..acres.....	813,153	795,530	107,311		
12 Excess of irrigable area over the area irrigated..1940..acres.....	451,382	406,071	117,857		8,988
13 .....1930..acres.....	510,037	507,768	148,373		
14 .....1920 ⁵ ..acres.....	345,588	334,836	58,985		
15 Area works were capable of supplying with water...1940..acres.....	844,212	824,678	70,211		6,699
16 .....1930..acres.....	824,152	819,399	37,102		
17 .....1920..acres.....	627,303	617,353	56,531		
18 Increase or decrease (-), 1930-1940.....percent....	2.4	0.6	4.6		
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	190,949	184,568	14,030		2,759
20 .....1930..acres.....	248,562	247,110	12,370		
21 .....1920..acres.....	159,738	155,659	8,205		
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	77.4	77.6	80.0		56.8
23 .....1929..percent....	69.8	69.8	81.6		
24 .....1919..percent....	74.5	74.8	85.5		
CAPITAL INVESTED TO JANUARY 1					
25 Total investment in irrigation enterprises.....1940..dollars....	83,526,606	83,181,559	11,724,383		794,834
26 (a) Cost of irrigation works and equipment.....1940..dollars....	82,990,947	82,646,590	11,723,685		794,834
27 (b) Investment in water rights (reported).....1940..dollars....	535,661	534,969	698		
28 Total investment in irrigation enterprises.....1930..dollars....	73,328,197	73,097,591	9,546,192		
29 .....1920..dollars....	33,498,094	33,198,726	7,381,891		
30 Increase or decrease (-), 1930-1940.....percent....	13.9	13.8	22.8		
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	96.94	100.87	166.99		118.65
32 .....1930..dollars....	86.97	89.21	142.26		
33 .....1920..dollars....	53.40	53.78	130.58		
34 Average investment per acre irrigated.....1939..dollars....	127.86	129.95	208.69		201.73
35 Estimated final investment in existing enterprises..1940..dollars....	108,980,519	108,598,969	22,055,225		2,348,508
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	98.66	103.81	126.72		181.66
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation...1939..number....		1,385	127	1,142	127
38 Area irrigated in these enterprises.....1939..acres.....		630,942	14,463	620,459	14,463
39 Cost of maintenance and operation.....1939..dollars....		3,101,467	50,715	3,065,628	50,715
40 Average cost, per acre irrigated.....1939..dollars....		4.92	3.51	4.94	3.51
41 Total annual charges (reported) ⁷.....1939..dollars....		2,826,235	450	2,825,625	450
42 Average annual charge per acre irrigated.....1939..dollars....		5.42	3.00	5.45	3.00
43 Area against which charges were assessed.....1939..acres.....		656,350	250	653,631	250
44 Average annual charge per acre assessed.....1939..dollars....		4.31	1.80	4.32	1.80
45 Total charges collected ⁷.....1939..dollars....		1,943,583	400	1,943,583	400
46 Indebtedness to December 31 (reported) ⁸.....1939..dollars....		42,589,633	2,500	42,589,633	2,500
WATER DELIVERED TO IRRIGATORS, 1939					
47 Enterprises reporting water delivered.....1939..number....		1,308	118	1,069	118
48 Area irrigated by these enterprises.....1939..acres.....		622,469	71,901	617,144	71,901
49 Water delivered.....1939..acre-feet....		2,056,290	80,044	2,046,272	80,044
50 Average water delivered per acre irrigated.....1939..acre-feet....		3.3	1.1	3.3	1.1
51 Average cost of water per acre irrigated.....1939..dollars....		5.82	2.88	5.81	2.88
52 Average cost of water per acre-foot delivered ⁴ ..1939..dollars....		1.76	2.59	1.75	2.59
DRAINAGE OF IRRIGATED LAND					
53 Enterprises reporting land drained or needing drainage.....1939..number....		18		18	
54 Irrigable area in these enterprises.....1939..acres.....		418,539		418,539	
55 Irrigated area in these enterprises.....1939..acres.....		271,680		271,680	
56 Area for which drains have been installed.....1939..acres.....		93,803		93,803	
57 Additional area needing drainage.....1939..acres.....		107,651		107,651	

¹ Data for 1 enterprise in Paria River Drainage Basin (4) (number refers to separate map) are included with Colorado River "Direct" Drainage Basin (1).
² Data for 2 enterprises in San Juan River "Direct" Drainage Basin (2) (number refers to separate map) are included with Chinle Creek Drainage Basin (3).
³ Data for 1 enterprise in Puerco River Drainage Basin (10) (number refers to separate map) are included with Little Colorado River "Direct" Drainage Basin (5).
⁴ Data for 1 enterprise in San Carlos River Drainage Basin (18) (number refers to separate map) are included with Upper Gila River "Direct" Drainage Basin (14).

CENSUS OF IRRIGATION - ARIZONA

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

COLORADO RIVER—Continued													
Little Colorado River								Gila River					
Total	Direct ⁵	Nutrioso Creek	Concho Creek	Silver Creek	Kanab Creek	Virgin River	Williams River					Upper Gila River	
								Total	Total	Direct ⁴			
(5)	(6)	(7)	(9)	(11)	(12)	(13)	(14)				(15)	(16)	
1,246	859	3	45	339	35	36	82	11,381	10,716	2,781	1		
15,006	9,360	154	921	4,571	500	617	1,714	562,152	471,091	130,065	2		
12,219	7,532	154	321	4,212	462	521	1,213	511,764	427,103	114,598	3		
155	141	.....	.....	14	.....	30	66	2,162	1,981	855	4
2,632	1,687	.....	600	345	.....	38	66	48,226	42,007	14,612	5
13,652	7,249	222	823	.....	322	444	1,111	500,169	.....	.....	6
17,036	10,260	636	244	.....	450	379	1,653	391,417	.....	.....	7
9.9	29.1	-30.6	11.9	.....	55.3	39.0	54.3	12.4	.....	.....	8
30,918	23,191	154	1,539	5,034	600	728	2,425	824,534	610,765	180,720	9		
29,116	14,683	260	1,197	.....	822	702	2,020	837,443	.....	.....	10
35,358	20,821	1,224	500	.....	710	533	3,232	643,480	.....	.....	11
15,912	13,831	.....	618	1,463	.....	100	711	262,382	139,694	50,655	12
15,464	7,434	38	374	.....	500	258	909	337,274	.....	.....	13
18,322	10,561	588	256	.....	260	154	1,579	252,063	.....	.....	14
24,981	18,154	154	1,539	5,134	600	646	2,346	719,195	575,922	163,298	15		
21,796	11,937	260	823	.....	667	690	1,475	724,283	.....	.....	16
21,880	14,131	952	250	.....	610	512	1,809	533,521	.....	.....	17
14.6	52.1	-40.8	87.0	.....	-10.0	-6.4	59.1	-0.7	.....	.....	18
9,975	8,794	.....	618	563	100	29	632	157,043	104,831	33,233	19	
8,144	4,688	38	.....	.....	345	246	364	234,114	.....	.....	20
4,844	3,871	316	6	.....	160	133	156	142,104	.....	.....	21
60.1	51.6	100.0	59.8	89.0	83.3	95.5	73.1	78.2	81.8	79.6	22		
62.6	60.7	85.4	100.0	.....	48.3	64.3	75.3	69.1	.....	.....	23
77.9	72.6	66.8	97.6	.....	73.8	74.0	91.4	73.4	.....	.....	24
1,552,636	1,232,916	8,330	101,480	209,910	6,086	16,918	52,948	69,033,754	53,438,448	13,259,650	25		
1,546,361	1,227,741	8,330	101,480	208,810	6,086	16,577	52,900	68,506,147	53,361,476	13,193,336	26		
6,275	5,175	.....	1,100	.....	.....	341	48	527,607	76,972	66,314	27
821,056	465,060	12,250	52,725	.....	13,540	17,750	62,321	62,420,861	.....	.....	28
460,206	146,913	16,500	49,228	.....	20,500	7,474	55,504	25,165,814	.....	.....	29
89.1	165.1	-32.0	92.5	.....	-55.1	-4.7	-15.0	10.6	.....	.....	30
62.15	67.91	54.09	65.94	40.89	10.14	26.19	22.57	95.99	92.79	81.20	31		
37.67	38.96	47.12	64.06	.....	20.30	25.72	42.25	86.16	.....	.....	32
21.03	10.40	17.33	196.91	.....	33.61	14.60	30.68	47.17	.....	.....	33
103.47	131.72	54.09	110.18	45.92	12.17	27.42	30.89	122.80	113.44	101.95	34		
2,121,912	1,788,692	12,830	101,480	218,910	6,086	26,313	59,608	81,981,317	64,555,131	23,375,480	35		
68.63	77.13	83.31	65.94	36.28	10.14	36.14	24.58	99.43	105.69	129.35	36		
65	52	1	3	9	6	16	66	.....	.....	.....	37
14,611	9,019	(⁶)	921	4,571	350	617	1,504	851	782	208	38		
21,182	16,275	(⁶)	879	3,878	353	1,673	5,046	543,316	14,463	13,807	39		
1.45	1.80	(⁶)	0.95	0.85	1.01	2.71	3.36	2,856,014	50,715	45,445	40		
32,500	18,776	.....	4,500	9,224	200	615	.....	5.26	3.51	3.29	41
2,60	2,56	.....	5,00	2,15	0.67	1.48	.....	2,597,862	450	276,927	42
19,683	13,241	.....	1,500	4,942	400	415	.....	5.82	3.00	2.71	43
1.65	1.42	.....	3,00	1.87	0.50	1.48	.....	571,175	250	124,676	44
22,128	12,940	.....	600	8,588	168	348	.....	4.55	1.80	1.80	45
236,527	124,527	.....	.....	112,000	.....	37	.....	1,711,005	400	203,651	46
.....	.....	.....	.....	.....	.....	.....	.....	38,853,738	2,500	33,408,250	47
66	52	3	3	8	6	14	60	907	118	749	48		
14,536	9,160	154	921	4,301	350	488	1,434	540,445	71,901	128,931	49		
32,250	19,221	154	1,612	11,063	331	2,042	3,975	1,744,324	80,044	382,789	50		
2.2	2.1	1.0	2.0	2.6	0.9	4.2	2.8	3.2	1.1	3.0	51		
2.38	2.23	1.50	4.97	2.16	1.04	3.26	3.49	6.20	2.88	5.33	52		
1.07	1.06	1.50	2.53	0.84	1.10	0.78	1.26	1.92	2.59	1.83	53		
5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
6,253	6,253	.....	.....	.....	.....	.....	(⁶)	245,003	.....	(⁶)	55
1,012	1,012	.....	.....	.....	.....	.....	(⁶)	219,972	.....	(⁶)	56
62	62	.....	.....	.....	.....	.....	(⁶)	45,706	.....	(⁶)	57
291	291	.....	.....	.....	.....	.....	.....	1,320	.....	1,320	58

⁵ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁷ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁸ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - ARIZONA

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		COLORADO RIVER—Continued					
		Gila River—Continued					
		Upper Gila River—Continued					
		San Francisco River			San Simon Creek	San Pedro River	Queen Creek
		Total	Direct (15)	Blue River (16)	(17)	(19)	(20)
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	19	4	15	72	220	75
2	Area irrigated.....1939..acres.....	245	33	212	580	6,009	7,148
3	(a) Cropland harvested.....1939..acres.....	224	33	191	577	4,669	6,693
4	(b) Crop failure.....1939..acres.....	16	.....	16	.....	35	89
5	(c) Pasture.....1939..acres.....	5	.....	5	3	1,305	366
6	Area irrigated.....1929..acres.....	781	.....	.....	.....	3,956	.....
7	.....1919..acres.....	429	.....	.....	.....	7,773	.....
8	Increase or decrease (-), 1929-1939.....percent.....	-68.6	.....	.....	.....	51.9	.....
9	Irrigable area in enterprises.....1940..acres.....	348	35	313	643	8,741	10,167
10	.....1930..acres.....	1,191	.....	.....	.....	6,584	.....
11	.....1920 ² ..acres.....	4,148	.....	.....	.....	18,959	.....
12	Excess of irrigable area over the area irrigated..1940..acres.....	103	2	101	263	2,732	3,019
13	.....1930..acres.....	410	.....	.....	.....	2,628	.....
14	.....1920 ² ..acres.....	3,719	.....	.....	.....	11,186	.....
15	Area works were capable of supplying with water..1940..acres.....	348	35	313	828	8,094	10,167
16	.....1930..acres.....	851	.....	.....	.....	4,428	.....
17	.....1920..acres.....	476	.....	.....	.....	10,861	.....
18	Increase or decrease (-), 1930-1940.....percent.....	-59.1	.....	.....	.....	62.8	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	103	2	101	248	2,085	3,019
20	.....1930..acres.....	70	.....	.....	.....	472	.....
21	.....1920..acres.....	47	.....	.....	.....	3,088	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	70.4	94.3	67.7	70.0	74.2	70.3
23	.....1929..percent.....	91.8	.....	.....	.....	89.3	.....
24	.....1919..percent.....	90.1	.....	.....	.....	71.6	.....
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	7,275	1,225	6,050	127,634	490,553	412,025
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	7,250	1,200	6,050	127,634	486,168	412,025
27	(b) Investment in water rights (reported).....1940..dollars.....	25	25	.....	.....	4,385	.....
28	Total investment in irrigation enterprises.....1930..dollars.....	22,649	.....	.....	.....	184,985	.....
29	.....1920..dollars.....	15,415	.....	.....	.....	359,153	.....
30	Increase or decrease (-), 1930-1940.....percent.....	-67.9	.....	.....	.....	165.2	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	20.91	35.00	19.33	154.15	60.61	40.53
32	.....1930..dollars.....	26.61	.....	.....	.....	41.78	.....
33	.....1920..dollars.....	32.38	.....	.....	.....	33.07	.....
34	Average investment per acre irrigated.....1939..dollars.....	29.69	37.12	28.54	220.06	81.64	57.64
35	Estimated final investment in existing enterprises.....1940..dollars.....	7,375	1,325	6,050	127,894	501,053	423,505
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	21.19	37.86	19.33	151.71	57.32	41.85
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
				Primary		Sup.	
				Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	13	3	10	36	1	15
38	Area irrigated in these enterprises.....1939..acres.....	213	33	180	414	(³)	7,144
39	Cost of maintenance and operation.....1939..dollars.....	815	325	490	5,576	(³)	75,419
40	Average cost, per acre irrigated.....1939..dollars.....	3.83	9.85	2.72	13.47	(³)	10.56
41	Total annual charges (reported) ^{4 5}.....1939..dollars.....	.....	.....	.....	.....	17,759	7,907
42	Average annual charge per acre irrigated.....1939..dollars.....	.....	.....	.....	.....	8.07	9.58
43	Area against which charges were assessed.....1939..acres.....	.....	.....	.....	.....	2,997	1,380
44	Average annual charge per acre assessed.....1939..dollars.....	.....	.....	.....	.....	5.93	5.73
45	Total charges collected ⁴.....1939..dollars.....	.....	.....	.....	.....	12,246	5,590
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	.....	.....	.....	.....	.....	57,275
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	16	3	13	66	1	15
48	Area irrigated by these enterprises.....1939..acres.....	233	33	200	545	(³)	7,144
49	Water delivered.....1939..acre-feet.....	722	28	694	1,807	(³)	23,062
50	Average water delivered per acre irrigated.....1939..acre-feet.....	3.1	0.8	3.5	3.3	(³)	3.2
51	Average cost of water per acre irrigated.....1939..dollars.....	3.91	9.85	2.74	13.31	(³)	9.61
52	Average cost of water per acre-foot delivered..1939..dollars.....	1.26	11.61	0.79	4.02	(³)	2.89
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	.....	.....	.....	.....	1	.....
54	Irrigable area in these enterprises.....1939..acres.....	.....	.....	.....	.....	(³)	.....
55	Irrigated area in these enterprises.....1939..acres.....	.....	.....	.....	.....	(³)	.....
56	Area for which drains have been installed.....1939..acres.....	.....	.....	.....	.....	(³)	.....
57	Additional area needing drainage.....1939..acres.....	.....	.....	.....	.....	.....	.....

¹ Data for 2 enterprises in Black River Drainage Basin (24) (number refers to separate map) are included with Salt River "Direct" Drainage Basin (23).

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - ARIZONA

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLORADO RIVER—Continued										
Gila River—Continued										
Upper Gila River—Continued							Lower Gila River			
Santa Cruz River			Salt River				Total			
Total	Direct (21)	Rillito Creek (22)	Total	Direct ¹ (23)	Tonto Creek (25)	Verde River (26)				
613	493	120	6,936	6,490	35	421	665			
59,889	56,051	3,838	267,155	259,008	512	8,635	91,061			
50,296	48,129	2,167	250,046	242,161	399	7,486	84,661			
691	685	6	295	53	1	241	181			
8,902	7,237	1,665	16,814	15,794	112	908	6,219			
24,718	.....	.....	311,264	264,740	442	6,844	.....		
33,019	.....	.....	247,260	235,825	502	6,564	.....		
142.3	.....	.....	-14.2	-2.5	15.8	26.2	.....		
90,112	84,773	5,339	319,854	305,883	532	13,439	213,749			
43,945	.....	.....	356,219	297,012	446	13,779	.....		
76,617	.....	.....	277,034	253,603	2,928	9,978	.....		
30,223	28,722	1,501	52,699	47,875	20	4,804	122,688			
19,227	.....	.....	44,955	32,272	4	6,935	.....		
43,598	.....	.....	29,774	17,778	2,426	3,414	.....		
82,015	77,216	4,799	311,172	298,636	520	12,016	143,273			
39,920	.....	.....	345,045	290,479	442	9,685	.....		
45,115	.....	.....	268,644	233,308	720	7,470	.....		
105.4	.....	.....	-9.8	2.6	17.6	24.1	.....		
22,126	21,165	961	44,017	40,628	8	3,381	52,212			
15,202	.....	.....	33,761	26,739	.....	2,841	.....		
12,096	.....	.....	21,384	17,483	218	906	.....		
73.0	72.6	80.0	65.9	86.4	96.5	71.9	63.6			
61.9	.....	.....	90.2	91.1	100.0	70.7	.....		
73.2	.....	.....	92.0	93.1	69.7	87.9	.....		
3,167,752	2,889,176	278,576	35,973,559	35,277,292	10,025	686,242	15,595,306			
3,166,347	2,888,289	278,058	35,968,716	35,272,646	10,000	686,070	15,144,671			
1,405	887	518	4,843	4,646	25	172	450,635			
2,251,988	.....	.....	36,188,493	32,193,073	20,550	462,381	.....		
5,168,524	.....	.....	14,939,034	14,339,874	9,468	209,482	.....		
40.7	.....	.....	-0.6	-9.6	-51.2	48.4	.....		
38.62	37.42	58.05	115.61	118.13	19.28	57.11	108.85			
56.41	.....	.....	104.88	110.53	46.49	47.74	.....		
114.56	.....	.....	55.61	56.61	13.15	28.04	.....		
52.89	51.55	72.58	134.65	136.73	19.58	79.47	171.26			
3,430,667	3,144,311	286,356	36,687,157	35,882,942	10,775	793,440	17,426,186			
38.07	37.09	53.63	114.70	117.31	20.25	59.04	81.53			
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
233	.....	172	.....	61	.....	42	.....	24	.....
58,130	.....	54,435	.....	3,695	.....	249,215	(3)	324	.....
451,311	.....	414,545	.....	36,766	.....	1,297,312	(3)	778	.....
7.76	.....	7.62	.....	9.95	.....	5.21	(3)	2.40	.....
88,044	.....	66,228	.....	21,816	.....	1,476,137	.....	18,437	.....
5.24	.....	4.44	.....	11.48	.....	5.93	.....	3.65	.....
17,428	.....	14,915	.....	2,513	.....	286,288	.....	7,213	.....
5.05	.....	4.44	.....	8.68	.....	5.12	.....	2.56	.....
21,011	.....	570	.....	20,441	.....	774,012	.....	12,487	.....
191,677	.....	157,317	.....	34,360	.....	22,227,414	.....	104,501	.....
202	.....	139	.....	63	.....	36	.....	22	.....
54,023	.....	50,413	.....	3,610	.....	252,646	(3)	295	.....
171,643	.....	161,673	.....	9,970	.....	767,369	(3)	480	.....
3.2	.....	3.2	.....	2.8	.....	3.0	(3)	1.6	.....
8.28	.....	8.13	.....	10.35	.....	5.99	(3)	2.47	.....
2.60	.....	2.53	.....	3.75	.....	1.97	(3)	1.52	.....
(3)	2	(3)	2	.....	.....	.....	.....	.....	.....
(3)	.....	(3)	.....	.....	.....	.....	.....	.....	.....
(3)	.....	(3)	.....	.....	.....	.....	.....	.....	.....
.....	

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - ARIZONA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued				INDEPENDENT BASINS				
	Gila River—Continued				Red Lake	Vamori (Valshni) Wash	Sulphur Springs	White-water Draw	
	Lower Gila River—Continued								
	Direct	Aqua Fria River	Hassayampa River	Centennial Wash	(31)	(32)	(33)	(34)	
(27)	(28)	(29)	(30)						
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number....	556	71	32	6	4	268	90	137
2	Area irrigated.....1939..acres.....	73,685	10,462	530	384	40	5,243	4,615	3,255
3	(a) Cropland harvested.....1939..acres.....	57,967	15,998	509	187	27	2,084	2,327	2,489
4	(b) Crop failure.....1939..acres.....	162	19	.....	.....	.....	434	76	94
5	(c) Pasture.....1939..acres.....	5,556	445	21	197	13	2,725	2,212	672
6	Area irrigated.....1929..acres.....	.....	25,104	432	.....	.....	.....	.....	3,301
7	.....1919..acres.....	.....	18,824	956	.....	.....	.....	.....	5,871
8	Increase or decrease (-), 1929-1939.....percent.....	.....	-34.4	22.7	.....	.....	.....	.....	-1.4
9	Irrigable area in enterprises.....1940..acres.....	165,625	46,892	751	461	42	8,637	44,161	5,624
10	.....1930..acres.....	.....	83,801	865	.....	.....	.....	.....	5,570
11	.....1920..acres.....	.....	38,699	3,657	.....	.....	.....	.....	16,623
12	Excess of irrigable area over the area irrigated.....1940..acres.....	91,940	30,430	221	97	2	3,394	39,546	2,369
13	.....1930..acres.....	.....	58,697	433	.....	.....	.....	.....	2,269
14	.....1920..acres.....	.....	19,875	2,701	.....	.....	.....	.....	10,752
15	Area works were capable of supplying with water.....1940..acres.....	95,346	46,771	750	406	42	8,571	6,030	4,891
16	.....1930..acres.....	.....	62,753	650	.....	.....	.....	.....	4,753
17	.....1920..acres.....	.....	30,000	1,773	.....	.....	.....	.....	9,950
18	Increase or decrease (-), 1930-1940.....percent.....	.....	-25.5	15.4	.....	.....	.....	.....	2.9
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	21,661	30,309	220	22	2	3,328	1,415	1,636
20	.....1930..acres.....	.....	37,649	218	.....	.....	.....	.....	1,452
21	.....1920..acres.....	.....	11,176	817	.....	.....	.....	.....	4,079
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	77.3	35.2	70.7	94.6	95.2	61.2	76.5	66.6
23	.....1929..percent.....	.....	40.0	66.5	.....	.....	.....	.....	69.5
24	.....1919..percent.....	.....	62.7	53.9	.....	.....	.....	.....	59.0
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	8,390,724	7,164,487	20,545	19,550	2,300	37,676	116,122	188,951
26	(a) Cost of irrigation works and equipment.....1940..dollars....	8,390,089	6,714,487	20,545	19,550	2,300	37,676	115,435	188,946
27	(b) Investment in water rights (reported).....1940..dollars....	635	450,000	.....	.....	.....	.....	687	5
28	Total investment in irrigation enterprises.....1930..dollars....	.....	7,451,130	26,450	.....	.....	.....	.....	230,606
29	.....1920..dollars....	.....	1,428,077	51,299	.....	.....	.....	.....	299,368
30	Increase or decrease (-), 1930-1940.....percent.....	.....	-3.8	-22.3	.....	.....	.....	.....	-18.1
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	88.00	153.18	27.39	48.15	54.76	4.40	19.26	38.63
32	.....1930..dollars....	.....	118.74	40.69	.....	.....	.....	.....	48.52
33	.....1920..dollars....	.....	47.60	28.93	.....	.....	.....	.....	30.09
34	Average investment per acre irrigated.....1939..dollars....	113.87	435.21	38.76	50.91	57.50	7.19	25.16	58.05
35	Estimated final investment in existing enterprises.....1940..dollars....	10,210,719	7,175,172	20,745	19,550	3,650	42,344	120,397	215,159
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	61.65	153.01	27.62	40.64	86.90	4.90	2.73	38.26
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.						
		Enterprises							
37	Enterprises reporting maintenance and operation.....1939..number....	87	4	47	30	5	4	26	80
38	Area irrigated in these enterprises.....1939..acres.....	70,019	656	15,478	500	143	40	2,980	4,236
39	Cost of maintenance and operation.....1939..dollars....	392,045	5,270	145,772	2,300	2,025	500	1,039	15,257
40	Average cost, per acre irrigated.....1939..dollars....	5.60	8.03	9.42	4.60	14.16	12.50	0.35	3.60
41	Total annual charges (reported) ² 3.....1939..dollars....	483,731	.....	228,920	.....	.....	.....	610	.....
42	Average annual charge per acre irrigated.....1939..dollars....	8.04	.....	22.89	.....	.....	.....	0.22	.....
43	Area against which charges were assessed.....1939..acres.....	90,393	.....	38,800	.....	.....	.....	2,719	.....
44	Average annual charge per acre assessed.....1939..dollars....	5.35	.....	5.90	.....	.....	.....	0.22	.....
45	Total charges collected ².....1939..dollars....	454,525	.....	227,483	.....	.....	.....	.....	.....
46	Indebtedness to December 31 (reported) ³.....1939..dollars....	3,710,488	.....	1,735,000	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number....	86	4	35	31	6	3	1	83
48	Area irrigated by these enterprises.....1939..acres.....	70,059	656	15,145	530	384	25	(⁴)	2,745
49	Water delivered.....1939..acre-feet....	338,232	2,067	29,565	1,378	933	51	(⁴)	4,281
50	Average water delivered per acre irrigated.....1939..acre-feet....	4.8	3.2	2.0	2.6	2.4	2.0	(⁴)	1.6
51	Average cost of water per acre irrigated.....1939..dollars....	8.04	8.03	17.49	4.60	14.16	8.00	(⁴)	6.04
52	Average cost of water per acre-foot delivered.....1939..dollars....	1.67	2.55	8.96	1.77	5.84	3.92	(⁴)	3.87
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number....	.....	.....	.....	.....	.....	.....	.....	.....
54	Irrigable area in these enterprises.....1939..acres.....	.....	.....	.....	.....	.....	.....	.....	.....
55	Irrigated area in these enterprises.....1939..acres.....	.....	.....	.....	.....	.....	.....	.....	.....
56	Area for which drains have been installed.....1939..acres.....	.....	.....	.....	.....	.....	.....	.....	.....
57	Additional area needing drainage.....1939..acres.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - ARIZONA

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DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

ITEM <small>(For definitions and explanations, see text. Major-basin totals for 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	STATE TOTAL	COLORADO RIVER					
		Total	Direct ¹	San Juan River	Little Colorado River		
				Chinle Creek ²	Total	Direct ³	Nutrioso Creek
		(1)	(3)		(5)	(6)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1 Enterprises.....1940..number.....	4,918	1,539	34	5	77	61	3
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	440	536	2,065	1,340	324	298	51
3 Diversion dams.....1940..total number.....	602	426	3	28	63	51	2
4 .....1930..total number.....	267	260	1	.....	31	9	4
5 .....1920..total number.....	248	242	2	.....	32	19	4
6 (a) Concrete and masonry.....1940..number.....	84	80	.....	27	26	.....	.....
7 (b) Timber.....1940..number.....	5	5	.....	.....	.....	.....	.....
8 (c) Earth and rock.....1940..number.....	321	239	.....	1	23	17	1
9 (d) Other, mixed, and not reported.....1940..number.....	192	102	3	.....	14	12	1
10 Main canals and laterals.....1940..total length, miles.....	4,178.2	4,138.2	304.5	164.3	321.2	242.1	6.0
11 .....1930..total length, miles.....	3,974	3,967	323	.....	220	116	2
12 .....1920..total length, miles.....	3,368	3,240	273	.....	199	100	8
13 (a) Earth.....1940..length, miles.....	3,986	3,946	288	164	321	242	6
14 (b) Lined.....1940..length, miles.....	192.2	192.2	16.5	0.3	0.2	0.1	.....
15 .....1940..capacity, c.f.s. ⁵	13,258	12,498	2,294	147	393	337	6
16 .....1930..capacity, c.f.s. ⁵	13,697	13,687	2,426	.....	314	129	3
17 .....1920..capacity, c.f.s. ⁵	11,707	11,154	713	.....	341	208	17
18 Pipe lines ⁶.....1940..total length, miles.....	344.3	334.0	11.2	0.1	2.4	2.2	.....
19 .....1930..total length, miles.....	189.3	185.2	12.5	.....	2.1	.....	.....
20 .....1920..total length, miles.....	104.5	99.4	.....	.....	.....	.....	.....
21 (a) Concrete.....1940..length, miles.....	265.8	265.8	10.3	.....	0.5	0.5	.....
22 (b) Metal.....1940..length, miles.....	65.7	55.4	0.9	0.1	1.9	1.7	.....
23 (c) Wood-stave.....1940..length, miles.....	3.0	3.0	.....	.....	.....	.....	.....
24 (d) Other.....1940..length, miles.....	9.8	9.6	.....	.....	.....	.....	.....
25 Storage dams.....1940..total number.....	199	188	.....	7	50	42	2
26 .....1930..total number.....	78	74	.....	.....	29	7	2
27 .....1920..total number.....	99	48	.....	.....	14	9	1
28 (a) Concrete and masonry.....1940..number.....	17	16	.....	.....	.....	.....	.....
29 (b) Earth and rock.....1940..number.....	167	157	.....	1	46	38	2
30 (c) Other, mixed, and not reported.....1940..number.....	15	15	.....	6	4	4	.....
31 Reservoirs.....1940..total number.....	333	302	.....	7	52	44	2
32 (a) 1-99 acre-feet capacity.....1940..number.....	274	244	.....	.....	18	16	.....
33 (b) 100-999 acre-feet capacity.....1940..number.....	36	35	.....	7	23	21	2
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	23	23	.....	.....	11	7	.....
35 .....1940..total capacity, ac.-ft. ⁷	4,860,898	4,860,586	.....	6,073	60,690	48,144	(⁸)
36 .....1930..total capacity, ac.-ft.....	378	288	.....	.....	37	10	3
37 .....1930..total capacity, ac.-ft.....	3,410,975	3,410,835	.....	.....	72,795	41,648	1,001
38 Wells, flowing.....1940..number.....	268	261	.....	.....	13	13	.....
39 .....1930..number.....	215	204	.....	.....	.....	.....	.....
40 .....1920..number.....	310	300	.....	.....	2	2	.....
41 .....1940..yield, g.p.m.....	22,878	22,038	.....	.....	4,000	4,000	.....
42 .....1930..yield, g.p.m.....	13,772	13,342	.....	.....	.....	.....	.....
43 .....1920..yield, g.p.m.....	14,547	14,044	.....	.....	.....	.....	.....
44 Wells, pumped.....1940..number.....	1,858	1,641	18	.....	16	14	.....
45 .....1930..number.....	1,398	1,188	1	.....	.....	.....	.....
46 .....1920..number.....	999	790	3	.....	2	.....	.....
47 .....1940..yield, g.p.m.....	2,508,337	2,426,877	7,933	.....	4,775	4,395	.....
48 .....1930..yield, g.p.m.....	1,832,352	1,769,895	1,000	.....	.....	.....	.....
49 .....1920..yield, g.p.m.....	1,042,590	969,803	750	.....	1,000	.....	.....
50 Pumping plants.....1940..total number.....	1,970	1,741	37	.....	22	19	.....
51 .....1930..total number.....	1,378	1,164	12	.....	.....	.....	.....
52 Prime movers.....1940..capacity, hp.....	102,733	99,142	2,196	.....	398	284	.....
53 .....1930..capacity, hp.....	57,633	55,608	2,545	.....	.....	.....	.....
54 .....1920..capacity, hp.....	22,014	19,611	414	.....	.....	.....	.....
55 (a) Electric.....1940..number.....	1,078	1,076	14	.....	1	3	.....
56 .....1940..capacity, hp.....	78,128	78,118	1,469	.....	13	13	.....
57 (b) Internal-combustion.....1940..number.....	796	601	21	.....	16	14	.....
58 .....1940..capacity, hp.....	24,145	20,614	724	.....	301	269	.....
59 (c) Other.....1940..number.....	96	64	2	.....	3	2	.....
60 .....1940..capacity, hp.....	460	410	(⁹)	.....	24	(⁹)	.....
61 Pumps.....1940..total number.....	1,969	1,748	36	.....	22	19	.....
62 .....1930..number.....	1,364	1,149	19	.....	.....	.....	.....
63 .....1920..number.....	1,001	792	10	.....	2	.....	.....
64 .....1940..capacity, g.p.m.....	2,992,986	2,893,289	202,223	.....	9,280	7,100	.....
65 .....1930..capacity, g.p.m.....	2,125,293	2,065,786	233,700	.....	.....	.....	.....
66 .....1920..capacity, g.p.m.....	1,048,030	974,063	80,200	.....	1,000	.....	.....
67 (a) Centrifugal.....1940..number.....	538	427	25	.....	15	14	.....
68 .....1940..capacity, g.p.m.....	648,142	598,116	124,388	.....	6,085	5,735	.....
69 .....1940..average capacity, g.p.m.....	1,205	1,401	4,976	.....	406	410	.....
70 (b) Turbine.....1940..number.....	1,260	1,196	5	.....	2	1	.....
71 .....1940..capacity, g.p.m.....	2,324,468	2,279,778	77,500	.....	(⁹)	(⁹)	.....
72 .....1940..average capacity, g.p.m.....	1,845	1,906	15,500	.....	(⁹)	(⁹)	.....
73 (c) Plunger.....1940..number.....	139	97	6	.....	3	2	.....
74 .....1940..capacity, g.p.m.....	6,344	3,713	335	.....	240	(⁹)	.....
75 .....1940..average capacity, g.p.m.....	46	38	56	.....	80	(⁹)	.....
76 (d) Other.....1940..number.....	32	28	.....	.....	2	2	.....
77 .....1940..capacity, g.p.m.....	14,032	11,682	.....	.....	(⁹)	(⁹)	.....
78 Pumping lift, from all sources.....1940..average, feet.....	60	62	27	.....	34	36	.....
79 .....1930..average, feet.....	46	45	39	.....	.....	.....	.....
80 .....1920..average, feet.....	44	45	14	.....	30	.....	.....
81 from pumped wells.....1940..average, feet.....	62	64	42	.....	30	31	.....
82 from surface sources.....1940..average, feet.....	34	32	19	.....	57	74	.....

¹Data for 1 enterprise in Paria River Drainage Basin (4) (number refers to separate map) are included with Colorado River "Direct" Drainage Basin (1). ²Data for 2 enterprises in San Juan River "Direct" Drainage Basin (2) (number refers to separate map) are included with Chinle Creek Drainage Basin (3). ³Data for 1 enterprise in Puerco River Drainage Basin (10) (number refers to separate map) are included with Little Colorado River "Direct" Drainage Basin (5). ⁴Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1. ⁵Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁶Includes siphons and farm pipe lines reported. ⁷Total capacity of all reservoirs regardless of size. ⁸Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - ARIZONA

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		COLORADO RIVER—Continued								
		Little Colorado River—Continued		Kanab Creek	Virgin River	Williams River	Gila River			
		Concho Creek	Silver Creek				Total	Upper Gila River		
				(7)	(9)	(11)		(12)	(13)	Total	Direct^{1}	(14)
ENTERPRISES AND IRRIGATION WORKS										
JANUARY 1										
1	Enterprises.....	1940..number.....	4	9	7	16	79	1,321	1,104	354
2	Average size of enterprise based on area works were capable of supplying with water.....	1940..acres.....	385	570	86	40	30	544	522	461
3	Diversion dams.....	1940..total number.....		10	1	5	13	313	274	36
4		1930..total number.....			2	2	9	200		
5		1920..total number.....			1		5	199		
6	(a) Concrete and masonry.....	1940..number.....		4	1		1	25	20	8
7	(b) Timber.....	1940..number.....						5	5	
8	(c) Earth and rock.....	1940..number.....		5		4	10	201	181	13
9	(d) Other, mixed, and not reported.....	1940..number.....		1		1	2	82	68	15
10	Main canals and laterals.....	1940..total length, miles.....	10.0	63.1	5.0	20.0	45.0	3,276.2	2,571.9	704.8
11		1930..total length, miles.....	2		6	11	28	3,331		
12		1920..total length, miles.....	3		4	11	35	2,701		
13	(a) Earth.....	1940..length, miles.....	10	63	5	20	45	3,103	2,481	701
14	(b) Lined.....	1940..length, miles.....		0.1				175.2	90.9	3.8
15		1940..capacity, c.f.s. ³	5	45	8	46	141	9,469	7,600	2,158
16		1930..capacity, c.f.s. ³	16		66	17	36	10,716		
17		1920..capacity, c.f.s. ³	3		1	9	40	10,032		
18	Pipe lines ⁴	1940..total length, miles.....		0.2		0.1	4.0	316.2	288.8	53.6
19		1930..total length, miles.....				3.0	3.7	150.0		
20		1920..total length, miles.....			1.3		10.1	87.9		
21	(a) Concrete.....	1940..length, miles.....					0.1	254.9	237.3	52.1
22	(b) Metal.....	1940..length, miles.....		0.2		0.1	3.1	49.3	47.1	1.5
23	(c) Wood-stave.....	1940..length, miles.....					0.8	2.2	2.1	
24	(d) Other.....	1940..length, miles.....						9.8	2.3	
25	Storage dams.....	1940..total number.....	2	4		1	4	126	119	7
26		1930..total number.....	2		1		2	40		
27		1920..total number.....						16	15	
28	(a) Concrete and masonry.....	1940..number.....						3		
29	(b) Earth and rock.....	1940..number.....	2	4		1	4	105	99	7
30	(c) Other, mixed, and not reported.....	1940..number.....						5	5	
31	Reservoirs.....	1940..total number.....	2	4		2	3	238	226	64
32	(a) 1-99 acre-feet capacity.....	1940..number.....	1	1		2	3	221	210	59
33	(b) 100-999 acre-feet capacity.....	1940..number.....						5	5	3
34	(c) 1,000 and over acre-feet capacity.....	1940..number.....	1	3				12	11	2
35		1940..total capacity, ac.-ft. ⁵	(⁶)	9,286		(⁶)	43	4,789,778	4,609,218	1,202,553
36		1930..total capacity, ac.-ft.....	2		6	3	14	214		
37		1920..total capacity, ac.-ft.....	1,197		508	2	34	3,315,572		
38	Wells, flowing.....	1940..number.....						248	248	95
39		1930..number.....					1	202		
40		1920..number.....						298		
41		1940..yield, g.p.m.....						18,038	18,038	5,685
42		1930..yield, g.p.m.....					10	13,314		
43		1920..yield, g.p.m.....						14,044		
44	Wells, pumped.....	1940..number.....	2			5	32	1,570	1,234	431
45		1930..number.....			3	4	4	1,119		
46		1920..number.....					5	774		
47		1940..yield, g.p.m.....	(⁶)			1,758	12,935	2,399,481	1,691,526	645,812
48		1930..yield, g.p.m.....			17	49	8,094	1,745,297		
49		1920..yield, g.p.m.....					2,015	965,338		
50	Pumping plants.....	1940..total number.....	2	1	1	5	38	1,638	1,292	442
51		1930..total number.....			3	4	41	1,080		
52	Prime movers.....	1940..capacity, hp.....	(⁶)	(⁶)	(⁶)	23	419	86,151	73,901	22,715
53		1930..capacity, hp.....			2	4	326	52,391		
54		1920..capacity, hp.....					39	19,037		
55	(a) Electric.....	1940..number.....			1		2	1,056	831	241
56		1940..capacity, hp.....			(⁶)		(⁶)	76,826	59,323	15,177
57	(b) Internal-combustion.....	1940..number.....	2			3	33	528	417	193
58		1940..capacity, hp.....	(⁶)			21	377	19,191	14,306	7,422
59	(c) Other.....	1940..number.....		1		2	3	54	44	8
60		1940..capacity, hp.....		(⁶)		(⁶)	37	344	272	116
61	Pumps.....	1940..total number.....	2	1	1	5	38	1,646	1,298	444
62		1930..number.....			3	4	44	1,055		
63		1920..number.....					8	765		
64		1940..capacity, g.p.m.....	(⁶)	(⁶)	(⁶)	1,105	13,665	2,666,316	1,946,281	695,647
65		1930..capacity, g.p.m.....			17	49	10,209	1,806,044		
66		1920..capacity, g.p.m.....					2,590	889,573		
67	(a) Centrifugal.....	1940..number.....	1		1	1	28	357	264	64
68		1940..capacity, g.p.m.....	(⁶)		(⁶)	(⁶)	10,895	455,698	323,796	62,616
69		1940..average capacity, g.p.m.....	(⁶)		(⁶)	(⁶)	389	1,276	1,226	979
70	(b) Turbine.....	1940..number.....		1			4	1,185	948	367
71		1940..capacity, g.p.m.....		(⁶)			2,400	2,197,078	1,609,788	627,393
72		1940..average capacity, g.p.m.....		(⁶)			600	1,854	1,698	1,710
73	(c) Plunger.....	1940..number.....	1			2	6	80	67	10
74		1940..capacity, g.p.m.....	(⁶)			(⁶)	370	2,763	2,277	508
75		1940..average capacity, g.p.m.....	(⁶)			(⁶)	62	35	34	51
76	(d) Other.....	1940..number.....				2		24	19	3
77		1940..capacity, g.p.m.....				(⁶)		10,777	10,420	5,100
78	Pumping lift, from all sources.....	1940..average, feet.....	(⁶)	(⁶)	(⁶)	19	25	65	67	63
79		1930..average, feet.....				58	24	46		
80		1920..average, feet.....					20	43		
81	from pumped wells.....	1940..average, feet.....	(⁶)			19	27	67	69	65
82	from surface sources.....	1940..average, feet.....		(⁶)	(⁶)		14	38	40	15

¹Data for 1 enterprise in San Carlos River Drainage Basin (18) (number refers to separate map) are included with Upper Gila River "Direct" Drainage Basin (14).

²Data for 2 enterprises in Black River Drainage Basin (24) (number refers to separate map) are included with Salt River "Direct" Drainage Basin (20).

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

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WORKS, 1940, 1930, AND 1920—Continued

COLORADO RIVER—Continued													
Gila River—Continued													
Upper Gila River—Continued													
San Francisco River			San Simon Creek (17)	San Pedro River (19)	Queen Creek (20)	Santa Cruz River			Salt River				
Total	Direct (15)	Blue River (16)				Total	Direct (21)	Rillito Creek (22)	Total	Direct ² (23)	Tonto Creek (25)	Verde River (26)	
17	3	14	76	111	17	284	217	67	246	64	28	154	1
20	12	22	11	73	598	289	356	72	1,265	4,666	19	78	2
15	1	14	2	23	.....	69	61	8	129	35	22	72	3
31	.....	.....	.....	12	.....	11	.....	.....	56	2	.....	46	4
28	.....	.....	.....	30	.....	31	.....	.....	44	8	9	22	5
.....	.....	.....	.....	2	.....	1	.....	1	9	4	.....	5	6
.....	.....	.....	.....	5	.....	5	.....	.....	.....	.....	.....	.....	7
14	.....	14	2	17	.....	41	34	7	94	14	22	58	8
1	1	.....	.....	4	.....	22	22	.....	26	17	.....	9	9
1.0	1.0	.....	5.0	47.0	3.0	152.3	106.0	46.3	1,658.8	1,510.1	8.0	140.7	10
3	.....	.....	.....	145	.....	189	.....	.....	1,471	1,176	1	144	11
12	.....	.....	.....	177	.....	335	.....	.....	1,201	1,009	26	114	12
1	1	.....	5	47	3	138	97	41	1,586	1,443	8	135	13
.....	.....	.....	.....	.....	.....	14.3	9.0	5.3	72.8	67.1	.....	5.7	14
21	5	16	30	246	.....	398	365	33	4,747	4,268	39	440	15
14	.....	.....	.....	112	.....	420	.....	.....	5,359	4,475	1	460	16
22	.....	.....	.....	270	.....	1,196	.....	.....	5,084	4,447	58	359	17
.....	.....	.....	5.7	11.5	26.5	65.0	50.9	14.1	126.5	115.7	.....	10.8	18
4.4	.....	.....	.....	3.0	.....	47.9	.....	.....	31.3	0.1	.....	5.7	19
1.4	.....	.....	.....	5.1	.....	35.0	.....	.....	4.3	1.5	.....	1.8	20
.....	.....	.....	0.8	1.2	26.5	54.3	46.9	7.4	102.4	101.8	.....	0.6	21
.....	.....	.....	4.9	9.9	.....	8.9	3.1	5.8	21.9	11.9	.....	10.0	22
.....	.....	.....	.....	0.4	.....	1.7	0.9	0.8	.....	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	0.1	.....	0.1	2.2	2.0	.....	0.2	24
.....	.....	.....	39	9	.....	44	37	7	20	6	.....	14	25
.....	.....	.....	6	6	.....	2	.....	.....	12	4	.....	6	26
1	.....	.....	9	9	.....	5	.....	.....	3	1	.....	.....	27
.....	.....	.....	1	1	.....	3	2	1	10	6	.....	4	28
.....	.....	.....	38	7	.....	37	31	6	10	.....	.....	10	29
.....	.....	.....	1	1	.....	4	4	.....	.....	.....	.....	.....	30
.....	.....	.....	45	45	.....	49	39	10	23	7	.....	16	31
.....	.....	.....	45	44	.....	48	38	10	14	2	.....	12	32
.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	1	33
.....	.....	.....	.....	1	.....	.....	.....	.....	8	5	.....	3	34
.....	.....	.....	113	3,091	.....	289	261	28	3,403,172	3,192,004	.....	211,168	35
.....	.....	.....	61	61	.....	4	.....	.....	23	4	.....	.....	36
.....	.....	.....	98	98	.....	12	.....	.....	2,020,233	2,015,500	.....	4,721	37
.....	.....	.....	50	91	.....	.....	.....	.....	12	.....	.....	12	38
.....	.....	.....	105	133	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	.....	.....	2,899	2,888	.....	.....	.....	.....	6,566	.....	.....	6,566	41
.....	.....	.....	3,106	3,106	.....	.....	.....	.....	.....	.....	.....	.....	42
.....	.....	.....	5,195	5,195	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	36	43	33	390	310	80	301	263	1	37	44
.....	.....	.....	.....	24	.....	154	.....	.....	343	227	5	22	45
4	.....	.....	.....	25	.....	365	.....	.....	132	72	1	3	46
.....	.....	.....	6,871	21,166	53,470	459,245	435,164	24,081	504,962	484,090	(⁶)	20,172	47
.....	.....	.....	9,310	9,310	.....	146,530	.....	.....	778,540	537,500	165	6,591	48
225	.....	.....	11,474	11,474	.....	576,234	.....	.....	150,874	75,319	500	.....	49
3	3	.....	37	47	36	405	321	84	322	270	1	51	50
4	.....	.....	.....	27	.....	121	.....	.....	283	153	6	32	51
24	24	.....	296	713	3,484	22,080	21,299	781	24,589	23,717	(⁶)	866	52
30	.....	.....	.....	283	.....	6,894	.....	.....	20,257	13,835	47	637	53
70	.....	.....	.....	285	.....	8,073	.....	.....	2,653	629	25	96	54
.....	.....	.....	.....	3	.....	294	.....	.....	212	244	.....	13	55
.....	.....	.....	.....	125	3,000	17,346	16,716	630	23,675	23,427	.....	218	56
3	3	.....	25	34	4	107	88	19	51	22	.....	23	57
24	24	.....	279	498	480	4,708	4,557	151	895	287	(⁶)	602	58
.....	.....	.....	12	10	1	4	.....	.....	9	4	.....	5	59
.....	.....	.....	17	90	(⁶)	26	.....	.....	19	3	.....	16	60
3	3	.....	36	48	36	406	322	84	325	270	1	54	61
5	.....	.....	.....	28	.....	155	.....	.....	291	160	6	33	62
12	.....	.....	.....	29	.....	366	.....	.....	124	50	2	11	63
1,000	1,000	.....	6,889	22,940	59,470	505,185	477,946	27,339	655,250	627,300	(⁶)	27,250	64
4,190	.....	.....	.....	12,210	.....	101,890	.....	.....	835,630	587,750	185	13,086	65
5,835	.....	.....	.....	12,949	.....	528,649	.....	.....	133,184	75,719	1,500	1,070	66
.....	.....	.....	.....	27	1	99	54	45	50	18	.....	50	67
3	3	.....	20	27	(⁶)	65,875	52,080	13,785	173,450	154,850	(⁶)	17,900	68
1,000	1,000	.....	5,585	14,240	(⁶)	685	964	307	3,469	8,603	(⁶)	577	69
333	333	.....	279	527	(⁶)	287	253	34	248	240	.....	8	70
.....	.....	.....	1,165	8,500	58,450	438,077	424,651	13,426	476,203	472,227	.....	3,976	71
.....	.....	.....	388	944	1,719	1,526	1,678	395	1,920	1,968	.....	497	72
.....	.....	.....	13	8	1	17	14	3	18	11	.....	7	73
.....	.....	.....	139	60	(⁶)	1,153	1,085	68	397	183	.....	214	74
.....	.....	.....	11	8	(⁶)	68	78	23	22	17	.....	31	75
.....	.....	.....	.....	4	.....	3	.....	.....	9	1	.....	8	76
.....	.....	.....	40	.....	.....	80	(⁶)	(⁶)	5,200	(⁶)	.....	5,160	77
8	8	.....	34	31	146	83	88	69	63	86	(⁶)	43	78
25	.....	.....	.....	24	.....	58	.....	.....	54	33	38	47	79
19	.....	.....	.....	30	.....	44	.....	.....	68	54	16	63	80
.....	.....	.....	29	31	146	85	90	71	64	86	(⁶)	35	81
8	8	.....	65	20	.....	39	46	25	57	.....	.....	57	82

⁴Includes siphons and farm pipe lines reported.
⁵Total capacity of all reservoirs regardless of size.
⁶Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—ARIZONA

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued					INDEPENDENT BASINS				
	Gila River—Continued					Red Lake (31)	Yuma (Valshni) Wash (32)	Sulphur Springs (33)	Whitewater Draw (34)	
	Lower Gila River									
	Total	Direct (27)	Aqua Fria River (28)	Hessa- yampa River (29)	Centennial Wash (30)					
ENTERPRISES AND IRRIGATION WORKS JANUARY 1										
1	Enterprises.....1940..number.....	217	117	60	34	6	4	136	92	147
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	660	815	780	22	68	10	63	66	33
3	Diversion dams.....1940..total number.....	39	20	19	.....	.....	.....	146	18	12
4	.....1930..total number.....	.....	.....	11	6	.....	.....	.....	.....	7
5	.....1920..total number.....	.....	.....	12	1	.....	.....	.....	.....	6
6	(a) Concrete and masonry.....1940..number.....	5	2	3	.....	.....	.....	1	3	.....
7	(b) Timber.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	(c) Earth and rock.....1940..number.....	20	7	13	.....	.....	.....	58	15	9
9	(d) Other, mixed, and not reported.....1940..number.....	14	11	3	.....	.....	.....	87	.....	3
10	Main canals and laterals.....1940..total length, miles.....	706.3	530.0	167.1	9.2	.....	.....	24.0	14.0	2.0
11	.....1930..total length, miles.....	.....	.....	292	15	.....	.....	.....	.....	7
12	.....1920..total length, miles.....	.....	.....	208	18	.....	.....	.....	.....	128
13	(a) Earth.....1940..length, miles.....	622	465	148	9	.....	.....	24	14	2
14	(b) Lined.....1940..length, miles.....	84.3	65.0	19.1	0.2	.....	.....	.....	.....	.....
15	.....1940..capacity, c.f.s. ¹	1,869	1,100	750	19	.....	2	396	274	88
16	.....1930..capacity, c.f.s. ¹.....	.....	.....	935	45	.....	.....	.....	.....	10
17	.....1920..capacity, c.f.s. ¹.....	.....	.....	525	46	.....	.....	.....	.....	553
18	Pipe lines ².....1940..total length, miles.....	27.4	7.9	19.3	0.2	.....	.....	.....	5.4	4.9
19	.....1930..total length, miles.....	.....	.....	26.1	3.5	.....	.....	.....	.....	4.1
20	.....1920..total length, miles.....	.....	.....	34.3	4.1	.....	.....	.....	.....	5.1
21	(a) Concrete.....1940..length, miles.....	17.6	7.9	9.7	.....	.....	.....	.....	.....	.....
22	(b) Metal.....1940..length, miles.....	2.2	.....	2.0	0.2	.....	.....	.....	5.4	4.9
23	(c) Wood-stave.....1940..length, miles.....	0.1	.....	0.1	.....	.....	.....	.....	.....	.....
24	(d) Other.....1940..length, miles.....	7.5	.....	7.5	.....	.....	.....	.....	.....	.....
25	Storage dams.....1940..total number.....	7	.....	7	.....	.....	.....	1	5	5
26	.....1930..total number.....	.....	.....	10	.....	.....	.....	.....	.....	4
27	.....1920..total number.....	.....	.....	5	1	.....	.....	.....	.....	51
28	(a) Concrete and masonry.....1940..number.....	1	.....	1	.....	.....	.....	.....	1	.....
29	(b) Earth and rock.....1940..number.....	6	.....	6	.....	.....	.....	1	4	5
30	(c) Other, mixed, and not reported.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Reservoirs.....1940..total number.....	12	1	10	.....	1	.....	1	13	17
32	(a) 1-99 acre-feet capacity.....1940..number.....	11	1	9	.....	1	.....	1	12	17
33	(b) 100-999 acre-feet capacity.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	1	.....	1	.....	.....	.....	.....	.....	.....
35	.....1940..total capacity, ac.-ft. ³	184,560	(⁴)	184,552	.....	(⁴)	.....	(⁴)	238	73
36	.....1930..total capacity, ac.-ft. ³.....	.....	.....	22	2	.....	.....	.....	.....	90
37	.....1920..total capacity, ac.-ft. ³.....	.....	.....	92,086	2	.....	.....	.....	.....	140
38	Wells, flowing.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	1	6
39	.....1930..number.....	.....	.....	.....	1	.....	.....	.....	.....	11
40	.....1920..number.....	.....	.....	1	.....	.....	.....	.....	.....	10
41	.....1940..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	(⁴)	.....	765
42	.....1930..yield, g.p.m.....	.....	.....	.....	150	.....	.....	.....	.....	430
43	.....1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	503
44	Wells, pumped.....1940..number.....	336	247	52	27	10	2	.....	73	142
45	.....1930..number.....	.....	.....	196	10	.....	.....	.....	.....	210
46	.....1920..number.....	.....	.....	114	15	.....	.....	.....	.....	209
47	.....1940..yield, g.p.m.....	707,955	631,906	61,499	7,785	6,765	(⁴)	.....	34,673	45,537
48	.....1930..yield, g.p.m.....	.....	.....	278,876	3,144	.....	.....	.....	.....	62,457
49	.....1920..yield, g.p.m.....	.....	.....	120,685	6,420	.....	.....	.....	.....	72,787
50	Pumping plants.....1940..total number.....	346	250	56	30	10	2	.....	77	150
51	.....1930..total number.....	.....	.....	214	14	.....	.....	.....	.....	214
52	Prime movers.....1940..capacity, hp.....	22,260	18,469	3,333	202	256	(⁴)	.....	1,480	2,070
53	.....1930..capacity, hp.....	.....	.....	8,681	121	.....	.....	.....	.....	2,025
54	.....1920..capacity, hp.....	.....	.....	4,749	204	.....	.....	.....	.....	2,403
55	(a) Electric.....1940..number.....	225	185	37	3	.....	.....	.....	.....	2
56	.....1940..capacity, hp.....	17,303	14,436	2,855	12	.....	.....	.....	.....	(⁴)
57	(b) Internal-combustion.....1940..number.....	111	63	18	23	.....	.....	.....	61	133
58	.....1940..capacity, hp.....	4,885	3,973	477	183	252	(⁴)	.....	1,451	2,045
59	(c) Other.....1940..number.....	10	2	7	4	3	(⁴)	.....	16	15
60	.....1940..capacity, hp.....	72	(⁴)	(⁴)	7	4	(⁴)	.....	29	15
61	Pumps.....1940..total number.....	348	250	56	31	11	2	.....	75	144
62	.....1930..total number.....	.....	.....	214	14	.....	.....	.....	.....	215
63	.....1920..total number.....	.....	.....	100	13	.....	.....	.....	.....	209
64	.....1940..capacity, g.p.m.....	720,035	639,756	64,994	8,560	6,725	(⁴)	.....	35,103	63,344
65	.....1930..capacity, g.p.m.....	.....	.....	322,942	4,708	.....	.....	.....	.....	59,507
66	.....1920..capacity, g.p.m.....	.....	.....	68,575	5,810	.....	.....	.....	.....	73,967
67	(a) Centrifugal.....1940..number.....	93	57	11	22	3	2	.....	44	65
68	.....1940..capacity, g.p.m.....	131,902	116,746	7,351	6,855	950	(⁴)	.....	21,080	27,696
69	.....1940..average capacity, g.p.m.....	1,418	2,048	668	312	317	(⁴)	.....	479	426
70	(b) Turbine.....1940..number.....	237	190	40	3	4	.....	.....	16	48
71	.....1940..capacity, g.p.m.....	587,290	522,810	57,140	1,640	5,700	.....	.....	13,460	31,230
72	.....1940..average capacity, g.p.m.....	2,478	2,752	1,428	547	1,425	.....	.....	841	651
73	(c) Plunger.....1940..number.....	13	2	3	4	4	.....	.....	14	28
74	.....1940..capacity, g.p.m.....	486	(⁴)	198	38	75	.....	.....	163	2,468
75	.....1940..average capacity, g.p.m.....	37	(⁴)	66	10	19	.....	.....	12	88
76	(d) Other.....1940..number.....	5	1	2	2	.....	.....	.....	1	3
77	.....1940..capacity, g.p.m.....	357	(⁴)	(⁴)	(⁴)	.....	.....	.....	(⁴)	1,950
78	Pumping lift, from all sources.....1940..average, feet.....	56	49	89	31	80	(⁴)	.....	46	57
79	.....1930..average, feet.....	.....	.....	52	29	.....	.....	.....	.....	48
80	.....1920..average, feet.....	.....	.....	47	35	.....	.....	.....	.....	44
81	from pumped wells.....1940..average, feet.....	57	50	94	32	80	(⁴)	.....	46	57
82	from surface sources.....1940..average, feet.....	16	14	20	14	.....	.....	.....	79	51

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³Total capacity of all reservoirs regardless of size. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — ARIZONA

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COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

ITEM (For definitions and explanations, see text)		STATE TOTAL	Apache	Cochise	Coconino	Gila
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a						
1	All farms.....1940..number.....	18,468	3,120	1,076	1,509	595
2	.....1930..number.....	14,173	1,444	927	783	306
3	Irrigated farms.....1940..number.....	10,339	935	516	237	255
4	.....1930..number.....	8,523	495	361	119	105
5	Increase or decrease (-), 1930-1940.....percent.....	21.3	68.9	42.9	99.2	142.9
Operated by—						
6	(a) Owners and managers.....1940..number.....	8,787	911	424	224	238
7	.....1930..number.....	6,750	460	277	117	93
8	(b) Tenants.....1940..number.....	1,552	24	92	19	17
9	.....1930..number.....	1,773	35	84	2	12
10	Land in all farms.....1940..acres.....	25,651,082	4,879,135	2,926,869	4,747,593	135,578
11	Land in irrigated farms.....1940..acres.....	5,274,470	1,047,869	907,700	405,394	17,602
12	Average per farm.....1940..acres.....	510	1,121	1,759	1,711	69
13	(a) Operated by owners and managers.....1940..acres.....	5,051,817	1,045,056	890,879	404,900	16,631
14	Average per farm.....1940..acres.....	575	1,147	2,101	1,808	70
15	(b) Operated by tenants.....1940..acres.....	222,653	2,813	16,821	134	971
16	Average per farm.....1940..acres.....	143	117	183	38	57
17	Approximate land area.....1940..acres.....	72,691,200	7,151,360	4,003,840	11,886,720	3,040,000
IRRIGATED AND IRRIGABLE AREAS						
18	Area irrigated.....1939..acres.....	653,263	11,401	11,458	2,065	1,424
19	(a) Cropland harvested.....1939..acres.....	592,305	9,603	8,142	1,597	1,266
20	(b) Crop failure.....1939..acres.....	3,321	406	125	9	11
21	(c) Pasture.....1939..acres.....	57,637	1,392	3,191	459	147
22	Area irrigated.....1929..acres.....	575,590	9,302	6,305	1,206	1,297
23	.....1919..acres.....	467,565	12,070	12,982	1,479	1,797
24	Increase or decrease (-), 1929-1939.....percent.....	13.5	22.6	81.7	71.2	9.8
25	Irrigable area in enterprises.....1940..acres.....	1,104,645	32,866	55,607	3,152	1,561
26	.....1930..acres.....	1,085,627	29,028	11,111	2,232	2,209
27	.....1920 ¹ ..acres.....	813,153	27,571	33,999	2,040	7,012
28	Excess of irrigable area over the area irrigated.....1940..acres.....	451,382	21,465	44,149	1,087	137
29	.....1930..acres.....	510,037	13,726	4,806	1,026	912
30	Area works were capable of supplying with water.....1940..acres.....	844,212	22,611	16,081	2,579	1,525
31	.....1930..acres.....	824,152	17,248	8,757	1,752	1,482
32	.....1920..acres.....	627,303	16,159	19,130	1,902	2,379
33	Increase or decrease (-), 1930-1940.....percent.....	2.4	31.1	83.6	47.2	2.9
34	Excess, capability of works over area irrigated.....1940..acres.....	190,949	11,210	4,623	514	101
35	.....1930..acres.....	248,562	7,946	2,452	546	185
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	12.4	1.1	1.3	0.5	8.1
37	.....1929..percent.....	19.3	1.8	1.7	13.3	14.2
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	77.4	50.4	71.3	80.1	93.4
39	.....1929..percent.....	69.8	53.9	72.0	68.8	87.5
CAPITAL INVESTED TO JANUARY 1						
40	Total investment in all enterprises.....1940..dollars.....	83,526,608	1,739,226	858,464	171,134	40,955
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	82,990,947	1,734,251	853,772	170,919	40,425
42	(b) Investment in water rights (reported).....1940..dollars.....	535,661	5,375	4,692	215	530
43	Total investment in all enterprises.....1930..dollars.....	73,328,197	622,600	470,611	39,073	153,073
44	.....1920 ¹ ..dollars.....	33,498,094	275,010	611,853	72,317	59,749
45	Increase or decrease (-), 1930-1940.....percent.....	13.9	179.3	82.4	338.0	-73.2
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	98.94	76.92	53.38	66.36	26.85
47	.....1930..dollars.....	88.97	36.10	53.74	22.30	103.29
48	.....1920 ¹ ..dollars.....	53.40	17.02	31.99	38.02	25.12
49	Average investment per acre irrigated.....1939..dollars.....	127.86	152.55	74.92	82.87	28.76
50	Estimated final investment in existing enterprises.....1940..dollars.....	108,980,519	3,685,276	892,957	282,471	47,055
51	.....1930..dollars.....	91,913,550	631,650	479,761	40,073	154,613
52	.....1920 ¹ ..dollars.....	34,615,064	283,240	635,248	72,317	60,749
53	Increase or decrease (-), 1930-1940.....percent.....	18.6	483.4	86.1	604.9	-69.6
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	98.66	112.13	16.06	89.62	30.14
55	.....1930..dollars.....	84.65	27.43	43.18	17.95	68.99
56	.....1920 ¹ ..dollars.....	42.37	10.27	18.68	35.45	8.66
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
		Primary Supplemental		Primary Supplemental		
		Enterprises		Enterprises		
57	Enterprises reporting maintenance and operation.....1939..number.....	1,380	127	32	282	6
58	Area irrigated in these enterprises.....1939..acres.....	630,942	14,463	11,147	10,776	125
59	Cost of maintenance and operation.....1939..dollars.....	3,101,467	50,715	19,193	50,297	270
60	Average cost, per acre irrigated.....1939..dollars.....	4.92	3.51	1.72	4.67	2.16
61	.....1929..dollars.....	4.57	.....	1.41	8.04	.....
62	Total annual charges (reported) ².....1939..dollars.....	2,826,235	450	26,226	17,759	5,721
63	Average annual charge per acre irrigated.....1939..dollars.....	5.42	3.00	2.65	8.07	3.63
64	Area against which charges were assessed.....1939..acres.....	656,350	250	16,257	2,997	1,674
65	Average annual charge per acre assessed.....1939..dollars.....	4.31	1.80	1.61	5.93	3.42
66	Total charges collected ².....1939..dollars.....	1,943,583	400	10,990	12,246	168
67	Indebtedness to December 31 (reported) ³.....1939..dollars.....	42,589,633	2,500	235,301	.....	47,341
WATER DELIVERED TO IRRIGATORS						
68	Enterprises reporting water delivered.....1939..number.....	1,303	118	34	313	5
69	Area irrigated in these enterprises.....1939..acres.....	622,469	71,901	11,401	8,776	124
70	Water delivered in these enterprises.....1939..acre-feet.....	2,050,290	80,044	21,866	21,899	503
71	Average water delivered per acre irrigated.....1939..acre-feet.....	3.3	1.1	1.9	2.5	4.1
72	Average cost of water per acre irrigated.....1939..dollars.....	5.82	2.88	2.47	7.30	1.77
DRAINAGE OF IRRIGATED LAND						
73	Enterprises reporting land drained or needing drainage.....1939..number.....	18	.....	1	1	1
74	Irrigable area in these enterprises.....1939..acres.....	418,539	.....	(4)	(4)	(4)
75	Irrigated area in these enterprises.....1939..acres.....	271,680	.....	(4)	(4)	(4)
76	Area for which drains have been installed.....1939..acres.....	80,803	.....	(4)	(4)	(4)
77	Additional area needing drainage.....1939..acres.....	107,651	.....	(4)	.....	.....

^aCensus of Agriculture. ¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ³Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only. ⁴Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - ARIZONA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)	Graham		Greenlee		Maricopa		Mohave		Navajo			
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS²												
1 All farms.....1940..number.....	676		239		4,632		373		2,448			
2 ..1930..number.....	749		257		4,597		384		1,287			
3 Irrigated farms.....1940..number.....	553		151		4,249		111		594			
4 ..1930..number.....	579		189		4,382		115		344			
5 Increase or decrease (-), 1930-1940.....percent.....	-4.5		-20.1		-3.0		-3.5		72.7			
Operated by—												
6 (a) Owners and managers.....1940..number.....	465		107		3,454		99		553			
7 ..1930..number.....	398		124		3,442		99		319			
8 (b) Tenants.....1940..number.....	88		44		795		12		41			
9 ..1930..number.....	181		65		940		16		25			
10 Land in all farms.....1940..acres.....	493,817		315,871		1,122,211		2,540,541		3,644,536			
11 Land in irrigated farms.....1940..acres.....	210,127		59,472		466,400		148,017		479,987			
12 Average per farm.....1940..acres.....	380		394		110		1,333		807			
13 (a) Operated by owners and managers.....1940..acres.....	199,973		52,819		402,639		145,624		474,898			
14 Average per farm.....1940..acres.....	430		494		117		1,471		859			
15 (b) Operated by tenants.....1940..acres.....	10,154		6,653		63,761		2,393		4,489			
16 Average per farm.....1940..acres.....	115		151		80		199		109			
17 Approximate land area.....1940..acres.....	2,950,400		1,199,360		5,907,840		8,486,400		6,343,040			
IRRIGATED AND IRRIGABLE AREAS												
18 Area irrigated.....1939..acres.....	36,628		5,124		344,406		1,824		8,528			
19 (a) Cropland harvested.....1939..acres.....	33,649		5,020		321,347		1,425		7,431			
20 (b) Crop failure.....1939..acres.....	689		20		283		78		9			
21 (c) Pasture.....1939..acres.....	2,290		84		22,776		321		1,088			
22 Area irrigated.....1929..acres.....	34,623		6,958		383,422		1,493		4,755			
23 ..1919..acres.....	32,400		6,974		282,130		2,342		5,832			
24 Increase or decrease (-), 1929-1939.....percent.....	5.8		-26.4		-10.2		22.2		79.3			
25 Irrigable area in enterprises.....1940..acres.....	37,821		5,931		499,966		2,594		11,193			
26 ..1930..acres.....	47,804		7,707		562,934		2,576		9,150			
27 ..1920 ¹ ..acres.....	41,938		15,288		490,967		3,395		11,956			
28 Excess of irrigable area over the area irrigated.....1940..acres.....	1,193		807		155,560		770		2,665			
29 ..1930..acres.....	13,181		749		179,512		1,083		4,395			
30 Area works were capable of supplying with water.....1940..acres.....	37,752		5,776		437,786		2,498		9,732			
31 ..1930..acres.....	46,405		7,167		498,790		2,190		5,850			
32 ..1920..acres.....	34,955		8,086		394,599		2,672		6,596			
33 Increase or decrease (-), 1930-1940.....percent.....	-18.6		-19.4		-12.2		14.1		66.4			
34 Excess, capability of works over area irrigated.....1940..acres.....	1,124		652		93,380		674		1,204			
35 ..1930..acres.....	11,782		209		115,368		697		1,095			
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	17.4		8.6		73.8		1.2		1.8			
37 ..1929..percent.....	25.4		33.9		75.1		0.6		1.2			
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	97.0		89.7		78.7		73.0		87.6			
39 ..1929..percent.....	74.6		97.1		76.9		68.2		81.3			
CAPITAL INVESTED TO JANUARY 1												
40 Total investment in all enterprises.....1940..dollars.....	1,117,374		93,743		50,510,962		35,690		610,878			
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	1,096,121		93,144		50,056,816		34,759		609,778			
42 (b) Investment in water rights (reported).....1940..dollars.....	21,253		599		454,146		931		1,100			
43 Total investment in all enterprises.....1930..dollars.....	856,777		305,227		47,812,637		111,082		300,626			
44 ..1920..dollars.....	945,403		75,158		17,491,021		86,612		246,783			
45 Increase or decrease (-), 1930-1940.....percent.....	30.4		-69.3		5.6		-87.9		103.2			
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	29.60		16.23		115.38		14.29		62.77			
47 ..1930..dollars.....	18.46		42.59		95.86		50.72		51.39			
48 ..1920..dollars.....	27.52		9.29		44.33		32.41		37.41			
49 Average investment per acre irrigated.....1939..dollars.....	30.51		18.29		146.66		19.57		71.63			
50 Estimated final investment in existing enterprises.....1940..dollars.....	1,156,424		100,308		52,160,767		49,215		764,878			
51 ..1930..dollars.....	890,027		312,727		48,579,087		115,312		318,626			
52 ..1920..dollars.....	995,803		77,758		17,517,821		88,112		264,283			
53 Increase or decrease (-), 1930-1940.....percent.....	29.9		-67.9		7.4		-87.3		140.1			
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	30.58		16.91		104.33		18.97		68.34			
55 ..1930..dollars.....	18.62		40.58		86.30		44.76		34.82			
56 ..1920 ¹ ..dollars.....	23.74		5.09		42.73		25.95		22.10			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS												
57 Enterprises reporting maintenance and operation.....1939..number.....	Primary		Sup.		Primary		Sup.		Primary		Sup.	
	Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
58 Area irrigated in these enterprises.....1939..acres.....	83	86	39	13	104	5	69	22	69	22		
59 Cost of maintenance and operation.....1939..dollars.....	36,594	8,923	5,067	634	333,216	866	1,594	6,327	4,240	7,459		
60 Average cost, per acre irrigated.....1939..dollars.....	0.94	2.14	1.97	3.19	1,865,686	7,265	2.76	1.18	2.76	1.18		
61 ..1929..dollars.....	1.49	2.95	2.95	4.24	5.60	8.39	10.40	2.64	10.40	2.64		
62 Total annual charges (reported) ^{2 3}.....1939..dollars.....	87,371	9,731	9,731	2,143,847	615	11,904	615	11,904	615	11,904		
63 Average annual charge per acre irrigated.....1939..dollars.....	2.55	2.18	2.18	6.77	1.48	2.16	1.48	2.16	1.48	2.16		
64 Area against which charges were assessed.....1939..acres.....	34,306	4,739	4,739	400,511	415	6,322	415	6,322	415	6,322		
65 Average annual charge per acre assessed.....1939..dollars.....	2.55	2.05	2.05	5.35	1.48	1.88	1.48	1.88	1.48	1.88		
66 Total charges collected ².....1939..dollars.....	84,871	9,114	9,114	1,424,645	348	11,138	348	11,138	348	11,138		
67 Indebtedness to December 31 (reported) ².....1939..dollars.....	31,045	1,368	1,368	26,569,625	37	290,844	37	290,844	37	290,844		
WATER DELIVERED TO IRRIGATORS												
68 Enterprises reporting water delivered.....1939..number.....	65	83	43	11	108	6	65	21	65	21		
69 Area irrigated in these enterprises.....1939..acres.....	36,268	9,956	4,671	523	337,975	58,910	1,471	5,998	1,471	5,998		
70 Water delivered in these enterprises.....1939..acre-feet.....	89,575	14,111	10,068	861	1,110,081	60,779	4,979	14,173	4,979	14,173		
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.5	1.4	2.2	1.6	3.3	1.0	3.4	2.4	3.4	2.4		
72 Average cost of water per acre irrigated.....1939..dollars.....	2.64	2.12	2.06	3.31	6.90	8.39	2.80	1.99	2.80	1.99		
DRAINAGE OF IRRIGATED LAND												
73 Enterprises reporting land drained or needing drainage.....1939..number.....					3					3		
74 Irrigable area in these enterprises.....1939..acres.....					244,625					243		
75 Irrigated area in these enterprises.....1939..acres.....					219,594					12		
76 Area for which drains have been installed.....1939..acres.....					45,435					52		
77 Additional area needing drainage.....1939..acres.....					1,320					191		

¹Census of Agriculture. ²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

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COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)	Pima		Pinal		Santa Cruz	Yavapai	Yuma
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS²							
1 All farms.....	1940..number.....	932	1,309	174	715	670	
2	1930..number.....	757	1,008	220	675	773	
3 Irrigated farms.....	1940..number.....	635	1,095	40	357	611	
4	1930..number.....	261	523	29	324	697	
5	Increase or decrease (-), 1930-1940.....	143.3	109.4	37.9	10.2	-12.3	
Operated by—							
6 (a) Owners and managers.....	1940..number.....	596	916	34	273	493	
7	1930..number.....	217	432	18	258	496	
8 (b) Tenants.....	1940..number.....	39	179	6	84	118	
9	1930..number.....	44	91	11	66	201	
10 Land in all farms.....	1940..acres.....	1,160,373	1,542,913	371,072	1,667,119	103,784	
11	1930..acres.....	293,661	593,930	168,610	384,312	91,989	
12	Average per farm.....	462	542	4,215	1,077	151	
13 (a) Operated by owners and managers.....	1940..acres.....	279,102	527,203	166,233	367,008	76,882	
14	Average per farm.....	468	576	4,948	1,344	156	
15 (b) Operated by tenants.....	1940..acres.....	14,559	66,727	377	17,304	15,137	
16	Average per farm.....	373	373	63	206	128	
17	Approximate land area.....	5,914,240	3,441,920	797,440	5,178,240	6,390,400	
IRRIGATED AND IRRIGABLE AREAS							
18 Area irrigated.....	1939..acres.....	33,995	117,556	2,842	9,572	66,440	
19 (a) Cropland harvested.....	1939..acres.....	25,376	100,930	2,706	8,322	65,491	
20 (b) Crop failure.....	1939..acres.....	899	358	32	264	138	
21 (c) Pasture.....	1939..acres.....	7,720	16,268	104	986	811	
22 Area irrigated.....	1929..acres.....	18,780	37,044	1,040	7,966	61,399	
23	1919..acres.....	16,883	28,647	2,608	11,566	49,855	
24	Increase or decrease (-), 1929-1939.....	81.0	217.3	173.3	20.2	8.2	
25 Irrigable area in enterprises.....	1940..acres.....	49,985	181,305	3,847	13,626	205,191	
26	1930..acres.....	36,720	132,198	2,296	12,662	233,000	
27	1920 ¹ ..acres.....	40,978	65,799	7,162	17,108	128,940	
28 Excess of irrigable area over the area irrigated.....	1940..acres.....	15,990	63,749	1,005	4,054	138,751	
29	1930..acres.....	17,940	95,154	1,256	4,696	171,601	
30 Area works were capable of supplying with water.....	1940..acres.....	44,711	161,613	3,345	13,156	85,047	
31	1930..acres.....	31,759	105,136	2,103	11,137	84,376	
32	1920..acres.....	25,443	34,706	3,413	13,382	64,481	
33	Increase or decrease (-), 1930-1940.....	40.8	53.7	59.1	18.1	0.8	
34 Excess, capability of works over area irrigated.....	1940..acres.....	10,716	44,057	503	3,584	18,607	
35	1930..acres.....	12,979	68,092	1,063	3,171	22,977	
36	Proportion which area irrigated is of all lands in irrigated farms.....	1939..percent.....	11.6	19.8	1.7	2.5	72.2
37	1929..percent.....	6.7	48.9	20.9	2.4	76.1	
38	Proportion which area irrigated is of area works were capable of supplying with water.....	1939..percent.....	76.0	72.7	85.0	72.8	78.1
39	1929..percent.....	59.1	35.2	49.5	71.5	72.8	
CAPITAL INVESTED TO JANUARY 1							
40 Total investment in all enterprises.....	1940..dollars.....	1,670,469	13,459,075	107,028	707,252	12,404,358	
41 (a) Cost of irrigation works and equipment.....	1940..dollars.....	1,669,851	13,414,203	106,241	707,095	12,403,572	
42 (b) Investment in water rights (reported).....	1940..dollars.....	618	44,872	787	157	786	
43 Total investment in all enterprises.....	1930..dollars.....	2,152,665	9,522,328	28,235	494,321	10,458,342	
44	1920..dollars.....	4,549,400	891,345	116,050	523,638	7,533,725	
45	Increase or decrease (-), 1930-1940.....	-22.4	41.3	279.1	42.9	18.6	
46	Average investment, based on area works were capable of supplying with water, per acre.....	1940..dollars.....	37.36	83.28	32.00	53.76	145.85
47	1930..dollars.....	67.78	90.57	13.43	44.44	123.95	
48	1920..dollars.....	178.81	25.68	34.00	39.13	117.15	
49	Average investment per acre irrigated.....	1939..dollars.....	49.14	114.49	37.66	73.89	186.70
50	Estimated final investment in existing enterprises.....	1940..dollars.....	1,627,242	23,642,390	112,588	753,323	23,505,025
51	1930..dollars.....	2,367,345	11,051,403	30,235	590,621	26,332,070	
52	1920..dollars.....	4,595,575	893,345	119,050	655,888	8,355,775	
53	Increase or decrease (-), 1930-1940.....	-22.8	113.9	272.4	27.6	-10.8	
54	Average investment, based on estimated final investment and irrigable area, per acre.....	1940..dollars.....	36.56	130.40	29.27	55.33	114.55
55	1930..dollars.....	64.47	83.60	13.17	46.65	113.10	
56	1920 ¹ ..dollars.....	112.15	13.58	16.62	38.34	64.80	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57 Enterprises reporting maintenance and operation.....	1939..number.....	Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises	
58	Area irrigated in these enterprises.....	165	217	16	26	166	1
59	Cost of maintenance and operation.....	30,601	116,597	3,765	2,243	8,766	(2)
60	Average cost, per acre irrigated.....	156,616	688,166	20,978	17,568	25,572	(2)
61	1929..dollars.....	5.12	5.86	7.83	7.83	2.92	(2)
62	Total annual charges (reported) ³	13.91	4.81	3.84	3.84	3.65	.....
63	Average annual charge per acre irrigated.....	80,654	187,825	.....	.....	18,437	450
64	Area against which charges were assessed.....	4.37	2.90	.....	.....	3.65	3.00
65	Average annual charge per acre assessed.....	19,086	86,692	.....	.....	7,213	250
66	Total charges collected ³	4.23	2.17	.....	.....	2.56	1.80
67	Indebtedness to December 31 (reported) ⁴	21,011	109,666	.....	.....	12,487	400
		137,244	10,849,403	.....	.....	94,750	2,500
WATER DELIVERED TO IRRIGATORS							
68 Enterprises reporting water delivered.....	1939..number.....	111	212	12	24	145	1
69	Area irrigated in these enterprises.....	23,681	116,540	2,238	1,935	5,783	(2)
70	Water delivered in these enterprises.....	62,115	386,546	3,630	7,365	12,216	(2)
71	Average water delivered per acre irrigated.....	2.6	3.3	1.6	3.8	2.1	(2)
72	Average cost of water per acre irrigated.....	6.46	5.15	3.69	7.91	4.03	(2)
DRAINAGE OF IRRIGATED LAND							
73 Enterprises reporting land drained or needing drainage.....	1939..number.....	.....	.....	2	.....	.....	6
74	Irrigable area in these enterprises.....	.....	.....	(2)	.....	.....	167,283
75	Irrigated area in these enterprises.....	.....	.....	(2)	.....	.....	50,696
76	Area for which drains have been installed.....	.....	.....	(2)	.....	.....	48,035
77	Additional area needing drainage.....	.....	.....	.....	.....	.....	106,040

¹Census of Agriculture. ²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - ARIZONA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

ITEM (For definitions and explanations, see text)	STATE TOTAL	Apache	Cochise	Coconino	Gila	Graham	Greenlee
FARM VALUES, 1940^a							
1 Land and buildings, all farms.....dollars..	153,676,675	5,945,776	10,580,705	6,293,728	1,207,076	7,382,308	1,102,423
2 Land and buildings, irrigated farms.....dollars..	115,309,610	2,425,407	3,958,972	831,388	572,129	6,514,898	606,683
Operated by—							
3 (a) Owners and managers.....dollars..	99,320,601	2,378,877	3,704,127	779,828	511,879	5,586,860	488,803
4 (b) Tenants.....dollars..	15,989,009	46,530	254,845	51,560	60,250	928,038	207,880
5 Average, land and buildings, per farm.....dollars..	11,152.88	2,594.02	7,672.43	3,507.97	2,243.64	11,761.01	4,613.79
6 per acre in farms.....dollars..	21.86	2.31	4.36	2.05	32.50	31.01	11.71
7 Buildings, irrigated farms reporting value.....number..	9,673	882	508	227	250	522	150
8 Total reported.....dollars..	16,497,968	389,091	733,015	193,495	158,780	739,250	169,430
9 Average, per irrigated farm reporting.....dollars..	1,705.57	441.15	1,442.94	852.40	635.12	1,416.19	1,129.47
10 per acre on all irrigated farms.....dollars..	3.13	0.37	0.81	0.48	9.02	3.52	2.85
11 Buildings, nonirrigated farms reporting value.....number..	7,587	2,146	532	1,245	243	64	85
12 Total reported.....dollars..	6,593,469	551,610	1,216,227	584,130	207,441	102,600	68,275
13 Average, per nonirrigated farm reporting.....dollars..	869.05	257.04	2,286.14	469.18	853.67	1,603.12	803.24
14 per acre on all nonirrigated farms.....dollars..	0.32	0.14	0.60	0.13	1.76	0.36	0.27
15 Implements and machinery, irrigated farms reporting value.....number..	8,031	770	493	207	147	399	139
16 Total reported.....dollars..	7,461,726	182,776	347,136	54,977	75,670	530,109	87,853
17 Average, per irrigated farm reporting.....dollars..	928.12	237.37	718.71	265.59	514.76	1,328.59	632.76
18 per acre, on all irrigated farms.....dollars..	1.41	0.17	0.38	0.14	4.30	2.52	1.48
19 Implements and machinery, nonirrigated farms reporting value.....number..	6,357	1,853	484	1,023	213	58	74
20 Total reported.....dollars..	2,499,372	269,482	398,851	472,524	89,250	53,160	36,883
21 Average, per acre, on all nonirrigated farms.....dollars..	0.12	0.07	0.20	0.11	0.76	0.19	0.14
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940.....number.....	1,912	36	361	36	71	181	62
23 .....1930.....number.....	1,271	33	311	19	76	47	48
24 .....1920.....number.....	1,388	39	328	21	83	100	69
25 Average size of enterprise based on irrigable area.....1940.....acres.....	578	913	154	88	22	209	96
26 .....1930.....acres.....	854	698	36	117	29	1,017	161
27 .....1920 ^b.....acres.....	586	707	104	97	84	419	222
28 Diversion dams.....1940.....number.....	602	66	31	13	45	40	27
29 Main canals and laterals.....1940.....length, miles.....	4,178.2	352.4	39.0	39.8	18.0	150.8	35.0
30 .....1930.....length, miles.....	3,974	156	139	33	12	216	50
31 .....1920.....length, miles.....	3,368	124	289	35	95	371	70
32 .....1940.....capacity, c.f.s. ^c	13,258	378	448	84	99	667	239
33 .....1930.....capacity, c.f.s. ^c	13,697	291	80	42	26	938	187
34 .....1920.....capacity, c.f.s. ^c	11,707	249	837	49	162	883	232
35 Pipe lines ^d.....1940.....length, miles.....	344.3	0.3	17.7	2.9	2.9	10.4	0.3
36 Storage dams.....1940.....number.....	199	31	51	19	3	11	.....
37 Reservoirs.....1940.....number.....	333	31	110	22	5	71	.....
38 .....1930.....number.....	378	27	198	4	7	46	.....
39 .....1920.....number.....	340	36	165	4	2	56	2
40 .....1940.....capacity, acre-feet.....	4,860,898	54,460	403	1,478	1,420,006	5,651	.....
41 .....1930.....capacity, acre-feet.....	3,410,975	57,905	318	603	1,367,312	1,838	.....
42 .....1920.....capacity, acre-feet.....	1,510,856	45,614	86,017	13	1	1,471	.....
43 Wells, flowing.....1940.....number.....	268	3	142	.....	1	100	.....
44 .....1930.....number.....	215	2	159	.....	.....	50	.....
45 .....1920.....number.....	310	.....	204	.....	.....	95	.....
46 .....1940.....yield, g.p.m.....	22,878	1,650	6,127	.....	(^e)	6,137	.....
47 .....1930.....yield, g.p.m.....	13,772	35	6,016	.....	.....	7,043	.....
48 .....1920.....yield, g.p.m.....	14,547	.....	9,643	.....	.....	4,054	.....
49 Wells, pumped.....1940.....number.....	1,858	4	276	3	16	118	21
50 .....1930.....number.....	1,398	.....	251	.....	13	5	2
51 .....1920.....number.....	999	2	255	.....	18	4	14
52 .....1940.....yield, g.p.m.....	2,508,337	880	97,632	250	3,685	146,681	21,585
53 .....1930.....yield, g.p.m.....	1,832,352	.....	74,902	.....	899	1,022	788
54 .....1920.....yield, g.p.m.....	1,042,590	1,000	90,531	.....	5,930	1,880	3,125
55 Pumping plants.....1940.....number.....	1,970	5	288	7	16	122	32
56 .....1930.....number.....	1,378	.....	262	.....	17	7	9
57 .....1920.....number.....	744	1	241	2	19	10	21
58 Prime movers.....1940.....capacity, hp.....	102,733	88	4,173	33	127	4,266	718
59 .....1930.....capacity, hp.....	57,633	.....	2,536	.....	129	38	67
60 .....1920.....capacity, hp.....	22,014	15	2,909	50	146	104	126
61 Pumps.....1940.....capacity, g.p.m.....	2,982,986	1,280	116,136	1,315	3,595	159,649	33,275
62 .....1930.....capacity, g.p.m.....	2,125,293	.....	80,912	.....	1,234	1,232	8,003
63 .....1920.....capacity, g.p.m.....	1,048,030	1,000	94,556	30	5,900	11,030	8,735
64 Pumping lift, from all sources.....1940.....average, feet.....	60	38	48	75	37	56	25
65 .....1930.....average, feet.....	46	.....	42	.....	49	24	22
66 .....1920.....average, feet.....	44	30	43	22	24	18	20
67 from pumped wells.....1940.....average, feet.....	62	20	48	8	37	58	31
PAY ROLL AND NUMBER OF EMPLOYEES 1939^e							
68 Enterprises reporting pay roll.....number.....	67	8	2	3	7	12	6
69 Irrigated area in these enterprises.....acres.....	515,128	9,499	(^f)	1,574	484	34,007	3,769
70 Wages and salaries paid and payable.....dollars..	1,444,641	69,770	(^f)	6,612	1,592	27,218	4,046
71 Persons employed during week ending April 29.....number..	1,546	132	(^f)	81	.....	75	7

^aCensus of Agriculture. ¹Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table I. ²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁴Includes siphons and farm pipe lines reported. ⁵Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms. ⁷Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - ARIZONA

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

ITEM (For definitions and explanations, see text)	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
FARM VALUES, 1940*								
1 Land and buildings, all farms.....dollars..	66,785,605	3,040,305	5,514,070	8,893,816	17,937,922	3,832,486	7,160,398	8,030,047
2 Land and buildings, irrigated farms.....dollars..	64,289,543	434,700	1,710,362	5,670,407	15,211,127	2,030,025	3,095,212	7,868,737
Operated by—								
3 (a) Owners and managers.....dollars..	55,774,330	402,600	1,604,700	5,038,357	11,413,912	2,002,975	2,733,412	6,899,941
4 (b) Tenants.....dollars..	8,515,213	32,100	105,662	632,050	3,797,215	27,050	361,800	968,816
5 Average, land and buildings, per farm.....dollars..	15,130.51	3,916.22	2,879.40	8,929.77	13,891.44	50,750.62	8,670.06	12,678.49
6 per acre in farms.....dollars..	137.85	2.94	3.57	19.31	25.61	12.04	8.05	85.54
Buildings, irrigated farms reporting value.....number...								
7 Total reported.....	3,974	109	525	592	970	39	353	572
8 Total reported.....dollars..	9,189,677	105,555	351,926	1,115,642	1,175,899	402,936	756,346	1,017,936
9 Average, per irrigated farm reporting.....dollars..	2,312.45	968.39	670.34	1,884.53	1,212.27	10,331.69	2,139.79	1,779.61
10 per acre on all irrigated farms.....dollars..	19.70	0.71	0.73	3.80	1.98	2.39	1.97	11.07
Buildings, nonirrigated farms reporting value.....number...								
11 Total reported.....	345	201	1,791	243	179	122	343	48
12 Total reported.....dollars..	524,005	190,400	801,172	823,498	360,750	451,226	675,690	36,445
13 Average, per nonirrigated farm reporting.....dollars..	1,518.86	947.26	447.33	3,388.88	2,015.36	3,698.57	1,969.94	753.27
14 per acre on all nonirrigated farms.....dollars..	0.80	0.08	0.25	0.95	0.38	2.23	0.53	3.10
Implements and machinery, irrigated farms reporting value.....number...								
15 Total reported.....	2,843	102	542	585	923	34	328	529
16 Total reported.....dollars..	3,213,777	76,725	176,290	392,479	1,178,049	100,641	262,267	780,877
17 Average, per irrigated farm reporting.....dollars..	1,130.42	771.81	325.26	670.90	1,276.33	2,960.03	799.59	1,476.14
18 per acre, on all irrigated farms.....dollars..	6.89	0.53	0.37	1.34	1.98	0.60	0.68	8.49
Implements and machinery, nonirrigated farms reporting value.....number...								
19 Total reported.....	211	134	1,510	219	145	103	295	35
20 Total reported.....dollars..	130,117	79,535	319,398	165,070	171,792	93,874	195,501	23,935
21 Average, per acre, on all nonirrigated farms.....dollars..	0.20	0.03	0.10	0.19	0.18	0.46	0.15	2.03
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22 Enterprises.....1940.....number.....	139	79	30	314	263	37	200	103
23 ..1930.....number.....	86	89	14	112	149	27	178	82
24 ..1920.....number.....	105	63	18	125	167	19	224	27
Average size of enterprise based on								
25 irrigable area.....1940.....acres.....	3,597	33	373	159	699	104	68	1,992
26 ..1930.....acres.....	6,546	29	654	328	887	85	71	2,841
27 ..1920 ¹.....acres.....	3,904	54	664	328	394	377	76	4,776
28 Diversion dams.....1940.....number.....	19	5	31	218	13	1	90	3
Main canals and laterals.....1940.....length, miles.....								
29 Total reported.....	2,115.1	37.0	142.1	143.3	561.0	7.0	168.6	369.1
30 ..1930.....length, miles.....	1,881	33	79	209	466	6	273	421
31 ..1920.....length, miles.....	1,324	36	73	190	244	28	170	319
32 ..1940.....capacity, c.f.s. ²	6,001	109	150	668	1,573	16	481	2,345
33 ..1930.....capacity, c.f.s. ²	7,154	102	83	381	1,264	4	500	2,645
34 ..1920.....capacity, c.f.s. ²	6,371	46	94	449	940	102	482	801
35 Pipe lines ³.....1940.....length, miles.....	161.3	2.2	0.9	62.0	52.2	3.5	8.9	18.8
Storage dams.....1940.....number.....								
36 Total reported.....	6	1	8	34	5	9	21	.....
Reservoirs.....1940.....number.....								
37 Total reported.....	6	2	9	39	6	9	22	1
38 ..1930.....number.....	11	16	11	7	3	.....	43	5
39 ..1920.....number.....	5	5	8	18	9	6	23	1
40 ..1940.....capacity, acre-feet.....	2,156,500	(⁴)	10,952	122	1,200,137	51	11,134	(⁴)
41 ..1930.....capacity, acre-feet.....	740,205	18	15,990	21,926	1,200,002	.....	4,817	41
42 ..1920.....capacity, acre-feet.....	1,367,305	338	2,410	360	57	51	7,209	10
Wells, flowing.....1940.....number.....								
43 Total reported.....	.....	.....	10	.....	.....	.....	12	.....
44 ..1930.....number.....	1	2	.....	.....	1	.....	.....	.....
45 ..1920.....number.....	.....	.....	2	6	1	.....	2	.....
46 ..1940.....yield, g.p.m.....	.....	.....	2,350	.....	.....	.....	6,566	.....
47 ..1930.....yield, g.p.m.....	150	28	.....	.....	500	.....	.....	.....
48 ..1920.....yield, g.p.m.....	.....	.....	.....	350	500	.....	.....	.....
Wells, pumped.....1940.....number.....								
49 Total reported.....	506	22	12	193	446	51	73	117
50 ..1930.....number.....	538	38	.....	169	203	21	61	97
51 ..1920.....number.....	238	11	1	248	136	16	26	30
52 ..1940.....yield, g.p.m.....	1,070,032	9,316	3,895	145,367	725,506	55,423	32,775	195,310
53 ..1930.....yield, g.p.m.....	1,146,898	8,941	.....	107,136	298,941	21,900	10,278	160,647
54 ..1920.....yield, g.p.m.....	288,339	1,515	.....	456,766	149,099	15,600	5,460	23,345
Pumping plants.....1940.....number.....								
55 Total reported.....	519	27	17	199	459	51	88	140
56 ..1930.....number.....	496	40	.....	135	210	21	73	108
57 ..1920.....number.....	95	11	1	136	124	14	36	33
58 Prime movers.....1940.....capacity, hp.....	46,236	392	250	5,219	33,120	1,053	1,248	5,810
59 ..1930.....capacity, hp.....	32,327	539	.....	5,122	10,287	254	637	5,697
60 ..1920.....capacity, hp.....	7,945	90	.....	3,980	4,940	343	191	1,165
61 Pumps.....1940.....capacity, g.p.m.....	1,227,027	12,368	8,000	154,977	785,018	59,843	41,299	389,210
62 ..1930.....capacity, g.p.m.....	1,233,211	15,194	.....	63,896	289,621	15,950	18,280	387,700
63 ..1920.....capacity, g.p.m.....	243,334	1,790	.....	408,581	148,924	15,200	6,005	102,945
Pumping lift, from all sources.....1940.....average, feet.....								
64 Total reported.....	95	22	33	65	89	35	32	35
65 ..1930.....average, feet.....	72	40	.....	43	59	24	28	40
66 ..1920.....average, feet.....	72	20	.....	38	48	25	37	29
67 from pumped wells.....1940.....average, feet.....	95	25	32	67	90	36	32	39
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁵								
68 Enterprises reporting pay roll.....number.....	12	.....	8	3	⁶ 2	.....	6	1
69 Irrigated area in these enterprises.....acres.....	316,463	.....	6,598	14,814	64,148	.....	3,230	59,342
70 Wages and salaries paid and payable.....dollars..	998,774	.....	41,212	19,327	36,315	.....	4,615	225,207
71 Persons employed during week ending April 29.....number.....	623	.....	62	22	133	.....	39	155

*Census of Agriculture. ¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ³Includes siphons and farm pipe lines reported. ⁴Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁵Pay roll and number of employees reported only by enterprises serving 5 or more farms. ⁶Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION—ARKANSAS

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	*33,744,000	33,616,000	33,616,000	33,616,000	33,616,000	33,616,000	33,616,000
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	216,674	253,013	242,334	232,604	214,678	178,694	124,760
Land in all farms.....acres....	18,044,542	17,741,627	16,052,962	17,456,750	17,416,075	16,636,719	14,881,356
Farms irrigated: ¹							
Farms.....number...	1,529	1,284	1,096	1,166	232	20	(²)
Increase or decrease (-) over preceding census.....percent..	³ 39.5	.....	-6.0	402.6	(⁴)	(⁵)	.....
Proportion of all farms.....percent..	0.7	0.5	0.5	0.5	0.1	(⁶)	(⁷)
Land in farms.....acres....	592,920	(²)	363,549	(²)	(²)	(²)	(²)
Proportion of all farm land.....percent..	3.3	(²)	2.3	(²)	(²)	(²)	(²)
Area irrigated.....acres....	⁸ 159,412	⁷ 135,179	⁸ 146,910	(⁹)	(⁶)	25	⁹
Increase or decrease (-) over preceding census.....percent..	³ 8.5	.....	.....	.....	.....	177.8	.....
Proportion of total land area of State.....percent..	0.5	0.4	0.4	.....	.....	(⁵)	(⁵)
Proportion of all farm land.....percent..	0.9	0.8	0.9	.....	.....	(⁵)	(⁵)
Value of irrigated farms (land and buildings).....dollars..	17,067,803	(²)	16,002,854	(²)	(²)	(²)	(²)
Average per farm.....dollars..	11,162.72	(²)	14,601.14	(²)	(²)	(²)	(²)
Average per acre.....dollars..	28.79	(²)	44.02	(²)	(²)	(²)	(²)
Value of farm implements and machinery ¹⁰.....dollars..	3,417,847	(²)	2,414,628	(²)	(²)	(²)	(²)
Average per farm ¹⁰.....dollars..	2,235.35	(²)	2,203.13	(²)	(²)	(²)	(²)
Average per acre ¹⁰.....dollars..	5.76	(²)	6.64	(²)	(²)	(²)	(²)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	1,298	(²)	1,043	944	310	(²)	(²)
Farms irrigated.....number...	1,474	(²)	(²)	(²)	(²)	(²)	(²)
Area irrigated.....acres....	161,501	(²)	151,787	143,946	27,753	(²)	(²)
Area existing works were capable of supplying with water.....acres....	287,765	(²)	209,942	179,013	47,136	(²)	(²)
Area irrigable.....acres....	314,929	(²)	225,992	¹¹ 246,480	¹¹ 52,863	(²)	(²)
Additional area existing works were capable of supplying with water.....acres....	126,164	(²)	58,155	35,067	19,383	(²)	(²)
Additional irrigable area in enterprises not supplied with water.....acres....	153,328	(²)	74,205	¹¹ 102,534	¹¹ 25,130	(²)	(²)
Investment in irrigation enterprises.....dollars..	5,766,895	(²)	6,836,648	7,183,322	537,934	(²)	(²)
Increase or decrease (-) over preceding census.....percent..	³ -15.6	(²)	-4.8	(²)	.....	.....	.....
Average per acre based on area works were capable of supplying with water.....dollars..	20.04	(²)	32.56	40.13	12.47	(²)	(²)
Increase or decrease (-) over preceding census.....percent..	³ -38.4	(²)	-18.9	.....	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	5,878,930	(²)	6,844,092	7,283,522	612,834	(²)	(²)
Average per acre based on irrigable area in enterprises.....dollars..	18.67	(²)	30.28	¹¹ 29.55	¹¹ 11.59	(²)	(²)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	5.46	(²)	7.03	13.67	(²)	(²)	(²)

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Not available. ³Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁴Percent not shown when more than 1,000. ⁵Less than one-tenth of 1 percent. ⁶Irrigated land from which crops were harvested plus 2,314 acres of irrigated land used only for pasture. ⁷Irrigated land from which crops were harvested. ⁸Area of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁹Data were secured for crops irrigated but the returns were considered relatively incomplete. ¹⁰Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹¹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹²The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			Irrigated pasture 1939	VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Total		Average per acre ²	Total	Average per acre ²	Total	Average per acre ²	
												Number
All farms.....	216,674	18,044,542	6,609,833	157,098	2,314	456,848,156	25.32	116,313,548	6.45	37,416,663	2.07	
Owners and managers.....	101,232	11,322,606	3,514,836	97,619	1,882	266,260,057	23.52	75,144,012	6.64	24,314,521	2.15	
Tenants.....	115,442	6,721,936	3,094,997	59,479	432	190,588,099	28.35	41,169,536	6.12	13,102,142	1.95	
Irrigated farms, total.....	1,529	592,920	276,440	157,098	2,314	17,067,803	28.79	3,211,708	5.42	3,417,847	5.76	
Owners and managers.....	958	394,572	182,619	97,619	1,882	11,711,544	29.68	2,342,453	5.94	2,365,355	5.99	
Tenants.....	571	198,348	93,821	59,479	432	5,356,259	27.00	869,255	4.38	1,052,492	5.31	
Wholly irrigated farms.....	245	55,705	25,539	25,539	545	1,552,234	27.87	227,550	4.08	491,980	8.83	
Owners and managers.....	115	29,130	11,054	11,054	417	832,640	28.58	136,925	4.70	262,180	9.00	
Tenants.....	130	26,575	14,485	14,485	128	719,594	27.08	90,625	3.41	229,800	8.85	
Partly irrigated farms.....	1,284	537,215	250,901	131,559	1,769	15,515,569	28.88	2,984,158	5.55	2,925,867	5.45	
Owners and managers.....	843	365,442	171,565	86,565	1,465	10,878,904	29.77	2,205,528	6.04	2,100,175	5.76	
Tenants.....	441	171,773	79,336	44,994	304	4,636,665	26.99	778,630	4.53	822,692	4.79	
Nonirrigated farms, total.....	215,145	17,451,622	6,333,393	.....	.....	439,780,353	25.20	113,101,840	6.48	33,998,816	1.95

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919 ¹	Increase or decrease (-) 1929-39	Irrigated area reporting—			Cost ²		
								Quantity	Cost	Quantity and cost	Quantity delivered per acre ²	Per acre	Per acre- foot
Total.....	Number 1,298	Acres 314,929	Acres 287,795	Acres 161,601	Acres 151,787	Acres 143,946	Percent 6.5	Acres 158,767	Acres 153,346	Acres 150,940	Acres-foot 2.8	Dollars 5.43	Dollars 1.95
Primary sources:													
Streams, gravity.....						120							
Streams, pumped.....	45	15,006	10,946	6,733	1,502	6,009	348.3	5,003	6,333	4,603	2.4	4.79	1.97
Streams, gravity and pumped.....	1	(³)	(³)	(³)				(³)	(³)	(³)	(³)	(³)	(³)
Wells, pumped.....	1,223	288,343	268,145	149,915	142,978	135,260	4.9	148,811	142,140	141,464	2.8	5.51	1.98
Wells, flowing.....													
Wells, pumped and flowing.....													
Lakes, gravity.....													
Lakes, pumped.....	3	361	361	134	75	450	78.7	134	134	134	1.7	5.67	3.41
Springs.....													
Springs and streams.....													
Stored storm water.....	1	(³)	(³)	(³)		440		(³)					
City water.....													
Sewage.....													
Streams, gravity; wells, pumped...	3	729	729	479		250		479	479	479	3.2	1.36	0.43
Streams, gravity; wells, flowing.....													
Streams, pumped; wells, pumped.....	13	8,320	5,714	3,330				3,330	3,330	3,330	3.0	4.09	1.37
Waste water, seepage or drainage.....	1	(³)	(³)	(³)				(³)	(³)	(³)	(³)	(³)	(³)
Other mixed.....	3	1,210	1,210	623	6,750	1,817	-90.8	623	623	623	2.8	2.25	0.80
Other and not reported.....					482								
Supplemental sources:⁵													
Streams, gravity and/or storage.....	1	(³)	(³)	(³)				(³)	(³)	(³)	(³)	(³)	(³)
Streams, pumped.....	4	1,216	1,216	302				192	192	192	2.8	4.69	1.70
Wells, pumped.....													
Wells, flowing.....													

¹Rice irrigation only. ²Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost of water had used the same quantity of water per acre as all enterprises which reported water delivered. ³Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁴In reservoirs filled from channels which carry water only during storms and are not classed as streams. ⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
Total.....	Dollars 5,766,895	Percent 100.0	Dollars 20.04	Dollars 6,836,648	Percent 100.0	Dollars 32.56	Dollars -12.52	Acres 153,346	Dollars 5.46	Acres 147,921	Dollars 7.03	Dollars -1.57	Acres 99,255	Dollars 13.67
Primary sources:														
Streams, gravity.....														
Streams, pumped.....	145,077	2.5	13.25	30,675	0.5	17.86	-4.61	6,333	5.07	1,502	6.27	-1.20	3,309	7.06
Streams, gravity and pumped.....	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
Wells, pumped.....	5,414,533	93.9	20.19	6,640,773	97.1	33.23	-13.04	142,140	5.53	139,594	7.04	-1.51	93,471	14.06
Wells, flowing.....														
Wells, pumped and flowing.....														
Lakes, gravity.....														
Lakes, pumped.....	2,725	(⁴)	7.55	1,900	(⁴)	9.50	-1.95	134	5.67	75	3.49	2.18	450	11.78
Springs.....														
Springs and streams.....														
Stored storm water.....	(³)	(³)	(³)										40	10.00
City water.....														
Sewage.....														
Streams, gravity; wells, pumped...	7,200	0.1	9.88					479	1.36				170	30.15
Streams, gravity; wells, flowing.....														
Streams, pumped; wells, pumped.....	121,410	2.1	21.25					3,330	4.09					
Waste water, seepage or drainage.....	(³)	(³)	(³)					(³)	(³)					
Other mixed.....	29,000	0.5	23.97	151,250	2.2	19.66	4.31	623	2.25	6,750	6.99	-4.74	1,815	4.16
Other and not reported.....				12,050	0.2	25.00								
Supplemental sources:⁵														
Streams, gravity and/or storage.....	(³)	(³)	(³)					(³)	(³)					
Streams, pumped.....	14,500	0.3	11.92					192	4.69					
Wells, pumped.....														
Wells, flowing.....														

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁴Less than one-tenth of 1 percent. ⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ⁶Data are not shown because less than 3 enterprises reported.

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930				1940		1930		
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED	Acres	Acres	Acres	Acres	Percent	IRRIGABLE AREA ³	Acres	Acres	Acres	Acres	Percent
Total.....	161,601	341	151,787	143,946	6.5	Total.....	314,929	1,266	225,992	246,480	39.4
Individual and partnership....	158,750	341	145,487	140,471	9.1	Individual and partnership....	310,689	1,266	218,992	242,380	41.9
Cooperative, incorporated....	(2)			1,075		Cooperative, incorporated....	(2)			1,500	
Cooperative, unincorporated....	(2)		6,300	2,400	(2)	Cooperative, unincorporated....	(2)		7,000	2,600	(2)
Commercial.....						Commercial.....					
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER											
Total.....	287,765	1,266	209,942	179,013	37.1						
Individual and partnership....	283,525	1,266	203,442	175,338	30.4						
Cooperative, incorporated....	(2)			1,275							
Cooperative, unincorporated....	(2)		6,500	2,400	(2)						
Commercial.....											

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ³For 1920 relates to total area. Irrigable area for that year was not reported.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 1,298	Number 8	Acres 314,929	Acres 287,765	Dollars 19.99	Dollars 5.45	Dollars 11.73	Dollars 5.20	Number 1,474	Acres 161,601	Acres 158,833	Acres 133	Acres 2,635
Individual and partnership....	1,294	6	310,689	283,525	20.09	5.41	11.73	5.20	1,443	158,750	155,992	133	2,635
Cooperative, incorporated....	2		(4)	(4)	(4)	(4)			(4)	(4)	(4)		
Cooperative, unincorporated....	2		(4)	(4)	(4)	(4)			(4)	(4)	(4)		
Commercial.....	2	2	(4)	(4)	(4)	(4)			(4)	(4)	(4)		

¹Reported by enterprises in the Census of Irrigation, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works	
	1940				1930				Increase or decrease (-) 1930-40	Primary enterprises			Supplemental enterprises
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment	Investment in water rights	1930	1920 ²						
Total.....	Dollars 5,766,895	Dollars 5,752,045	Dollars 14,850	Dollars 5,766,895	Dollars	Dollars 6,836,648	Dollars 7,183,322	Percent -15.6	Dollars 19.99	Dollars 11.73	Dollars 640	Dollars 112,035	
Individual and partnership....	5,711,895	5,697,045	14,850	5,711,895	.....	6,711,648	7,073,297	-14.9	20.09	11.73	640	112,035
Cooperative, incorporated....	(3)	(3)	.....	(3)	.....	.....	60,013	.....	(3)	.....	.....	.....
Cooperative, unincorporated....	(3)	(3)	.....	(3)	.....	.....	50,012	(3)	(3)	.....	.....	.....
Commercial.....	(3)	(3)	.....	(3)	.....	125,000	50,012	(3)	(3)	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Rice irrigation only. ³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enterprises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939	Average per acre works were capable of supplying with water	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939	
		Irrigable 1940	Works were capable of supplying with water 1940				Enterprises 1940	Dec. 31 1939					Dec. 31 1938
Total.....	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres 4,879	Dollars 34,409	Dollars 23,818
Partnership.....	(3)	(3)	(3)
Cooperative, incorporated....
Cooperative, unincorporated....
Commercial.....	(3)	(3)	(3)

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

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STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
Total.....	Acres 153,346	Dollars 635,891	Acres 231	Dollars 1,201	Dollars 5.45	Dollars 5.20	Number 6	Dollars 12,623	Number 44
Individual and partnership.....	150,495	814,077	231	1,201	5.41	5.20	4	(²)	(²)
Cooperative, incorporated.....	(²)	(²)			(²)				
Cooperative, unincorporated.....	(²)	(²)			(²)				(²)
Commercial.....	(²)	(²)			(²)		2	(²)	(²)

¹Only for enterprises serving 5 or more farms.

²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capac-ity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
Total.....	Number 6	Number 27	Sec.-ft. 270	Miles 74	Miles 3.9	24	Ac.-ft. 31,992	Miles 13.0	.....	G.p.m.	1,534	G.p.m. 1,812,647	1,633	Hp. 76,048	1,633	G.d.m. 2,013,697
Individual and partnership.....	5	22	210	56	3.9	22	29,942	13.0	.....	.....	1,532	1,810,447	1,622	75,213	1,623	1,965,997
Cooperative, incorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2,200	2	120	2	2,200
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	715	8	45,500
Commercial.....	1	5	60	18	.....	2	2,050	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches.

²Includes flumes.

STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930	
	Diver-sion	Storage	Diver-sion	Storage
	Number	Number	Number	Number
Total.....	6	27	1	6
Concrete or masonry.....	.....	.....	.....	.....
Timber.....	1	.....	1	.....
Earth and rock.....	4	21	.....	6
Other and mixed.....	1	1	.....	.....
Not reported.....	.....	5	.....	.....

¹Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED				
						Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity	
Total, 1940.....	Number 1,633	Percent 100.0	G.p.m. 2,013,697	Percent 100.0	Feet 61	Total, 1940.....	Number 1,633	Percent 100.0	Hp. 76,048	Percent 100.0
Electric motor.....	560	34.3	632,117	31.4	66	Centrifugal pump.....	1,417	86.8	67,815	89.2
Centrifugal.....	489	30.0	532,017	26.5	69	Electric.....	568	34.8	22,063	29.0
Turbine.....	67	4.1	95,700	4.7	40	Internal-combustion.....	834	51.1	45,077	59.3
Plunger.....	.....	.....	.....	.....	.....	Other.....	15	0.9	675	0.9
Other.....	4	0.2	4,400	0.2	100	Turbine pump.....	147	9.0	5,749	7.6
Internal-combustion engine.....	870	53.3	1,142,543	56.7	58	Electric.....	61	3.7	2,133	2.8
Centrifugal.....	705	46.8	986,951	49.0	60	Internal-combustion.....	83	5.1	3,461	4.6
Turbine.....	68	5.4	137,090	6.8	42	Other.....	3	0.2	135	0.2
Plunger.....	1	0.1	2	(¹)	50	Plunger pump.....	1	0.1	1	(¹)
Other.....	16	1.0	18,500	0.9	50	Electric.....	.....	.....	.....	.....
Other kinds of motive power.....	12	0.7	17,400	0.9	42	Internal-combustion.....	1	0.1	1	(¹)
Centrifugal.....	6	0.4	7,900	0.4	41	Other.....	.....	.....	.....	.....
Turbine.....	4	0.2	7,700	0.4	34	Other and mixed types of pumps.....	68	4.1	2,483	3.2
Plunger.....	.....	.....	.....	.....	.....	Electric.....	25	1.5	949	1.2
Other.....	2	0.1	1,800	0.1	55	Internal-combustion.....	40	2.4	1,444	1.9
Mixed kinds of motive power.....	191	11.7	221,637	11.0	67	Other.....	3	0.2	90	0.1
Centrifugal.....	179	11.0	210,337	10.4	69	Total, 1930.....	² 1,184	.....	66,980	.....
Turbine.....	7	0.4	5,800	0.3	47	Increase or decrease (-) 1930-1940.....	449	.....	9,068	.....
Plunger.....	.....	.....	.....	.....	.....
Other.....	5	0.3	5,500	0.3	45					
Total, 1930.....	1,206	.....	1,775,788	.....	68					
Increase or decrease (-) 1930-1940..	427	237,909	-7					

¹Less than one-tenth of 1 percent.

²Number of pumping plants.

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STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²	
	Miles	Miles	Percent ³
Total.....	13.0	1.0	
Concrete:			
1 to 12 inches.....			
13 to 24 inches.....			
Over 24 inches.....			
Metal:			
1 to 12 inches.....	3.2	0.9	255.6
13 to 24 inches.....			
Over 24 inches.....	0.2	0.1	100.0
Wood-stave:			
1 to 12 inches.....			
13 to 24 inches.....			
Over 24 inches.....			
Clay and other:			
1 to 12 inches.....	9.6		
13 to 24 inches.....			
Over 24 inches.....			

¹Includes siphons and farm pipe lines reported. ²Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census. ³Percent not shown when more than 1,000.

STATE TABLE 14—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number...	96	597	134
Area irrigable in these enterprises.....acres...	34,894	124,799	¹ 37,574
Area irrigated in these enterprises.....acres...	14,700	(²)	(²)
Area for which drains have been installed.....acres...	26,078	107,601	27,350
Additional area needing drainage.....acres...	2,016	1,873	2,821
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	177.4	³ 86.2	¹ 72.8
(b) All irrigation enterprises.....percent..	16.1	70.9	19.00
Ratio of area drained plus area needing drainage to—			
(a) Irrigable area reporting.....percent..	80.5	(²)	(²)
(b) Irrigated area reporting.....percent..	191.1		¹ 80.3

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ²Not available. ³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED			NOT MEASURED		
	1939	1929 ¹	1919 ²	1939 ¹	1929 ¹	1919 ²	1939	1929 ¹	1919 ²
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,172		50,859				2,172		50,859
Area irrigated by these enterprises.....acres.....	1,082		12,720				1,082		12,720
Average water per acre irrigated.....acre-feet..	2.0		4.0				2.0		4.0
Total water delivered to irrigators.....acre-feet..	21,060		13,089				21,060		13,089
Area irrigated by these enterprises.....acres.....	8,135		5,189				8,135		5,189
Average water per acre irrigated.....acre-feet..	2.6		2.5				2.6		2.5
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	420,229						420,229		
Area irrigated by these enterprises.....acres.....	150,632						150,632		
Average water per acre irrigated.....acre-feet..	2.8						2.8		
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..									
Area irrigated by these enterprises.....acres.....									
Average water per acre irrigated.....acre-feet..									
Total water delivered to irrigators.....acre-feet..	28						28		
Area irrigated by these enterprises.....acres.....	39						39		
Average water per acre irrigated.....acre-feet..	0.7						0.7		
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	528						528		
Area irrigated by these enterprises.....acres.....	192						192		
Average water per acre irrigated.....acre-feet..	2.8						2.8		

¹Not reported. ²Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1919.

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STATE TABLE 16.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS			
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms
1	Enterprises, 1940.....number...	1,293	21	1,142	122	8
2	Irrigated farms, 1939.....number...	1,474		1,142	264	68
3	Area irrigated, 1939.....acres.....	161,601		135,687	21,035	4,879
4	(a) From which crops were harvested.....acres.....	158,633		133,213	20,791	4,829
5	(b) On which crops failed.....acres.....	133		133		
6	(c) Irrigated pasture.....acres.....	2,635		2,341	244	50
CAPITAL INVESTMENT, 1940						
7	Total capital investment in all enterprises.....dollars..	5,752,045	47,800	4,930,198	668,670	105,377
8	(a) Cost of irrigation works and equipment.....dollars..	5,752,045	47,800	4,930,198	668,670	105,377
9	(b) Investment in water rights.....dollars.....					
10	Area works were capable of supplying with water.....acres.....	287,765	3,534	244,907	32,474	6,850
11	Average investment per acre irrigated.....dollars.....	35.59		36.34	31.79	21.60
12	Average investment per acre which the works could supply with water.....dollars..	19.99	13.53	20.13	20.59	15.38
MAINTENANCE AND OPERATION, AND CHARGES, 1939						
13	Enterprises reporting maintenance and operation.....number...	1,228	18	1,064	118	8
14	(a) Area irrigated in these enterprises.....acres.....	153,346		127,943	20,524	4,879
15	(b) Cost of maintenance and operation.....dollars.....	835,891	18	724,445	84,975	26,453
16	(c) Average cost per irrigated acre reporting.....dollars..	5.45		5.66	4.14	5.42
17	Total annual charges ².....dollars.....	34,409				34,409
18	Average charge per irrigated acre reporting.....dollars..	7.05				7.05
19	Area against which charges were assessed.....acres.....	4,879				4,879
20	Average annual charge per acre assessed.....dollars.....	7.05				7.05
21	Total charges collected ².....dollars.....	23,818				23,818
TYPE, 1940						
22	Individual and partnership.....number.....	1,269	21	1,140	122	6
23	Cooperative (incorporated and unincorporated).....number.....	2		2		
24	Commercial.....number.....	2				2
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939						
25	Enterprises reporting pay roll.....number.....	6				6
26	Wages and salaries paid and payable for 1939.....dollars..	12,823				12,823
27	Persons employed during week ending April 29, 1939.....number..	44				44
SOURCE OF WATER SUPPLY, 1939						
28	Streams, gravity.....number.....					
29	Streams, pumped.....number.....	45		34	7	4
30	Wells, pumped.....number.....	1,223	21	1,091	108	3
31	Wells, pumped and flowing; or wells flowing.....number.....					
32	Lakes, gravity or pumped.....number.....	3		3		
33	Streams and springs; or springs.....number.....					
34	Mixed, streams and wells.....number.....	17		10	6	1
35	Other mixed or stored storm water.....number.....	5		4	1	
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)						
IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms
1	Enterprises, 1940.....number...	5	5			
2	Irrigated farms, 1939.....number.....	4	4			
3	Area irrigated, 1939.....acres.....	341	341			
CAPITAL INVESTMENT, 1940						
4	Total capital investment in all enterprises.....dollars..	14,850	14,850			
5	(a) Cost of irrigation works and equipment.....dollars..	14,850	14,850			
6	(b) Investment in water rights.....dollars.....					
7	Area works were capable of supplying with water.....acres.....	1,266	1,266			
8	Average investment per acre irrigated.....dollars.....	43.55	43.55			
9	Average investment per acre which the works could supply with water.....dollars..	11.73	11.73			
MAINTENANCE AND OPERATION, AND CHARGES, 1939						
10	Enterprises reporting maintenance and operation.....number...	3	3			
11	(a) Area irrigated in these enterprises.....acres.....	231	231			
12	(b) Cost of maintenance and operation.....dollars.....	1,201	1,201			
13	(c) Average cost per irrigated acre reporting.....dollars..	5.20	5.20			
TYPE, 1940						
14	Individual and partnership.....number.....	5	5			
15	Cooperative (incorporated and unincorporated).....number.....					
16	Commercial.....number.....					
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939						
17	Streams, pumped.....number.....	1	1			
18	Wells, pumped or flowing.....number.....	4	4			
19	Streams, gravity or storage.....number.....					

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION - ARKANSAS

STATE TABLE 16.-ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940-Continued

PRIMARY ENTERPRISES (For definitions and explanations, see text)		ACRES IRRIGATED			COST OF IRRIGATION WORKS AND EQUIPMENT			
		No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999
1	Enterprises, 1940.....number...	21	575	633	64	872	372	49
2	Irrigated farms, 1939.....number...		615	724	135	948	430	96
3	Area irrigated, 1939.....acres.....		35,877	97,358	23,360	89,244	56,746	15,611
4	(a) From which crops were harvested.....acres.....		35,651	95,908	27,274	87,045	55,762	15,426
5	(b) On which crops failed.....acres.....		38	95	.....	100	18	15
6	(c) Irrigated pasture.....acres.....		188	1,355	1,092	1,499	966	170
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	47,800	1,671,712	3,350,200	682,333	1,908,335	2,890,865	952,845
8	(a) Cost of irrigation works and equipment.....dollars..	47,800	1,671,712	3,350,200	682,333	1,908,335	2,890,865	952,845
9	(b) Investment in water rights.....dollars.....							
10	Area works were capable of supplying with water.....acres..	3,534	79,904	164,378	39,949	164,118	96,992	26,655
11	Average investment per acre irrigated.....dollars.....		46.60	34.41	24.05	21.38	50.94	61.04
12	Average investment per acre which the works could supply with water.....dollars..	13.63	20.92	20.38	17.08	11.63	29.81	35.75
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number...	18	547	604	59	817	363	48
14	(a) Area irrigated in these enterprises.....acres.....		34,103	92,963	26,280	83,162	54,888	15,296
15	(b) Cost of maintenance and operation.....dollars.....	18	237,755	496,518	101,600	448,883	303,562	83,446
16	(c) Average cost per irrigated acre reporting.....dollars..		6.97	5.34	3.87	5.40	5.53	5.46
17	Total annual charges ².....dollars.....			1,810	32,599	1,090	3,895	29,424
18	Average charge per irrigated acre reporting.....dollars..			3.13	7.58	3.67	2.69	9.39
19	Area against which charges were assessed.....acres.....			579	4,300	297	1,447	3,135
20	Average annual charge per acre assessed.....dollars.....			3.13	7.58	3.67	2.69	9.39
21	Total charges collected ².....dollars.....				23,818		2,175	21,643
TYPE, 1940								
22	Individual and partnership.....number.....	21	574	632	62	870	372	47
23	Cooperative (incorporated and unincorporated).....number...		1	1	.....	2	.....	.....
24	Commercial.....number.....				2	.....	.....	2
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
25	Enterprises reporting pay roll.....number.....			2	4	2	1	3
26	Wages and salaries paid and payable for 1939.....dollars..			12,823		4,040		8,783
27	Persons employed during week ending April 29, 1939.....number...			44		26		18
SOURCE OF WATER SUPPLY, 1939								
28	Streams, gravity.....number.....							
29	Streams, pumped.....number.....		34	4	7	39	2	4
30	Wells, pumped.....number.....	21	534	616	52	820	363	40
31	Wells, pumped and flowing; or wells flowing.....number.....							
32	Lakes, gravity or pumped.....number.....		2	1	.....	3	.....	.....
33	Streams and springs; or springs.....number.....							
34	Mixed, streams and wells.....number.....		3	10	4	7	6	4
35	Other mixed or stored storm water.....number.....		2	2	1	3	1	1

SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		ACRES IRRIGATED			COST OF IRRIGATION WORKS AND EQUIPMENT			
		No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999
1	Enterprises, 1940.....number...	5				5		
2	Irrigated farms, 1939.....number...	4				4		
3	Area irrigated, 1939.....acres.....		341			341		
CAPITAL INVESTMENT, 1940								
4	Total capital investment in all enterprises.....dollars..	14,850				14,850		
5	(a) Cost of irrigation works and equipment.....dollars..	14,850				14,850		
6	(b) Investment in water rights.....dollars.....							
7	Area works were capable of supplying with water.....acres..	1,266				1,266		
8	Average investment per acre irrigated.....dollars.....	43.55				43.55		
9	Average investment per acre which the works could supply with water.....dollars..	11.73				11.73		
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
10	Enterprises reporting maintenance and operation.....number...	3				3		
11	(a) Area irrigated in these enterprises.....acres.....		231			231		
12	(b) Cost of maintenance and operation.....dollars.....		1,201			1,201		
13	(c) Average cost per irrigated acre reporting.....dollars..		5.20			5.20		
TYPE, 1940								
14	Individual and partnership.....number.....	3		2		4	1	
15	Cooperative (incorporated and unincorporated).....number...							
16	Commercial.....number.....							
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939								
17	Streams, pumped.....number.....	1				1		
18	Wells, pumped or flowing.....number.....	2		2			1	
19	Streams, gravity or storage.....number.....					3		

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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STATE TABLE 17.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.—Dec.		Jan.—Mar.		Apr.—June		July—Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Arkansas River														
Sallisaw, Okla.....	Sequoyah.....	Feet 531	Inches 31.82	Inches -11.05	Inches 6.75	Inches -3.07	Inches 9.27	Inches +0.77	Inches 12.33	Inches -2.42	Inches 3.47	Inches -6.33	Degrees F. 63.5	Degrees F. +1.5
Fayetteville Exp.....	Washington...	1,451	35.47	-8.83	7.13	-2.14	9.78	+0.88	15.97	+1.34	2.59	-8.91	61.1	+2.2
Lutherville.....	Johnson.....	775	65.14	+16.65	12.29	+0.94	19.68	+8.66	18.11	+3.50	15.06	+3.55	62.2	+1.6
Cotter.....	Baxter.....	440	49.30	+7.00	12.95	+3.37	13.82	+4.68	17.65	+4.00	4.88	-5.05	(?)	(?)
Pine Bluff.....	Jefferson.....	215	66.26	+14.43	8.93	-3.93	29.35	+15.08	22.62	+8.52	5.36	-5.24	65.1	+1.6
Pocahontas.....	Randolph.....	309	50.28	+0.32	9.81	-1.17	15.48	+3.23	14.80	+0.71	10.19	-2.45	61.2	+1.0
Searcy.....	White.....	245	63.74	+17.14	12.87	+1.61	21.51	+9.33	18.04	+5.27	11.32	+0.93	63.0	+1.6
Stuttgart.....	Arkansas.....	214	62.20	+11.80	6.97	-5.42	28.23	+14.22	17.34	+3.67	9.66	-0.67	63.7	+1.3
Red River														
Antlers, Okla.....	Pushmataha...	511	39.92	-4.90	5.89	-4.82	11.71	+2.47	17.24	+2.19	5.08	-4.74	65.1	+1.9
Idabel, Okla.....	McCurain.....	504	39.91	-5.09	5.61	-5.01	15.68	+4.39	14.23	-0.06	4.39	-4.41	64.8	+0.9
Fulton.....	Hempstead...	260	46.91	+0.85	9.30	-1.28	22.10	+9.70	8.24	-5.24	7.27	-2.33	(?)	(?)
Magnolia.....	Columbia.....	315	49.78	+2.34	12.35	+0.18	22.40	+9.59	8.30	-4.77	6.67	-2.66	66.8	+1.6
Ouachita River														
Mena.....	Polk.....	1,207	48.59	-3.58	8.69	-2.98	13.81	+2.32	16.38	-0.57	9.71	-2.35	63.7	+3.3
Jessieville.....	Garland.....	750	65.80	+13.84	14.35	+1.78	15.69	+2.25	22.29	+6.45	13.47	+3.35	(?)	(?)
Warren.....	Bradley.....	206	57.22	+4.54	7.65	-5.84	24.80	+10.54	16.81	+3.22	7.96	-3.38	65.4	+1.5
Portland.....	Ashley.....	122	47.99	-2.34	7.73	-5.22	25.86	+11.83	9.02	-4.53	5.38	-4.42	64.4	-0.2
St. Francis River														
St. Francis.....	Clay.....	290	55.25	+2.60	8.58	-3.59	22.42	+7.45	14.66	+2.67	9.59	-3.93	(?)	(?)
Marked Tree.....	Poinsett.....	229	57.39	+7.26	6.43	-6.31	23.55	+9.15	19.56	+6.66	7.85	-2.24	61.2	+0.6
Marianna.....	Lee.....	235	45.45	-2.13	4.19	-7.35	21.68	+8.18	13.03	+0.73	6.55	-3.69	63.7	+1.3

¹Departure from normal.

²Not available.

Precipitation in Arkansas during both the calendar year (1939) and the water year (October 1938 through September 1939) as reported by the United States Weather Bureau, was substantially above normal. However, drought conditions which prevailed during September and October 1939 were decidedly unfavorable for vegetation, especially late corn, meadows, pastures, potatoes, and truck. The scarcity of water for stock became a problem in most western and northern counties during this period. The Weather Bureau reports further:

"Monthly precipitation averages were above the 35-year normal in January, February, April and June. The average for the year was 50.16 inches which is 1.91 inches above the 49-year average. The greatest annual amount was 66.68 inches at Pine Bluff, while the least annual amount was 33.26 inches recorded at Fort Smith. The greatest monthly amount was 16.69 inches recorded at Pine Bluff in February, while the least monthly amount was 0.00 at Plantersville for October. February and June were noted for frequent rainy days. The average of 12 rainy days in February was a record for that month. Snowfall for the year averaged 5.1 inches. Heavy rains were reported on the evening of April 15th and all day of the 16th, over the northern and

central counties, being excessive over west central counties. Mountain Valley reported 8.25 inches for 24 hours, ending at 6 p.m. on the 16th, the greatest for the year. Danville reported 10.04 inches in less than 48 hours; Dardanelle 8.40 inches; Booneville 8.08; Ozark 4.57; Jessieville 7.60; Story 7.82 and Oden 8.22 during the same period. This downpour caused a record stage on the Petit Jean River at Danville of 31.8 feet on April 17th, causing flood losses estimated at \$24,000. During this rainstorm the dam of the city of Paris waterworks washed out, with an estimated loss of \$35,000.

"Temperatures were above the 35-year normal every month except April and November. The mean of 62.7° was 1.2° above the 49-year average. The highest annual mean was 67.6° at Texarkana, while the lowest mean was 57.8° at Lead Hill. The highest temperature during the year was 112° at Booneville on September 4th. This reading was one degree below the September record established at Helena in 1925. The lowest temperature was 4°, recorded at Mammoth Spring on February 4th. January and September were unusually warm. The mean of 79.9° in September was exceeded only once in September records, the record being 80.5° in September 1925."

CENSUS OF IRRIGATION - ARKANSAS

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ^{1 2}	MISSISSIPPI RIVER (Mississippi River drains entire State; therefore Mississippi River total for Arkansas is identical with State total)			
		St. Francis River	White River		
		L'Anguille River ³	Total	Direct	
		(10)		(13)	
IRRIGATED FARMS AND AREAS					
1	Irrigated farms.....1939..number.....	1,474	138	839	508
2	Area irrigated.....1939..acres.....	161,601	16,325	92,088	56,439
3	(a) Cropland harvested.....1939..acres.....	158,833	15,464	90,534	55,828
4	(b) Crop failure.....1939..acres.....	133	20	103	23
5	(c) Pasture.....1939..acres.....	2,635	841	1,451	588
6	Area irrigated.....1929..acres.....	151,787	13,282	85,884	.....
7	.....1919..acres.....	143,946	4,965	74,918	.....
8	Increase or decrease (-), 1929-1939.....percent.....	6.5	22.9	7.2	.....
9	Irrigable area in enterprises.....1940..acres.....	314,929	32,011	164,176	97,810
10	.....1930..acres.....	225,982	23,587	130,476	.....
11	.....1920 ⁴ ..acres.....	246,480	14,188	131,946	.....
12	Excess of irrigable area over the area irrigated.....1940..acres.....	153,328	15,686	72,088	41,371
13	.....1930..acres.....	74,205	10,305	44,582	.....
14	.....1920 ⁴ ..acres.....	102,534	9,233	56,428	.....
15	Area works were capable of supplying with water.....1940..acres.....	287,765	30,992	158,722	85,578
16	.....1930..acres.....	209,942	21,599	119,560	.....
17	.....1920..acres.....	179,013	5,920	95,709	.....
18	Increase or decrease (-), 1930-1940.....percent.....	37.1	43.5	32.8	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	126,164	14,667	66,634	39,139
20	.....1930..acres.....	59,155	8,317	33,676	.....
21	.....1920..acres.....	35,067	955	20,791	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	56.2	52.7	58.0	59.1
23	.....1929..percent.....	72.3	61.5	71.8	.....
24	.....1919..percent.....	80.4	83.9	78.3	.....
CAPITAL INVESTED TO JANUARY 1					
25	Total investment in irrigation enterprises.....1940..dollars.....	5,766,895	334,988	3,271,717	2,566,147
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	5,766,895	334,988	3,271,717	2,566,147
27	(b) Investment in water rights (reported).....1940..dollars.....	.....	.....	.....	.....
28	Total investment in irrigation enterprises.....1930..dollars.....	6,836,648	432,600	4,165,818	.....
29	.....1920..dollars.....	7,183,322	216,727	3,992,967	.....
30	Increase or decrease (-), 1930-1940.....percent.....	-15.6	-22.6	-21.5	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	20.04	10.81	20.61	26.55
32	.....1930..dollars.....	32.56	20.03	34.84	.....
33	.....1920..dollars.....	40.13	36.95	41.72	.....
34	Average investment per acre irrigated.....1939..dollars.....	35.69	20.52	35.53	45.47
35	Estimated final investment in existing enterprises.....1940..dollars.....	5,878,930	335,363	3,294,327	2,581,907
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	18.67	10.48	20.07	26.40
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	1,228	3	123	441
38	Area irrigated in these enterprises.....1939..acres.....	153,346	231	15,161	87,488
39	Cost of maintenance and operation.....1939..dollars.....	835,691	1,201	73,094	476,123
40	Average cost, per acre irrigated.....1939..dollars.....	5.45	5.20	4.82	5.44
41	Total annual charges (reported) ^{6 7}.....1939..dollars.....	34,409	.....	13,535	9,360
42	Average annual charge per acre irrigated.....1939..dollars.....	7.05	.....	5.24	7.54
43	Area against which charges were assessed.....1939..acres.....	4,879	.....	2,582	1,242
44	Average annual charge per acre assessed.....1939..dollars.....	7.05	.....	5.24	7.54
45	Total charges collected ⁸.....1939..dollars.....	23,818	.....	2,175	.....
46	Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939					
47	Enterprises reporting water delivered.....1939..number.....	1,258	2	123	722
48	Area irrigated by these enterprises.....1939..acres.....	158,767	(⁹)	16,320	91,470
49	Water delivered.....1939..acre-feet.....	441,289	(⁹)	40,939	255,838
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.8	(⁹)	2.5	2.8
51	Average cost of water per acre irrigated.....1939..dollars.....	5.42	(⁹)	4.82	5.48
52	Average cost of water per acre-foot delivered.....1939..dollars.....	1.95	(⁹)	1.83	1.96
DRAINAGE OF IRRIGATED LAND					
53	Enterprises reporting land drained or needing drainage.....1939..number.....	96	.....	14	40
54	Irrigable area in these enterprises.....1939..acres.....	34,894	.....	3,310	9,694
55	Irrigated area in these enterprises.....1939..acres.....	14,700	.....	1,778	5,719
56	Area for which drains have been installed.....1939..acres.....	26,078	.....	1,465	6,773
57	Additional area needing drainage.....1939..acres.....	2,016	.....	355	909

¹Data for 1 enterprise in Bartholomew Bayou Drainage Basin (22) (number refers to separate map) are included with State total. ²Data for 1 enterprise in Mississippi River "Direct" Drainage Basin (11) (number refers to separate map) are included with Mississippi River total. ³Data for 1 enterprise in St. Francis River Basin (1) (number refers to separate map) are included with L'Anguille River Basin (10). ⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁶Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁷Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only. ⁸Data are not shown because less than 3 enterprises reported.

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DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	MISSISSIPPI RIVER—Continued								
	White River—Continued						Arkansas River (7)		
	Black River (3)	Village River (24)	Cache River			Big Creek (23)			
			Total	Direct (2)	Bayou de Vue (9)				
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....	1939..number.....	13	33	214	52	162	71	495
2	Area irrigated.....	1939..acres.....	1,805	5,198	19,681	5,253	14,428	8,965	53,174
3	(a) Cropland harvested.....	1939..acres.....	1,795	5,133	18,913	4,923	13,990	8,865	52,821
4	(b) Crop failure.....	1939..acres.....	10	20	50	30	20	.....	10
5	(c) Pasture.....	1939..acres.....	.....	45	718	300	418	100	343
6	Area irrigated.....	1929..acres.....	.....	.....	.....	.....	.....	.....	52,446
7	.....	1919..acres.....	.....	.....	.....	.....	.....	.....	63,521
8	Increase or decrease (-), 1929-1939.....	percent.....	.....	.....	.....	.....	.....	.....	1.4
9	Irrigable area in enterprises.....	1940..acres.....	3,872	6,916	40,082	9,687	30,395	15,496	118,725
10	.....	1930..acres.....	.....	.....	.....	.....	.....	.....	71,754
11	.....	1920 ¹ ..acres.....	.....	.....	.....	.....	.....	.....	100,296
12	Excess of irrigable area over the area irrigated.....	1940..acres.....	2,067	1,718	20,401	4,434	15,967	6,531	65,551
13	.....	1930..acres.....	.....	.....	.....	.....	.....	.....	19,308
14	.....	1920 ¹ ..acres.....	.....	.....	.....	.....	.....	.....	36,775
15	Area works were capable of supplying with water.....	1940..acres.....	3,064	6,863	38,431	9,322	29,109	14,786	98,034
16	.....	1930..acres.....	.....	.....	.....	.....	.....	.....	68,608
17	.....	1920..acres.....	.....	.....	.....	.....	.....	.....	76,779
18	Increase or decrease (-), 1930-1940.....	percent.....	.....	.....	.....	.....	.....	.....	42.9
19	Excess of area works were capable of supplying with water over area irrigated.....	1940..acres.....	1,259	1,665	18,750	4,069	14,681	5,621	44,860
20	.....	1930..acres.....	.....	.....	.....	.....	.....	.....	16,162
21	.....	1920..acres.....	.....	.....	.....	.....	.....	.....	13,258
22	Proportion which area irrigated is of area works were capable of supplying with water.....	1939..percent.....	58.9	75.7	51.2	56.4	49.6	60.6	54.2
23	.....	1929..percent.....	.....	.....	.....	.....	.....	.....	76.4
24	.....	1919..percent.....	.....	.....	.....	.....	.....	.....	82.7
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....	1940..dollars.....	37,800	70,250	380,770	83,025	297,745	216,750	2,159,490
26	(a) Cost of irrigation works and equipment.....	1940..dollars.....	37,800	70,250	380,770	83,025	297,745	216,750	2,159,490
27	(b) Investment in water rights (reported).....	1940..dollars.....	.....	.....	.....	.....	.....	.....	.....
28	Total investment in irrigation enterprises.....	1930..dollars.....	.....	.....	.....	.....	.....	.....	2,233,855
29	.....	1920..dollars.....	.....	.....	.....	.....	.....	.....	2,950,522
30	Increase or decrease (-), 1930-1940.....	percent.....	.....	.....	.....	.....	.....	.....	-3.3
31	Average investment based on area works were capable of supplying with water, per acre.....	1940..dollars.....	12.34	10.24	9.91	8.91	10.23	14.66	22.03
32	.....	1930..dollars.....	.....	.....	.....	.....	.....	.....	32.56
33	.....	1920..dollars.....	.....	.....	.....	.....	.....	.....	38.43
34	Average investment per acre irrigated.....	1939..dollars.....	20.94	13.51	19.35	15.81	20.64	24.18	40.61
35	Estimated final investment in existing enterprises.....	1940..dollars.....	40,400	70,250	384,220	84,375	299,845	217,550	2,248,540
36	Average investment based on estimated final investment and irrigable area, per acre.....	1940..dollars.....	10.43	10.16	9.59	8.71	9.86	14.04	18.94
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
37	Enterprises reporting maintenance and operation.....	1939..number.....	8	24	191	1	47	392	1
38	Area irrigated in these enterprises.....	1939..acres.....	1,623	4,127	18,720	.....	5,253	13,467	50,683
39	Cost of maintenance and operation.....	1939..dollars.....	10,725	16,213	87,947	(²)	23,713	64,234	286,594
40	Average cost, per acre irrigated.....	1939..dollars.....	6.61	3.93	4.70	.....	4.51	4.77	5.65
41	Total annual charges (reported) ^{3 4}	1939..dollars.....	.....	2,175	.....	.....	.....	.....	2,000
42	Average annual charge per acre irrigated.....	1939..dollars.....	.....	3.82	.....	.....	.....	.....	2.60
43	Area against which charges were assessed.....	1939..acres.....	.....	570	.....	.....	.....	.....	770
44	Average annual charge per acre assessed.....	1939..dollars.....	.....	3.82	.....	.....	.....	.....	2.60
45	Total charges collected ⁵	1939..dollars.....	.....	2,175	.....	.....	.....	.....	21,643
46	Indebtedness to December 31 (reported) ⁴	1939..dollars.....	.....	.....	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....	1939..number.....	8	26	191	.....	46	145	47
48	Area irrigated by these enterprises.....	1939..acres.....	1,565	5,198	19,541	.....	5,253	14,288	8,965
49	Water delivered.....	1939..acre-feet.....	5,412	17,107	57,775	.....	15,673	42,102	21,845
50	Average water delivered per acre irrigated.....	1939..acre-feet.....	3.5	3.3	3.0	.....	3.0	2.9	2.4
51	Average cost of water per acre irrigated.....	1939..dollars.....	5.59	3.93	4.70	.....	4.51	4.77	4.32
52	Average cost of water per acre-foot delivered.....	1939..dollars.....	1.62	1.19	1.59	.....	1.51	1.62	1.77
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....	1939..number.....	2	5	20	.....	8	12	3
54	Irrigable area in these enterprises.....	1939..acres.....	(²)	910	4,264	.....	1,542	2,722	1,650
55	Irrigated area in these enterprises.....	1939..acres.....	(²)	666	2,952	.....	998	1,954	564
56	Area for which drains have been installed.....	1939..acres.....	(²)	660	2,447	.....	976	1,471	1,000
57	Additional area needing drainage.....	1939..acres.....	.....	100	314	.....	20	294	470

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ²Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only. ⁵Data are not shown because less than 3 enterprises reported.

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DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

ITEM (For definitions and explanations, see text. Major basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹ 2	MISSISSIPPI RIVER (Mississippi River drains entire State; therefore Mississippi River total for Arkansas is identical with State totals)			
		St. Francis River	White River		
		L'Anguille River ³ (10)	Total	Direct (13)	Black River (3)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1					
1 Enterprises.....1940..number.....	1,298	130	746	463	9
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	222	238	213	206	340
3 Diversion dams.....1940..total number.....	6	3	2	.....	.....
4 1930..total number.....	1	.....	.....	.....	.....
5 1920..total number.....	63	.....	62	.....	.....
6 (a) Concrete and masonry.....1940..number.....	.....	.....	.....	.....	.....
7 (b) Timber.....1940..number.....	1	.....	.....	.....	.....
8 (c) Earth and rock.....1940..number.....	4	.....	2	1	.....
9 (d) Other, mixed, and not reported.....1940..number.....	1	.....	1	1	.....
10 Main canals and laterals.....1940..total length, miles.....	77.9	1.0	39.8	20.9	.....
11 1930..total length, miles.....	51	.....	25	.....	.....
12 1920..total length, miles.....	86	.....	60	.....	.....
13 (a) Earth.....1940..length, miles.....	74	1	36	20	.....
14 (b) Lined.....1940..length, miles.....	3.9	.....	3.8	0.9	.....
15 1940..capacity, c.f.s. ⁴	270	5	25	12	.....
16 1930..capacity, c.f.s. ⁴	1,845	.....	1,396	.....	.....
17 1920..capacity, c.f.s. ⁴	1,205	2	1,067	.....	.....
18 Pipe lines ⁵.....1940..total length, miles.....	13.0	1.0	9.8	9.6	.....
19 1930..total length, miles.....	1.0	.....	0.6	.....	.....
20 1920..total length, miles.....	0.4	.....	.....	.....	.....
21 (a) Concrete.....1940..length, miles.....	.....	.....	.....	.....	.....
22 (b) Metal.....1940..length, miles.....	3.4	1.0	0.2	.....	.....
23 (c) Wood-stave.....1940..length, miles.....	.....	.....	.....	.....	.....
24 (d) Other.....1940..length, miles.....	9.6	.....	9.5	9.6	.....
25 Storage dams.....1940..total number.....	27	.....	12	9	.....
26 1930..total number.....	6	.....	3	.....	.....
27 1920..total number.....	17	.....	14	.....	.....
28 (a) Concrete and masonry.....1940..number.....	.....	.....	.....	.....	.....
29 (b) Earth and rock.....1940..number.....	21	.....	11	8	.....
30 (c) Other, mixed, and not reported.....1940..number.....	6	.....	1	1	.....
31 Reservoirs.....1940..total number.....	24	.....	11	8	.....
32 (a) 1-99 acre-feet capacity.....1940..number.....	3	.....	2	2	.....
33 (b) 100-999 acre-feet capacity.....1940..number.....	8	.....	4	4	.....
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	13	.....	5	2	.....
35 1940..total capacity, ac.-ft. ³	31,992	.....	16,821	3,821	.....
36 1930..total capacity, ac.-ft. ³	10	.....	7	.....	.....
37 1920..total capacity, ac.-ft. ³	7,342	.....	1,076	.....	.....
38 Wells, flowing.....1940..number.....	.....	.....	.....	.....	.....
39 1930..number.....	.....	.....	.....	.....	.....
40 1920..number.....	.....	.....	.....	.....	.....
41 1940..yield, g.p.m.....	.....	.....	.....	.....	.....
42 1930..yield, g.p.m.....	.....	.....	.....	.....	.....
43 1920..yield, g.p.m.....	.....	.....	.....	.....	.....
44 Wells, pumped.....1940..number.....	1,534	156	891	559	12
45 1930..number.....	1,190	140	662	.....	.....
46 1920..number.....	1,089	56	626	.....	.....
47 1940..yield, g.p.m.....	1,812,647	209,350	1,070,716	593,044	27,800
48 1930..yield, g.p.m.....	1,641,448	203,350	838,588	.....	.....
49 1920..yield, g.p.m.....	1,470,147	73,050	820,388	.....	.....
50 Pumping plants.....1940..total number.....	1,633	159	938	589	13
51 1930..total number.....	1,194	134	655	.....	.....
52 Prime movers.....1940..capacity, hp.....	76,048	5,198	44,221	30,856	526
53 1930..capacity, hp.....	66,980	6,178	39,052	.....	.....
54 1920..capacity, hp.....	58,332	2,223	30,537	.....	.....
55 (a) Electric.....1940..number.....	654	68	357	253	.....
56 1940..capacity, hp.....	25,145	1,990	13,886	9,775	.....
57 (b) Internal-combustion.....1940..number.....	958	86	570	334	13
58 1940..capacity, hp.....	50,003	2,988	29,810	21,021	526
59 (c) Other.....1940..number.....	21	5	11	2	.....
60 1940..capacity, hp.....	900	220	525	(?)	.....
61 Pumps.....1940..total number.....	1,633	159	941	589	13
62 1930..number.....	1,206	130	677	.....	.....
63 1920..number.....	1,121	64	633	.....	.....
64 1940..capacity, g.p.m.....	2,013,697	210,300	1,127,316	637,894	27,840
65 1930..capacity, g.p.m.....	1,775,788	201,656	813,862	.....	.....
66 1920..capacity, g.p.m.....	1,654,097	78,450	858,688	.....	.....
67 (a) Centrifugal.....1940..number.....	1,439	92	830	562	11
68 1940..capacity, g.p.m.....	1,737,205	118,350	977,474	610,404	24,640
69 1940..average capacity, g.p.m.....	1,207	1,286	1,178	1,086	2,240
70 (b) Turbine.....1940..number.....	166	67	90	16	2
71 1940..capacity, g.p.m.....	246,290	91,950	125,440	17,190	(?)
72 1940..average capacity, g.p.m.....	1,484	1,372	1,394	1,074	(?)
73 (c) Plunger.....1940..number.....	1	.....	1	.....	.....
74 1940..capacity, g.p.m.....	(?)	.....	(?)	.....	.....
75 1940..average capacity, g.p.m.....	(?)	.....	(?)	.....	.....
76 (d) Other.....1940..number.....	27	.....	20	11	.....
77 1940..capacity, g.p.m.....	30,200	.....	24,400	10,300	.....
78 Pumping lift, from all sources.....1940..average, feet.....	61	35	63	82	24
79 1930..average, feet.....	68	34	72	.....	.....
80 1920..average, feet.....	50	31	50	.....	.....
81 from pumped wells.....1940..average, feet.....	64	36	64	82	25
82 from surface sources.....1940..average, feet.....	25	9	25	41	20

¹Data for 1 enterprise in Bartholomew Bayou Drainage Basin (22) (number refers to separate map) are included with State total. ²Data for 1 enterprise in Mississippi River "Direct" Drainage Basin (11) (number refers to separate map) are included with Mississippi River total. ³Data for 1 enterprise in St. Francis River Basin (1) (number refers to separate map) are included with L'Anguille River Basin (10). ⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁵Includes siphons and farm pipe lines reported. ⁶Total capacity of all reservoirs regardless of size. ⁷Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

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DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSISSIPPI RIVER—Continued						
	White River—Continued					Arkansas River (7)	
	Village River (24)	Cache River			Big Creek (23)		
		Total	Direct (2)	Bayou de Vue (9)			
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940..number.....	26	200	47	153	48	420
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	264	192	198	190	308	233
3	Diversion dams.....1940..total number.....		1	1			3
4	.....1930..total number.....						
5	.....1920..total number.....						
6	(a) Concrete and masonry.....1940..number.....						
7	(b) Timber.....1940..number.....						1
8	(c) Earth and rock.....1940..number.....		1	1			2
9	(d) Other, mixed, and not reported.....1940..number.....						
10	Main canals and laterals.....1940..total length, miles.....	6.5	5.5	5.5		6.9	37.1
11	.....1930..total length, miles.....						26
12	.....1920..total length, miles.....						26
13	(a) Earth.....1940..length, miles.....	5	5	5		6	37
14	(b) Lined.....1940..length, miles.....	1.5	0.5	0.5		0.9	0.1
15	.....1940..capacity, c.f.s. ¹		13	7	6		240
16	.....1930..capacity, c.f.s. ¹						449
17	.....1920..capacity, c.f.s. ¹						136
18	Pipe lines ².....1940..total length, miles.....					0.2	2.2
19	.....1930..total length, miles.....						0.4
20	.....1920..total length, miles.....						
21	(a) Concrete.....1940..length, miles.....						
22	(b) Metal.....1940..length, miles.....					0.2	2.2
23	(c) Wood-stave.....1940..length, miles.....						
24	(d) Other.....1940..length, miles.....						
25	Storage dams.....1940..total number.....	3					15
26	.....1930..total number.....						3
27	.....1920..total number.....						3
28	(a) Concrete and masonry.....1940..number.....						
29	(b) Earth and rock.....1940..number.....	3					10
30	(c) Other, mixed, and not reported.....1940..number.....						5
31	Reservoirs.....1940..total number.....	3					13
32	(a) 1-99 acre-foot capacity.....1940..number.....						1
33	(b) 100-999 acre-foot capacity.....1940..number.....						4
34	(c) 1,000 and over acre-foot capacity.....1940..number.....	3					8
35	.....1940..total capacity, ac.-ft. ³	13,000					15,171
36	.....1930..total capacity, ac.-ft. ³						3
37	.....1920..total capacity, ac.-ft. ³						6,266
38	Wells, flowing.....1940..number.....						
39	.....1930..number.....						
40	.....1920..number.....						
41	.....1940..yield, g.p.m.....						
42	.....1930..yield, g.p.m.....						
43	.....1920..yield, g.p.m.....						
44	Wells, pumped.....1940..number.....	37	216	46	170	67	486
45	.....1930..number.....						388
46	.....1920..number.....						404
47	.....1940..yield, g.p.m.....	64,452	283,750	65,700	218,050	101,670	532,381
48	.....1930..yield, g.p.m.....						599,510
49	.....1920..yield, g.p.m.....						575,509
50	Pumping plants.....1940..total number.....	36	233	50	183	67	534
51	.....1930..total number.....						395
52	Prime movers.....1940..capacity, hp.....	1,273	8,189	1,721	6,468	3,377	26,622
53	.....1930..capacity, hp.....						21,750
54	.....1920..capacity, hp.....						25,572
55	(a) Electric.....1940..number.....	14	54	6	48	36	229
56	.....1940..capacity, hp.....	510	1,729	210	1,519	1,872	9,269
57	(b) Internal-combustion.....1940..number.....	22	171	42	129	30	300
58	.....1940..capacity, hp.....	763	6,035	1,411	4,624	1,465	17,198
59	(c) Other.....1940..number.....		8		6		5
60	.....1940..capacity, hp.....		425	(4)	325	(4)	155
61	Pumps.....1940..total number.....	37	236	55	181	66	531
62	.....1930..number.....						399
63	.....1920..number.....						421
64	.....1940..capacity, g.p.m.....	62,452	307,380	74,900	232,480	91,750	675,131
65	.....1930..capacity, g.p.m.....						660,150
66	.....1920..capacity, g.p.m.....						714,459
67	(a) Centrifugal.....1940..number.....	30	181	45	136	46	515
68	.....1940..capacity, g.p.m.....	49,650	230,180	57,000	173,180	62,600	640,431
69	.....1940..average capacity, g.p.m.....	1,655	1,272	1,267	1,273	1,361	1,244
70	(b) Turbine.....1940..number.....	3	49	9	40	20	9
71	.....1940..capacity, g.p.m.....	5,800	70,100	17,100	53,000	29,150	28,900
72	.....1940..average capacity, g.p.m.....	1,933	1,431	1,900	1,325	1,458	3,211
73	(c) Plunger.....1940..number.....	1					
74	.....1940..capacity, g.p.m.....	(4)					
75	.....1940..average capacity, g.p.m.....	(4)					
76	(d) Other.....1940..number.....	3	6	1	5		7
77	.....1940..capacity, g.p.m.....	7,000	7,100	(4)	6,300		5,800
78	Pumping lift, from all sources.....1940..average, feet.....	30	33	26	34	39	67
79	.....1930..average, feet.....						74
80	.....1920..average, feet.....						53
81	from pumped wells.....1940..average, feet.....	30	34	27	36	39	71
82	from surface sources.....1940..average, feet.....		13	12	13		28

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³Total capacity of all reservoirs regardless of size. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

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COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Arkansas	Clay	Craighead
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*					
1	All farms.....1940..number.....	216,674	2,324	3,307	4,541
2	.....1930..number.....	242,394	2,301	3,436	4,757
3	Irrigated farms.....1940..number.....	1,529	608	14	86
4	.....1930..number.....	1,096	546	9	40
5	Increase or decrease (-), 1930-1940.....percent.....	39.5	11.4	55.6	115.0
Operated by—					
6	(a) Owners and managers.....1940..number.....	958	360	9	64
7	.....1930..number.....	625	299	4	27
8	(b) Tenants.....1940..number.....	571	248	5	22
9	.....1930..number.....	471	247	5	13
10	Land in all farms.....1940..acres.....	18,044,542	393,056	289,680	337,346
11	Land in irrigated farms.....1940..acres.....	529,920	257,345	8,363	22,917
12	Average per farm.....1940..acres.....	388	423	597	266
13	(a) Operated by owners and managers.....1940..acres.....	394,572	163,121	6,123	17,567
14	Average per farm.....1940..acres.....	412	453	680	274
15	(b) Operated by tenants.....1940..acres.....	196,348	94,224	2,240	5,350
16	Average per farm.....1940..acres.....	347	380	448	243
17	Approximate land area.....1940..acres.....	33,744,000	662,400	416,000	458,860
IRRIGATED AND IRRIGABLE AREAS					
18	Area irrigated.....1939..acres.....	161,601	65,316	1,643	6,524
19	(a) Cropland harvested.....1939..acres.....	158,833	64,554	1,633	6,394
20	(b) Crop failure.....1939..acres.....	133	23	10	20
21	(c) Pasture.....1939..acres.....	2,635	739	.....	110
22	Area irrigated.....1929..acres.....	151,787	84,662	795	3,489
23	.....1919..acres.....	143,946	76,511	345	3,190
24	Increase or decrease (-), 1929-1939.....percent.....	6.5	-22.9	106.7	87.0
25	Irrigable area in enterprises.....1940..acres.....	314,929	128,385	3,672	14,339
26	.....1930..acres.....	225,992	112,563	1,447	4,910
27	.....1920 ⁴ ..acres.....	246,480	117,822	1,040	6,869
28	Excess of irrigable area over the area irrigated.....1940..acres.....	153,328	63,069	2,029	7,815
29	.....1930..acres.....	74,205	27,901	652	1,421
30	Area works were capable of supplying with water.....1940..acres.....	287,765	110,146	2,864	13,937
31	.....1930..acres.....	209,942	106,588	1,137	4,725
32	.....1920 ⁴ ..acres.....	179,013	89,546	905	5,047
33	Increase or decrease (-), 1930-1940.....percent.....	37.1	3.3	151.9	195.0
34	Excess, capability of works over area irrigated.....1940..acres.....	126,164	44,830	1,221	7,413
35	.....1930..acres.....	58,155	21,926	342	1,236
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	27.3	25.4	19.6	28.5
37	.....1929..percent.....	41.8	45.4	38.3	41.7
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	56.2	59.3	57.4	46.8
39	.....1929..percent.....	72.3	79.4	69.9	73.8
CAPITAL INVESTED TO JANUARY 1					
40	Total investment in all enterprises.....1940..dollars.....	5,766,895	3,193,737	35,700	117,355
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	5,766,895	3,193,737	35,700	117,355
42	(b) Investment in water rights (reported).....1940..dollars.....	.....	.....	.....	.....
43	Total investment in all enterprises.....1930..dollars.....	6,836,648	3,732,165	28,400	119,100
44	.....1920 ⁴ ..dollars.....	7,183,322	3,492,391	47,414	140,375
45	Increase or decrease (-), 1930-1940.....percent.....	-15.6	-14.4	25.7	-1.5
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	20.04	29.00	12.47	8.42
47	.....1930..dollars.....	32.56	35.01	24.98	25.21
48	.....1920 ⁴ ..dollars.....	40.13	39.00	52.39	27.81
49	Average investment per acre irrigated.....1939..dollars.....	35.69	48.90	21.73	17.99
50	Estimated final investment in existing enterprises.....1940..dollars.....	5,878,930	3,262,847	36,200	117,455
51	.....1930..dollars.....	6,844,092	3,733,965	28,400	119,100
52	.....1920 ⁴ ..dollars.....	7,283,522	3,564,791	47,414	140,375
53	Increase or decrease (-), 1930-1940.....percent.....	-14.1	-12.6	27.5	-1.4
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	18.67	25.41	9.86	8.19
55	.....1930..dollars.....	30.28	33.17	19.63	24.26
56	.....1920 ⁴ ..dollars.....	29.55	30.26	45.59	20.44
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number.....	1,229	3	473	2
58	Area irrigated in these enterprises.....1939..acres.....	159,346	251	61,943	7
59	Cost of maintenance and operation.....1939..dollars.....	635,691	1,201	339,806	(³)
60	Average cost, per acre irrigated.....1939..dollars.....	5.45	5.19	5.49	(²)
61	.....1929..dollars.....	7.03	.....	6.52	.....
62	Total annual charges (reported) ⁵.....1939..dollars.....	34,409	.....	30,144	.....
63	Average annual charge per acre irrigated.....1939..dollars.....	7.05	.....	.....	.....
64	Area against which charges were assessed.....1939..acres.....	4,879	.....	3,417	.....
65	Average annual charge per acre assessed.....1939..dollars.....	7.05	.....	.....	.....
66	Total charges collected.....1939..dollars.....	23,818	.....	21,643	.....
67	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS					
68	Enterprises reporting water delivered.....1939..number.....	1,259	2	495	7
69	Area irrigated in these enterprises.....1939..acres.....	158,767	(⁷)	63,350	(⁷)
70	Water delivered in these enterprises.....1939..acre-feet.....	441,289	(⁷)	172,016	(⁷)
71	Average water delivered per acre irrigated.....1939..acre-feet.....	2.8	(⁷)	2.7	(⁷)
72	Average cost of water per acre irrigated.....1939..dollars.....	5.42	(⁷)	5.46	(⁷)
DRAINAGE OF IRRIGATED LAND					
73	Enterprises reporting land drained or needing drainage.....1939..number.....	96	.....	31	2
74	Irrigable area in these enterprises.....1939..acres.....	34,894	.....	17,195	(³)
75	Irrigated area in these enterprises.....1939..acres.....	14,700	.....	5,715	(³)
76	Area for which drains have been installed.....1939..acres.....	25,078	.....	15,595	(³)
77	Additional area needing drainage.....1939..acres.....	2,016	.....	400	.....

* Census of Agriculture.
¹ Data between census years not comparable (see headnote).
² Percent not shown when more than 1,000.
³ Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - ARKANSAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

Irrigation data omitted from any of the counties listed are included under "All other counties"

Cross	Jackson	Jefferson	Lawrence	Lee	Lonoke	Monroe	Poinsett	Prairie	St. Francis	Woodruff	All other counties ¹	
3,836	2,861	6,484	2,757	4,280	4,424	2,633	4,136	2,063	5,456	2,747	164,825	1
4,398	3,768	8,099	2,851	5,559	6,169	3,415	3,876	2,131	6,507	3,432	181,806	2
78	59	8	9	27	131	28	118	248	28	36	51	3
96	2	.....	.....	9	86	20	103	189	21	13	22	4
116.7	(3)	.....	.....	200.0	52.3	40.0	14.6	31.2	33.3	176.9	131.8	5
50	30	6	7	2	84	15	88	172	11	19	41	6
24	.....	.....	.....	2	42	9	66	122	7	6	17	7
28	29	2	2	25	47	13	30	76	17	17	10	8
12	.....	.....	.....	7	44	11	37	67	14	7	7	9
238,694	281,526	318,450	272,732	247,999	381,462	187,477	277,788	263,182	300,203	217,457	14,037,500	10
23,424	17,122	7,475	2,177	10,154	53,313	13,086	39,177	94,298	18,631	14,224	11,204	11
300	290	834	242	376	407	468	332	380	685	395	220	12
16,232	11,627	(3)	(3)	(3)	31,049	7,312	30,782	67,658	11,285	9,078	10,215	13
325	388	(3)	(3)	(3)	370	467	350	393	1,028	478	249	14
7,192	6,495	(3)	(3)	(3)	22,204	5,784	8,395	26,640	7,346	5,146	988	15
267	189	(3)	(3)	(3)	474	445	280	351	432	303	99	16
400,640	407,680	569,600	378,980	396,800	512,000	394,880	487,680	431,360	407,040	378,880	27,441,280	17
9,444	7,992	367	688	2,527	15,608	3,445	13,217	24,903	4,814	4,655	458	18
9,051	7,634	367	688	2,527	15,593	3,405	12,636	24,831	4,714	4,348	458	19
20	50	.....	.....	.....	15	40	.....	10	.....	.....	.....	20
373	308	.....	.....	.....	.....	.....	581	62	100	307	.....	21
3,698	.....	.....	.....	2,255	12,567	2,345	10,517	25,612	3,064	1,950	833	22
3,410	.....	.....	.....	.....	24,941	1,135	10,310	10,225	6,840	3,838	3,201	23
155.4	.....	.....	.....	12.1	24.2	46.9	25.7	-2.8	57.1	138.7	.....	24
18,147	12,021	1,301	910	3,440	38,918	6,988	27,839	40,515	8,456	8,178	1,820	25
7,048	.....	.....	.....	4,275	24,032	2,785	25,769	34,365	3,840	3,881	1,097	26
11,830	.....	.....	.....	.....	34,502	2,733	26,578	16,900	10,490	9,915	7,801	27
8,703	4,029	934	222	913	23,310	3,543	14,622	15,612	3,642	3,523	1,362	28
3,390	.....	.....	.....	2,020	11,465	420	15,252	8,753	776	1,931	264	29
16,948	11,998	1,041	860	3,440	36,933	6,508	27,640	39,376	8,456	7,158	460	30
6,828	.....	.....	.....	4,275	21,715	2,705	22,331	31,825	3,790	3,006	1,017	31
4,655	.....	.....	.....	.....	30,788	1,565	12,850	13,216	9,355	5,245	5,841	32
148.2	.....	.....	.....	-19.5	70.1	140.6	23.8	123.1	23.7	123.1	.....	33
7,504	4,006	674	172	913	21,325	3,063	14,423	14,473	3,642	2,503	2	34
3,130	.....	.....	.....	2,020	9,148	360	11,814	6,213	726	1,056	184	35
40.3	46.7	4.9	31.6	24.9	29.3	26.3	33.7	26.4	25.8	32.7	4.1	36
45.6	.....	.....	.....	30.5	38.7	28.7	39.6	38.7	30.5	45.2	25.8	37
55.7	66.6	35.3	80.0	73.5	42.3	52.9	47.8	63.2	56.9	65.0	99.6	38
54.2	.....	.....	.....	52.7	57.9	86.7	47.1	80.5	80.8	64.9	81.9	39
190,200	121,175	4,750	12,100	41,231	410,649	98,076	283,153	1,019,575	154,519	70,725	13,950	40
190,200	121,175	4,750	12,100	41,231	410,649	98,076	283,153	1,019,575	154,519	70,725	13,950	41
143,000	.....	.....	.....	123,700	817,355	112,200	274,100	1,234,803	129,500	96,600	25,725	43
174,628	.....	.....	.....	.....	1,272,698	76,674	404,158	787,275	425,414	192,550	169,750	44
33.0	.....	.....	.....	-66.7	-49.8	-12.6	3.3	-17.4	19.3	-26.8	-45.8	45
11.22	10.10	4.56	14.07	11.99	11.12	15.07	10.24	25.89	18.27	9.88	30.33	46
20.94	.....	.....	.....	28.94	37.64	41.48	12.27	38.80	34.17	32.14	25.29	47
37.51	.....	.....	.....	.....	41.34	48.89	31.45	59.57	45.47	36.71	29.06	48
20.14	15.16	12.94	17.59	16.32	26.31	28.47	21.42	40.94	32.10	15.19	30.46	49
190,575	122,175	4,900	14,200	41,231	417,799	98,076	285,453	1,021,725	154,519	71,525	40,250	50
143,000	.....	.....	.....	123,700	817,355	112,200	278,044	1,236,003	129,500	96,600	26,225	51
174,628	.....	.....	.....	.....	1,297,493	76,674	404,158	789,275	425,414	192,550	170,750	52
33.3	.....	.....	.....	-66.7	-48.9	-12.6	2.7	-17.3	19.3	-26.0	53.5	53
10.50	10.16	3.77	15.60	11.99	10.74	14.03	10.25	25.22	18.27	8.75	22.12	54
20.29	.....	.....	.....	28.94	34.01	40.58	10.79	35.97	33.72	24.89	23.91	55
14.76	.....	.....	.....	.....	37.61	28.05	15.21	46.70	40.55	19.42	21.89	56
70	49	5	5	10	117	25	109	215	28	26	5	57
8,230	6,921	337	688	2,527	14,620	3,445	13,144	24,665	4,814	3,577	450	58
42,953	30,017	385	2,250	5,188	88,332	13,744	55,180	167,309	27,597	14,595	3,270	59
5.22	4.34	1.14	3.27	2.05	6.04	3.99	4.20	6.78	5.73	4.08	7.27	60
5.99	.....	.....	.....	7.61	8.46	11.31	5.10	7.18	9.66	11.08	8.70	61
.....	2,175	90	2,000	.....	.....	.....	.....	.....	.....	.....	.....	62
.....	3.82	0.74	2.60	.....	.....	.....	.....	.....	.....	.....	.....	63
.....	570	122	770	.....	.....	.....	.....	.....	.....	.....	.....	64
.....	3.82	0.74	2.60	.....	.....	.....	.....	.....	.....	.....	.....	65
.....	2,175	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
77	50	6	5	10	124	23	102	214	28	30	6	68
9,444	7,992	367	688	2,527	15,195	3,445	13,212	24,833	4,814	4,525	458	69
27,705	25,036	295	2,611	6,147	45,898	11,177	33,034	70,255	11,620	13,095	812	70
2.9	3.1	0.8	3.8	2.4	3.0	3.2	2.5	2.8	2.4	2.9	1.8	71
5.22	4.34	1.14	3.27	2.05	6.01	3.99	4.20	6.77	5.73	4.08	7.27	72
12	(3)	(3)	4	.....	9	.....	9	6	.....	8	3	73
2,930	(3)	(3)	710	.....	2,945	(3)	2,338	1,105	.....	2,104	1,652	74
1,606	(3)	(3)	526	.....	1,277	(3)	1,460	689	.....	1,661	290	75
1,775	(3)	(3)	660	.....	2,550	(3)	460	521	.....	1,086	292	76
.....	(3)	(3)	.....	.....	65	.....	550	312	.....	558	.....	77

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.
⁷ Data are not shown because less than 3 enterprises reported.

CENSUS OF IRRIGATION — ARKANSAS

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	STATE TOTAL	Arkansas	Clay	Craighead	Cross	Jackson	Jefferson	Lawrence
FARM VALUES, 1940^a								
1 Land and buildings, all farms.....dollars..	456,948,156	10,538,337	8,312,386	13,968,276	7,647,929	8,571,252	13,189,797	6,635,863
2 Land and buildings, irrigated farms.....dollars..	17,067,803	7,682,186	137,000	532,480	510,958	529,960	230,110	61,000
Operated by—								
3 (a) Owners and managers.....dollars..	11,711,544	5,116,145	102,400	436,080	359,133	337,260	(¹)	(¹)
4 (b) Tenants.....dollars..	5,366,259	2,566,041	34,600	96,400	151,825	192,700	(¹)	(¹)
5 Average, land and buildings, per farm.....dollars..	11,162.72	12,635.17	9,785.71	6,191.63	6,550.74	8,982.37	28,763.75	6,777.78
6 per acre in farms.....dollars..	28.79	29.85	16.38	23.24	21.81	30.95	30.78	28.02
7 Buildings, irrigated farms reporting value.....number..	1,464	584	13	83	76	55	8	9
8 Total reported.....dollars..	3,211,708	1,549,190	20,800	119,705	92,710	92,210	41,900	12,550
9 Average, per irrigated farm reporting.....dollars..	2,193.79	2,652.72	1,600.00	1,442.23	1,219.87	1,676.55	5,237.50	1,394.44
10 per acre on all irrigated farms.....dollars..	5.42	6.02	2.49	5.22	3.96	5.39	5.61	5.76
11 Buildings, nonirrigated farms reporting value.....number..	208,576	1,659	3,189	4,366	3,662	2,750	6,364	2,705
12 Total reported.....dollars..	113,101,940	829,178	2,020,236	3,123,427	1,736,660	1,728,967	3,147,288	1,836,305
13 Average, per nonirrigated farm reporting.....dollars..	542.26	499.81	633.50	715.40	474.24	628.72	494.55	678.86
14 per acre on all nonirrigated farms.....dollars..	6.48	6.11	7.18	9.93	8.07	6.54	10.12	6.79
15 Implements and machinery, irrigated farms reporting value.....number..	1,436	560	13	80	73	52	7	9
16 Total reported.....dollars..	3,417,947	1,195,947	48,720	203,325	167,520	140,725	67,470	25,300
17 Average, per irrigated farm reporting.....dollars..	2,360.12	2,135.44	3,747.69	2,541.56	2,294.79	2,706.25	9,638.57	2,811.11
18 per acre, on all irrigated farms.....dollars..	5.76	4.65	5.83	8.87	7.15	8.22	9.03	11.62
19 Implements and machinery, nonirrigated farms reporting value.....number..	166,473	1,426	3,068	3,997	2,395	2,236	3,719	2,072
20 Total reported.....dollars..	33,998,816	236,625	773,127	1,247,331	727,083	717,379	1,091,904	642,691
21 Average, per acre, on all nonirrigated farms.....dollars..	1.95	1.74	2.75	3.97	3.38	2.71	3.51	2.38
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22 Enterprises.....1940...number.....	² 1,299	505	8	85	78	51	6	5
23 ..1930...number.....	1,043	504	7	35	52	1	1	.....
24 ..1920...number.....	944	454	4	44	35	.....	.....	.....
25 Average size of enterprise based on irrigable area.....	.....	.....	.....	.....	.....	.....	.....	.....
26 ..1940...acres.....	242	254	459	169	233	236	217	182
27 ..1930...acres.....	217	223	207	140	136	.....	.....	.....
28 ..1920 ^b ...acres.....	261	260	260	156	338	.....	.....	.....
29 Diversion dams.....1940...number.....	6	4	.....	.....	.....	1	.....	.....
30 Main canals and laterals.....1940...length, miles.....	77.9	41.2	.....	.....	1.0	12.0	.....	.....
31 ..1930...length, miles.....	51	37	.....	.....	.....	.....	.....	.....
32 ..1920...length, miles.....	86	26	7	6	.....	.....	.....	.....
33 ..1940...capacity, c. f. s. ⁴	270	235	.....	7	5	6	6	.....
34 ..1930...capacity, c. f. s. ⁴	1,845	507	.....	.....	.....	.....	.....	.....
35 ..1920...capacity, c. f. s. ⁴	1,205	166	15	820	.....	.....	.....	.....
36 Pipe lines ⁵.....1940...length, miles.....	13.0	0.2	.....	.....	.....	.....	.....	.....
37 Storage dams.....1940...number.....	27	24	.....	.....	.....	.....	.....	3
38 Reservoirs.....1940...number.....	24	21	.....	.....	.....	.....	.....	3
39 ..1930...number.....	10	3	.....	1	.....	.....	.....	.....
40 ..1920...number.....	16	.....	.....	.....	.....	.....	.....	.....
41 ..1940...capacity, acre-feet.....	31,992	18,992	.....	.....	.....	.....	.....	13,000
42 ..1930...capacity, acre-feet.....	7,342	7,250	.....	40	.....	.....	.....	.....
43 ..1920...capacity, acre-feet.....	20	.....	.....	.....	.....	.....	.....	.....
44 Wells, flowing.....1940...number.....	.....	.....	.....	.....	.....	.....	.....	.....
45 ..1930...number.....	.....	.....	.....	.....	.....	.....	.....	.....
46 ..1920...number.....	.....	.....	.....	.....	.....	.....	.....	.....
47 ..1940...yield, g. p. m.....	.....	.....	.....	.....	.....	.....	.....	.....
48 ..1930...yield, g. p. m.....	.....	.....	.....	.....	.....	.....	.....	.....
49 ..1920...yield, g. p. m.....	.....	.....	.....	.....	.....	.....	.....	.....
50 Wells, pumped.....1940...number.....	1,534	597	11	76	87	62	3	5
51 ..1930...number.....	1,190	593	6	39	53	.....	.....	.....
52 ..1920...number.....	1,089	496	4	63	41	.....	.....	.....
53 ..1940...yield, g. p. m.....	1,812,647	616,478	26,400	89,500	122,700	96,202	1,800	8,950
54 ..1930...yield, g. p. m.....	1,641,448	835,660	11,500	40,450	76,900	.....	.....	.....
55 ..1920...yield, g. p. m.....	1,470,147	573,524	9,700	66,000	63,650	.....	.....	.....
56 Pumping plants.....1940...number.....	1,633	654	12	87	90	63	6	5
57 ..1930...number.....	1,184	603	7	38	53	.....	.....	.....
58 ..1920...number.....	1,041	497	4	51	36	.....	.....	.....
59 Prime movers.....1940...capacity, hp.....	76,048	34,832	486	2,998	2,817	2,297	192	175
60 ..1930...capacity, hp.....	66,980	35,586	370	1,396	2,512	.....	.....	.....
61 ..1920...capacity, hp.....	58,332	29,299	180	1,987	2,013	.....	.....	.....
62 Pumps.....1940...capacity, g. p. m.....	2,013,697	790,878	26,440	103,680	128,550	101,702	5,400	8,950
63 ..1930...capacity, g. p. m.....	1,775,788	947,070	14,000	40,800	75,900	.....	.....	.....
64 ..1920...capacity, g. p. m.....	1,654,097	749,974	9,000	67,500	61,350	.....	.....	.....
65 Pumping lift, from all sources.....1940...average, feet.....	61	79	25	30	33	32	29	22
66 ..1930...average, feet.....	68	78	35	33	27	.....	.....	.....
67 ..1920...average, feet.....	50	61	20	30	27	.....	.....	.....
from pumped wells.....1940...average, feet.....	64	83	26	33	34	33	23	22
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶								
68 Enterprises reporting pay roll.....number.....	6	3	.....	.....	.....	.....	(¹)	1
69 Irrigated area in these enterprises.....acres.....	4,027	3,135	.....	.....	.....	.....	(¹)	.....
70 Wages and salaries paid and payable.....dollars..	12,823	8,793	.....	.....	.....	.....	.....	.....
71 Persons employed during week ending April 29.....number..	44	18	.....	.....	.....	.....	.....	.....

^aCensus of Agriculture.

¹Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

²Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table I.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁵Includes siphons and farm pipe lines reported.

⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — ARKANSAS

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	Lee	Lonoke	Monroe	Polk	Prairie	St. Francis	Woodruff	All other counties ¹
FARM VALUES, 1940²								
1 Land and buildings, all farms.....dollars..	7,951,838	12,435,174	5,109,223	13,675,834	6,160,734	11,752,760	6,169,648	324,729,105
2 Land and buildings, irrigated farms.....dollars..	305,835	1,671,930	409,447	917,430	3,005,965	417,870	223,848	431,784
Operated by—								
3 (a) Owners and managers.....dollars..	(³)	982,170	183,497	707,770	2,246,225	269,370	151,075	415,684
4 (b) Tenants.....dollars..	(³)	689,760	225,950	209,660	759,740	148,500	72,773	16,100
5 Average, land and buildings, per farm.....dollars..	11,327.22	12,762.82	14,623.11	7,774.83	12,120.83	14,923.93	6,218.00	8,466.35
6 per acre in farms.....dollars..	30.12	31.36	31.27	23.42	31.88	22.43	15.74	36.54
Buildings, irrigated farms reporting value.....number...	27	125	27	112	237	24	34	50
7 Total reported.....dollars..	55,980	222,600	61,222	167,801	566,540	59,445	34,500	114,555
8 Average, per irrigated farm reporting.....dollars..	2,073.33	1,780.80	2,267.48	1,498.22	2,390.46	2,476.88	1,014.71	2,291.10
9 per acre on all irrigated farms.....dollars..	5.51	4.18	4.67	4.28	6.01	3.19	2.43	10.22
10 Buildings, nonirrigated farms reporting value.....number...	3,955	4,147	2,512	3,946	1,764	5,237	2,661	159,659
11 Total reported.....dollars..	1,826,881	2,397,684	968,165	2,339,813	1,044,588	2,568,549	1,269,275	86,264,804
12 Average, per nonirrigated farm reporting.....dollars..	461.92	578.17	385.42	592.96	592.17	490.46	476.99	540.31
13 per acre on all nonirrigated farms.....dollars..	7.68	7.31	5.55	9.81	6.19	9.12	6.25	6.15
14 Implements and machinery, irrigated farms reporting value.....number...	26	127	26	112	242	28	33	48
15 Total reported.....dollars..	47,665	382,060	91,475	329,467	520,123	72,605	66,700	58,945
16 Average, per irrigated farm reporting.....dollars..	1,833.27	3,008.35	3,518.27	2,941.67	2,149.27	2,593.04	2,021.21	1,225.94
17 per acre, on all irrigated farms.....dollars..	4.69	7.17	6.98	8.41	5.52	3.90	4.69	5.25
18 Implements and machinery, nonirrigated farms reporting value.....number...	2,933	3,642	2,136	3,261	1,421	4,286	1,996	127,895
19 Total reported.....dollars..	571,707	1,279,901	405,225	1,019,128	327,154	872,386	501,050	23,586,125
20 Average, per acre, on all nonirrigated farms.....dollars..	2.40	3.90	2.32	4.27	1.94	3.10	2.47	1.68
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22 Enterprises.....1940...number.....	10	128	25	112	219	29	32	6
23 ..1930...number.....	10	99	12	87	181	16	16	22
24 ..1920...number.....		145	6	107	70	28	30	21
25 Average size of enterprise based on								
26 irrigable area.....1940...acres.....	344	304	279	249	185	292	256	303
27 ..1930...acres.....	428	243	230	296	190	240	243	
28 ..1920 ³ ...acres.....		238	456	248	241	375	330	371
29 Diversion dams.....1940...number.....					1			
30 Main canals and laterals.....1940...length, miles.....	5.0	4.0			12.0	0.9	1.8	
31 ..1930...length, miles.....	3	10		1				
32 ..1920...length, miles.....		21						23
33 ..1940...capacity, c.f.s. ⁴		9			2			
34 ..1930...capacity, c.f.s. ⁴	7	131	1,200					
35 ..1920...capacity, c.f.s. ⁴		81	8	5		12		98
36 Pipe lines ⁵.....1940...length, miles.....	0.2	0.9					9.6	2.1
37 Storage dams.....1940...number.....								
38 Reservoirs.....1940...number.....								
39 ..1930...number.....		5						1
40 ..1920...number.....		14						2
41 ..1940...capacity, acre-feet.....								
42 ..1930...capacity, acre-feet.....		27						25
43 ..1920...capacity, acre-feet.....		20						
44 Wells, flowing.....1940...number.....								
45 ..1930...number.....								
46 ..1920...number.....								
47 ..1940...yield, g.p.m.....								
48 ..1930...yield, g.p.m.....								
49 ..1920...yield, g.p.m.....								
50 Wells, pumped.....1940...number.....	14	140	33	150	275	40	34	7
51 ..1930...number.....	24	108	16	113	196	19	19	4
52 ..1920...number.....		149	8	128	79	58	38	25
53 ..1940...yield, g.p.m.....	14,100	200,485	44,800	191,800	266,542	65,270	61,800	5,820
54 ..1930...yield, g.p.m.....	34,900	184,300	19,200	203,051	176,612	32,500	22,075	4,300
55 ..1920...yield, g.p.m.....		272,850	11,400	168,600	92,415	104,358	59,200	48,450
56 Pumping plants.....1940...number.....	14	148	32	153	283	41	37	8
57 ..1930...number.....	24	107	15	103	191	22	16	5
58 ..1920...number.....		152	7	117	77	46	31	23
59 Prime movers.....1940...capacity, hp.....	770	8,108	1,526	5,097	12,975	2,100	1,525	210
60 ..1930...capacity, hp.....	1,601	7,487	865	4,336	10,728	1,200	754	145
61 ..1920...capacity, hp.....		9,745	330	4,697	4,431	3,175	1,445	1,030
62 Pumps.....1940...capacity, g.p.m.....	14,100	206,985	46,500	188,000	266,142	56,750	62,650	6,970
63 ..1930...capacity, g.p.m.....	34,900	187,325	19,450	206,656	183,812	32,500	24,875	6,500
64 ..1920...capacity, g.p.m.....		279,150	11,400	173,850	99,155	96,358	59,900	46,450
65 Pumping lift, from all sources.....1940...average, feet.....	34	58	58	37	77	42	32	41
66 ..1930...average, feet.....	48	60	66	32	95	64	62	21
67 ..1920...average, feet.....		43	73	33	59	33	45	
from pumped wells.....1940...average, feet.....	34	61	58	37	78	42	32	47
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁶								
68 Enterprises reporting pay roll.....number.....	2							
69 Irrigated area in these enterprises.....acres.....	(³)							
70 Wages and salaries paid and payable.....dollars..	(³)							
71 Persons employed during week ending April 29.....number.....	(³)							

¹ Census of Agriculture.

² Data between census years not comparable (see headnote).

³ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁵ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁶ Includes siphons and farm pipe lines reported.

⁷ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - CALIFORNIA

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	⁴ 100,353,920	99,617,280	99,617,280	99,617,280	¹ 99,617,280	99,898,880	99,776,000
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	132,658	150,360	135,676	117,670	88,197	72,542	52,894
Land in all farms.....acres.....	30,524,324	30,437,988	30,442,581	29,365,667	² 27,931,444	28,828,951	21,427,293
Farms irrigated: ²							
Farms.....number...	64,310	91,347	85,794	67,391	39,352	25,675	13,732
Increase or decrease (-) over preceding census.....percent..	³ -1.7	.....	27.3	71.3	53.3	87.0	.....
Proportion of all farms.....percent.....	63.6	60.8	63.2	57.3	44.6	35.4	26.0
Land in farms.....acres.....	14,071,222	(⁴)	12,018,864	(⁴)	(⁴)	(⁴)	(⁴)
Proportion of all farm land.....percent.....	46.1	(⁴)	39.5	(⁴)	(⁴)	(⁴)	(⁴)
Area irrigated.....acres.....	⁴ 4,276,554	⁶ 3,513,700	⁷ 3,540,350	(⁸)	(⁸)	1,446,114	1,004,233
Increase or decrease (-) over preceding census.....percent..	³ 20.8	.....	.....	.....	.....	44.0	.....
Proportion of total land area of State.....percent.....	4.3	3.5	3.6	.....	.....	1.4	1.0
Proportion of all farm land.....percent.....	14.0	11.5	11.6	.....	.....	5.0	4.7
Value of irrigated farms (land and buildings).....dollars..	1,591,824,377	(⁴)	2,438,289,524	(⁴)	(⁴)	(⁴)	(⁴)
Average per farm.....dollars..	18,880.61	(⁴)	28,423.59	(⁴)	(⁴)	(⁴)	(⁴)
Average per acre.....dollars..	113.13	(⁴)	202.87	(⁴)	(⁴)	(⁴)	(⁴)
Value of farm implements and machinery ⁹.....dollars..	99,181,718	(⁴)	96,785,492	(⁴)	(⁴)	(⁴)	(⁴)
Average per farm ⁹.....dollars..	1,176.39	(⁴)	1,128.25	(⁴)	(⁴)	(⁴)	(⁴)
Average per acre ⁹.....dollars..	7.05	(⁴)	8.05	(⁴)	(⁴)	(⁴)	(⁴)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	39,975	(⁴)	38,117	24,115	13,970	(⁴)	(⁴)
Farms irrigated.....number...	125,303	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Area irrigated.....acres.....	5,069,598	(⁴)	4,746,632	4,219,040	2,664,104	(⁴)	(⁴)
Area existing works were capable of supplying with water.....acres.....	7,398,576	(⁴)	6,815,250	5,894,466	3,619,378	(⁴)	(⁴)
Area irrigable.....acres.....	8,039,175	(⁴)	8,075,895	¹⁰ 7,805,207	¹⁰ 5,490,360	(⁴)	(⁴)
Additional area existing works were capable of supplying with water.....acres.....	2,329,008	(⁴)	2,068,618	1,675,426	955,274	(⁴)	(⁴)
Additional irrigable area in enterprises not supplied with water.....acres.....	2,969,607	(⁴)	3,329,263	¹⁰ 3,586,167	¹⁰ 2,826,256	(⁴)	(⁴)
Investment in irrigation enterprises.....dollars..	318,889,218	(⁴)	¹¹ 310,967,979	194,886,388	72,580,030	19,181,610	13,004,817
Increase or decrease (-) over preceding census.....percent..	² 2.5	(⁴)	59.6	168.5	278.4	47.5	.....
Average per acre based on area works were capable of supplying with water.....dollars..	43.10	(⁴)	45.63	33.06	20.05	(⁴)	(⁴)
Increase or decrease (-) over preceding census.....percent..	³ -5.5	(⁴)	38.0	64.9	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	327,593,311	(⁴)	¹¹ 325,930,535	225,799,123	84,392,344	(⁴)	(⁴)
Average per acre based on irrigable area in enterprises.....dollars..	40.75	(⁴)	40.36	¹⁰ 28.93	¹⁰ 15.37	(⁴)	(⁴)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	4.73	(⁴)	6.10	4.40	1.54	(⁴)	(⁴)

¹Decrease due to the formation of the Salton Sea. ²Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ³Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁴Not available. ⁵Irrigated land from which crops were harvested plus 544,339 acres of irrigated land used only for pasture. ⁶Irrigated land from which crops were harvested. ⁷Acres of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁸Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁹Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹⁰For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹¹Revised. ¹²The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	Number 132,658	Acres 30,524,324	Acres 6,534,562	Acres 3,732,215	Acres 544,339	Dollars 2,166,452,648	Dollars 70.97	Dollars 379,708,056	Dollars 12.44	Dollars 132,337,109	Dollars 4.34
Owners and managers.....	107,259	24,830,742	4,971,661	2,943,787	447,187	1,767,610,287	71.19	332,650,294	13.40	105,477,163	4.25
Tenants.....	25,399	5,693,582	1,562,901	788,428	97,152	398,842,361	70.05	47,057,762	8.27	26,859,946	4.72
Irrigated farms, total.....	84,310	14,071,222	4,713,175	3,732,215	544,339	1,591,824,377	113.13	250,220,347	17.78	99,181,718	7.05
Owners and managers.....	69,306	12,016,422	3,735,087	2,943,787	447,187	1,336,967,338	111.25	223,587,210	18.61	80,621,811	6.71
Tenants.....	15,004	2,054,800	978,088	788,428	97,152	254,857,039	124.08	26,633,137	12.97	18,559,907	9.03
Wholly irrigated farms.....	66,819	6,537,964	2,930,047	2,930,047	279,476	1,103,786,529	168.83	183,518,261	28.07	67,675,526	10.35
Owners and managers.....	55,052	5,325,147	2,294,670	2,294,670	221,097	929,091,333	174.47	164,336,793	30.66	54,691,896	10.27
Tenants.....	11,767	1,212,817	635,377	635,377	58,379	174,695,196	144.04	19,179,468	15.81	12,983,630	10.71
Partly irrigated farms.....	17,491	7,533,258	1,783,128	802,168	264,863	488,037,848	64.78	66,702,086	8.85	31,506,192	4.18
Owners and managers.....	14,254	6,691,275	1,440,417	649,117	228,090	407,776,005	60.94	59,228,417	8.85	25,929,915	3.88
Tenants.....	3,237	841,983	342,711	153,051	38,773	80,261,843	95.32	7,473,669	8.88	5,576,277	6.62
Nonirrigated farms, total.....	48,348	16,463,102	1,821,387	.....	.....	574,628,271	34.93	129,487,709	7.87	33,185,391	2.02

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION - CALIFORNIA

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
39,975	8,039,175	7,396,576	5,069,568	4,746,632	4,219,040	6.8	4,840,760	4,860,264	4,687,108	2.8	5.42	1.95	
Primary sources:													
Streams, gravity.....	2,140	2,897,828	2,690,410	1,741,575	1,699,599	2,564,445	2.5	1,602,613	1,629,784	1,532,267	2.3	2.62	1.12
Streams, pumped.....	1,309	850,614	513,716	470,538	469,944	295,673	0.1	433,416	458,294	421,462	3.5	3.13	0.89
Streams, gravity and pumped.....	68	654,420	454,260	251,136	85,169	60,278	194.9	239,742	247,034	236,410	4.2	3.92	0.91
Wells, pumped.....	26,294	2,126,146	2,070,540	1,511,789	1,453,272	826,846	4.0	1,490,218	1,457,423	1,445,676	2.7	8.87	3.24
Wells, flowing.....	113	2,845	2,726	1,636	1,927	17,663	-15.1	1,296	791	619	3.5	1.62	0.53
Wells, pumped and flowing.....	28	7,046	6,767	5,877	9,761	23,561	-39.8	5,852	5,662	5,637	2.8	24.05	8.48
Lakes, gravity.....	8	1,280	1,280	1,484	17,097	48,084	-97.3	360	415	360	1.9	1.21	0.63
Lakes, pumped.....	26	23,603	23,584	21,972	4,097	4,168	436.3	21,947	18,942	18,917	1.0	0.72	0.74
Springs.....	688	36,443	35,732	28,538	23,999	27,698	18.9	24,752	23,372	20,800	1.7	1.68	0.97
Springs and streams.....	166	51,066	48,994	28,555	.....	.....	.....	21,631	27,558	20,894	1.9	0.53	0.28
Stored storm water.....	36	6,679	5,398	4,360	10,754	20,351	-59.5	4,143	4,245	4,034	1.3	0.89	0.85
City water.....	68	10,599	10,374	9,497	641	515	(²)	9,406	8,591	8,587	3.7	5.36	1.45
Sewage.....	13	3,060	3,055	2,314	732	1,385	216.1	2,301	1,832	1,832	2.2	2.49	1.13
Streams, gravity; wells, pumped..	268	1,063,976	966,360	786,466	780,960	87,897	0.7	782,056	780,278	777,232	2.1	4.02	1.89
Streams, gravity; wells, flowing..	24	6,454	6,405	4,363	2,222	4,255	96.4	3,732	4,362	3,732	0.8	0.34	0.41
Streams, pumped; wells, pumped..	273	209,725	174,298	138,215	.....	.....	.....	137,649	135,404	134,838	2.4	7.13	2.93
Waste water, seepage or drainage..	42	14,561	14,061	11,456	.....	.....	.....	11,403	7,665	7,645	2.4	1.21	0.51
Other mixed.....	179	72,630	70,627	50,757	186,458	228,424	-72.8	48,243	48,632	46,166	2.2	5.93	2.67
Other and not reported.....	.....	.....	.....	.....	.....	7,807	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:³													
Streams, gravity and/or storage...	42	149,661	129,311	94,088	.....	.....	.....	60,038	92,009	58,178	1.4	2.15	1.52
Streams, pumped.....	94	11,089	11,002	5,807	2,453	.....	136.7	3,416	5,737	3,346	2.0	3.53	1.72
Wells, pumped.....	8,105	4,490,287	4,484,237	4,355,447	287,136	.....	23.8	4,351,518	4,340,025	4,338,618	4.1	4.32	4.27
Wells, flowing.....	1	(⁴)	(⁴)	(⁴)	.....	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered.

²Percent not shown when more than 1,000.

³Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

⁴Data for 1 enterprise with "Wells, flowing" source of supply are included with enterprises reporting "Wells, pumped" source of supply in the 1940 Census.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	318,889,218	100.0	43.10	310,967,979	100.0	45.63	-2.53	4,831,550	4.73	4,538,579	6.10	-1.37	3,714,361	4.40
Primary sources:														
Streams, gravity.....	63,428,239	19.9	23.58	65,278,333	21.0	24.01	-0.43	1,640,639	1.77	1,611,792	2.16	-0.39	2,275,062	2.06
Streams, pumped.....	19,458,731	6.1	23.91	31,603,584	10.2	38.63	-14.72	459,287	3.18	459,987	4.47	-1.29	267,826	5.10
Streams, gravity and pumped.....	34,584,451	10.8	76.13	9,730,362	3.1	48.42	27.71	247,034	3.18	85,169	8.25	-5.07	60,137	1.93
Wells, pumped.....	104,729,374	32.8	50.58	100,421,609	32.3	61.00	-10.42	1,457,450	8.41	1,356,975	10.05	-1.64	724,593	10.40
Wells, flowing.....	146,036	(⁴)	53.57	159,035	0.1	47.47	6.10	791	1.71	1,517	10.93	-9.22	4,341	5.91
Wells, pumped and flowing.....	1,313,926	0.4	194.45	1,163,841	0.4	100.84	93.61	5,662	20.81	9,651	13.47	7.34	20,426	7.63
Lakes, gravity.....	10,907	(⁴)	8.52	3,277,641	1.1	52.31	-43.79	415	1.76	16,602	3.01	-1.25	41,962	0.39
Lakes, pumped.....	49,938	(⁴)	2.12	494,070	0.2	109.21	-107.09	18,942	0.73	3,082	3.97	-3.24	3,783	1.66
Springs.....	649,317	0.2	18.17	563,188	0.2	18.32	-0.15	23,372	1.40	20,258	1.92	-0.52	21,635	2.21
Springs and streams.....	382,408	0.1	7.81	.....	.....	.....	.....	27,558	0.50	.....	.....	.....	.....	.....
Stored storm water.....	134,019	(⁴)	24.84	430,258	0.1	26.33	-1.49	4,245	1.21	9,050	1.73	-0.52	18,963	4.25
City water.....	494,854	0.2	46.74	10,769	(⁴)	16.07	30.67	8,169	4.25	191	14.28	-10.03	58	24.05
Sewage.....	82,370	(⁴)	26.96	105,650	(⁴)	92.92	-65.96	1,832	2.49	621	3.10	-0.61	1,286	11.25
Streams, gravity; wells, pumped..	55,040,258	17.3	56.96	60,683,254	19.5	59.33	-2.37	740,101	3.24	778,819	5.29	-2.05	67,779	15.62
Streams, gravity; wells, flowing..	20,540	(⁴)	3.21	123,631	(⁴)	40.10	-36.89	4,362	0.36	2,012	0.71	-0.35	1,860	28.93
Streams, pumped; wells, pumped..	14,725,424	4.6	84.48	.....	.....	.....	.....	135,404	6.61	.....	.....	.....	.....	.....
Waste water, seepage or drainage..	50,611	(⁴)	3.61	.....	.....	.....	.....	7,655	1.21	.....	.....	.....	.....	.....
Other mixed.....	4,872,433	1.5	68.99	27,422,195	8.8	99.69	-30.70	48,632	6.07	180,853	9.83	-3.76	196,886	5.36
Other and not reported.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,744	16.13
Supplemental sources:³														
Streams, gravity and/or storage...	5,052,412	1.6	39.07	.....	.....	.....	.....	92,009	0.99	.....	.....	.....	.....	.....
Streams, pumped.....	515,449	0.2	46.85	70,661	(⁴)	17.47	29.38	5,737	7.83	2,389	5.39	2.44	.....	.....
Wells, pumped.....	13,157,321	4.1	27.17	9,439,878	3.0	30.03	-2.86	3,414,489	4.35	270,764	5.97	-1.62	.....	.....
Wells, flowing.....	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Revised. ⁴Less than one-tenth of 1 percent. ⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ⁶Data for 1 enterprise with "Wells, flowing" source of supply are included with enterprises reporting "Wells, pumped" source of supply in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE, 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					Increase or decrease (-) 1930-40 primary enterprises	
	1940		1930		1920		Increase or decrease (-) 1930-40 primary enterprises	1940		1930			1920
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises				Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises		
AREA IRRIGATED						AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued							
Total.....	Acres 5,069,568	Acres 455,342	Acres 4,746,632	Acres 4,219,040	Percent 6.8								
Individual and partnership....	2,004,621	348,721	1,735,457	1,502,870	15.5								
Cooperative, incorporated....	761,563	27,221	853,547	1,215,696	-0.2								
Cooperative, unincorporated....	89,964	19,426											
Irrigation district.....	1,684,602	12,387	1,598,830	577,168	5.4								
Reclamation district.....	59,052	22,743											
Commercial.....	368,841	23,135	312,313	879,499	18.1								
Bureau of Reclamation ²	44,581	1,709	31,998	36,622	39.3								
Office of Indian Affairs ²	4,106		2,908	697	41.2								
State.....	4,729		9,186	2,936	-48.5								
City and/or sewage.....	46,419		79,590	6,213	-41.7								
Other.....	1,090		122,803	3,339	-89.1								
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						IRRIGABLE AREA⁴							
Total.....	7,398,576	624,550	6,815,250	5,894,466	8.6	8,039,175	651,037	8,075,895	7,805,207		-0.5		
Individual and partnership....	2,767,274	483,132	2,087,308	1,919,663	35.8	2,879,543	503,769	2,268,503	2,698,798		26.9		
Cooperative, incorporated....	1,093,743	43,744	1,359,477	1,705,647	-12.1	1,131,337	44,094	1,488,059	2,148,711		-17.0		
Cooperative, unincorporated....	100,999	24,269				103,087	24,269						
Irrigation district.....	2,384,379	12,387	2,386,919	899,785	-0.1	2,750,301	12,387	3,142,415	1,101,220		-12.5		
Reclamation district.....	136,276	22,743				137,526	22,743						
Commercial.....						830,592	42,066	799,995	1,778,135		3.8		
Bureau of Reclamation ²						68,643	1,709	62,188	47,689		10.4		
Office of Indian Affairs ²						27,109		5,579	5,252		385.9		
State.....						6,158		11,064	6,259		-44.3		
City and/or sewage.....						102,035		95,431	10,645		6.9		
Other.....						2,844		202,661	8,518		-98.6		

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²U. S. Dept. of the Interior. ³Includes "Not reported." ⁴For 1920 relates to total area. Irrigable area for that year was not reported. For explanation of areas, see text, p. 137.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 39,975	Number 1,191	Acres 8,039,175	Acres 7,398,576	Dollars 39.18	Dollars 4.39	Dollars 27.01	Dollars 3.69	Number 125,303	Acres 5,069,568	Acres 4,621,791	Acres 22,084	Acres 425,690
Individual and partnership....	36,729	284	2,879,543	2,767,274	34.70	6.11	26.19	4.26	34,706	2,004,621	1,780,635	10,250	213,736
Cooperative, incorporated....	658	516	1,131,337	1,093,743	41.45	4.69	41.08	4.64	30,375	761,563	728,047	1,053	32,463
Cooperative, unincorporated....	284	142	103,087	100,999	29.07	3.22	3.94	0.28	2,115	89,964	76,635	193	13,136
Irrigation district.....	87	87	2,750,301	2,384,379	45.08	2.70	15.74	0.07	44,762	1,684,602	1,558,969	7,812	117,821
Reclamation district.....	14	11	137,526	136,276	17.52	2.82	0.91	0.23	311	59,052	56,735	250	2,067
Commercial.....	104	93	830,592	740,007	33.60	3.46	56.42	2.76	7,988	368,841	324,752	2,491	41,598
U. S. Bureau of Reclamation.....	8	7	68,643	60,297	97.42	1.81	24.15	0.67	1,387	44,581	40,987		3,594
U. S. Office of Indian Affairs.....	51	27	27,109	7,864	126.19	7.32			728	4,106	3,958	20	128
State.....	11	2	6,158	5,858	64.43	7.31			30	4,729	4,676		53
City and/or sewage.....	24	19	102,035	99,035	35.08	8.53			2,863	46,419	45,307	15	1,097
Other.....	5	3	2,844	2,844	41.77	4.29			38	1,090	1,090		

¹Reported by enterprises in the Census of Irrigation, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. For explanation of areas and investment, see text, p. 137.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE, 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER				Capital expenditures during 1939 ³	Estimated investment required to complete works
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises					
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment						Investment in water rights				
Total.....	Dollars 318,889,218	Dollars 300,164,036	Dollars 18,725,182	Dollars 306,729,175	Dollars 12,160,043	Dollars 310,967,979	Dollars 194,886,388	Percent 2.5	Dollars 40.57	Dollars 29.96	Dollars 2,178,568	Dollars 8,704,093		
Individual and partnership....	109,682,184	97,017,879	12,664,305	108,671,184	1,011,000	108,129,435	57,616,716	1.4	35.06	26.21	31,244	1,316,658		
Cooperative, incorporated....	54,961,343	51,321,960	3,639,383	47,143,212	7,818,131	48,682,069	48,899,448	19.5	46.92	83.20	402,837	254,093		
Cooperative, unincorporated....	3,225,749	3,130,024	95,725	3,031,164	194,585	105,349,178	33,985,301	3.8	30.99	3.94	15,719	222,600		
Irrigation district.....	109,319,715	109,122,822	196,893	107,672,826	1,646,889	105,349,178	33,985,301	3.8	45.77	15.90	1,294,176	6,015,930		
Reclamation district.....	2,413,740	2,393,108	20,632	2,408,740	5,000				17.56	0.91	5,475	24,500		
Commercial.....	28,354,269	26,287,295	2,066,974	26,923,959	1,430,310	24,660,738	44,996,723	15.0	35.52	56.53	236,552	98,765		
U. S. Bureau of Reclamation.....	5,915,578	5,874,308	41,270	5,915,578		5,520,644	2,398,220	7.2	97.42	24.15	61,842	268,107		
U. S. Office of Indian Affairs.....	992,397			992,397		547,695	55,556	81.2	126.19		124,398	503,440		
State.....	423,779	423,779		377,431	46,348	881,722	224,909	51.9	72.94					
City and/or sewage.....	3,477,614	3,477,614		3,473,884	3,730	14,748,387	1,401,320	-76.4	35.11		6,325			
Other.....	122,850	122,850		118,800	4,050	2,448,091	5,308,195	-85.0	43.20					

¹Only for enterprises serving 5 or more farms. ²Revised. ³Includes "Not reported." For explanation of investment, see text, p. 137.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter-prises 1940	-Area		Total indebtedness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ⁵	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrigable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	357	3,587,608	3,160,514	95,694,893	32.40	30.45	41	19,651,711	18,668,245	16.53	4,309,809	13,041,764	10,922,709
Partnership.....	9	4,057	4,047	36,512	13.60	9.02	.....	.....	.....	.....	80,013	522,060	97,403
Cooperative, incorporated.....	220	710,988	682,311	6,553,380	10.72	9.27	11	388,001	264,051	28.15	924,906	4,287,634	3,372,476
Cooperative, unincorporated.....	5	7,873	7,873	37,950	5.52	4.82	.....	.....	137	.....	57,882	146,920	105,707
Irrigation district.....	72	2,189,539	1,874,717	74,431,404	35.96	39.89	23	18,003,764	17,962,931	3.34	2,684,596	6,027,944	5,986,602
Reclamation district.....	5	82,910	82,910	1,412,344	42.12	17.03	1	1,036,496	223,739	87.81	64,648	139,081	137,702
Commercial.....	35	520,136	444,897	9,300,579	49.04	20.28	5	141,495	138,032	35.00	389,246	1,458,006	1,103,047
Bureau of Reclamation ⁷	5	70,303	61,957	3,777,454	65.41	62.03	1	81,955	79,355	4.11	58,834	94,407	67,755
Office of Indian Affairs ⁸.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,582	17,661	.....
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	344	1,250	.....
City and/or sewage.....	6	1,802	1,802	145,270	113.14	80.62	.....	.....	.....	.....	45,758	342,607	40,017
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000	4,194	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$27.25. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$22.57. ⁵Based on primary enterprises only; State average for supplemental enterprises is \$16.78. ⁶Data for less than 3 enterprises shown with permission of the enterprise involved. ⁷U. S. Dept. of the Interior. ⁸Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁹For explanation of areas and investment, see text, p. 137.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	4,831,550	21,229,685	439,235	1,620,218	4.39	3.69	851	4,901,580	4,425
Individual and partnership.....	1,860,837	11,365,258	334,114	1,424,440	6.11	4.26	92	31,053	125
Cooperative, incorporated.....	754,503	3,538,502	25,721	119,226	4.69	4.64	474	1,194,163	1,394
Cooperative, unincorporated.....	72,190	232,665	19,426	5,360	3.22	0.28	79	29,712	90
Irrigation district.....	1,684,602	4,555,036	12,387	900	2.70	0.07	84	2,694,292	2,045
Reclamation district.....	35,766	100,785	22,743	5,323	2.82	0.23	9	28,302	37
Commercial.....	368,192	1,273,403	23,135	63,823	3.46	2.76	75	578,299	401
U. S. Bureau of Reclamation ²	44,581	80,793	1,709	1,146	1.81	0.67	4	77,059	64
U. S. Office of Indian Affairs.....	21,897	21,201	.....	.....	7.32	.....	22	63,580	148
State.....	1,472	10,756	.....	.....	7.31	.....	1	760	2
City and/or sewage.....	5,504	46,972	.....	.....	8.53	.....	11	204,360	119
Other.....	1,006	4,314	.....	.....	4.29	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for less than 3 enterprises shown with permission of the enterprise involved. ³For explanation of areas and investment, see text, p. 137.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES		FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS				
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capac-ity	Length	Num-ber	Yield	Number	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²										Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles	Ac.-ft.	Miles	Miles	G. p. m.	Number	G. p. m.	Hp.	Number	G. p. m.				
Total.....	2,714	709	91,776	18,217	1,562.1	2,652	3,561,621	22,690.2	436	34,767	48,568	26,297,969	52,217	968,351	52,016	.....	.....
Individual and partnership....	2,261	562	21,494	3,010	191.1	2,203	111,666	14,378.0	389	24,462	46,220	26,349,361	49,066	779,009	48,883	30,863,577	.....
Cooperative, incorporated.....	146	45	14,123	1,950	308.6	237	146,386	4,615.6	42	7,740	1,210	962,604	1,568	109,337	1,573	2,749,700	.....
Cooperative, unincorporated....	127	16	2,242	332	36.1	48	19,102	456.4	2	540	284	207,301	334	11,043	332	253,280	.....
Irrigation district.....	88	42	36,306	10,081	807.2	77	1,386,806	2,107.3	.....	.....	544	574,654	805	46,474	788	3,778,759	.....
Reclamation district.....	3	1	1,880	205	9.2	2	3	14.6	.....	.....	.....	.....	59	6,233	60	977,000	.....
Commercial.....	47	30	14,956	2,300	105.7	58	602,273	896.8	3	2,025	213	171,847	259	14,107	257	417,736	.....
Bureau of Reclamation ³	3	5	325	238	107.2	5	1,314,100	6.2	.....	.....	1	600	3	160	3	28,500	.....
Office of Indian Affairs ³	29	3	272	57	14.3	10	510	125.5	.....	.....	62	10,648	71	543	70	11,965	.....
State.....	6	4	94	9	2.7	9	703	22.5	.....	.....	20	9,679	36	872	34	52,178	.....
City and/or sewage.....	4	1	81	23	.....	3	72	60.8	.....	.....	5	3,245	7	210	7	6,745	.....
Other.....	.....	.....	.....	12	.....	.....	.....	6.5	.....	.....	9	8,030	9	363	9	8,030	.....

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number		Number	Number	Number	Number
Total.....	2,714	709	1,654	421	Earth and rock.....	1,111	531	.....	156
Concrete or masonry.....	527	126	319	98	Other and mixed.....	541	19	1,025	143
Timber.....	477	5	265	.....	Not reported.....	58	28	45	24

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	52,016	100.0	39,147,470	100.0	55	Total, 1940.....	52,217	100.0	968,351	100.0
Electric motor.....	41,768	80.4	31,721,814	81.0	57	Centrifugal pump.....	16,109	30.9	206,903	21.4
Centrifugal.....	13,709	26.4	13,746,834	35.1	29	Electric.....	12,290	23.5	163,062	16.9
Turbine.....	25,835	49.8	17,296,281	44.1	70	Internal-combustion.....	3,787	7.3	43,040	4.4
Plunger.....	2,049	3.9	140,136	0.4	102	Other.....	32	0.1	801	0.1
Other.....	175	0.3	538,563	1.4	74	Turbine pump.....	27,027	51.7	596,016	61.5
Internal-combustion engine.....	6,413	12.3	3,858,816	9.9	47	Electric.....	24,261	46.5	505,201	52.1
Centrifugal.....	3,543	6.8	2,221,766	5.7	23	Internal-combustion.....	2,725	5.2	90,108	9.3
Turbine.....	2,297	4.4	1,563,462	4.0	81	Other.....	21	(¹)	707	0.1
Plunger.....	196	0.4	35,594	0.1	69	Plunger pump.....	2,443	4.7	11,165	1.2
Other.....	77	0.1	37,994	0.1	45	Electric.....	1,647	3.2	8,226	0.8
Other kinds of motive power.....	283	(¹) 0.5	29,929	0.1	48	Internal-combustion.....	511	1.0	2,509	0.3
Centrifugal.....	19	(¹)	16,742	(¹)	30	Other.....	285	0.5	430	(¹)
Turbine.....	11	(¹)	5,820	(¹)	97	Other and mixed types of pumps.....	6,638	12.7	154,267	15.9
Plunger.....	242	0.5	6,394	(¹)	48	Electric.....	5,734	11.0	127,809	13.2
Other.....	11	(¹)	973	(¹)	34	Internal-combustion.....	804	1.5	25,077	2.6
Mixed kinds of motive power.....	3,552	6.8	3,536,911	9.0	51	Other.....	² 100	0.2	1,381	0.1
Centrifugal.....	1,457	2.8	1,726,868	4.4	28	Total, 1930.....	³ 46,729	.....	620,767	.....
Turbine.....	1,854	3.5	1,672,433	4.3	73	Increase or decrease (-) 1930-1940.....	5,488	.....	147,584	.....
Plunger.....	196	0.4	17,121	(¹)	60					
Other.....	45	0.1	120,489	0.3	49					
Total, 1930.....	47,994	.....	33,240,589	.....	53					
Increase or decrease (-) 1930-1940...	4,022	.....	5,906,881	.....	2					

¹ Less than one-tenth of 1 percent.

² Includes 2 hydraulic rams.

³ Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 22,690.2	Miles 14,683.0	Percent 54.5	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	160.1	138.9	15.3
1 to 12 inches.....	13,183.5	7,199.4	89.1	13 to 24 inches.....	55.8	88.6	1.2
13 to 24 inches.....	3,218.7	2,269.5	56.9	Over 24 inches.....	33.9		
Over 24 inches.....	342.8					Clay and other:	
Metal:				1 to 12 inches.....	215.5	78.7	173.8
1 to 12 inches.....	4,787.1	3,333.4	43.6	13 to 24 inches.....	53.9	32.0	105.6
13 to 24 inches.....	510.6	758.3	-17.3	Over 24 inches.....	11.9		
Over 24 inches.....	116.4						

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

³ Includes 784.2 miles pipe lines not segregated by size.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	897	933	545	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	2,598,196	3,105,549	1,623,330	(a) Enterprises reporting lands drained and/or needing drainage...percent..	88.2	³ 49.0	¹ 19.7
Area irrigated in these enterprises.....acres...	1,711,027	(²)	(²)	(b) All irrigation enterprises.....percent..	29.8	32.1	7.6
Area for which drains have been installed...acres...	1,509,632	1,522,338	319,573	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	394,963	235,990	409,933	(a) Irrigable area reporting.....percent..	73.3	56.6	¹ 44.9
				(b) Irrigable area reporting.....percent..	111.3	(²)	(²)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ² Not available. ³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	11,016,598	10,109,851	14,793,933	9,680,546	9,272,139	10,581,929	1,336,052	837,712	4,212,004
Area irrigated by these enterprises.....acres.....	2,541,663	2,527,416	2,167,485	2,181,859	2,296,760	1,785,976	359,804	230,636	381,509
Average water per acre irrigated.....acre-feet..	4.3	4.0	6.8	4.4	4.0	5.9	3.7	3.6	11.0
Total water delivered to irrigators.....acre-feet..	7,979,232	5,631,710	3,409,367	4,108,863	4,049,809	1,627,316	3,870,369	1,581,901	1,782,051
Area irrigated by these enterprises.....acres.....	3,085,064	1,993,373	1,438,699	1,734,660	1,492,989	751,327	1,350,404	500,384	687,372
Average water per acre irrigated.....acre-feet..	2.6	2.8	2.4	2.4	2.7	2.2	2.9	3.2	2.6
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	4,678,688	.....	.....	557,974	.....	.....	4,120,614	.....	.....
Area irrigated by these enterprises.....acres.....	1,755,696	.....	.....	291,328	.....	.....	1,464,368	.....	.....
Average water per acre irrigated.....acre-feet..	2.7	.....	.....	1.9	.....	.....	2.8	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	130,534	.....	.....	77,658	.....	.....	52,876	.....	.....
Area irrigated by these enterprises.....acres.....	90,777	.....	.....	39,611	.....	.....	51,168	.....	.....
Average water per acre irrigated.....acre-feet..	1.4	.....	.....	2.0	.....	.....	1.0	.....	.....
Total water delivered to irrigators.....acre-feet..	92,076	.....	.....	55,758	.....	.....	36,318	.....	.....
Area irrigated by these enterprises.....acres.....	63,454	.....	.....	31,584	.....	.....	31,870	.....	.....
Average water per acre irrigated.....acre-feet..	1.5	.....	.....	1.8	.....	.....	1.1	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	669,906	.....	.....	5,893	.....	.....	664,013	.....	.....
Area irrigated by these enterprises.....acres.....	351,518	.....	.....	5,026	.....	.....	346,492	.....	.....
Average water per acre irrigated.....acre-feet..	1.9	.....	.....	1.2	.....	.....	1.9	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
Total.....	Acres 5,069,568	Percent 100.0	Acres 455,342	Acres 4,746,632	Percent 100.0	Acres 4,219,040	Percent 100.0
Appropriation ²	1,230,693	24.3	24,313	1,808,898	38.2	1,289,937	30.5
Riparian.....	426,708	8.4	21,253	357,635	7.5	240,512	5.7
Appropriation and riparian.....	778,908	15.4	37,992	.....	.....	.....	.....
Underground.....	1,479,022	29.1	348,514	1,454,093	30.6	863,613	20.5
Appropriation and underground.....	478,114	9.4	2,737	.....	.....	.....	.....
Riparian and underground.....	105,371	2.1	2,018	.....	.....	.....	.....
Adjudicated by court.....	494,693	9.8	18,107	777,891	16.4	982,157	23.3
Other mixed and not reported.....	76,059	1.5	408	348,115	7.3	842,621	20.0

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).
²"Appropriation" includes water rights published in the 1930 and 1920 census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 44,581 acres which were irrigated in 1939, and which were within the Bard and Reservation Divisions of the Yuma Project, the Tule Lake Division of the Klamath Project, and the Orland Project. These projects are indicated as separate enterprises under the Bureau of Reclamation and are not duplicated under any other classification. Areas totaling 1,709 acres irrigated with supplemental water from the Klamath Project are reported as receiving a primary supply through other enterprises.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 relates to the areas outlined in the preceding paragraph and reflects costs incurred by the Bureau of Reclamation in the construction of these

enterprises. There are excluded from the totals construction expenditures on the All-American Canal, which was not in operation in 1939, to provide a substituted supply for the Imperial Irrigation District, and on the Coachella Branch Canal in southern California. Neither are there included construction expenditures on the Central Valley Project, a multiple-purpose project designed to produce power, provide supplemental water for irrigation in the San Joaquin Valley and Contra Costa area, and municipal water supplies; for flood control and improvement of navigation. There are also omitted construction expenditures on Parker Dam constructed by the Bureau of Reclamation with funds advanced by the Metropolitan Water District of southern California as a source of Colorado River water for Los Angeles and 12 other cities of the coastal plain.

CENSUS OF IRRIGATION - CALIFORNIA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	31,733	780	27,633	2,170	779	228	128	15
2	Irrigated farms, 1939.....number...	125,303	.....	27,633	5,372	7,558	10,682	33,081	40,977
3	Area irrigated, 1939.....acres.....	5,069,568	.....	1,777,214	229,809	336,133	397,182	976,480	1,352,750
4	(a) From which crops were harvested.....acres.....	4,621,791	.....	1,577,094	199,384	294,748	364,346	925,764	1,260,465
5	(b) On which crops failed.....acres.....	22,084	.....	11,061	678	1,220	982	4,143	4,000
6	(c) Irrigated pasture.....acres.....	425,693	.....	189,069	29,747	40,165	31,854	46,573	88,285
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	300,164,036	1,807,790	81,094,859	14,512,633	17,993,899	26,580,291	83,956,546	74,218,018
8	(a) Cost of irrigation works and equipment.....dollars..	289,861,271	1,757,460	80,842,476	13,712,349	17,498,418	25,022,253	77,236,880	73,791,435
9	(b) Investment in water rights.....dollars..	10,302,765	50,330	252,383	800,284	495,481	1,558,038	6,719,666	426,589
10	Area works were capable of supplying with water.....acres.....	7,398,576	169,707	2,427,559	322,108	561,799	693,866	1,515,586	1,707,951
11	Average investment per acre irrigated.....dollars..	59.21	.....	45.63	63.15	53.52	66.50	82.59	54.86
12	Average investment per acre which the works could supply with water.....dollars..	40.57	10.65	33.41	45.06	32.02	38.17	54.13	43.45
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	29,185	259	25,786	2,044	733	222	127	14
14	(a) Area irrigated in these enterprises.....acres.....	4,831,550	.....	1,640,124	207,289	315,802	379,356	976,180	1,312,799
15	(b) Cost of maintenance and operation.....dollars..	21,229,685	24,019	10,085,495	1,125,306	1,390,091	1,524,612	4,171,180	2,908,982
16	(c) Average cost per irrigated acre reporting.....dollars..	4.39	.....	6.15	5.43	4.40	3.99	4.10	2.22
17	Total annual charges ².....dollars..	12,789,209	1,327	.....	1,258	1,614,261	1,752,072	4,968,540	4,451,751
18	Average charge per irrigated acre reporting.....dollars..	4.24	.....	.....	0.52	5.12	4.61	5.15	3.29
19	Area against which charges were assessed.....acres.....	4,212,879	28,552	.....	2,430	373,929	517,020	1,480,778	1,810,170
20	Average annual charge per acre assessed.....dollars..	3.04	0.05	.....	0.52	4.32	3.39	3.36	2.46
21	Total charges collected ².....dollars..	10,519,461	1,355	.....	180	831,568	1,541,343	3,927,332	4,217,683
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ³.....number...	345	4 ²	.....	4 ¹	103	135	94	10
23	(a) Area irrigated in these enterprises.....acres.....	2,009,905	.....	.....	300	102,064	269,031	765,231	873,279
24	(b) Indebtedness.....dollars..	94,170,982	16,099	.....	105	3,494,685	10,889,486	31,747,673	48,022,934
25	(c) Average indebtedness per acre irrigated.....dollars..	46.85	.....	.....	0.35	34.24	40.48	40.19	54.99
26	(d) Cost of irrigation works and equipment.....dollars..	153,776,097	298,833	.....	3,000	5,955,983	19,690,445	65,435,348	62,497,488
27	(e) Investment in water rights.....dollars..	7,613,291	40,200	.....	1,500	362,946	963,921	5,908,141	336,583
28	(f) Total investment.....dollars..	161,389,388	334,033	.....	4,500	6,318,929	20,654,366	71,043,489	62,834,071
29	(g) Maintenance and operation.....dollars..	7,455,185	3,872	.....	162	331,191	1,148,944	3,437,242	2,533,774
30	(h) Total annual charges ².....dollars..	9,575,190	.....	.....	162	455,738	1,322,944	4,291,729	3,504,617
31	(i) Total charges collected ².....dollars..	8,504,288	1,093	.....	180	318,331	1,268,219	3,379,086	3,537,379
32	(j) Area against which annual charges were assessed.....acres.....	2,888,146	.....	.....	300	129,045	372,020	1,240,617	1,146,164
33	(k) Average indebtedness per acre assessed.....dollars..	32.40	.....	.....	0.35	22.98	29.27	25.55	41.90
34	(l) Average charges per acre assessed.....dollars..	3.32	.....	.....	0.54	3.53	3.56	3.46	3.06
35	(m) Average charges per acre irrigated.....dollars..	4.77	.....	.....	0.54	4.51	4.92	5.61	4.01
36	Enterprises reporting arrearage ³.....number...	40	.....	.....	.....	11	11	15	3
37	(a) Area assessed in these enterprises.....acres.....	1,170,069	.....	.....	.....	15,988	112,947	266,412	774,722
38	(b) Total arrearage.....dollars..	19,649,311	.....	.....	.....	851,944	3,668,581	4,150,609	10,978,277
39	(c) Average arrearage per acre assessed.....dollars..	16.53	.....	.....	.....	34.03	32.48	15.58	14.17
40	(d) Indebtedness.....dollars..	55,869,751	.....	.....	.....	2,445,615	6,360,755	9,566,131	37,497,250
TYPE, 1940									
41	Individual and partnership.....number...	30,536	761	27,430	2,064	279	1	1	.....
42	Cooperative (incorporated and unincorporated).....number...	903	13	166	90	390	170	71	3
43	Irrigation district.....number...	85	1	.....	.....	13	25	36	10
44	Commercial.....number...	100	2	11	.....	55	17	14	1
45	U. S. Bureau of Reclamation.....number...	5	1	.....	.....	1	.....	3	.....
46	U. S. Office of Indian Affairs.....number...	51	2	11	12	18	6	2	.....
47	All other.....number...	53	.....	15	4	23	9	1	1
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....number...	835	8	.....	4 ²	468	216	126	15
49	Wages and salaries paid and payable for 1939.....dollars..	4,841,769	5,436	.....	1,181	278,011	604,813	1,770,141	2,182,187
50	Persons employed during week ending April 29, 1939.....number...	4,371	9	.....	6	788	685	1,397	1,488
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....number...	2,140	54	1,723	119	141	65	32	6
52	Streams, pumped.....number...	1,309	31	1,163	67	25	15	8	.....
53	Wells, pumped.....number...	26,284	653	23,060	1,891	548	103	29	.....
54	Wells, pumped and flowing; or wells flowing.....number...	141	1	128	8	1	.....	3	.....
55	Lakes, gravity or pumped.....number...	34	.....	27	4	3	.....	.....	.....
56	Streams and springs; or springs.....number...	854	26	803	16	3	5	1	.....
57	Mixed, streams and wells.....number...	633	8	448	45	40	32	52	8
58	Other mixed or stored storm water.....number...	338	7	281	20	18	8	3	1

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	8,242	633	7,308	278	9	4	9	1
2	Irrigated farms, 1939.....number...	12,399	.....	7,308	635	109	203	2,221	(⁶)
3	Area irrigated, 1939.....acres.....	455,342	.....	333,365	18,688	18,632	4,029	67,613	(⁶)
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	18,723,182	1,117,411	11,088,130	626,640	428,096	294,023	3,485,717	(⁶)
5	(a) Cost of irrigation works and equipment.....dollars..	16,867,904	1,117,371	11,074,450	626,039	308,513	232,938	1,756,368	(⁶)
6	(b) Investment in water rights.....dollars..	1,857,278	40	8,680	601	117,583	1,025	1,729,349	(⁶)
7	Area works were capable of supplying with water.....acres.....	624,580	45,762	418,085	23,735	20,481	4,235	88,186	(⁶)
8	Average investment per acre irrigated.....dollars..	41.12	.....	33.25	33.53	22.87	72.98	51.40	(⁶)
9	Average investment per acre which the works could supply with water.....dollars..	29.98	24.42	26.51	26.40	20.80	69.43	39.53	(⁶)

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
² Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION - CALIFORNIA

CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
760	26,032	3,457	1,188	205	63	8	26,366	3,970	1,149	221	27	1
.....	31,088	8,613	14,543	16,968	27,065	27,026	29,520	9,226	12,331	29,700	44,526	2
.....	698,484	554,738	736,848	710,635	1,161,465	1,207,598	1,091,197	590,273	721,651	1,009,878	1,656,569	3
.....	646,239	506,628	645,385	626,568	1,057,910	1,139,061	831,236	534,584	661,061	945,282	1,549,628	4
.....	4,333	2,996	2,512	2,931	5,312	4,000	6,421	2,140	4,944	2,048	6,531	5
.....	47,912	45,114	88,751	81,136	98,243	64,537	153,540	53,549	55,646	62,548	100,410	6
1,807,790	53,983,782	27,349,457	38,325,762	55,515,412	70,111,373	53,070,460	38,904,293	29,993,055	35,821,141	84,824,817	110,620,730	7
1,757,460	53,812,766	27,040,352	35,987,202	51,587,783	66,731,831	52,943,877	38,765,888	29,733,023	34,898,647	77,476,422	108,887,291	8
50,330	171,016	309,103	2,338,560	3,827,629	3,379,642	126,583	138,405	260,032	922,494	7,348,395	1,633,439	9
169,707	1,039,249	715,530	999,925	1,145,643	1,759,692	1,574,830	1,511,361	762,313	1,050,228	1,802,393	2,272,281	10
.....	77.29	49.29	52.03	77.33	56.58	43.95	35.65	50.81	48.44	81.99	66.78	11
10.65	51.94	38.22	38.33	48.35	39.19	33.70	25.74	39.34	33.54	46.55	48.68	12
259	24,313	3,254	1,099	193	59	8	24,088	3,758	1,093	220	26	13
.....	666,659	520,670	678,587	670,343	1,087,983	1,207,598	988,173	557,552	667,589	1,001,618	1,616,618	14
24,019	5,759,214	3,351,012	3,421,442	3,027,274	3,287,040	2,359,684	5,347,920	3,406,015	3,437,629	4,700,398	4,337,723	15
.....	8.64	6.44	5.04	4.47	2.93	1.95	5.41	6.11	5.02	4.58	2.68	16
1,327	285,645	637,760	1,588,679	3,296,310	3,911,037	3,068,451	123,624	423,612	1,496,145	5,364,779	5,361,049	17
.....	14.44	11.99	7.39	6.96	3.74	2.54	3.02	3.63	4.96	5.82	3.26	18
28,552	27,934	64,089	267,158	712,667	1,507,814	1,604,665	44,789	136,272	382,979	1,277,900	2,370,939	19
0.05	10.23	9.95	5.95	4.63	2.59	1.91	2.76	3.11	3.91	4.20	2.27	20
1,355	142,541	448,964	1,419,472	2,317,673	3,014,248	3,175,208	56,274	249,905	1,179,057	3,948,977	5,085,248	21
42	21	75	125	75	43	4	8	48	136	134	19	22
.....	1,324	14,428	99,452	278,515	948,108	768,078	2,834	27,143	141,615	723,568	1,114,745	23
16,099	93,609	414,000	6,569,625	18,354,610	31,783,482	36,939,557	4,123	110,522	1,734,504	27,612,255	64,709,578	24
.....	70.70	28.69	66.06	64.80	36.61	48.09	1.45	4.07	12.25	36.90	58.05	25
283,833	361,252	2,036,854	15,403,427	36,343,219	54,871,012	44,446,500	23,400	493,475	5,587,430	56,294,046	91,377,746	26
40,200	48,534	152,290	1,327,542	3,178,600	2,829,542	36,583	1,500	99,449	441,802	5,527,101	1,543,439	27
334,033	429,786	2,189,144	16,730,969	39,521,819	57,700,554	44,483,083	24,900	592,924	6,029,232	61,821,147	92,921,185	28
3,872	27,819	181,059	896,238	1,645,422	2,716,629	1,984,476	7,030	65,732	625,111	3,094,759	3,662,553	29
.....	53,830	238,653	1,029,524	2,576,461	3,275,748	2,400,974	7,415	84,753	795,164	4,464,876	4,222,962	30
1,093	34,156	217,145	1,031,673	1,895,889	2,829,428	2,494,904	4,703	84,409	638,766	3,490,649	4,285,761	31
.....	5,718	19,853	124,283	485,524	1,272,158	980,610	2,839	34,454	164,842	1,044,237	1,641,774	32
.....	16.37	20.85	48.61	37.71	24.98	37.67	1.45	3.21	10.52	25.87	39.41	33
.....	9.41	12.02	8.28	5.31	2.57	2.45	2.61	2.46	4.82	4.28	2.57	34
.....	40.66	16.54	10.46	9.25	3.86	3.13	2.62	3.12	5.62	6.18	3.79	35
.....	3	3	10	11	10	3	.....	4	7	25	7	36
.....	233	1,220	17,948	88,115	258,943	803,610	.....	83	16,313	217,570	936,103	37
.....	8,655	36,954	1,051,999	2,547,804	5,657,693	10,346,206	.....	655	64,097	7,188,318	12,396,241	38
.....	37.15	30.29	41.47	28.91	21.85	12.87	.....	7.89	3.93	31.32	13.24	39
.....	13,169	67,431	2,504,289	5,678,804	15,249,058	32,357,000	.....	5,169	161,862	13,803,958	41,898,762	40
761	25,678	3,125	894	73	5	.....	26,093	3,631	772	39	1	41
13	280	282	229	79	20	.....	230	287	290	93	3	42
1	3	5	20	27	22	.....	1	.....	.....	.....	.....	43
2	17	25	27	17	11	1	5	23	42	26	4	44
1	.....	.....	1	1	2	.....	1	.....	1	1	2	45
2	38	6	5	.....	.....	.....	24	12	12	3	.....	46
.....	16	14	12	8	3	.....	12	17	17	6	1	47
8	157	233	251	123	55	8	90	237	314	168	26	48
5,436	52,516	130,115	536,861	833,380	1,672,759	1,610,702	61,545	74,204	436,482	1,468,609	2,800,929	49
9	256	391	693	708	1,228	1,086	112	331	762	1,215	1,948	50
54	1,316	366	292	79	29	4	1,855	135	88	54	8	51
31	887	226	133	25	6	1	1,130	114	41	21	3	52
853	22,385	2,607	594	43	2	.....	21,781	3,546	883	74	.....	53
1	132	3	4	1	.....	.....	127	8	2	4	.....	54
.....	28	3	1	1	1	.....	32	1	1	.....	.....	55
26	722	68	33	5	.....	.....	814	28	12	.....	.....	56
8	324	133	97	44	24	3	367	96	93	61	16	57
7	238	51	34	7	1	.....	260	42	29	7	.....	58
633	6,946	529	124	5	5	.....	7,872	296	64	9	1	1
.....	7,248	621	1,120	720	3,230	.....	7,594	813	834	1,235	(5)	2
.....	204,265	81,471	73,701	16,075	79,830	.....	273,351	70,340	61,759	36,878	(6)	3
1,117,411	7,575,445	2,219,448	2,666,246	657,498	4,489,134	.....	8,433,865	2,250,967	2,005,114	4,343,071	(5)	4
1,117,371	7,573,324	2,217,388	2,514,421	628,689	2,816,711	.....	8,315,469	2,249,342	1,944,114	2,666,814	(5)	5
40	2,121	2,060	151,825	28,809	1,672,423	.....	118,396	61,000	1,676,257	.....	(5)	6
45,762	261,586	99,991	103,692	18,359	95,160	.....	370,428	90,516	96,938	42,602	(5)	7
.....	37.09	27.24	36.18	40.90	56.23	.....	30.83	32.00	32.47	117.77	(5)	8
24.42	28.96	22.20	25.71	35.81	47.17	.....	22.77	24.87	20.68	101.95	(5)	9

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
² Data for less than 3 enterprises shown with permission of the enterprises involved.
³ Data are included only in State total because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
10	Enterprises reporting maintenance and operation.....	number... 7,453	76	7,066	269	9	4	8	1
11	(a) Area irrigated in these enterprises.....	acres... 439,235		319,732	17,715	18,632	4,029	66,313	(^b)
12	(b) Cost of maintenance and operation.....	dollars... 1,620,218	18,823	1,337,263	77,211	11,066	34,654	107,729	(^b)
13	(c) Average cost per irrigated acre reporting.....	dollars... 3.69		4.18	4.36	0.59	8.60	1.62	(^b)
14	Total annual charges ³	dollars... 252,555				24,064	28,748	165,671	(^b)
15	Average charge per irrigated acre reporting.....	dollars... 3.06				1.37	9.04	3.41	(^b)
16	Area against which charges were assessed.....	acres... 96,930				18,018	3,179	62,919	(^b)
17	Average annual charge per acre assessed.....	dollars... 2.61				1.37	9.04	2.63	(^b)
18	Total charges collected ³	dollars... 403,248				22,410	21,035	150,167	(^b)
INDEBTEDNESS AND ARREARAGE, 1939									
19	Enterprises reporting indebtedness ⁴	number... 12				3	3	5	1
20	(a) Area irrigated in these enterprises.....	acres... 52,641				12,852	2,510	24,465	(^b)
21	(b) Indebtedness.....	dollars... 1,523,911				141,757	141,325	436,328	(^b)
22	(c) Average indebtedness per acre irrigated.....	dollars... 28.95				11.03	56.30	17.83	(^b)
23	(d) Cost of irrigation works and equipment.....	dollars... 3,784,684				208,413	212,170	1,671,936	(^b)
24	(e) Investment in water rights.....	dollars... 1,817,957				117,583	1,025	1,699,349	(^b)
25	(f) Total investment.....	dollars... 5,602,641				325,996	213,195	3,371,285	(^b)
26	(g) Maintenance and operation.....	dollars... 144,186				2,531	6,302	101,281	(^b)
27	(h) Total annual charges ⁵	dollars... 198,902				17,412	996	148,022	(^b)
28	(i) Total charges collected ⁵	dollars... 372,147				16,684	2,400	143,427	(^b)
29	(j) Area against which annual charges were assessed.....	acres... 52,102				12,852	1,699	24,776	(^b)
30	(k) Average indebtedness per acre assessed.....	dollars... 27.25				11.03	22.55	17.61	(^b)
31	(l) Average charges per acre assessed.....	dollars... 3.84				1.35	0.60	5.97	(^b)
32	(m) Average charges per acre irrigated.....	dollars... 3.86				1.35	0.60	6.05	(^b)
33	Enterprises reporting arrearage ⁶	number... 5				1			
34	(a) Area assessed in these enterprises.....	acres... 143				143			
35	(b) Total arrearage.....	dollars... 2,400				2,400			
36	(c) Average arrearage per acre assessed.....	dollars... 16.78				16.78			
37	(d) Indebtedness.....	dollars... 2,400				2,400			
TYPE, 1940									
38	Individual and partnership.....	number... 8,193	629	7,266	276	2			
39	Cooperative (incorporated and unincorporated).....	number... 39	2	21	2	5			
40	Irrigation district.....	number... 5	1			1			
41	Commercial.....	number... 4				1			
42	U. S. Bureau of Reclamation.....	number... 3	1	1					
43	All other.....	number... 5							
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
44	Enterprises reporting pay roll.....	number... 16				4	3	8	1
45	Wages and salaries paid and payable for 1939.....	dollars... 59,811				2,305	7,989	39,487	(^b)
46	Persons employed during week ending April 29, 1939.....	number... 54				4	12	35	(^b)
SOURCE OF SUPPLEMENTAL WATER SUPPLY 1939									
47	Streams, pumped.....	number... 94	19	73	2				
48	Wells, pumped or flowing.....	number... 8,106	610	7,211	273	7	3	2	
49	Streams, gravity or storage.....	number... 42	4	24	3	2	1	7	1

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Data are included only in State total because less than 3 enterprises reported in the 1940 Census.
³Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Klamath River														
Klamath Falls, Oregon.....	Klamath.....	4,100	9.02	-3.18	3.43	-1.19	3.58	-0.84	0.90	-1.18	1.11	+0.03	50.1	+2.2
Montague.....	Siskiyou.....	2,523	7.99	-4.38	2.49	-2.13	2.23	-2.15	0.90	-1.19	2.37	+1.09	53.5	+0.5
Averages.....			8.50	-3.78	2.96	-1.66	2.90	-1.50	0.90	-1.19	1.74	+0.56	51.8	+1.4
Pacific Slope (North of San Francisco Bay)														
Crescent City.....	Del Norte.....	125	66.44	-7.17	24.14	-1.89	35.37	+2.38	5.29	-5.89	1.64	-1.77	54.4	+1.7
Weaverville.....	Trinity.....	2,030	25.28	-11.11	11.44	-2.05	9.95	-7.61	3.23	-1.20	0.66	-0.25	54.7	+1.4
Eureka.....	Humboldt.....	44	29.48	-10.28	12.43	-1.36	13.93	-4.89	2.78	-3.07	0.34	-0.96	52.2	+0.6
Ukiah.....	Mendocino.....	650	22.81	-12.29	9.82	-2.64	11.13	-7.65	1.62	-1.71	0.24	-0.29	59.6	+2.1
Cloverdale.....	Sonoma.....	315	18.00	-19.22	6.10	-6.02	9.84	-10.80	2.06	-1.78	0.00	-0.62	61.5	+2.1
Averages.....			32.40	-12.01	12.79	-2.79	16.04	-5.71	3.00	-2.73	0.58	-0.78	56.5	+1.6
San Francisco Bay														
Santa Rosa.....	Sonoma.....	167	15.26	-13.49	6.54	-3.43	7.38	-7.71	1.26	-1.86	0.08	-0.49	59.0	+2.1
Livermore.....	Alameda.....	480	9.62	-4.08	2.60	-1.68	6.15	-1.43	0.71	-0.75	0.16	-0.22	59.5	+0.2
San Jose.....	Santa Clara.....	95	10.77	-2.97	3.64	-0.53	6.11	-1.59	0.74	-0.73	0.28	-0.12	59.2	+1.5
Averages.....			11.88	-6.85	4.26	-1.88	6.55	-3.58	0.90	-1.11	0.17	-0.28	59.2	+1.5
Pacific Slope (South of San Francisco Bay)														
Santa Cruz.....	Santa Cruz.....	125	21.22	-4.91	5.74	-2.68	12.70	-1.76	1.46	-1.12	1.32	+0.65	57.9	+0.6
King City.....	Monterey.....	331	7.85	-2.42	2.36	-0.31	5.02	-1.46	0.19	-0.75	0.28	+0.10	59.1	+0.1
Salinas.....	Monterey.....	45	10.97	-2.00	3.21	-0.80	6.79	-0.44	0.68	-0.72	0.29	-0.04	56.8	+0.4
San Luis Obispo.....	San Luis Obispo.....	300	10.37	-10.66	2.09	-3.73	7.28	-5.60	0.39	-1.62	0.61	+0.29	59.2	+0.4
Santa Maria.....	Santa Barbara.....	217	11.51	-2.35	1.94	-1.59	7.82	-0.78	0.25	-1.18	1.50	+1.20	57.7	0.0
Averages, north group.....			12.38	-4.47	3.07	-1.82	7.92	-2.01	0.59	-1.08	0.80	+0.44	58.1	+0.3
Oxnard.....	Ventura.....	51	14.68	+2.48	6.65	+2.48	6.00	-0.07	0.34	-1.49	1.69	+1.56	59.3	+0.5
Los Angeles.....	Los Angeles.....	261	18.74	+3.51	7.27	+2.76	5.53	-3.42	0.26	-1.31	5.68	+5.48	65.4	+3.0
San Bernardino (near).....	San Bernardino.....	1,172	17.97	+2.10	7.21	+3.15	7.59	-1.47	0.91	-1.41	2.26	+1.83	64.2	+1.3
Santa Ana.....	Orange.....	133	20.51	+7.11	8.77	+4.99	7.18	-0.75	0.65	-0.81	3.91	+3.68	63.2	+1.1
Escondido.....	San Diego.....	750	18.40	+1.80	6.37	+1.91	7.91	-1.83	0.86	-1.31	3.26	+3.03	62.2	+1.3
Averages, south group.....			18.06	+3.40	7.25	+3.06	6.84	-1.51	0.80	-1.27	3.36	+3.12	62.9	+1.4

¹Departure from normal.

CENSUS OF IRRIGATION - CALIFORNIA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940-Continued

No acres ¹	ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
76	6,744	510	113	5	5	7,116	270	57	9	1	10	
.....	198,583	78,442	66,305	16,075	79,830	262,997	67,769	58,877	36,878	(2)	11	
18,823	669,711	319,350	301,400	52,909	58,025	1,048,073	233,502	175,534	129,637	(2)	12	
.....	4.38	4.07	4.55	3.29	0.73	3.99	3.45	2.98	3.52	(2)	13	
.....	788	5,868	96,620	28,318	120,961	765	2,957	55,059	160,302	(2)	14	
.....	22.51	10.22	12.48	2.28	1.96	2.38	10.06	1.58	4.66	(2)	15	
.....	35	574	22,051	12,425	61,845	322	294	48,766	34,734	(2)	16	
.....	22.51	10.22	4.38	2.28	1.96	2.38	10.06	1.13	4.62	(2)	17	
.....	1,145	5,865	74,833	23,374	287,931	.....	4,061	30,724	158,627	(2)	18
.....	.....	5 1	6	5 2	3	.....	.....	5 1	3	6	19
.....	143	5,671	7,725	39,102	(2)	143	4,614	34,748	(2)	20
.....	2,400	252,802	16,371	1,252,338	.....	(2)	2,400	45,325	671,329	(2)	21
.....	16.78	44.58	2.12	32.03	.....	(2)	16.78	9.82	19.32	(2)	22
.....	9,660	729,174	263,771	2,782,079	.....	(2)	9,660	134,966	1,944,140	(2)	23
.....	.....	116,725	28,809	1,672,423	.....	(2)	.....	26,000	1,676,257	.....	24
.....	9,660	845,899	292,580	4,954,302	.....	(2)	9,660	160,966	3,620,397	(2)	25
.....	866	62,454	28,689	52,177	.....	(2)	866	7,123	101,960	(2)	26
.....	1,287	56,548	26,435	115,632	.....	(2)	1,287	4,076	160,302	(2)	27
.....	1,284	55,631	23,374	291,858	.....	(2)	1,284	2,400	158,627	(2)	28
.....	143	5,132	7,725	39,102	.....	(2)	143	4,089	34,734	(2)	29
.....	16.78	29.01	2.12	32.03	.....	(2)	16.78	10.13	16.45	(2)	30
.....	9.00	11.02	3.42	2.96	.....	(2)	9.00	1.00	4.62	(2)	31
.....	9.00	11.73	3.42	2.96	.....	(2)	9.00	1.00	4.66	(2)	32
.....	5 1	.....	.....	.....	.....	.....	5 1	.....	.....	.....	33
.....	143	.....	.....	.....	.....	.....	143	.....	.....	.....	34
.....	2,400	.....	.....	.....	.....	.....	2,400	.....	.....	.....	35
.....	16.78	.....	.....	.....	.....	.....	16.78	.....	.....	.....	36
.....	2,400	.....	.....	.....	.....	.....	2,400	.....	.....	.....	37
.....	629	6,932	522	108	2	.....	7,855	281	54	3	38
.....	2	13	7	14	1	.....	14	15	7	3	39
.....	1	.....	.....	.....	2	.....	1	.....	.....	1	40
.....	1	1	1	1	1	.....	2	.....	1	2	41
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	5 2	7	5 2	5	.....	.....	5 2	6	6	44
.....	465	21,528	11,063	26,715	(2)	710	10,218	37,933	(2)	45
.....	2	23	10	19	3	13	35	(2)	46
.....	19	63	8	3	1	.....	83	8	2	1	47
.....	610	6,864	514	116	2	.....	7,759	294	58	5	48
.....	4	19	7	5	2	.....	30	4	4	3	49

¹Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
²Data for less than 3 enterprises shown with permission of the enterprises involved.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939—Continued

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Sacramento River (Tributary watershed)														
Alturas.....	Modoc.....	Feet 4,446	Inches 7.56	-4.47	Inches 2.61	-1.06	Inches 2.50	-1.63	Inches 1.02	-1.85	Inches 1.43	+0.07	Degrees F. 47.3	Degrees F. +0.6
Mount Shasta.....	Siskiyou.....	3,555	20.40	-13.29	8.39	-2.74	7.81	-8.73	2.40	-2.28	1.80	+0.46	51.5	+2.4
Redding.....	Shasta.....	718	24.79	-11.35	9.33	-2.74	9.15	-9.01	4.43	-0.53	1.88	+0.93	64.6	+2.0
Sierraville.....	Sierra.....	5,000	14.72	-11.04	2.62	-4.98	6.48	-7.04	2.91	-0.60	2.71	+1.58	47.1	+2.3
Quincy.....	Plumas.....	3,409	21.47	-17.54	5.74	-7.29	12.11	-7.25	3.20	-1.99	0.42	-1.01	(2)	(2)
Lake Spaulding.....	Nevada.....	5,075	41.13	-23.78	11.69	-8.80	21.66	-12.05	6.30	-3.03	1.48	+0.09	49.6	+1.7
Nevada City.....	Nevada.....	2,570	29.19	-18.17	7.66	-7.74	17.45	-7.43	3.43	-2.74	0.65	-0.26	(2)	(2)
Placerville.....	El Dorado.....	1,925	25.52	-11.93	6.54	-5.14	14.16	-6.23	3.19	-1.47	1.63	+0.91	56.3	+1.2
Clear Lake (near).....	Lake.....	1,350	10.40	-11.24	4.76	-2.46	4.86	-7.38	0.73	-1.01	0.05	-0.39	57.9	+0.2
Averages.....	.....	.....	21.69	-13.65	6.59	-4.77	10.69	-7.42	3.07	-1.72	1.34	+0.26	53.5	+1.5
Sacramento River (Valley)														
Red Bluff.....	Tehama.....	303	12.39	-10.49	4.97	-2.73	3.22	-8.31	2.36	-0.44	1.84	+0.99	64.0	+1.6
Willows.....	Glenn.....	136	6.78	-9.77	2.77	-2.92	2.73	-5.97	0.89	-0.85	0.45	-0.03	63.3	+1.0
Marysville.....	Yuba.....	61	9.66	-10.64	3.05	-4.13	4.50	-6.13	1.69	-0.59	0.42	+0.01	63.6	+1.0
Sacramento.....	Sacramento.....	25	9.79	-8.16	2.88	-2.95	5.39	-3.92	1.17	-1.26	0.35	-0.03	62.2	+2.3
Averages.....	.....	.....	9.65	-9.81	3.42	-3.18	3.96	-6.08	1.51	-0.78	0.76	+0.23	63.3	+1.5
San Joaquin River (Tributary watershed)														
Glennville.....	Kern.....	3,300	22.16	+3.10	4.97	-0.55	12.52	+3.04	2.60	-0.86	2.07	+1.47	56.5	+1.8
Giant Forest.....	Tulare.....	6,360	31.95	-5.24	7.50	-4.29	18.62	+1.84	4.35	-3.75	1.48	+0.96	48.6	+1.1
Huntington Lake.....	Fresno.....	7,000	21.03	-9.67	6.13	-2.00	9.18	-6.88	3.67	-1.42	2.05	+0.63	46.0	+2.3
Yosemite.....	Mariposa.....	3,983	24.06	-9.63	7.17	-2.60	12.22	-5.06	2.37	-2.89	2.30	+0.92	53.9	+2.0
Lake Eleanor.....	Tuolumne.....	4,650	32.64	-9.28	9.74	-1.89	16.87	-5.85	3.03	-3.20	3.00	+1.66	54.3	+2.9
Twin Lakes.....	Alpine.....	7,920	35.41	-7.29	7.63	-3.35	19.54	-3.59	4.75	-1.29	3.49	+0.94	40.8	+1.0
Averages.....	.....	.....	27.87	-6.33	7.19	-2.45	14.82	-2.75	3.46	-2.23	2.40	+1.10	50.0	+1.8

¹Departure from normal.

²Data not available.

CENSUS OF IRRIGATION — CALIFORNIA

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939—Continued

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
San Joaquin River (Valley)		Feet	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Degrees F.	Degrees F.
Bakersfield.....	Kern.....	289	7.33	+1.45	1.67	+0.03	4.49	+1.52	0.69	-0.41	0.48	+0.31	65.4	+0.8
Porterville.....	Tulare.....	464	8.43	-1.68	2.96	+0.25	4.18	-1.22	1.11	-0.66	0.18	-0.05	64.6	+0.6
Hanford.....	Kings.....	249	6.53	-1.68	1.80	-0.29	3.75	-0.89	0.94	-0.17	0.04	-0.33	61.7	-0.6
Fresno.....	Fresno.....	277	9.12	-0.27	2.26	-0.69	4.64	-0.10	2.05	+0.58	0.17	-0.06	64.2	+1.9
Los Banos.....	Merced.....	120	6.14	-2.33	1.96	-0.58	2.64	-2.03	0.76	-0.87	0.79	+0.65	62.5	-0.8
Merced.....	Merced.....	173	8.55	-2.84	2.22	-1.19	5.19	-1.12	0.51	-0.93	0.63	+0.40	61.2	-0.8
Denair.....	Stanislaus.....	126	9.98	-0.14	3.00	-0.22	5.53	+0.13	0.56	-0.82	0.69	+0.77	62.1	+1.9
Stockton.....	San Joaquin.....	20	10.33	-3.45	2.95	-1.44	6.34	-1.07	0.64	-1.01	0.40	+0.07	59.9	-0.5
Averages.....			8.30	-1.37	2.35	-0.52	4.60	-0.60	0.91	-0.47	0.45	+0.22	62.7	+0.3
Cowhead Lake														
Fort Bidwell.....	Modoc.....	4,735	9.65	-4.75	4.00	-0.87	3.58	-2.18	1.46	-1.15	0.61	-0.55	49.9	+1.1
Honey Lake														
Susanville.....	Lassen.....	4,268	8.68	-9.88	1.12	-5.18	5.70	-2.97	1.51	-0.93	0.35	-0.80	51.1	+1.4
Truckee River														
Truckee.....	Nevada.....	6,200	20.99	-2.42	4.12	-2.63	12.78	-0.83	1.91	-0.48	2.18	+1.52	44.5	+0.8
Owens River														
Independence.....	Inyo.....	3,939	5.82	+1.53	1.06	-0.03	2.69	+0.45	0.57	+0.10	1.50	+1.01	59.4	+1.7
Amargosa River and Dry Lakes														
Trona.....	San Bernardino.....	1,656	7.27	+2.56	1.98	+0.90	2.00	-0.76	0.48	-0.13	2.81	+2.55	66.9	+1.5
Antelope Valley														
Fairmont.....	Los Angeles.....	3,036	17.18	+2.49	7.06	+3.00	6.61	-2.25	0.78	-0.62	2.73	+2.36	60.2	-0.7
Llano.....	Los Angeles.....	3,400	10.61	+3.78	4.26	+2.70	3.40	-0.42	0.65	-0.30	2.30	+1.80	59.3	-0.3
Averages.....			13.89	+3.13	5.66	+2.85	5.00	-1.34	0.72	-0.46	2.52	+2.08	59.8	-0.5
San Jacinto River														
San Jacinto.....	Riverside.....	1,550	17.61	-4.08	4.97	+1.48	6.78	-0.59	1.13	-0.74	4.73	-4.23	(²)	(²)
Whitewater River														
Indio.....	Riverside.....	-20	12.47	+9.19	2.31	+1.33	1.07	-0.41	0.13	-0.09	8.96	+8.36	73.4	0.0
Colorado River														
Blythe.....	Riverside.....	268	10.22	+6.11	2.44	+1.21	1.00	-0.66	0.00	-0.25	6.78	+5.81	70.9	+0.9
Brawley.....	Imperial.....	-119	9.03	+6.37	1.45	+0.50	0.83	-0.35	0.00	-0.24	6.75	+6.46	72.6	+1.3
Averages.....			9.62	+6.24	1.95	+0.86	0.92	-0.50	0.00	-0.24	6.76	+6.14	71.8	+1.1

¹Departure from normal.

²Data not available.

Precipitation.—The total precipitation in California for the calendar year 1939, as reported by the U. S. Weather Bureau, was 67 percent, and the total snowfall was 89 percent of the 43-year average. Monthly averages in 1939 exceeded the normal slightly in May and July. The September rainfall was nearly 4 times the normal amount, but the excess was confined to desert regions and southwestern counties. Precipitation was subnormal during the other 9 months, with deficiency large in January and February. The total snowfall for the first 3 months of 1939 was moderately heavy, but snowfall was generally light thereafter.

Annual precipitation totals for the calendar year 1939 exceeded the normal in the desert regions and San Diego County, and locally elsewhere in southern California and the southern San Joaquin Valley, but were subnormal elsewhere, with deficiencies largest in central coastal and Sacramento valleys and over the western slopes of the northern and middle Sierra Nevada. The annual surplus in the desert regions and locally in other limited areas of southern California was due to the excessive rains attending a tropical storm that moved inland near the Los Angeles Harbor on September 25. In the northern fifth of the State a large percentage of the annual precipitation occurred in December.

Although precipitation for the calendar year 1938 was 126 percent and the total snowfall 142 percent of the 42-year average, the precipitation of fall and early winter was only about normal in the northern half and light in the southern half until mid-December when general rains started. These were heaviest in southern California and were sufficient to overcome the previous 1938-39 deficiency in that area. (California precipitation is reported for the year beginning with July.) Thus in October (1938) precipitation exceeded the normal throughout the northern two-thirds of the State with excess greatest over the northern Sacramento Valley and the western slopes of the Sierra Nevada, but was deficient in the southern third; in November it was about half the usual amount,

the deficiency being general but least in the northern fourth of the State and increasing southward, necessitating heavy irrigation in southern areas; in December the total precipitation was three-fourths and the total snowfall about one-fifth of the December average. The large excess was thus confined to southern California and the desert region. A moderate excess occurred in the southern San Joaquin Drainage Basin. The deficiency elsewhere was most marked in the Sacramento Drainage Basin and the central coastal area.

The average precipitation for the water year (October 1938 through September 1939) at 58 stations listed in State table 18 which are arranged to indicate rainfall distribution within major drainage basins was 16.62 inches, a departure of -5.06 inches from the average water-year normal for these stations. Precipitation for the water year in practically all areas north of the Tehachapi Mountains and Death Valley was substantially below normal while all areas to the south, with the exception of the San Jacinto Valley, received an unusual rainfall above normal, as indicated in the subaverages given in table 18.

Vegetation got a late start in 1939 because of a cold winter and cold early spring, and deficient precipitation unfavorably affected pastures and nonirrigated crops in much of central and northern California. Otherwise the growing season was generally favorable for the development and harvesting of field, nut, and fruit crops, and crop yields were fair to good. Winter pastures, grains, and cover crops got a poor start in much of the Sacramento and San Joaquin Valleys because of deficient moisture in the fall months of 1938.

In 1929, average annual precipitation was only about 59 percent of normal, the deficiency characterizing all months except April, June, and December. Precipitation was poorly distributed, both as to time and amount. Precipitation in 1928 was about 75 percent of normal, being subnormal in every month except March and November. Snowfall in the mountains was much below the average.

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STATE TABLE 19.—IRRIGATION ENTERPRISES SPREADING WATER FOR STORAGE UNDERGROUND—FARMS AND AREAS BENEFITED, CAPITAL INVESTED, COST OF MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, QUANTITIES AND COSTS OF WATER, AND PHYSICAL WORKS: CENSUS OF 1940

	ITEM (Averages, proportions, and percentages are based on enterprises reporting all the specific factors involved)	Totals and ratios ¹	
FARMS AND AREAS BENEFITED			
1	Enterprises reporting.....number.....	17	.....
2	Farms benefited.....number.....	6,390	(7)
3	Area irrigated in benefited area.....acres.....	250,069	(10)
4	Irrigable area in enterprises.....acres.....	825,095	(16)
5	Proportion which area irrigated is of irrigable area in enterprises.....percent.....	90.5	(10)
6	Area spreading works were capable of benefiting.....acres.....	487,357	(14)
7	Proportion which area irrigated is of area enterprises were capable of benefiting.....percent.....	96.4	(10)
8	Area of spreading grounds.....acres.....	9,314	(16)
9	Average area works were capable of benefiting, per acre of spreading ground.....acres.....	56	(13)
CAPITAL INVESTED²			
10	Total investment in spreading enterprises.....dollars.....	7,022,426	(16)
11	(a) Cost of spreading works and equipment to December 31, 1939.....dollars.....	6,506,246	(16)
12	(b) Investment in water rights to December 31, 1939.....dollars.....	516,180	(1)
13	Average investment per acre works were capable of benefiting.....dollars.....	13.39	(13)
14	Average investment per acre of spreading ground.....dollars.....	727.40	(15)
15	Estimated final investment in existing enterprises.....dollars.....	7,794,426	(16)
16	Average investment, per acre, based on estimated final investment and irrigable area.....dollars.....	9.27	(15)
17	Capital expenditures in 1939.....dollars.....	590,654	(9)
MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS²			
18	Cost of maintenance and operation.....dollars.....	81,440	(14)
19	Area irrigated in benefited area.....acres.....	250,069	(10)
20	Average cost of maintenance and operation per acre irrigated.....dollars.....	0.30	(10)
21	Area of spreading grounds.....acres.....	8,606	(13)
22	Average cost of maintenance and operation per acre of spreading grounds.....dollars.....	9.45	(13)
23	Charges assessed ³.....dollars.....	223,006	(8)
24	Area assessed.....acres.....	191,235	(8)
25	Average charge per acre assessed.....dollars.....	1.17	(8)
26	Charges collected.....dollars.....	301,675	(9)
27	Indebtedness to December 31, 1939.....dollars.....	2,659,876	(5)
28	Area works were capable of benefiting.....acres.....	139,235	(5)
29	Average indebtedness per acre the works were capable of benefiting.....dollars.....	19.10	(5)
30	Area assessed.....acres.....	158,835	(5)
31	Average indebtedness per acre assessed.....dollars.....	16.75	(5)
QUANTITIES AND COSTS OF WATER²			
32	Quantity of water entering system.....acre-feet.....	111,092	(11)
33	Average quantity per irrigated acre benefited.....acre-feet.....	0.4	(9)
34	Quantity of water stored underground.....acre-feet.....	110,226	(11)
35	Average quantity per irrigated acre benefited.....acre-feet.....	0.4	(9)
36	Average cost per acre-foot of water stored underground ⁴.....dollars.....	2.97	(7)
37	Quantity of water pumped in benefited area.....acre-feet.....	295,520	(8)
38	Average cost of spreading per acre-foot of water pumped in benefited area ⁵.....dollars.....	1.09	(7)
SPREADING WORKS²			
39	Diversion dams.....total number.....	21	(10)
40	(a) Concrete or rock.....number.....	17	(8)
41	(b) Earth.....number.....	4	(3)
42	Canals.....total length, miles.....	129.1	(14)
43	(a) Earth.....length, miles, sec.-ft.....	15,654	(14)
44	(b) Concrete or rubble-lined.....length, miles.....	109.4	(12)
45	Pipe lines.....total length, miles.....	19.7	(7)
46	(a) Concrete.....length, miles.....	37.1	(5)
47	(b) Metal.....length, miles.....	3.0	(4)
48	Storage dams.....total number.....	34.1	(2)
49	(a) Concrete or rock.....number.....	15	(7)
50	(b) Earth.....number.....	2	(1)
51	Retard or spreading dams.....total number.....	13	(6)
52	(a) Concrete or rock.....number.....	546	(14)
53	(b) Earth.....number.....	211	(6)
54	Reservoirs.....total number.....	335	(11)
55	(a) Concrete or rock.....number.....	20	(8)
56	(b) Earth.....total capacity, acre-feet.....	172,281	(8)
IRRIGATION PUMPING PLANTS AND WELLS WITHIN THE BENEFITED AREA			
57	Pumping plants.....total number.....	⁶ 3,739	(8)
58	Motive power.....total hp.....	98,298	(7)
59	(a) Electric.....number.....	⁶ 3,538	(7)
60	(b) Internal combustion.....hp.....	89,970	(6)
61	(b) Internal combustion.....number.....	⁶ 194	(7)
62	(c) Other.....hp.....	7,283	(6)
63	(c) Other.....number.....	7	(2)
64	Pumps.....hp.....	1,045	(2)
65	(a) Centrifugal.....total number.....	⁷ 3,739	(8)
66	(a) Centrifugal.....total capacity, g.p.m.....	1,488,845	(7)
67	(a) Centrifugal.....number.....	⁷ 213	(3)
68	(a) Centrifugal.....capacity, g.p.m.....	13,450	(2)
69	(b) Turbine.....number.....	⁷ 3,525	(7)
70	(b) Turbine.....capacity, g.p.m.....	1,474,927	(6)
71	(c) Plunger.....number.....	1	(1)
72	(c) Plunger.....capacity, g.p.m.....	468	(1)
73	Wells, pumped.....number.....	3,739	(8)
74	Wells, pumped.....yield, g.p.m.....	1,322,198	(8)
75	Wells, flowing.....number.....	171	(2)
76	Wells, flowing.....yield, g.p.m.....	11,340	(2)

¹ Numbers in parentheses represent the number of enterprises reporting the item or the number of enterprises from which statistics were used in the computation of ratios. Statistics not included in any other table. ² Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ³ Based on charges assessed and quantity of water stored underground. ⁴ Based on charges assessed and quantity of water pumped in the benefited area. ⁵ Includes 500 electric motors and 60 internal-combustion engines for which no horsepower was reported. ⁶ Includes 200 centrifugal and 360 turbine pumps for which no capacity was reported.

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DRAINAGE BASIN TABLE I—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	PACIFIC OCEAN STREAMS (North of San Francisco Bay)				
		Total ¹	Klamath River		(3)	
			Total	Direct		
IRRIGATED FARMS AND AREAS						
1 Irrigated farms.....1939..number.....	125,303	1,785	1,517	299		
2 Area irrigated.....1939..acres.....	5,069,568	116,412	108,172	16,385		
3 (a) Cropland harvested.....1939..acres.....	4,621,791	82,629	75,155	10,016		
4 (b) Crop failure.....1939..acres.....	22,084	97	40	38		
5 (c) Pasture.....1939..acres.....	425,693	33,687	32,977	6,331		
6 Area irrigated.....1929..acres.....	4,746,532	68,270	61,886			
7 ..1919..acres.....	4,219,040	66,001	62,535			
8 Increase or decrease (-), 1929-1939.....percent.....	6.8	70.5	74.8			
9 Irrigable area in enterprises.....1940..acres.....	8,039,175	161,324	150,129	21,690		
10 ..1930..acres.....	8,075,895	129,806	117,807			
11 ..1920 ² ..acres.....	7,805,207	146,070	122,853			
12 Excess of irrigable area over the area irrigated.....1940..acres.....	2,969,607	44,912	41,957	5,305		
13 ..1930..acres.....	3,329,269	61,538	55,921			
14 ..1920 ² ..acres.....	3,586,167	80,069	80,318			
15 Area works were capable of supplying with water...1940..acres.....	7,398,576	135,503	124,542	19,937		
16 ..1930..acres.....	6,815,250	104,765	95,250			
17 ..1920..acres.....	5,894,466	85,098	70,275			
18 Increase or decrease (-), 1930-1940.....percent.....	8.6	29.3	30.8			
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	2,329,008	19,091	16,370	3,552		
20 ..1930..acres.....	2,068,618	36,495	33,364			
21 ..1920..acres.....	1,675,426	19,097	7,740			
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	68.5	85.9	86.9	82.2		
23 ..1929..percent.....	69.6	65.2	65.0			
24 ..1919..percent.....	71.6	77.6	89.0			
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars....	318,899,218	5,713,760	5,294,938	664,350		
26 (a) Cost of irrigation works and equipment.....1940..dollars....	306,729,175	5,668,567	5,250,436	658,970		
27 (b) Investment in water rights (reported).....1940..dollars....	12,160,043	45,193	44,502	5,380		
28 Total investment in irrigation enterprises.....1930..dollars....	310,967,979	4,792,229	4,192,140			
29 ..1920..dollars....	194,886,388	2,378,513	1,690,958			
30 Increase or decrease (-), 1930-1940.....percent.....	2.5	19.2	25.3			
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	43.10	42.17	42.52	33.32		
32 ..1930..dollars....	45.63	44.74	44.01			
33 ..1920..dollars....	33.06	27.95	24.06			
34 Average investment per acre irrigated.....1939..dollars....	62.90	49.08	48.95	40.55		
35 Estimated final investment in existing enterprises.....1940..dollars....	327,593,311	6,065,102	5,617,941	667,855		
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	40.75	37.60	37.42	30.79		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Sup.	Primary	Sup.	Primary	Sup.
	Enterprises		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation...1939..number.....	29,200	7,453	636	6	602	6
38 Area irrigated in these enterprises.....1939..acres.....	4,831,550	439,235	104,646	2,212	96,933	2,212
39 Cost of maintenance and operation.....1939..dollars....	21,229,685	1,620,218	158,910	1,531	112,328	1,531
40 Average cost, per acre irrigated.....1939..dollars....	4.39	3.69	1.52	0.69	1.16	0.69
41 Total annual charges (reported) ⁶.....1939..dollars....	12,789,209	252,555	101,703	996	100,453	996
42 Average annual charge per acre irrigated.....1939..dollars....	4.24	2.51	2.11	0.60	2.10	0.60
43 Area against which charges were assessed.....1939..acres.....	4,212,879	96,930	57,225	1,660	56,861	1,660
44 Average annual charge per acre assessed.....1939..dollars....	3.04	2.61	1.78	0.60	1.77	0.60
45 Total charges collected ⁶.....1939..dollars....	10,519,461	403,248	54,568		54,568	
46 Indebtedness to December 31 (reported) ⁷.....1939..dollars....	94,170,982	1,523,911	5,510,753	37,425	5,510,753	37,425
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number.....	29,476	7,503	625	4	379	4
48 Area irrigated by these enterprises.....1939..acres.....	4,840,760	414,972	93,841	1,972	86,043	1,972
49 Water delivered.....1939..acre-feet.....	12,657,820	761,982	210,931	4,010	197,244	4,010
50 Average water delivered per acre irrigated.....1939..acre-feet.....	2.6	1.8	2.2	2.0	2.3	2.0
51 Average cost of water per acre irrigated.....1939..dollars....	5.06	4.00	2.03	0.55	1.65	0.55
52 Average cost of water per acre-foot delivered.....1939..dollars....	1.93	2.18	0.90	0.27	0.72	0.27
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number.....	897		31		22	
54 Irrigable area in these enterprises.....1939..acres.....	2,598,196		47,261		46,735	
55 Irrigated area in these enterprises.....1939..acres.....	1,711,027		33,599		33,289	
56 Area for which drains have been installed.....1939..acres.....	1,509,832		39,592		39,530	
57 Additional area needing drainage.....1939..acres.....	394,963		312		288	

¹Data for 1 enterprise in Illinois River Drainage Basin (2) (number refers to separate map) are included with Pacific Ocean streams total.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Revised.

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

PACIFIC OCEAN STREAMS—Continued (North of San Francisco Bay)								SAN FRANCISCO BAY (Other than Sacramento-San Joaquin Delta and Sacramento and San Joaquin Rivers)							
Klamath River—Continued				Mad River	Eel River	Russian River	Other coastal streams	Total	Direct	Petaluma Creek	Sonoma Creek				
Lost River	Shasta River	Scott River	Trinity River												
(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)					
396	285	227	310	9	32	221	5	4,400	215	4	12	1			
31,529	39,691	20,795	5,842	179	941	7,063	46	116,502	1,379	31	378	2			
27,901	17,888	15,217	4,133	104	532	6,793	33	108,693	1,337	31	252	3			
.....	.....	1	1	.....	.....	57	.....	1,856	35	.....	.....	4
3,628	15,743	5,567	1,708	75	409	213	13	5,953	7	.....	126	5		
.....	.....	.....	.....	.....	.....	5,431	.....	99,079	.....	.....	.....	6
.....	.....	.....	.....	.....	.....	3,045	.....	76,947	.....	.....	.....	7
.....	.....	.....	.....	.....	.....	30.0	.....	17.6	.....	.....	.....	8
43,815	52,048	23,276	9,300	271	1,516	9,334	63	165,735	1,806	72	412	9			
.....	.....	.....	.....	.....	.....	10,071	.....	111,354	.....	.....	.....	10
12,286	18,417	2,491	3,458	92	575	12,475	17	100,730	427	41	34	11			
.....	.....	.....	.....	.....	.....	2,271	.....	49,233	.....	.....	.....	12
.....	.....	.....	.....	.....	.....	4,640	.....	12,275	.....	.....	.....	13
.....	.....	.....	.....	.....	.....	9,430	.....	23,783	.....	.....	.....	14
36,404	36,995	22,678	8,528	214	1,420	9,253	63	163,185	1,793	72	412	15			
.....	.....	.....	.....	.....	.....	7,941	.....	107,432	.....	.....	.....	16
.....	.....	.....	.....	.....	.....	4,200	.....	86,779	.....	.....	.....	17
.....	.....	.....	.....	.....	.....	16.5	.....	51.9	.....	.....	.....	18
4,875	3,364	1,893	2,666	35	479	2,190	17	46,683	414	41	34	19			
.....	.....	.....	.....	.....	.....	2,510	.....	8,353	.....	.....	.....	20
.....	.....	.....	.....	.....	.....	1,155	.....	9,832	.....	.....	.....	21
86.6	90.9	91.7	69.5	83.6	66.3	76.3	73.0	71.4	76.9	43.1	91.7	22			
.....	.....	.....	.....	.....	.....	68.4	.....	92.2	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	72.5	.....	88.7	.....	.....	.....	24
2,249,887	1,902,008	276,517	202,176	7,305	41,957	365,635	3,725	9,346,398	286,694	6,000	31,350	25			
2,249,887	1,869,336	270,376	201,867	7,300	41,747	365,159	3,725	9,331,250	286,694	6,000	31,350	26			
.....	32,672	6,141	309	5	210	476	.....	15,148	.....	.....	.....	27
.....	.....	.....	.....	.....	.....	534,835	.....	9,405,139	.....	.....	.....	28
.....	.....	.....	.....	.....	.....	162,690	.....	4,940,061	.....	.....	.....	29
.....	.....	.....	.....	.....	.....	-31.6	.....	-0.6	.....	.....	.....	30
61.80	51.41	12.19	23.71	34.14	29.55	39.52	59.13	57.27	159.90	83.33	76.09	31			
.....	.....	.....	.....	.....	.....	67.35	.....	87.55	.....	.....	.....	32
.....	.....	.....	.....	.....	.....	38.72	.....	56.93	.....	.....	.....	33
71.36	56.56	13.30	34.61	40.81	44.59	51.77	80.98	80.23	207.90	193.55	82.94	34			
2,518,135	1,904,768	293,472	227,711	10,405	46,507	384,324	5,725	9,412,904	286,929	7,000	31,350	35			
57.47	36.60	12.87	24.49	38.39	30.68	41.17	90.87	56.79	158.88	97.22	76.09	36			
Primary Enterprises	Sup.	Primary Enterprises	Sup.	.....	.....	.....	.....	Primary Enterprises	Sup.	.....	.....	.....
6	41	97	116	3	149	5	27	198	4	2,568	3	102	5	11	37
25,624	1,660	33,597	18,581	305	5,563	62	881	6,729	41	114,041	569	1,090	31	317	38
30,016	996	40,141	9,555	495	13,931	502	3,994	41,831	265	887,812	3,794	22,495	665	3,384	39
1.17	0.60	1.19	0.53	1.43	2.50	8.10	4.52	6.22	6.46	7.79	6.67	20.64	21.45	10.68	40
27,802	996	57,700	9,340	2,500	1,250	167,534	10,884	41
1.25	0.60	3.88	1.23	2.48	3.63	9.45	60.13	42
23,905	1,660	22,252	7,591	1,008	344	18,074	229	43
1.16	0.60	2.59	1.23	2.48	3.63	9.27	47.53	44
1,357	42,638	8,873	4,752	3,060	45
1,999,289	37,425	2,365,807	71,687	19,795	46
10	41	78	73	2	97	8	30	203	4	2,643	2	106	4	12	47
31,529	1,660	30,961	10,565	(6)	3,396	87	821	6,838	41	115,522	(6)	1,261	31	378	48
73,741	3,320	63,589	21,710	(6)	17,717	137	1,055	12,410	65	192,419	(6)	2,474	43	674	49
2.3	2.0	2.1	2.1	(6)	5.2	1.6	1.3	1.8	1.6	1.7	(6)	2.0	1.4	1.8	50
1.17	0.60	2.21	1.04	(6)	2.86	8.10	4.68	6.15	6.46	8.22	(6)	25.74	15.00	10.68	51
0.50	0.30	1.08	0.51	(6)	0.55	5.12	3.64	3.39	4.08	4.93	(6)	13.12	10.81	5.99	52
5	4	7	4	2	6	41	38	5	1	53
40,795	4,074	762	101	(5)	399	12	15,973	193	(5)	54
28,510	3,456	353	81	(5)	238	6	11,096	192	(5)	55
37,768	1,300	31	9	(5)	50	7,724	117	(5)	56
150	53	60	25	(5)	16	5,212	57

4 Data for less than 3 enterprises shown with permission of the enterprise involved.
5 Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
6 Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
7 Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	SAN FRANCISCO BAY—Continued (Other than Sacramento-San Joaquin Delta and Sacramento and San Joaquin Rivers)						
	Napa River (15)	Suisun Bay			Alameda Creek (18)	Santa Clara Valley streams (19)	
		Total	Direct	Walnut Creek			
IRRIGATED FARMS AND AREAS							
1 Irrigated farms.....1939..number.....	175	231	157	74	584	3,179	
2 Area irrigated.....1939..acres.....	2,291	19,198	16,529	2,669	18,723	74,502	
3 (a) Cropland harvested.....1939..acres.....	2,069	12,506	9,857	2,649	18,515	73,983	
4 (b) Crop failure.....1939..acres.....	3	1,560	1,540	20	121	137	
5 (c) Pasture.....1939..acres.....	219	5,132	5,132	.....	87	382
6 Area irrigated.....1929..acres.....	.....	.....	.....	.....	.....	62,397
7 .....	.....	.....	.....	.....	.....	54,340
8 Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	.....	.....	19.4
9 Irrigable area in enterprises.....1940..acres.....	3,939	26,534	22,788	3,746	28,259	104,713	
10 .....	.....	.....	.....	.....	.....	67,486
11 .....	.....	.....	.....	.....	.....	65,528
12 Excess of irrigable area over the area irrigated..1940..acres.....	1,648	7,336	6,259	1,077	9,536	30,211	
13 .....	.....	.....	.....	.....	.....	5,089
14 .....	.....	.....	.....	.....	.....	11,188
15 Area works were capable of supplying with water..1940..acres.....	3,915	26,439	22,753	3,686	28,075	102,479	
16 .....	.....	.....	.....	.....	.....	66,304
17 .....	.....	.....	.....	.....	.....	57,534
18 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	54.6
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,624	7,241	6,224	1,017	9,352	27,977	
20 .....	.....	.....	.....	.....	.....	3,907
21 .....	.....	.....	.....	.....	.....	3,194
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	58.5	72.6	72.6	72.4	66.7	72.7	
23 .....	.....	.....	.....	.....	.....	94.1
24 .....	.....	.....	.....	.....	.....	94.4
CAPITAL INVESTED TO JANUARY 1							
25 Total investment in irrigation enterprises.....1940..dollars....	253,329	554,158	291,238	262,920	1,182,715	7,092,152	
26 (a) Cost of irrigation works and equipment.....1940..dollars....	252,719	554,052	291,232	262,820	1,178,565	7,021,870	
27 (b) Investment in water rights (reported).....1940..dollars....	610	106	6	100	4,150	10,282	
28 Total investment in irrigation enterprises.....1930..dollars....	.....	.....	.....	.....	.....	5,021,248
29 .....	.....	.....	.....	.....	.....	3,336,187
30 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	40.0
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	64.71	20.96	12.80	71.33	42.13	68.62	
32 .....	.....	.....	.....	.....	.....	75.73
33 .....	.....	.....	.....	.....	.....	57.99
34 Average investment per acre irrigated.....1939..dollars....	110.58	28.87	17.62	98.51	63.17	94.39	
35 Estimated final investment in existing enterprises..1940..dollars....	258,489	580,518	317,488	263,030	1,189,606	7,059,013	
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	65.62	21.88	13.93	70.22	42.10	67.41	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
37 Enterprises reporting maintenance and operation...1939..number.....	116	208	134	74	480	1,646	3
38 Area irrigated in these enterprises.....1939..acres.....	2,009	19,045	16,394	2,651	18,143	73,406	569
39 Cost of maintenance and operation.....1939..dollars....	14,087	54,212	28,951	25,261	126,798	666,171	3,794
40 Average cost, per acre irrigated.....1939..dollars....	7.01	2.85	1.77	9.53	6.99	9.08	6.67
41 Total annual charges (reported) ^{3 4}.....1939..dollars....	197	197	3,914	152,539
42 Average annual charge per acre irrigated.....1939..dollars....	4.92	4.92	2.35	9.63
43 Area against which charges were assessed.....1939..acres.....	40	40	1,669	16,136
44 Average annual charge per acre assessed.....1939..dollars....	4.92	4.92	2.35	9.45
45 Total charges collected ³.....1939..dollars....	1,692
46 Indebtedness to December 31 (reported) ⁴.....1939..dollars....	19,795
WATER DELIVERED TO IRRIGATORS, 1939							
47 Enterprises reporting water delivered.....1939..number.....	163	215	144	71	499	1,642	2
48 Area irrigated by these enterprises.....1939..acres.....	2,206	18,888	16,373	2,515	18,713	74,045	(2)
49 Water delivered.....1939..acre-feet.....	3,835	50,832	46,426	4,406	31,602	102,959	(2)
50 Average water delivered per acre irrigated.....1939..acre-feet.....	1.7	2.7	2.8	1.8	1.7	1.4	(2)
51 Average cost of water per acre irrigated.....1939..dollars....	6.91	2.84	1.73	9.97	7.01	9.85	(2)
52 Average cost of water per acre-foot delivered..1939..dollars....	3.97	1.05	0.61	5.69	4.15	6.94	(2)
DRAINAGE OF IRRIGATED LAND							
53 Enterprises reporting land drained or needing drainage.....1939..number.....	13	7	7	4	8
54 Irrigable area in these enterprises.....1939..acres.....	574	14,148	14,148	279	772
55 Irrigated area in these enterprises.....1939..acres.....	343	9,657	9,657	114	563
56 Area for which drains have been installed.....1939..acres.....	215	7,232	7,232	16	137
57 Additional area needing drainage.....1939..acres.....	83	5,000	5,000	125	4

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

PACIFIC OCEAN STREAMS (South of San Francisco Bay)													
Total	Pajaro and San Benito Rivers	Salinas River	Santa Maria River	San Antonio River	Santa Ynez River	Ventura River							
	(20)	(21)	(22)	(23)	(24)	(25)							
43,351	1,483	1,198	201	11	166	284						1	
790,017	53,082	103,818	25,236	721	11,681	4,011						2	
778,540	52,702	102,268	24,398	646	10,579	3,871						3	
3,086	141	233	161	.....	331	.....						4
8,391	219	1,317	677	75	771	140						5	
739,670	43,519	77,266	21,818	.....	11,869	.....						6
543,385	19,771	48,087	9,623	.....	3,491	.....						7
6.8	21.9	34.4	15.7	.....	-1.6	.....						8
1,121,672	69,748	111,990	29,961	781	14,950	4,690						9	
979,574	51,910	88,587	23,939	.....	18,522	.....						10
831,490	33,620	60,989	22,903	.....	10,062	.....						11
331,655	36,686	8,172	4,725	60	3,269	679						12	
239,904	7,791	11,331	2,121	.....	6,653	.....						13
288,105	13,849	12,892	13,280	.....	6,591	.....						14
1,094,207	83,213	111,570	29,185	756	14,764	4,654						15	
918,956	49,013	85,437	23,779	.....	16,695	.....						16
662,847	23,769	57,456	20,460	.....	9,645	.....						17
19.1	69.8	30.6	22.7	.....	-11.6	.....						18
304,190	30,151	7,752	3,949	35	3,063	643						19	
179,286	5,494	8,171	1,961	.....	4,826	.....						20
119,462	5,998	9,359	10,837	.....	6,154	.....						21
72.2	63.8	93.1	86.5	95.4	79.1	86.2						22	
80.5	88.8	90.4	91.8	.....	71.1	.....						23
82.0	76.7	83.7	47.0	.....	36.2	.....						24
100,761,225	3,367,947	5,936,503	1,160,535	33,750	566,836	688,758						25	
93,214,281	3,363,367	5,934,103	1,160,395	33,750	566,693	687,998						26	
7,546,944	4,580	2,400	200	.....	143	760						27
93,601,386	2,970,981	4,774,377	1,044,252	.....	3,606,837	.....						28
53,456,601	1,248,343	2,570,331	573,194	.....	284,037	.....						29
7.6	13.4	24.3	11.1	.....	-84.3	.....						30
92.09	40.47	53.21	39.76	44.64	38.39	147.99						31	
58.17	60.62	55.88	43.91	.....	216.04	.....						32
80.65	48.44	44.74	28.02	.....	29.45	.....						33
127.54	63.47	57.18	45.99	46.81	48.53	171.72						34	
101,898,894	3,731,182	5,977,697	1,161,585	33,750	583,920	695,256						35	
90.85	41.57	53.38	38.77	43.21	39.06	148.24						36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.		
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises			
8,185	169	1,107	7	840	21	186	2	11	1	139	1	74	4
730,444	45,402	52,045	317	102,477	2,003	24,587	(2)	721	(2)	11,599	(2)	3,935	56
6,115,393	224,834	323,258	1,910	671,861	14,535	177,874	(2)	4,880	(2)	60,587	(2)	40,532	1,010
8.37	4.85	6.21	6.03	6.56	7.26	7.23	(2)	6.77	(2)	5.22	(2)	10.30	18.04
4,512,728	192,547	24,312	25,801	1,200	16,586
11.91	5.64	6.81	4.96	12.00	9.09
447,112	34,422	21,490	5,270	100	2,139
10.09	5.59	1.13	4.90	12.00	7.75
3,348,715	357,734	15,764	24,275	606	17,719
14,866,308	1,334,758	10,334	1,600
8,391	169	1,114	7	854	23	188	2	11	1	142	75	4
779,080	28,584	52,945	317	103,598	2,010	24,770	(2)	721	(2)	11,581	3,696	56
1,453,282	55,534	80,687	301	252,148	5,153	69,667	(2)	1,896	(2)	19,161	6,008	76
1.9	1.9	1.5	0.9	2.4	2.6	2.8	(2)	2.6	(2)	1.7	1.6	1.4
9.59	7.60	6.27	6.03	6.50	7.26	7.21	(2)	6.77	(2)	5.21	12.95	18.04
5.14	3.91	4.11	6.35	2.67	2.83	2.56	(2)	2.57	(2)	3.15	7.97	13.29
363	45	85	(2)	2	4
80,567	3,065	9,440	(2)	586
60,530	2,423	8,791	(2)	586
39,322	1,783	6,029	215
3,569	143	1,101	(2)	19

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION—CALIFORNIA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	PACIFIC OCEAN STREAMS—Continued (South of San Francisco Bay)								
	Santa Clara River and Calleguas Creek ¹		Los Angeles and San Gabriel Rivers		Santa Ana River		Santa Margarita River		
	(26)	(27)	(28)	(29)	(28)	(29)	(28)	(29)	
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	1,654	11,635	18,534	192				
2	Area irrigated.....1939..acres.....	85,764	156,870	258,653	4,139				
3	(a) Cropland harvested.....1939..acres.....	85,332	157,983	254,636	3,962				
4	(b) Crop failure.....1939..acres.....	261	213	908	59				
5	(c) Pasture.....1939..acres.....	171	674	3,050	98				
6	Area irrigated.....1929..acres.....	61,492	172,263	246,889					
7	.....1919..acres.....	28,270	186,218	185,508				
8	Increase or decrease (-), 1929-1939.....percent.....		-7.8	4.8					
9	Irrigable area in enterprises.....1940..acres.....	117,224	253,400	353,674	6,803				
10	.....1930..acres.....	74,691	244,266	303,570				
11	.....1920 ⁴ ..acres.....	43,205	244,394	281,630				
12	Excess of irrigable area over the area irrigated.....1940..acres.....	31,460	94,530	95,021	2,664				
13	.....1930..acres.....	13,199	72,003	56,671				
14	.....1920 ⁴ ..acres.....	14,935	58,176	96,122				
15	Area works were capable of supplying with water.....1940..acres.....	115,139	251,794	343,843	6,487				
16	.....1930..acres.....	69,288	231,391	291,630				
17	.....1920..acres.....	30,216	218,628	218,735				
18	Increase or decrease (-), 1930-1940.....percent.....		8.8	17.9					
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	29,375	92,924	85,190	2,348				
20	.....1930..acres.....	7,796	59,128	44,631				
21	.....1920..acres.....	1,946	32,410	33,227				
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	74.5	63.1	75.2	63.8				
23	.....1929..percent.....	88.7	74.4	84.7				
24	.....1919..percent.....	93.6	85.2	84.8				
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars.....	8,577,686	18,637,170	36,111,047	951,762				
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	8,247,958	17,721,573	30,480,067	451,761				
27	(b) Investment in water rights (reported).....1940..dollars.....	329,728	915,597	5,630,980	500,001				
28	Total investment in irrigation enterprises.....1930..dollars.....	5,422,200	27,835,206	27,092,533					
29	.....1920..dollars.....	2,211,473	18,370,719	19,318,550				
30	Increase or decrease (-), 1930-1940.....percent.....		-33.0	33.3					
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	74.50	74.02	105.02	146.72				
32	.....1930..dollars.....	78.26	120.30	92.93				
33	.....1920..dollars.....	73.19	84.03	91.06				
34	Average investment per acre irrigated.....1939..dollars.....	100.01	117.31	139.61	229.95				
35	Estimated final investment in existing enterprises.....1940..dollars.....	8,783,571	18,707,000	36,227,294	988,842				
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	74.93	73.82	102.43	146.82				
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	533	17	1,138	15	1,775	28	148	(^b) 1
38	Area irrigated in these enterprises.....1939..acres.....	84,365	4,376	115,803	5,358	249,818	16,471	4,075	(^b)
39	Cost of maintenance and operation.....1939..dollars.....	626,314	56,720	1,254,604	56,357	2,146,687	36,571	36,192	(^b)
40	Average cost, per acre irrigated.....1939..dollars.....	7.42	12.96	10.83	10.52	8.59	2.34	8.88	(^b)
41	Total annual charges (reported) ⁶ 7.....1939..dollars.....	258,055	27,762	1,366,667	51,995	2,248,850	79,328	13,124	
42	Average annual charge per acre irrigated.....1939..dollars.....	9.47	18.27	11.36	11.76	12.37	5.17	9.41	
43	Area against which charges were assessed.....1939..acres.....	28,178	1,519	124,021	4,422	202,273	15,667	1,395	
44	Average annual charge per acre assessed.....1939..dollars.....	9.16	18.27	11.02	11.76	11.12	5.06	9.41	
45	Total charges collected ⁸.....1939..dollars.....	179,668	18,635	915,950	51,116	1,587,508	78,347	13,000	
46	Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	166,806		1,215,642	117,936	4,382,315	312,322		
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	540	14	1,155	14	1,871	27	139	(^b) 1
48	Area irrigated by these enterprises.....1939..acres.....	85,256	2,891	156,993	2,929	253,356	16,542	3,980	(^b)
49	Water delivered.....1939..acre-feet.....	153,765	3,697	250,690	3,439	479,421	39,751	7,143	(^b)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.8	1.3	1.6	1.2	1.9	2.4	1.8	(^b)
51	Average cost of water per acre irrigated.....1939..dollars.....	7.68	14.97	10.79	21.02	11.01	5.29	8.66	(^b)
52	Average cost of water per acre-foot delivered.....1939..dollars.....	4.25	11.11	6.75	17.91	5.82	2.20	4.82	(^b)
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	63		32		70		2	
54	Irrigable area in these enterprises.....1939..acres.....	27,660		4,101		26,496		(^b)	
55	Irrigated area in these enterprises.....1939..acres.....	15,764		2,949		23,938		(^b)	
56	Area for which drains have been installed.....1939..acres.....	20,457		1,142		7,484		(^b)	
57	Additional area needing drainage.....1939..acres.....	1,015		85		728			

¹ 1930 and 1920 data for Santa Clara River only, therefore percentages are not shown.
² Miscellaneous coastal streams north of Santa Maria River to San Francisco.
³ Miscellaneous coastal streams south of Santa Ynez River to Santa Margarita River.
⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION—CALIFORNIA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

PACIFIC OCEAN STREAMS—Continued (South of San Francisco Bay)										SACRAMENTO-SAN JOAQUIN DELTA				
San Luis Rey River	San Dieguito River	San Diego River	Sweetwater River	Otay and Tia Juana Rivers	Other coastal streams (north) ²	Other coastal streams (south) ⁵	Total							
(30)	(31)	(32)	(33)	(34)	(35)	(36)								
2,373	1,828	1,462	835	331	772	792	66,363			1				
17,365	13,445	10,489	5,162	3,541	20,074	13,966	3,371,960			2				
17,163	13,362	10,290	5,150	3,068	19,212	13,819	3,063,033			3				
10	40	85	1	48	553	42	11,521			4				
212	43	114	11	405	309	105	297,406			5				
.....	.....	9,078	.....	.....	.....	.....	3,157,132			6
.....	.....	8,812	.....	.....	.....	.....	2,744,644			7
.....	.....	15.5	.....	.....	.....	.....	6.8			8
32,236	24,711	19,633	5,463	5,480	24,844	26,084	5,636,102			9				
.....	.....	18,301	.....	.....	.....	.....	5,393,666			10
.....	.....	14,039	.....	.....	.....	.....	5,499,735			11
14,851	11,266	9,144	301	1,939	4,770	12,118	2,264,142			12				
.....	.....	9,223	.....	.....	.....	.....	2,236,534			13
.....	.....	5,227	.....	.....	.....	.....	2,755,091			14
31,339	24,532	18,176	5,424	5,390	23,626	24,315	5,108,599			15				
.....	.....	17,865	.....	.....	.....	.....	4,795,836			16
.....	.....	10,789	.....	.....	.....	.....	4,113,524			17
.....	.....	1.7	.....	.....	.....	.....	6.5			18
13,954	11,087	7,687	262	1,849	3,552	10,349	1,736,639			19				
.....	.....	8,787	.....	.....	.....	.....	1,638,704			20
.....	.....	1,977	.....	.....	.....	.....	1,368,880			21
55.5	54.8	57.7	95.2	65.7	85.0	57.4	66.0			22				
.....	.....	50.8	.....	.....	.....	.....	65.8			23
.....	.....	81.7	.....	.....	.....	.....	66.5			24
4,212,983	2,502,857	5,210,892	7,639,011	478,277	1,450,829	3,234,362	169,471,616			25				
4,205,856	2,498,797	5,210,892	7,530,136	476,277	1,445,662	3,199,056	165,880,975			26				
7,127	4,060	.....	108,875	2,000	5,167	35,326	3,590,641			27			
.....	.....	3,192,381	.....	.....	.....	.....	164,628,093			28
.....	.....	1,789,124	.....	.....	.....	.....	100,527,759			29
.....	.....	63.2	.....	.....	.....	.....	2.9			30
194.43	102.02	286.69	1,408.37	88.73	61.41	133.02	33.17			31				
.....	.....	178.69	.....	.....	.....	.....	34.33			32
.....	.....	165.83	.....	.....	.....	.....	24.52			33
242.33	186.16	496.80	1,479.85	135.07	72.27	231.59	50.26			34				
4,372,338	2,538,362	5,240,963	7,642,611	485,002	1,458,304	3,261,195	175,836,694			35				
135.64	102.72	266.95	1,398.98	88.50	58.70	125.03	31.20			36				
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
341	9	222	34	438	12	48	6	200	2	615	370	9	16,040	7,261
16,928	13,215	13,228	1,327	10,205	254	5,046	125	3,311	(5)	19,015	13,286	1,178	3,227,470	384,497
101,493	36,969	87,827	8,044	136,971	2,613	107,501	1,338	26,869	(5)	163,646	148,287	3,575	11,627,200	1,357,620
6.00	2.80	6.64	6.06	13.42	10.29	21.30	10.70	8.12	(5)	8.61	11.16	3.03	3.60	3.53
119,888	33,472	205,746	77,375	89,107	1,521	5,969	58,507	5,978,229	34,892
11.38	2.61	19,57	13.36	19.51	5.74	2.73	15.48	2.89	0.59
20,228	12,814	16,874	14,091	4,568	425	2,220	3,840	3,026,228	55,230
5.93	2.61	12.19	5.49	19.51	3.58	2.70	15.24	1.98	0.63
71,769	209,636	123,750	218,369	89,107	3,280	315	87,695	5,149,590	22,140
979,499	904,500	664,573	1,368,260	5,460,500	3,700	623,079	56,273,276	139,000
340	8	209	33	450	15	53	6	215	2	646	389	12	16,096	7,313
16,788	404	12,966	1,027	10,414	323	5,162	125	3,524	(5)	19,767	13,763	1,247	3,185,364	377,491
24,621	139	16,716	583	15,692	293	6,777	267	10,271	(5)	37,609	20,788	966	8,708,832	693,453
1.5	0.3	1.3	0.6	1.5	0.9	1.3	2.1	2.9	(5)	1.9	1.5	0.8	2.7	1.8
10.28	9.86	17.72	3.35	12.54	10.29	18.98	10.70	7.84	(5)	8.62	13.12	3.03	4.04	3.73
7.01	28.41	13.64	5.89	8.33	11.36	14.42	5.01	2.69	(5)	4.53	8.68	3.92	1.48	2.03
7	7	3	2	18	23	449
2,451	486	55	(5)	813	2,751	1,897,086
1,749	361	31	(5)	572	1,474	1,151,590
690	54	16	(5)	313	728	1,213,586
73	28	14	(5)	106	4	60,179

⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁶Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁷Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA—Continued							
		Direct (37)		Total ¹		Sacramento River			
						Total		Direct (38)	
						Upper Sacramento River			
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	1,904	15,582	2,859	874				
2	Area irrigated.....1939..acres.....	245,691	757,446	138,364	14,423				
3	(a) Cropland harvested.....1939..acres.....	238,636	657,387	98,766	11,581				
4	(b) Crop failure.....1939..acres.....	1,012	5,468	403	11				
5	(c) Pasture.....1939..acres.....	6,043	94,591	39,175	2,831				
6	Area irrigated.....1929..acres.....		696,824						
7	.....1919..acres.....		640,950						
8	Increase or decrease (-), 1929-1939.....percent.....		8.7						
9	Irrigable area in enterprises.....1940..acres.....	337,304	1,683,768	231,336	37,754				
10	.....1930..acres.....		1,554,698						
11	.....1920 ² ..acres.....		1,204,769						
12	Excess of irrigable area over the area irrigated.....1940..acres.....	91,613	926,322	92,972	23,331				
13	.....1930..acres.....		857,774						
14	.....1920 ² ..acres.....		563,819						
15	Area works were capable of supplying with water.....1940..acres.....	333,376	1,368,187	217,525	37,704				
16	.....1930..acres.....		1,176,770						
17	.....1920..acres.....		864,605						
18	Increase or decrease (-), 1930-1940.....percent.....		16.3						
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	87,685	610,741	79,161	23,281				
20	.....1930..acres.....		479,846						
21	.....1920..acres.....		223,655						
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	73.7	55.4	63.6	38.3				
23	.....1929..percent.....		59.2						
24	.....1919..percent.....		74.1						
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars.....	5,809,300	44,525,264	5,239,691	1,452,961				
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	5,807,746	43,106,005	5,170,795	1,452,542				
27	(b) Investment in water rights (reported).....1940..dollars.....	1,554	1,420,259	68,896	419				
28	Total investment in irrigation enterprises.....1930..dollars.....		48,750,541						
29	.....1920..dollars.....		28,633,106						
30	Increase or decrease (-), 1930-1940.....percent.....		-8.7						
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	17.43	32.54	24.09	38.54				
32	.....1930..dollars.....		41.43						
33	.....1920..dollars.....		33.35						
34	Average investment per acre irrigated.....1939..dollars.....	23.64	58.78	37.87	100.74				
35	Estimated final investment in existing enterprises.....1940..dollars.....	5,873,307	47,475,230	5,350,982	1,455,342				
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	17.41	28.20	23.13	38.55				
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	684	11	4,622	59	1,003	19	159	4
38	Area irrigated in these enterprises.....1939..acres.....	170,538	22,950	724,241	16,164	127,845	12,999	14,099	98
39	Cost of maintenance and operation.....1939..dollars.....	504,942	6,701	2,609,208	12,144	230,737	2,778	49,416	472
40	Average cost, per acre irrigated.....1939..dollars.....	2.96	0.29	3.60	0.76	1.80	0.21	3.50	4.82
41	Total annual charges (reported) ⁴.....1939..dollars.....	315,488	5,329	1,349,810	15,360	144,125	15,360	50,266	
42	Average annual charge per acre irrigated.....1939..dollars.....	5.07	0.23	3.17	1.24	2.90	1.24	5.55	
43	Area against which charges were assessed.....1939..acres.....	87,196	22,743	835,583	12,387	84,753	12,387	27,740	
44	Average annual charge per acre assessed.....1939..dollars.....	3.62	0.23	1.62	1.24	1.70	1.24	1.81	
45	Total charges collected ⁴.....1939..dollars.....	282,500	5,323	1,197,880	15,400	106,803	15,400	46,812	
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	2,191,863		13,261,459	139,000	1,922,900	139,000	1,121,000	
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	772	8	4,678	55	869	17	146	4
48	Area irrigated by these enterprises.....1939..acres.....	210,047	22,949	685,988	16,264	105,710	13,065	12,420	96
49	Water delivered.....1939..acre-feet.....	489,991	21,184	2,474,591	20,679	242,981	13,353	19,465	150
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	0.9	3.6	1.3	2.3	1.0	1.6	1.6
51	Average cost of water per acre irrigated.....1939..dollars.....	3.28	0.28	3.68	1.63	2.05	1.30	5.48	4.82
52	Average cost of water per acre-foot delivered.....1939..dollars.....	1.40	0.31	1.04	1.28	0.89	1.27	3.49	3.15
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	196		152		55		11	
54	Irrigable area in these enterprises.....1939..acres.....	218,350		675,229		14,798		698	
55	Irrigated area in these enterprises.....1939..acres.....	158,807		273,817		11,909		672	
56	Area for which drains have been installed.....1939..acres.....	171,853		536,104		8,407		7	
57	Additional area needing drainage.....1939..acres.....	9,522		22,746		536		139	

¹ 1930 and 1920 data include an unidentified portion of the Sacramento-San Joaquin Delta which was not considered as a separate drainage basin in those years.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, - 1939-Continued

SACRAMENTO-SAN JOAQUIN DELTA-Continued											
Sacramento River-Continued											
Upper Sacramento River-Continued											
Pit River			Clear Creek (41)	Cow Creek (42)	Bear Creek (43)	Cottonwood Creek (44)	Battle Creek (45)	Paynes Creek (46)			
Total	Direct (39)	Goose Lake (40)									
570	487	83	22	163	37	155	55	6			
82,459	76,226	6,233	628	5,686	1,523	2,470	4,028	387			
59,401	54,252	5,149	391	2,301	588	2,275	747	157			
2	1	1	.....	106	1	.....	.....	100			
23,056	21,873	1,083	237	3,279	834	195	3,281	130			
69,768	.....	.....	.....	5,122	.....	2,446	4,570	.....		
89,984	.....	.....	.....	6,068	.....	2,972	2,966	.....		
18.2	.....	.....	.....	11.0	.....	1.0	-11.9	.....		
121,879	98,305	23,574	1,449	6,910	1,817	10,846	6,611	730			
94,151	.....	.....	.....	5,877	.....	13,971	6,352	.....		
129,984	.....	.....	.....	12,488	.....	21,016	6,590	.....		
39,420	22,079	17,941	821	1,224	294	8,376	2,583	343			
24,383	.....	.....	.....	755	.....	11,525	1,782	.....		
40,000	.....	.....	.....	6,420	.....	18,044	3,624	.....		
113,972	91,070	22,902	1,231	6,883	1,817	5,723	6,191	730			
83,058	.....	.....	.....	5,757	.....	6,738	5,824	.....		
107,478	.....	.....	.....	7,446	.....	4,112	5,108	.....		
37.2	.....	.....	.....	19.6	.....	-15.1	6.3	.....		
31,513	14,844	16,669	603	1,197	294	3,253	2,163	343			
13,290	.....	.....	.....	635	.....	4,232	1,254	.....		
17,484	.....	.....	.....	1,378	.....	1,140	2,142	.....		
72.4	83.7	27.2	51.0	82.6	83.8	43.2	65.1	53.0			
84.0	.....	.....	.....	89.0	.....	36.3	78.5	.....		
83.7	.....	.....	.....	81.5	.....	72.3	58.1	.....		
1,400,476	1,313,605	86,871	35,967	118,795	29,227	827,179	68,651	15,005			
1,340,116	1,257,865	82,251	35,967	116,034	26,312	827,179	64,290	15,000			
60,360	55,740	4,620	.....	2,761	915	.....	4,371	5			
982,284	.....	.....	.....	89,260	.....	821,779	87,685	.....		
799,913	.....	.....	.....	126,946	.....	573,601	95,139	.....		
42.6	.....	.....	.....	33.1	.....	0.7	-21.7	.....		
12.29	14.42	3.79	29.22	17.26	16.09	144.54	11.09	20.55			
11.83	.....	.....	.....	15.50	.....	121.96	15.06	.....		
7.44	.....	.....	.....	17.05	.....	139.49	18.63	.....		
16.98	17.23	13.94	57.27	20.89	19.19	334.89	17.04	38.77			
1,461,936	1,374,030	87,966	38,667	119,570	29,227	832,829	68,651	15,005			
12.00	13.98	3.73	26.69	17.30	16.09	76.79	10.38	20.55			
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
324	2	277	2	47	12	84	29	25	3	42	6
73,760	(3)	67,743	(3)	6,017	(3)	4,978	1,506	2,470	11	3,945	367
37,855	(3)	36,100	(3)	1,795	(3)	5,477	1,093	19,469	35	1,195	(3)
0.51	(3)	0.53	(3)	0.29	(3)	1.85	0.73	7.88	3.18	0.40	3.09
12,577	15,360	12,535	15,360	42	672	729	100	17,573	.....	20	.....
0.72	1.24	0.73	1.24	0.11	1.40	0.51	0.51	8.79	.....	0.05	.....
23,598	12,387	23,223	12,387	375	480	1,560	197	2,500	.....	420	.....
0.53	1.24	0.54	1.24	0.11	1.40	0.47	0.51	7.03	.....	0.05	.....
6,970	15,400	6,970	15,400	.....	.....	591	.....	.....	.....	.....	.....
45,000	139,000	45,000	139,000	.....	.....	.....	.....	.....	.....	.....	.....
270	2	222	2	48	12	52	18	16	(3)	27	5
71,227	(3)	65,299	(3)	5,928	(3)	2,536	10.33	2,197	(3)	3,213	375
163,386	(3)	146,868	(3)	16,518	(3)	12,850	4,855	3,270	(3)	6,305	755
2.3	(3)	2.2	(3)	2.8	(3)	3.8	4.7	1.5	(3)	2.0	2.0
0.54	(3)	0.57	(3)	0.30	(3)	1.85	0.43	8.31	(3)	0.23	3.05
0.24	(3)	0.25	(3)	0.11	(3)	0.49	0.09	5.58	(3)	0.12	1.52
35	.....	35	.....	.....	.....	.....	4	.....	.....	3	.....
13,244	.....	13,244	.....	.....	.....	.....	479	.....	.....	377	.....
10,411	.....	10,411	.....	.....	.....	.....	474	.....	.....	352	.....
8,400	.....	8,400	.....	.....	.....	.....	.....	.....	.....	.....	.....
340	.....	340	.....	.....	.....	.....	26	.....	.....	31	.....

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA—Continued							
		Sacramento River—Continued							
		Upper Sacramento River—Continued				Middle Sacramento River			
		Redbank Creek group (47)	Antelope and Mill Creeks (48)	Thomas Creek (49)	Deer Creek (50)	Total			
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	160	374	373	70	8,449			
2	Area irrigated.....1939..acres.....	3,467	9,282	8,238	5,773	484,265			
3	(a) Cropland harvested.....1939..acres.....	2,096	8,623	5,903	4,723	432,477			
4	(b) Crop failure.....1939..acres.....	100	.....	63	.....	4,062	
5	(c) Pasture.....1939..acres.....	1,271	659	2,252	1,050	47,727			
6	Area irrigated.....1929..acres.....	.....	.....	.....	.....	.....
7	.....1919..acres.....	.....	.....	.....	.....	.....
8	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	.....	.....
9	Irrigable area in enterprises.....1940..acres.....	9,215	12,918	12,987	8,220	1,142,387			
10	.....1930..acres.....	.....	.....	.....	.....	.....
11	.....1920 ¹ ..acres.....	.....	.....	.....	.....	.....
12	Excess of irrigable area over the area irrigated.....1940..acres.....	5,748	3,636	4,749	2,447	658,121			
13	.....1930..acres.....	.....	.....	.....	.....	.....
14	.....1920 ¹ ..acres.....	.....	.....	.....	.....	.....
15	Area works were capable of supplying with water.....1940..acres.....	9,215	12,918	12,921	8,220	902,733			
16	.....1930..acres.....	.....	.....	.....	.....	.....
17	.....1920..acres.....	.....	.....	.....	.....	.....
18	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	5,748	3,636	4,683	2,447	418,467			
20	.....1930..acres.....	.....	.....	.....	.....	.....
21	.....1920..acres.....	.....	.....	.....	.....	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	37.6	71.9	63.8	70.2	53.6			
23	.....1929..percent.....	.....	.....	.....	.....	.....
24	.....1919..percent.....	.....	.....	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars.....	567,715	248,139	389,676	85,900	29,450,495			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	567,715	248,139	389,611	85,900	28,544,266			
27	(b) Investment in water rights (reported).....1940..dollars.....	.....	.....	65	.....	906,229
28	Total investment in irrigation enterprises.....1930..dollars.....	.....	.....	.....	.....	.....
29	.....1920..dollars.....	.....	.....	.....	.....	.....
30	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	61.61	19.21	30.16	10.45	32.62			
32	.....1930..dollars.....	.....	.....	.....	.....	.....
33	.....1920..dollars.....	.....	.....	.....	.....	.....
34	Average investment per acre irrigated.....1939..dollars.....	163.75	26.73	47.30	14.86	60.81			
35	Estimated final investment in existing enterprises.....1940..dollars.....	595,730	248,139	389,926	95,900	32,268,794			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	64.65	19.21	30.02	11.67	28.25			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary		Sup.		Primary		Sup.	
		Enterprises				Enterprises			
37	Enterprises reporting maintenance and operation.....1939..number.....	14	13	1	286	5	7	1,813	22
38	Area irrigated in these enterprises.....1939..acres.....	3,467	9,282	(^e)	7,617	217	5,733	465,645	2,187
39	Cost of maintenance and operation.....1939..dollars.....	23,590	30,232	(^e)	55,433	605	4,295	1,634,557	7,333
40	Average cost, per acre irrigated.....1939..dollars.....	6.80	3.26	(^e)	7.28	2.79	0.75	3.51	3.35
41	Total annual charges (reported) ³.....1939..dollars.....	14,800	29,750	7,247	10,391	1,028,593
42	Average annual charge per acre irrigated.....1939..dollars.....	4.51	3.63	5.08	1.87	3.08
43	Area against which charges were assessed.....1939..acres.....	7,400	8,500	4,452	7,906	660,668
44	Average annual charge per acre assessed.....1939..dollars.....	2.00	3.50	1.63	1.31	1.56
45	Total charges collected ³.....1939..dollars.....	11,282	30,794	974	9,280	866,315
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	700,000	52,000	1,400	3,500	9,592,055
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	12	10	1	295	5	6	1,935	21
48	Area irrigated by these enterprises.....1939..acres.....	3,366	987	(^e)	7,414	217	333	459,445	2,237
49	Water delivered.....1939..acre-feet.....	5,978	2,060	(^e)	21,033	132	705	1,842,716	5,700
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.8	2.1	(^e)	2.8	0.6	2.1	4.0	2.5
51	Average cost of water per acre irrigated.....1939..dollars.....	4.68	1.47	(^e)	7.76	2.79	5.15	3.55	3.32
52	Average cost of water per acre-foot delivered.....1939..dollars.....	2.63	0.70	(^e)	2.73	4.68	2.43	0.89	1.30
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	69
54	Irrigable area in these enterprises.....1939..acres.....	574,652
55	Irrigated area in these enterprises.....1939..acres.....	241,627
56	Area for which drains have been installed.....1939..acres.....	463,760
57	Additional area needing drainage.....1939..acres.....	22,025

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

SACRAMENTO-SAN JOAQUIN DELTA—Continued													
Sacramento River—Continued													
Middle Sacramento River—Continued													
Direct	Rock Creek	Stony Creek	Chico Creek	Butte Creek	West side streams	Feather River							
						Total	Direct	(51)	(52)	(53)	(54)	(55)	(56)	(57)
1,899	92	746	140	818	91	4,663	2,629					1	
245,864	4,193	17,489	8,271	12,546	4,657	191,247	134,681					2	
239,100	2,837	16,849	6,036	9,971	3,519	154,105	109,802					3	
419	.....	14	4	.....	50	3,575	1,756					4
6,805	1,356	605	2,231	2,575	1,088	33,567	23,123					5	
.....	.....	15,898	.....	.....	.....	173,350	.....					6
.....	.....	23,558	.....	.....	.....	162,314	.....					7
.....	.....	9.9	.....	.....	.....	10.3	.....					8
513,116	5,243	23,696	36,761	27,408	7,306	528,755	301,606					9	
.....	.....	25,218	.....	.....	.....	540,530	.....					10
.....	.....	45,143	.....	.....	.....	255,830	.....					11
267,232	1,150	6,230	28,490	14,862	2,649	337,908	166,925					12	
.....	.....	9,320	.....	.....	.....	367,180	.....					13
.....	.....	21,584	.....	.....	.....	93,516	.....					14
502,948	5,293	23,434	22,706	16,868	7,256	324,228	215,824					15	
.....	.....	24,626	.....	.....	.....	294,446	.....					16
.....	.....	36,191	.....	.....	.....	190,955	.....					17
.....	.....	4.8	.....	.....	.....	10.1	.....					18
257,064	1,100	5,966	14,435	4,322	2,599	132,961	81,143					19	
.....	.....	8,728	.....	.....	.....	121,096	.....					20
.....	.....	12,632	.....	.....	.....	28,641	.....					21
48.9	79.2	74.5	36.4	74.4	64.2	59.0	62.4					22	
.....	.....	64.6	.....	.....	.....	58.9	.....					23
.....	.....	65.1	.....	.....	.....	65.0	.....					24
11,690,290	152,002	2,528,980	743,564	837,606	142,816	13,355,237	8,391,203					25	
11,606,305	151,987	2,528,652	743,562	836,055	142,806	12,534,899	7,577,965					26	
83,985	15	328	2	1,551	10	820,338	813,238					27	
.....	.....	2,439,017	.....	.....	.....	15,668,631	.....					28
.....	.....	1,539,614	.....	.....	.....	6,456,150	.....					29
.....	.....	3.7	.....	.....	.....	-14.8	.....					30
23.24	28.72	107.82	32.75	49.66	19.68	41.19	38.88					31	
.....	.....	99.04	.....	.....	.....	53.21	.....					32
.....	.....	42.54	.....	.....	.....	33.81	.....					33
47.54	36.25	144.78	89.90	66.76	30.67	69.83	52.39					34	
11,644,714	152,002	2,534,761	745,064	838,406	145,696	16,008,121	10,910,187					35	
23.08	28.45	106.96	20.27	30.59	19.94	30.28	35.17					36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
342	3	44	59	2	132	1	74	68	1	1,094	15	910	4
240,625	979	3,086	17,268	(2)	7,854	(2)	12,433	4,393	(2)	180,046	594	124,062	150
762,341	2,087	9,160	38,028	(2)	31,052	(2)	50,901	24,753	(2)	718,322	3,571	523,066	178
3.17	2.13	3.03	2.20	(2)	3.95	(2)	4.09	5.63	(2)	3.99	6.01	4.22	1.19
431,139	36,318	7,369	23,438	1,696	528,643	335,510
2.27	2.34	1.97	3.84	4.61	4.50	4.88
225,594	19,955	3,738	13,006	366	398,009	108,956
1.91	1.82	1.97	1.80	4.61	1.33	3.23
379,071	60,614	40,076	252,500	1,398	386,156	292,076
4,281,715	1,696,694	3,361,246	1,404,323
363	3	86	59	2	133	1	72	74	1	1,146	14	934	1
240,277	979	4,193	17,380	(2)	8,109	(2)	12,451	4,657	(2)	172,378	644	115,891	(2)
1,038,910	2,837	8,266	76,644	(2)	23,094	(2)	38,380	14,164	(2)	643,258	1,861	507,489	(2)
4.3	3.0	2.0	4.4	(2)	2.8	(2)	3.1	3.0	(2)	3.7	2.9	4.4	(2)
2.60	2.13	3.03	2.53	(2)	3.93	(2)	3.96	5.62	(2)	4.94	5.88	5.26	(2)
0.60	0.71	1.54	0.57	(2)	1.38	(2)	1.29	1.85	(2)	1.32	2.04	1.20	(2)
29	(2)	1	8	29	27
418,716	(2)	668	144,068	143,264
194,129	(2)	448	41,435	40,956
370,535	(2)	210	88,715	88,611
1,748	(2)	103	18,064	18,064

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA—Continued					
		Sacramento River—Continued					
		Middle Sacramento River—Continued			Lower Sacramento River		
		Feather River—Continued			Total	Direct (60)	American River (61)
		Yuba and Upper Bear Rivers ² (58)	Lower Bear River (59)				
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number....	1,926	108	4,274	521	2,575	
2	Area irrigated.....1939..acres.....	50,015	6,551	134,816	38,572	38,047	
3	(a) Cropland harvested.....1939..acres.....	38,145	6,158	126,124	36,805	34,570	
4	(b) Crop failure.....1939..acres.....	1,811	8	1,003	407	207	
5	(c) Pasture.....1939..acres.....	10,059	385	7,689	1,360	3,270	
6	Area irrigated.....1929..acres.....	23,924				27,378	
7	.....1919..acres.....	19,473				47,166
8	Increase or decrease (-), 1929-1939.....percent.....					39.0	
9	Irrigable area in enterprises.....1940..acres.....	217,186	9,963	310,045	102,007	71,957	
10	.....1930..acres.....	194,279				51,410
11	.....1920 ³ ..acres.....	69,074				82,695
12	Excess of irrigable area over the area irrigated.....1940..acres.....	167,171	3,412	175,229	63,435	33,910	
13	.....1930..acres.....	170,355				24,032
14	.....1920 ³ ..acres.....	49,601				35,539
15	Area works were capable of supplying with water.....1940..acres.....	100,150	8,254	247,929	91,994	51,073	
16	.....1930..acres.....	42,465				34,375
17	.....1920..acres.....	23,492				52,842
18	Increase or decrease (-), 1930-1940.....percent.....					48.6	
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	50,135	1,703	113,113	53,422	13,026	
20	.....1930..acres.....	18,541				6,997
21	.....1920..acres.....	4,019				5,686
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	49.9	79.4	54.4	41.9	74.5	
23	.....1929..percent.....	56.3				79.6
24	.....1919..percent.....	82.9				89.2
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars....	4,564,499	399,535	9,835,078	3,252,627	3,326,095	
26	(a) Cost of irrigation works and equipment.....1940..dollars....	4,557,399	399,535	9,389,944	3,252,377	3,325,488	
27	(b) Investment in water rights (reported).....1940..dollars....	7,100		445,134	250	607	
28	Total investment in irrigation enterprises.....1930..dollars....	3,200,008				3,437,456	
29	.....1920..dollars....	2,518,770				2,890,114
30	Increase or decrease (-), 1930-1940.....percent.....					-3.2	
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	45.58	48.41	39.67	35.36	65.12	
32	.....1930..dollars....	75.36				100.00
33	.....1920..dollars....	107.22				54.69
34	Average investment per acre irrigated.....1939..dollars....	91.26	60.99	72.95	84.33	87.42	
35	Estimated final investment in existing enterprises.....1940..dollars....	4,691,976	405,958	9,855,484	3,256,128	3,334,124	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	21.60	40.75	31.79	31.92	46.33	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.		
		Enterprises		Enterprises			
37	Enterprises reporting maintenance and operation.....1939..number....	100	11	84	18	280	
38	Area irrigated in these enterprises.....1939..acres.....	49,803	444	6,181	978	37,051	
39	Cost of maintenance and operation.....1939..dollars....	159,727	3,393	35,509	743,914	198,657	
40	Average cost, per acre irrigated.....1939..dollars....	3.21	7.64	5.74	5.69	5.36	
41	Total annual charges (reported) ⁵.....1939..dollars....	174,253		18,880	177,192	20,752	
42	Average annual charge per acre irrigated.....1939..dollars....	3.74		8.44	4.18	2.85	
43	Area against which charges were assessed.....1939..acres.....	289,969		4,084	90,162	22,881	
44	Average annual charge per acre assessed.....1939..dollars....	0.60		4.62	1.97	0.91	
45	Total charges collected ⁵.....1939..dollars....	75,200		18,880	224,762	51,395	
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars....	1,798,453		158,470	1,746,504	134,529	
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number....	118	12	94	17	286	
48	Area irrigated by these enterprises.....1939..acres.....	49,936	484	6,551	942	35,265	
49	Water delivered.....1939..acre-feet....	117,371	1,671	18,398	388,894	136,161	
50	Average water delivered per acre irrigated.....1939..acre-feet....	2.4	3.5	2.8	3.0	3.9	
51	Average cost of water per acre irrigated.....1939..dollars....	3.79	7.64	8.64	5.37	4.55	
52	Average cost of water per acre-foot delivered.....1939..dollars....	1.61	2.21	3.08	1.81	1.18	
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number....			2	30	11	
54	Irrigable area in these enterprises.....1939..acres.....			(4)	85,779	71,734	
55	Irrigated area in these enterprises.....1939..acres.....			(4)	20,381	18,540	
56	Area for which drains have been installed.....1939..acres.....			(4)	63,937	50,314	
57	Additional area needing drainage.....1939..acres.....				185	6	

¹ 1930 and 1920 data include an unidentified portion of the Sacramento-San Joaquin Delta which was not considered as a separate drainage basin in those years.

² 1930 and 1920 data for Yuba River only, therefore percentages are not shown.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - CALIFORNIA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

SACRAMENTO-SAN JOAQUIN DELTA—Continued															
Sacramento River—Continued				San Joaquin River											
Lower Sacramento River—Continued				Total ¹						Kern River					
Cache Creek (62)	Putah Creek (63)			Direct (64)	Avenal and El Paso Creeks group (65)	Coliente Creek (66)			Total			Direct (67)			
895	283			3,572	14	225			2,430			2,004	1		
44,235	13,962			265,390	6,862	17,213			257,073			206,427	2		
41,580	13,159			245,895	6,522	16,945			218,170			168,341	3		
377	12			39	.....	126			458			324	4	
2,268	791			19,456	160	142			38,445			37,762	5		
24,160	.....			471,789	.....	.....			196,861			.....	6
24,541	.....			642,261	.....	.....			200,641			.....	7
83.1	.....			-4.6	-43.7	.....			30.6			.....	8
106,068	30,013			362,024	7,765	23,512			481,373			413,405	9		
88,802	.....			638,596	.....	.....			446,298			.....	10
56,498	.....			1,083,862	.....	.....			432,481			.....	11
61,833	16,051			96,634	1,083	6,299			224,300			206,978	12		
64,642	.....			166,807	.....	.....			249,437			.....	13
31,957	.....			441,601	.....	.....			231,840			.....	14
75,388	29,474			341,161	7,760	22,772			477,239			410,056	15		
56,009	.....			623,486	.....	.....			437,885			.....	16
31,212	.....			873,300	.....	.....			299,665			.....	17
34.6	.....			-45.3	.....	.....			9.0			.....	18
31,153	15,512			75,771	1,078	5,559			220,166			203,629	19		
31,849	.....			151,697	.....	.....			241,024			.....	20
6,671	.....			231,099	.....	.....			99,024			.....	21
58.7	47.4			77.8	86.1	75.6			53.9			50.3	22		
43.1	.....			75.7	.....	.....			45.0			.....	23
78.6	.....			73.5	.....	.....			67.0			.....	24
2,517,141	739,215			8,343,127	142,923	1,450,647			11,465,707			8,358,795	25		
2,072,881	739,198			7,848,472	142,918	1,450,563			11,465,267			8,358,355	26		
444,260	17			494,655	5	84			440			440	27		
2,421,872	.....			12,006,191	.....	.....			9,518,734			.....	28
916,477	.....			9,224,164	.....	.....			17,573,637			.....	29
3.9	.....			-30.5	.....	.....			62.9			.....	30
33.39	25.08			24.46	18.42	63.70			24.07			20.38	31		
43.24	.....			19.26	.....	.....			21.74			.....	32
29.36	.....			10.56	.....	.....			58.64			.....	33
56.90	52.94			31.44	21.39	84.28			44.68			40.49	34		
2,625,457	739,775			8,361,296	145,423	1,494,147			11,818,468			8,630,520	35		
23.81	24.65			23.10	18.73	63.55			24.55			20.88	36		
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.		
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises			
351	17	263	1	8,376	7,172	87	4	11	95	31	1,167	63	863	63	37
43,730	948	13,596	(*)	2,220,936	344,506	265,375	892	5,832	15,672	2,552	254,170	5,978	203,761	5,978	38
145,404	1,973	100,067	(*)	7,985,052	1,335,613	798,979	1,165	19,518	182,031	12,106	1,465,412	28,779	920,855	28,779	39
3.33	2.08	7.36	(*)	3.60	3.88	3.01	1.31	3.35	11.62	4.74	5.77	4.81	4.52	4.81	40
56,223	3,582	4,279,318	14,203	847,882	23,870	564,403	457,488	41
3.08	10.60	2.74	0.59	3.53	13.21	4.11	3.72	42
22,591	338	2,088,261	20,100	260,953	1,807	150,188	135,789	43
2.58	10.60	2.05	0.71	3.25	13.21	3.76	3.37	44
56,803	1,540	3,643,263	1,417	905,162	27,236	133,601	112,379	45
366,000	22,048	40,574,964	2,535,646	1,910	2,331,138	2,288,822	46
360	16	269	1	8,258	7,229	82	4	14	101	31	1,174	65	867	64	47
44,070	912	13,842	(*)	2,163,415	337,277	252,621	892	6,682	17,082	2,304	255,763	7,674	205,231	6,474	48
84,464	1,604	48,292	(*)	5,375,672	649,370	672,699	1,117	8,098	65,804	6,752	767,256	16,710	595,615	16,110	49
2.1	1.8	3.5	(*)	2.5	1.9	2.7	1.3	1.2	3.9	2.9	3.0	2.2	2.9	2.5	50
3.98	2.11	7.54	(*)	4.18	4.08	3.51	1.31	3.35	11.65	5.11	6.18	4.82	5.07	4.82	51
1.86	1.20	2.16	(*)	1.68	2.12	1.32	1.04	2.76	3.02	1.74	2.06	2.21	1.75	1.94	52
9	74	9	6	5	53
1,231	987,064	138,923	(*)	49,800	49,222	54
839	734,526	113,002	(*)	36,874	36,323	55
845	491,014	66,065	(*)	49,171	49,011	56
179	27,820	2,700	(*)	200	200	57

¹ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
² Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA—Continued					
		San Joaquin River—Continued					
		Kern River—Con.		Tule River and Deer Creek ¹ (69)	Kaweah River (70)	Panoche and Los Gatos Creeks group (71)	Kings River ² (72)
		Poso Creek and White River (68)					
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	426	1,886	3,217	75	18,972	
2	Area irrigated.....1939..acres.....	50,646	101,922	161,146	89,827	804,076	
3	(a) Cropland harvested.....1939..acres.....	49,829	93,734	150,784	88,876	744,677	
4	(b) Crop failure.....1939..acres.....	184	461	546	911	2,201	
5	(c) Pasture.....1939..acres.....	683	7,727	9,816	40	57,196	
6	Area irrigated.....1929..acres.....	33,620	95,237	222,363	.....	742,282
7	.....1919..acres.....	.....	61,223	149,932	.....	552,601
8	Increase or decrease (-), 1929-1939.....percent.....	50.6	7.0	-27.5	.....	8.3
9	Irrigable area in enterprises.....1940..acres.....	67,968	142,820	259,761	139,157	1,307,075	
10	.....1930..acres.....	35,809	118,540	322,000	.....	1,278,720
11	.....1920 ³ ..acres.....	.....	175,777	356,703	.....	1,052,406
12	Excess of irrigable area over the area irrigated.....1940..acres.....	17,322	40,888	98,615	43,330	502,999	
13	.....1930..acres.....	2,189	23,303	99,637	.....	536,438
14	.....1920 ³ ..acres.....	.....	114,554	206,771	.....	499,805
15	Area works were capable of supplying with water.....1940..acres.....	67,183	135,063	225,097	132,331	1,223,247	
16	.....1930..acres.....	34,046	109,698	316,135	.....	1,161,442
17	.....1920..acres.....	.....	109,412	299,474	.....	895,263
18	Increase or decrease (-), 1930-1940.....percent.....	97.3	23.1	-28.8	.....	5.3
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	16,537	33,141	63,921	42,504	419,171	
20	.....1930..acres.....	426	14,451	93,772	.....	419,160
21	.....1920..acres.....	.....	48,189	149,542	.....	342,662
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	75.4	75.5	71.6	67.9	65.7	
23	.....1929..percent.....	98.7	86.8	70.3	.....	63.9
24	.....1919..percent.....	.....	56.0	50.1	.....	61.7
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	3,126,912	6,289,529	9,534,690	2,910,008	27,490,233	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	3,126,912	6,282,423	9,469,967	2,910,008	26,564,681	
27	(b) Investment in water rights (reported).....1940..dollars.....	.....	7,106	64,723	.....	925,552
28	Total investment in irrigation enterprises.....1930..dollars.....	2,468,693	5,996,673	11,449,116	.....	24,300,665
29	.....1920..dollars.....	.....	2,842,495	6,186,840	.....	8,145,446
30	Increase or decrease (-), 1930-1940.....percent.....	.....	4.9	-16.7	.....	13.1
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	46.54	46.57	42.36	21.99	22.47	
32	.....1930..dollars.....	72.51	54.67	36.22	.....	20.92
33	.....1920..dollars.....	.....	25.98	20.66	.....	9.10
34	Average investment per acre irrigated.....1939..dollars.....	61.74	61.71	59.17	32.40	34.19	
35	Estimated final investment in existing enterprises.....1940..dollars.....	3,187,948	6,310,287	9,659,945	2,943,729	27,609,046	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	46.90	44.18	37.19	22.11	21.12	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	304	1,034	120	1,763	387
38	Area irrigated in these enterprises.....1939..acres.....	50,389	97,674	7,747	157,523	37,463
39	Cost of maintenance and operation.....1939..dollars.....	544,557	842,232	53,405	1,180,448	200,696
40	Average cost, per acre irrigated.....1939..dollars.....	10.81	8.62	6.89	7.49	5.36
41	Total annual charges (reported) ⁴.....1939..dollars.....	106,915	223,690	384,722	12,320
42	Average annual charge per acre irrigated.....1939..dollars.....	7.46	8.16	5.73	8.80
43	Area against which charges were assessed.....1939..acres.....	14,399	33,294	118,265	15,400
44	Average annual charge per acre assessed.....1939..dollars.....	7.43	6.72	3.25	0.80
45	Total charges collected ⁴.....1939..dollars.....	21,222	145,824	99,231	667
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	42,316	439,410	1,270,914
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	307	976	126	1,727	399
48	Area irrigated by these enterprises.....1939..acres.....	50,532	(⁶)	92,665	9,425	148,530	38,766
49	Water delivered.....1939..acre-feet.....	171,641	(⁶)	299,613	19,411	470,274	90,282
50	Average water delivered per acre irrigated.....1939..acre-feet.....	3.4	(⁶)	3.2	2.1	3.2	2.3
51	Average cost of water per acre irrigated.....1939..dollars.....	10.67	10.08	6.89	7.82	5.68
52	Average cost of water per acre-foot delivered.....1939..dollars.....	3.14	3.12	3.35	2.47	2.44
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	1	6	13
54	Irrigable area in these enterprises.....1939..acres.....	(⁶)	765	1,395
55	Irrigated area in these enterprises.....1939..acres.....	(⁶)	607	1,012
56	Area for which drains have been installed.....1939..acres.....	(⁶)	230	580
57	Additional area needing drainage.....1939..acres.....	(⁶)	40	122

¹1920 data for Tule River only.

²Includes that portion of Tulare Lake area not under flood water in Census of 1940. Tulare Lake was dry and tabulated separately, Censuses of 1920 and 1930.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - CALIFORNIA

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

SACRAMENTO-SAN JOAQUIN DELTA—Continued															
San Joaquin River—Continued															
Fresno River		Merced River		Orestimba and Los Banos Creeks group		Tuolumne River		Stanislaus River		Calaveras River		Mokelumne River		Cosumnes River	
(73)		(74)		(75)		(76)		(77)		(78)		(79)		(80)	
1,224		2,639		38		7,915		3,960		943		1,614		253	1
85,401		125,698		8,918		230,686		97,184		28,463		82,200		6,944	2
80,871		110,239		8,699		224,173		73,443		25,843		73,192		5,247	3
86		5		37		4		11		89		60		27	4
4,744		15,454		182		6,509		23,730		2,551		8,948		1,670	5
17,640		140,131		.....		207,347		81,881		8,327		85,172		7,885	6
12,414		65,151		.....		163,533		75,359		13,323		36,848		3,259	7
384.1		-10.3		.....		11.3		18.5		241.8		-3.5		-11.9	8
144,967		177,221		11,967		257,773		141,859		38,347		96,667		28,742	9
21,209		197,436		.....		247,681		177,073		9,491		114,586		26,614	10
30,004		222,715		.....		298,418		156,453		21,598		155,800		9,011	11
59,566		51,523		3,049		27,067		44,675		9,884		14,467		21,798	12
3,569		57,305		.....		40,334		95,092		1,164		29,416		18,729	13
17,590		157,564		.....		132,885		80,094		8,275		118,632		5,732	14
144,667		167,094		11,967		257,731		119,396		38,025		95,142		8,372	15
20,072		195,641		.....		247,165		147,702		9,143		109,164		25,621	16
14,016		71,709		.....		250,425		111,182		16,469		72,144		6,405	17
620.7		-14.6		.....		4.3		-19.2		315.9		-12.6		-67.6	18
59,266		41,396		3,049		27,045		22,214		9,562		12,942		1,428	19
2,432		55,510		.....		39,818		65,721		816		23,932		17,936	20
1,602		6,558		.....		64,892		35,833		3,166		35,296		3,146	21
59.0		75.2		74.5		89.5		81.4		74.9		66.4		82.9	22
87.9		71.6		.....		83.9		55.5		91.1		76.0		30.5	23
88.6		90.9		.....		66.1		67.8		80.8		51.1		50.9	24
3,010,138		19,201,929		326,452		13,354,008		10,928,016		1,547,082		2,795,696		326,867	25
2,919,296		19,181,529		324,952		13,150,308		10,627,616		1,544,791		2,748,126		317,307	26
90,842		20,400		1,500		203,700		300,400		2,291		47,570		9,560	27
432,791		17,249,861		.....		13,964,091		10,280,594		463,580		3,709,181		592,663	28
415,365		3,812,235		.....		7,173,602		7,840,486		818,995		1,675,137		153,899	29
595.5		11.3		.....		-4.5		6.3		233.7		-24.6		-44.8	30
20.81		114.92		27.28		51.81		91.53		40.69		29.36		39.04	31
21.56		88.17		.....		56.58		69.60		50.70		33.98		22.95	32
29.64		53.16		.....		28.65		70.51		49.67		23.22		24.03	33
35.25		152.76		36.61		57.89		112.45		54.35		34.01		47.07	34
3,012,013		19,204,069		333,502		15,369,566		11,433,286		1,551,671		2,900,342		341,367	35
20.78		108.36		27.87		59.62		80.60		40.46		30.00		11.86	36
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
1,001	98	299	43	35	14	134	15	123	22	900	6	1,261	13	197	37
85,063	5,148	125,352	1,332	8,918	2,930	230,460	1,572	97,184	4,114	28,215	415	77,719	462	5,821	38
507,389	33,340	357,515	10,910	60,719	30,930	496,876	4,734	275,882	10,670	197,302	1,952	297,428	1,410	33,668	39
5.96	6.48	2.85	8.19	6.81	10.56	2.16	3.01	2.84	2.59	6.99	4.70	3.83	3.05	5.82	40
34,285	.....	340,844	.....	162	.....	570,245	.....	535,589	.....	4,500	.....	27,219	.....	1,794	41
2.84	.....	3.10	.....	0.54	.....	2.55	.....	5.77	.....	6.62	.....	2.03	.....	1.71	42
15,517	.....	145,378	.....	300	.....	265,961	.....	132,369	.....	1,320	.....	14,759	.....	1,109	43
2.21	.....	2.34	.....	0.54	.....	2.14	.....	4.05	.....	3.41	.....	1.84	.....	1.62	44
23,546	.....	337,842	.....	180	.....	650,015	.....	524,197	.....	1,200	.....	24,247	.....	500	45
127,000	.....	16,191,000	.....	105	.....	7,288,291	.....	7,856,750	.....	15,000	.....	230,000	.....	.....	46
990	98	309	38	35	7	139	10	127	22	914	8	1,266	13	208	47
85,170	5,148	125,680	1,347	8,918	2,930	230,389	1,249	96,934	4,114	28,396	545	81,396	462	6,120	48
256,473	14,742	346,785	4,903	26,213	4,003	683,735	1,155	265,316	7,660	72,864	1,224	268,567	996	23,147	49
3.0	2.9	2.8	3.6	2.9	1.4	3.0	0.9	2.7	1.9	2.6	2.2	3.3	2.2	3.8	50
6.11	6.48	3.45	5.27	6.81	6.85	2.61	3.07	5.73	2.59	7.06	4.70	3.87	3.05	6.63	51
2.08	2.26	1.25	1.45	2.32	5.01	0.88	3.32	2.09	1.39	2.75	2.09	1.17	1.42	1.75	52
.....	.....	3	.....	(e)	2	11	.....	3	.....	6	.....	21	.....	.....	53
.....	.....	151,620	.....	(e)	.....	246,723	.....	125,315	.....	859	.....	15,584	.....	.....	54
.....	.....	107,602	.....	(e)	.....	221,878	.....	87,225	.....	170	.....	14,200	.....	.....	55
.....	.....	85,136	.....	(e)	.....	210,246	.....	72,415	.....	757	.....	13,758	.....	.....	56
.....	.....	10,084	.....	(e)	.....	10,018	.....	500	.....	4	.....	87	.....	.....	57

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919, CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	INDEPENDENT BASINS						
	Total ^a	Surprise Valley	Madeline Plains	Honey Lake	Pyramid Lake Basin and Truckee River ^b	Lahontan Lake Basin and Carson River ^c	
		(82)	(83)	(86)	(87)	(88)	
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	3,576	170	9	227	7	27
2	Area irrigated.....1939..acres.....	219,909	31,996	3,672	39,414	1,675	8,105
3	(a) Cropland harvested.....1939..acres.....	146,145	25,952	2,407	25,618	106	1,715
4	(b) Crop failure.....1939..acres.....	1,524	50	.....	505	.....	10
5	(c) Pasture.....1939..acres.....	72,240	6,094	1,265	13,091	1,569	6,380
6	Area irrigated.....1929..acres.....	217,828	.....	.....	24,664	.....	1,925
7	.....1919..acres.....	340,679	.....	.....	44,327	.....	4,459
8	Increase or decrease (-), 1929-1939.....percent.....	1.0	.....	.....	59.8	.....	321.0
9	Irrigable area in enterprises.....1940..acres.....	317,485	45,119	4,030	63,203	1,675	8,261
10	.....1930..acres.....	342,394	.....	.....	49,319	.....	2,595
11	.....1920 ^d ..acres.....	606,167	.....	.....	55,065	.....	7,027
12	Excess of irrigable area over the area irrigated..1940..acres.....	97,576	13,123	358	23,789	.....	156
13	.....1930..acres.....	124,566	.....	.....	24,655	.....	670
14	.....1920 ^d ..acres.....	265,488	.....	.....	10,738	.....	2,568
15	Area works were capable of supplying with water...1940..acres.....	281,228	44,707	4,030	55,463	1,675	8,260
16	.....1930..acres.....	283,651	.....	.....	49,069	.....	2,455
17	.....1920..acres.....	451,243	.....	.....	49,264	.....	4,819
18	Increase or decrease (-), 1930-1940.....percent.....	-0.9	.....	.....	13.0	.....	236.5
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	61,319	12,711	358	16,049	.....	155
20	.....1930..acres.....	65,833	.....	.....	24,405	.....	530
21	.....1920..acres.....	110,564	.....	.....	4,937	.....	360
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	76.2	71.6	91.1	71.1	100.0	98.1
23	.....1929..percent.....	76.8	.....	.....	50.3	.....	78.4
24	.....1919..percent.....	75.5	.....	.....	90.0	.....	92.5
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	12,340,872	140,327	32,800	292,400	7,610	51,930
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	11,989,893	79,933	32,800	267,781	7,610	50,780
27	(b) Investment in water rights (reported).....1940..dollars.....	370,979	60,394	.....	24,619	.....	1,150
28	Total investment in irrigation enterprises.....1930..dollars.....	18,130,791	.....	.....	1,511,574	.....	2,250
29	.....1920..dollars.....	16,750,413	.....	.....	414,068	.....	40,385
30	Increase or decrease (-), 1930-1940.....percent.....	-31.9	.....	.....	-80.7	.....	(²)
31	Average investment based on area works were capable of supplying with water, per acre...1940..dollars.....	43.88	3.14	8.14	5.27	4.54	6.29
32	.....1930..dollars.....	63.92	.....	.....	30.81	.....	0.92
33	.....1920..dollars.....	41.55	.....	.....	8.41	.....	8.38
34	Average investment per acre irrigated.....1939..dollars.....	56.12	4.39	8.93	7.42	4.54	6.41
35	Estimated final investment in existing enterprises..1940..dollars.....	13,073,905	140,347	32,800	297,915	7,610	51,930
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	41.18	3.11	8.14	4.71	4.54	6.29
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.		Primary	Sup.	
		Enterprises			Enterprises		
37	Enterprises reporting maintenance and operation...1939..number.....	1,546	14	160	4	130	3
38	Area irrigated in these enterprises.....1939..acres.....	200,667	6,555	29,825	3,362	34,950	194
39	Cost of maintenance and operation.....1939..dollars.....	992,551	32,239	9,373	300	11,457	133
40	Average cost, per acre irrigated.....1939..dollars.....	4.95	4.92	0.31	0.09	0.33	0.69
41	Total annual charges (reported) ⁵.....1939..dollars.....	220,724	24,120	1,096	.....	13,844	.....
42	Average annual charge per acre irrigated.....1939..dollars.....	4.38	4.29	0.51	.....	1.81	.....
43	Area against which charges were assessed.....1939..acres.....	57,926	5,618	2,130	.....	8,435	.....
44	Average annual charge per acre assessed.....1939..dollars.....	3.81	4.29	0.51	.....	1.64	.....
45	Total charges collected ⁵.....1939..dollars.....	182,248	23,374	.....	.....	8,845	.....
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	1,101,704	12,728	.....	.....	47,000	.....
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	1,673	15	144	9	143	3
48	Area irrigated by these enterprises.....1939..acres.....	212,187	6,356	29,825	3,672	38,581	194
49	Water delivered.....1939..acre-feet.....	594,727	8,594	35,796	3,475	67,032	347
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.8	1.4	1.2	0.9	1.7	1.8
51	Average cost of water per acre irrigated.....1939..dollars.....	5.23	4.69	0.32	0.09	0.62	0.69
52	Average cost of water per acre-foot delivered..1939..dollars.....	1.87	3.47	0.26	0.09	0.36	0.38
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	14	.....	.....	.....	3	.....
54	Irrigable area in these enterprises.....1939..acres.....	17,309	.....	.....	.....	695	.....
55	Irrigated area in these enterprises.....1939..acres.....	1,493	.....	.....	.....	465	.....
56	Area for which drains have been installed.....1939..acres.....	1,618	.....	.....	.....	660	.....
57	Additional area needing drainage.....1939..acres.....	10,691	.....	.....	.....	.....	.....

^a Data for 2 enterprises in Cowhead and Warner Lakes Drainage Basin (81), 2 enterprises in Smoke Creek Drainage Basin (85), and 1 enterprise in Adobe Meadows Drainage Basin (92) (number refers to separate map) are included with Independent Basins total.
^b Data for corresponding basins in Nevada not tabulated under "Independent Basins."
^c Joins "Amargosa River Drainage Basin" in Nevada.
^d For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
^e Percent not shown when more than 1,000.

CENSUS OF IRRIGATION - CALIFORNIA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

INDEPENDENT BASINS—Continued										COLORADO RIVER					
Walker-Lake			Mono Lake (91)	Owens River (93)	Amargosa River and Dry Lakes ¹ (95)	Antelope Valley (97)	Mojave River (98)	San Jacinto River (99)	Whitewater River (100)	Total (101)	Direct (102)	Imperial Valley (102)			
Total	West Walker River (89)	East Walker River (90)													
71	50	21	12	238	17	636	173	1,184	799	5,228	678	4,550	1		
38,131	17,849	20,282	786	13,300	910	30,982	6,456	23,165	18,981	454,768	37,629	416,939	2		
5,916	5,671	245	88	7,377	465	30,742	4,591	22,639	17,683	442,752	37,829	404,923	3		
.....		
32,215	12,178	20,037	698	5,923	425	172	69	233	445	4,000	.....	4,000	4	
16,012	.....	.....	11,500	29,806	.....	.....	1,796	293	853	8,016	.....	8,016	5
39,261	.....	.....	4,190	144,024	.....	.....	6,118	33,953	.....	464,653	.....	.....	6
138.1	.....	.....	-93.2	-55.4	.....	.....	4,608	20,869	14,643	447,384	.....	.....	7
.....	.....	.....	.....	.....	.....	.....	5.5	-31.8	.....	-2.1	.....	.....	8
38,416	17,849	20,567	965	19,607	1,436	44,908	12,853	29,804	43,472	636,857	110,040	526,817	9		
16,012	.....	.....	15,500	12,046	.....	.....	35,995	54,368	.....	1,119,099	.....	.....	10
42,295	.....	.....	70,377	200,147	.....	.....	21,523	34,974	37,604	621,015	.....	.....	11
286	.....	285	179	6,307	526	13,926	6,397	6,639	24,491	182,089	72,211	109,878	12	
.....	.....	.....	4,000	.....	.....	.....	29,877	20,415	.....	654,446	.....	.....	13
3,034	.....	.....	66,187	56,123	.....	.....	16,915	14,105	22,961	173,631	.....	.....	14
38,416	17,849	20,567	965	16,080	1,366	41,163	10,271	28,969	27,127	615,854	89,222	526,632	15		
16,012	.....	.....	11,500	19,049	.....	.....	8,627	43,120	.....	604,600	.....	.....	16
40,355	.....	.....	45,760	182,748	.....	.....	6,510	22,263	22,282	494,975	.....	.....	17
139.9	.....	.....	-91.6	-15.6	.....	.....	19.1	-32.8	.....	1.9	.....	.....	18
.....	.....	285	179	2,780	456	10,181	3,815	5,804	8,146	161,086	51,393	109,693	19	
.....	.....	.....	41,570	38,724	.....	.....	2,509	9,167	.....	139,947	.....	.....	20
1,094	.....	.....	.....	.....	.....	.....	1,902	1,394	7,639	47,591	.....	.....	21
99.3	100.0	98.6	81.5	82.7	66.6	75.3	62.9	80.0	70.0	73.8	42.4	79.2	22		
100.0	.....	.....	100.0	.....	.....	.....	70.9	78.7	.....	76.9	.....	.....	23
97.3	.....	.....	9.2	78.8	.....	.....	70.8	93.7	65.7	90.4	.....	.....	24
83,200	50,425	32,775	14,260	254,312	31,600	4,552,411	528,548	3,443,172	2,880,352	21,255,347	4,513,237	16,742,110	25		
79,200	46,425	32,775	14,050	254,312	31,600	4,413,711	527,313	3,302,501	2,880,352	20,664,209	3,923,799	16,740,410	26		
4,000	4,000	.....	210	.....	.....	138,700	1,235	140,671	.....	591,138	589,438	1,700	27
736,210	.....	.....	1,281,055	325,653	.....	.....	1,192,329	4,489,207	.....	20,410,341	.....	.....	28
37,575	.....	.....	5,363,658	5,785,132	.....	.....	616,769	2,139,257	2,242,944	14,833,041	.....	.....	29
-88.7	.....	.....	-98.9	-21.9	.....	.....	.....	-55.7	.....	4.1	.....	.....	30
2.17	2.83	1.59	14.78	15.82	23.13	110.59	51.46	118.86	106.18	34.51	50.58	31.79	31		
45.98	.....	.....	111.40	17.10	.....	.....	138.21	104.11	.....	39.76	.....	.....	32
0.93	.....	.....	117.22	31.66	.....	.....	94.74	96.99	100.66	29.97	.....	.....	33
2.18	2.83	1.62	18.14	19.12	34.73	146.94	81.87	148.64	151.75	46.74	119.31	40.15	34		
83,600	50,825	32,775	14,260	288,212	32,600	4,859,662	583,148	3,480,969	3,172,902	21,305,812	4,528,237	16,777,575	35		
2.18	2.85	1.59	14.78	14.70	22.70	108.21	45.37	116.80	72.99	39.45	41.15	31.85	36		
30	15	15	10	31	11	.....	.....	.....	.....	.....	.....	.....	37
36,141	17,849	18,292	540	10,649	536	29,628	(⁴)	6,195	22,952	5,900	16,562	454,282	37,829	416,453	38
5,982	5,363	599	825	10,596	3,637	453,799	(⁴)	57,235	226,819	31,191	210,459	1,447,829	168,124	1,279,705	39
0.17	0.30	0.03	1.53	1.00	6.79	15.32	(⁴)	9.24	9.88	5.29	12.71	3.19	4.44	3.07	40
3,661	3,661	4,400	29,832	765	524	131,595	23,355	35,718	1,808,291	122,291	1,686,000	41
0.25	0.25	0.75	12.49	2.38	11.64	10.31	4.41	9.04	3.98	3.24	4.05	42
14,643	14,643	5,903	5,454	322	329	15,227	5,296	4,852	606,314	44,314	562,000	43
0.25	0.25	0.75	5.47	2.38	1.59	8.64	4.41	7.36	2.98	2.76	3.00	44
4,466	4,466	23,789	524	119,102	23,374	25,495	1,779,588	89,588	1,690,000	45
1,253	1,253	336,018	357	648,678	12,371	68,755	16,379,146	879,146	15,500,000	46
32	15	17	12	50	15	453	1	153	237	11	400	48	3	45	47
38,131	17,849	20,282	786	13,215	572	30,549	(⁴)	6,166	22,952	6,023	18,422	454,766	37,629	416,937	48
48,668	25,897	22,781	1,806	53,257	1,943	176,433	(⁴)	21,973	55,529	8,217	94,831	1,497,629	327,669	1,169,960	49
1.3	1.5	1.1	2.3	4.0	3.4	5.8	(⁴)	3.6	2.4	1.4	5.1	3.3	8.7	2.8	50
0.17	0.30	0.03	1.53	0.99	17.18	15.92	(⁴)	9.27	9.98	4.90	13.44	3.99	3.23	4.06	51
0.13	0.21	0.03	0.66	0.25	5.06	2.76	(⁴)	2.60	4.13	3.60	2.61	1.21	0.37	1.45	52
.....	7.2	4	3	7.2	7.1	7.1	53
.....	1,112	500	(⁴)	14,780	540,000	15,000	525,000	54
.....	400	55	(⁴)	416	422,789	6,789	416,000	55
.....	400	208	350	208,000	8,000	200,000	56
.....	555	110	(⁴)	10,000	315,000	315,000	57

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁷Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE II--ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	PACIFIC OCEAN STREAMS (North of San Francisco Bay)						
		Total ¹	Klamath River					
			Total	Direct (3)	Lost River (4)	Shasta River (5)	Scott River (6)	Trinity River (7)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1 Enterprises.....1940..number.....	² 39,984	1,005	742	257	11	100	174	200
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	185	135	168	78	3,309	370	130	43
3 Diversion dams.....1940..total number.....	2,714	587	570	140	.....	89	186	155
4 1930..total number.....	1,654	431	405	.....	.....	.....	.....	.....
5 1920..total number.....	2,070	469	448	.....	.....	.....	.....	.....
6 (a) Concrete and masonry.....1940..number.....	527	25	19	4	.....	3	5	7
7 (b) Timber.....1940..number.....	477	109	109	51	.....	21	8	29
8 (c) Earth and rock.....1940..number.....	1,111	274	266	40	.....	56	91	78
9 (d) Other, mixed, and not reported.....1940..number.....	599	179	176	45	.....	9	82	40
10 Main canals and laterals.....1940..total length, miles.....	19,799.1	1,096.9	1,081.5	269.1	126.5	200.2	263.1	222.6
11 1930..total length, miles.....	18,602	989	942	.....	.....	.....	.....	.....
12 1920..total length, miles.....	27,394	1,562	1,171	.....	.....	.....	.....	.....
13 (a) Earth.....1940..length, miles.....	18,217	1,067	1,053	262	125	195	262	209
14 (b) Lined.....1940..length, miles.....	1,582.1	29.9	26.5	7.1	1.5	5.2	1.1	13.6
15 1940..capacity, c.f.s. ³	91,776	2,758	2,572	583	88	574	628	699
16 1930..capacity, c.f.s. ³	84,944	2,910	2,851	.....	.....	.....	.....	.....
17 1920..capacity, c.f.s. ³	115,237	5,850	5,716	.....	.....	.....	.....	.....
18 Pipe lines ⁴.....1940..total length, miles.....	22,690.2	109.3	42.3	11.9	.....	4.7	15.4	10.3
19 1930..total length, miles.....	14,683.0	78.1	17.6	.....	.....	.....	.....	.....
20 1920..total length, miles.....	6,885.9	52.4	19.1	.....	.....	.....	.....	.....
21 (a) Concrete.....1940..length, miles.....	16,745.0	25.8	3.1	0.3	.....	0.3	.....	2.5
22 (b) Metal.....1940..length, miles.....	5,414.1	79.5	36.0	10.8	.....	2.1	15.4	7.7
23 (c) Wood-stave.....1940..length, miles.....	249.8	3.3	2.6	0.6	.....	1.9	.....	0.1
24 (d) Other.....1940..length, miles.....	281.3	0.7	0.6	0.2	.....	0.4	.....	.....
25 Storage dams.....1940..total number.....	709	30	25	6	1	10	5	3
26 1930..total number.....	421	26	10	.....	.....	.....	.....	.....
27 1920..total number.....	455	38	23	.....	.....	.....	.....	.....
28 (a) Concrete and masonry.....1940..number.....	126	4	2	1	.....	.....	.....	1
29 (b) Earth and rock.....1940..number.....	531	20	18	2	1	10	4	1
30 (c) Other, mixed, and not reported.....1940..number.....	52	6	5	3	.....	.....	1	1
31 Reservoirs.....1940..total number.....	2,652	39	29	6	⁵ 1	9	7	6
32 (a) 1-99 acre-feet capacity.....1940..number.....	2,436	37	27	6	.....	8	7	6
33 (b) 100-999 acre-feet capacity.....1940..number.....	102	.....	.....	.....	.....	.....	.....	.....
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	114	2	2	.....	1	1	.....	.....
35 1940..total capacity, ac.-ft. ⁶	3,581,621	510,379	510,189	20	440,000	70,085	79	5
36 1930..total capacity, ac.-ft.	1,769	29	23	.....	.....	.....	.....	.....
37 1920..total capacity, ac.-ft.	3,225,675	549,463	549,256	.....	.....	.....	.....	.....
38 Wells, flowing.....1940..number.....	436	3	3	3	.....	.....	.....	.....
39 1930..number.....	449	4	3	.....	.....	.....	.....	.....
40 1920..number.....	1,415	4	3	.....	.....	.....	.....	.....
41 1940..yield, g.p.m.....	34,767	42	42	42	.....	.....	.....	.....
42 1930..yield, g.p.m.....	55,768	205	200	.....	.....	.....	.....	.....
43 1920..yield, g.p.m.....	287,187	.....	.....	.....	.....	.....	.....	.....
44 Wells, pumped.....1940..number.....	48,568	244	48	19	2	9	14	4
45 1930..number.....	46,737	221	14	.....	.....	.....	.....	.....
46 1920..number.....	25,401	107	14	.....	.....	.....	.....	.....
47 1940..yield, g.p.m.....	28,297,969	136,495	27,469	21,200	(?)	2,706	1,818	1,140
48 1930..yield, g.p.m.....	24,266,167	112,534	21,442	.....	.....	.....	.....	.....
49 1920..yield, g.p.m.....	10,608,476	35,194	.....	.....	.....	.....	.....	.....
50 Pumping plants.....1940..total number.....	52,217	404	92	30	11	25	17	9
51 1930..total number.....	46,729	337	42	.....	.....	.....	.....	.....
52 Prime movers.....1940..capacity, hp.....	968,351	5,873	2,545	537	244	1,644	63	57
53 1930..capacity, hp.....	820,767	5,743	2,902	.....	.....	.....	.....	.....
54 1920..capacity, hp.....	386,200	3,858	2,636	.....	.....	.....	.....	.....
55 (a) Electric.....1940..number.....	49,952	198	47	15	10	.....	.....	.....
56 1940..capacity, hp.....	804,298	3,943	2,244	417	243	1,543	21	(?)
57 (b) Internal-combustion.....1940..number.....	7,827	191	35	10	.....	.....	12	7
58 1940..capacity, hp.....	100,794	1,839	252	76	.....	100	40	36
59 (c) Other.....1940..number.....	438	15	10	5	.....	.....	.....	.....
60 1940..capacity, hp.....	3,319	91	49	44	(?)	(?)	(?)	(?)
61 Pumps.....1940..total number.....	52,016	406	94	32	11	25	17	9
62 1930..number.....	47,994	364	50	.....	.....	.....	.....	.....
63 1920..number.....	24,134	190	47	.....	.....	.....	.....	.....
64 1940..capacity, g.p.m.....	39,147,470	374,811	182,489	41,645	55,143	77,791	4,043	3,867
65 1930..capacity, g.p.m.....	33,240,569	370,862	199,696	.....	.....	.....	.....	.....
66 1920..capacity, g.p.m.....	16,773,692	168,163	111,709	.....	.....	.....	.....	.....
67 (a) Centrifugal.....1940..number.....	18,728	331	62	19	6	22	10	5
68 1940..capacity, g.p.m.....	17,712,210	314,945	141,951	35,815	22,850	76,766	3,773	2,747
69 1940..average capacity, g.p.m.....	946	950	2,290	1,885	3,808	3,489	377	549
70 (b) Turbine.....1940..number.....	29,997	42	7	5	.....	.....	.....	.....
71 1940..capacity, g.p.m.....	20,537,996	27,175	7,450	5,450	.....	(?)	.....	(?)
72 1940..average capacity, g.p.m.....	685	647	1,064	1,090	.....	(?)	.....	(?)
73 (c) Plunger.....1940..number.....	2,983	25	18	6	1	2	6	3
74 1940..capacity, g.p.m.....	199,245	933	740	370	(?)	(?)	280	120
75 1940..average capacity, g.p.m.....	67	37	41	62	(?)	(?)	37	40
76 (d) Other.....1940..number.....	308	8	7	2	4	.....	.....	.....
77 1940..capacity, g.p.m.....	698,019	32,358	32,348	(?)	32,288	.....	(?)	.....
78 Pumping lift, from all sources.....1940..average, feet.....	55	31	34	46	26	43	19	23
79 1930..average, feet.....	53	27	38	.....	.....	.....	.....	.....
80 1920..average, feet.....	41	22	13	.....	.....	.....	.....	.....
81 from pumped wells.....1940..average, feet.....	57	34	37	71	(?)	27	19	24
82 from surface sources.....1940..average, feet.....	31	28	31	28	8	49	14	22

¹Data for 1 enterprise in Illinois River Drainage Basin (2) (number refers to separate map) are included with Pacific Ocean streams total.
²Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.
³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION - CALIFORNIA

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WORKS, 1940, 1930, AND 1920

PACIFIC OCEAN STREAMS—Continued (North of San Francisco Bay)				SAN FRANCISCO BAY (Other than Sacramento-San Joaquin Delta and Sacramento and San Joaquin Rivers)										
Mad River	Eel River	Russian River	Other coastal streams	Total	Direct	Petaluma Creek	Sonoma Creek	Napa River	Suisun Bay				Santa Clara Valley streams	
									Total	Direct	Walnut Creek	Alameda Creek		
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)			
9	34	214	5	2,725	111	5	12	169	224	149	75	505	1,699	1
24	42	43	13	60	16	14	34	23	118	153	49	56	60	2
1		14	1	47				3	6	3	3		38	3
		13		24									15	4
		9		26									14	5
		5	1	25				2					23	6
				4					1			1		7
1		6		10					2	2			8	8
		3		8				1	3	1	2		4	9
6.0	3.1	4.2	1.1	80.5	1.1			1.1	31.7	30.0	1.7	15.4	31.2	10
		38		35									22	11
		372		85									46	12
6	3	3	1	68				1	30	30		12	25	13
	0.1	1.2	0.1	12.5	1.1			0.1	1.7		1.7	3.4	6.2	14
9	19	152	4	611	3	1	11	109	146	137	9	16	325	15
		47		317									160	16
		23		381									295	17
0.7	4.7	61.0	0.6	892.5	38.9	0.2	2.3	75.8	48.7	27.8	20.9	192.1	534.5	18
		47.6		422.5									219.9	19
		27.2		264.6									159.5	20
0.5	1.4	20.8		574.6	5.9		1.0	21.2	12.0	4.3	7.7	87.3	447.2	21
0.2	3.3	39.4	0.6	306.3	31.3	0.2	1.3	54.6	36.5	23.5	13.0	100.0	82.4	22
		0.7		8.4	1.7				0.2		0.2	3.4	3.1	23
		0.1		3.2								1.4	1.8	24
2		3		21	1	1	1	9	4	3	1	2	3	25
		10		11										26
		10		9										27
		2		3				2	1		1			28
2				14	1		1	6	2	2		2	2	29
		1		4		1		1	1	1			1	30
2		7	1	63	10	1	2	9	12	4	8	20	9	31
2		7	1	60	10	1	2	8	11	3	8	20	8	32
				2				1					1	33
				1					1	1				34
(?)		136	(?)	2,446	22	(?)	(?)	376	1,457	1,438	19	30	548	35
		6		43									5	36
		207		8,217									12	37
				2				2						38
				9									5	39
		1		74				(?)					65	40
				(?)										41
				1,085									966	42
				13,075									11,150	43
1	19	173	3	3,103	132	5	8	128	284	178	106	649	1,897	44
		188		3,100									1,473	45
		89		2,451									1,546	46
(?)	12,740	94,953	433	1,204,661	12,863	515	2,570	41,157	62,015	42,931	19,084	236,080	849,461	47
		79,472		1,068,327									675,915	48
		30,234		705,510									489,395	49
3	27	276	6	3,325	142	5	20	192	300	188	112	664	2,002	50
		249		3,114									1,470	51
35	307	2,957	29	67,134	1,073	28	273	1,495	2,811	1,488	1,323	8,887	52,567	52
		2,193		61,205									36,286	53
		1,058		36,219									25,857	54
		132		2,944		133	5	16	264	156	108	593	1,736	55
(?)	18	1,484		58,573	973	28	217	1,119	2,573	1,332	1,241	7,759	46,904	56
2	9	140	5	340	7		4	49	16	12	4	64	200	57
(?)	107	1,433	27	7,394	98		56	367	198	116	82	1,112	5,563	58
		4	5	41	2			6	20	20			7	59
		40	2	167	(?)			9	40	40			16	60
3	27	276	6	3,311	143	5	20	191	302	189	113	665	1,985	61
		267		3,193									1,478	62
		128		2,102									1,297	63
2,600	16,035	172,154	1,533	1,359,663	13,891	515	6,465	63,749	105,245	81,741	23,504	247,771	922,027	64
		144,027		1,212,738									719,616	65
		51,239		862,987									590,541	66
3	21	240	5	443	27		10	104	51	41	10	69	182	67
2,600	12,850	155,414	1,530	209,141	2,827		4,330	45,241	19,905	14,405	5,500	29,442	107,396	68
867	612	648	306	472	105		433	435	390	351	550	427	590	69
	5	30		2,641	66		7	38	212	121	91	554	1,764	70
	3,175	16,550		1,131,406	9,060		1,750	15,598	83,914	66,657	17,257	213,468	807,616	71
	635	552		428	137		250	410	396	551	190	385	458	72
		6	5	194	45		4	48	35	23	12	31	28	73
		190	3	11,280	1,729	495	385	2,850	1,346	599	747	1,160	3,315	74
		32	3	58	38		124	28	59	26	62	37	118	75
				33	5		1		4	4		11	11	76
	(?)			7,836	275	(?)		(?)	80	80		3,701	3,700	77
17	38	29	58	96	92	108	37	37	66	54	88	56	118	78
		27		102									104	79
		23		55									57	80
(?)	35	32		100	94	108	37	46	69	56	91	56	121	81
16	43	25	58	46	45		38	27	34	25	51	42	70	82

4 Includes siphons and farm pipe lines reported.
 5 Data for less than 3 enterprises shown with permission of the enterprise involved.
 6 Total capacity of all reservoirs regardless of size.
 7 Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — CALIFORNIA

DRAINAGE BASIN TABLE II— ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	PACIFIC OCEAN STREAMS (South of San Francisco Bay)							
	Total	Pajaro and San Benito Rivers	Salinas River	Santa Maria River	San Antonio River	Santa Ynez River	Ventura River	Santa Clara River and Calleguas Creek ¹
		(20)	(21)	(22)	(23)	(24)	(25)	(26)
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
1 Enterprises.....1940..number.....	9,038	1,169	893	200	12	148	83	583
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	121	71	125	146	63	100	56	197
3 Diversion dams.....1940..total number.....	275	39	10	3	4	4	7	16
4 1930..total number.....	165	26	8	.....	.....	11	.....	18
5 1920..total number.....	197	29	7	1	.....	9	.....	15
6 (a) Concrete and masonry.....1940..number.....	82	6	3	1	.....	2	1	4
7 (b) Timber.....1940..number.....	18	1	.....	.....	.....	.....	.....	.....
8 (c) Earth and rock.....1940..number.....	143	30	4	2	.....	.....	4	12
9 (d) Other, mixed, and not reported.....1940..number.....	32	2	3	.....	.....	2	2	.....
10 Main canals and laterals.....1940..total length, miles.....	562.0	59.2	35.9	2.5	0.5	3.5	1.6	46.1
11 1930..total length, miles.....	1,095	27	209	15	.....	9	.....	40
12 1920..total length, miles.....	1,347	95	215	16	.....	14	.....	79
13 (a) Earth.....1940..length, miles.....	209	48	29	2	.....	3	1	11
14 (b) Lined.....1940..length, miles.....	353.0	11.2	6.9	0.5	0.5	0.5	0.6	35.1
15 1940..capacity, c.f.s. ⁴	3,744	131	129	13	.....	18	24	166
16 1930..capacity, c.f.s. ⁴	2,994	29	771	12	.....	21	.....	101
17 1920..capacity, c.f.s. ⁴	9,418	278	553	69	.....	227	.....	191
18 Pipe lines ⁵.....1940..total length, miles.....	12,512.9	332.4	775.6	178.4	7.3	92.8	102.1	1,365.1
19 1930..total length, miles.....	8,253.8	151.5	361.9	112.9	.....	109.8	.....	496.7
20 1920..total length, miles.....	4,041.4	83.2	169.6	28.9	.....	28.7	.....	154.0
21 (a) Concrete.....1940..length, miles.....	8,211.7	194.6	678.4	168.3	5.6	60.7	40.4	1,138.4
22 (b) Metal.....1940..length, miles.....	3,985.4	117.4	93.4	10.1	1.7	25.1	61.7	218.6
23 (c) Wood-stave.....1940..length, miles.....	106.7	6.7	1.2	.....	.....	7.0	.....	3.9
24 (d) Other.....1940..length, miles.....	209.1	13.7	2.6	.....	.....	.....	.....	4.2
25 Storage dams.....1940..total number.....	234	10	5	5	.....	8	4	8
26 1930..total number.....	122	13	2	2	.....	13	.....	1
27 1920..total number.....	82	9	4	1	.....	8	.....	3
28 (a) Concrete and masonry.....1940..number.....	65	2	.....	.....	.....	.....	2	5
29 (b) Earth and rock.....1940..number.....	157	7	4	5	.....	7	2	3
30 (c) Other, mixed, and not reported.....1940..number.....	12	1	1	.....	.....	1	.....	.....
31 Reservoirs.....1940..total number.....	937	24	38	11	4	13	19	55
32 (a) 1-99 acre-foot capacity.....1940..number.....	866	21	37	11	4	13	19	54
33 (b) 100-999 acre-foot capacity.....1940..number.....	32	2	1	.....	.....	.....	.....	1
34 (c) 1,000 and over acre-foot capacity.....1940..number.....	19	1	.....	.....	.....	.....	.....	.....
35 1940..total capacity, ac.-ft. ⁶	363,427	4,338	258	42	9	19	102	359
36 1930..total capacity, ac.-ft. ⁶	519	23	33	3	.....	18	.....	18
37 1920..total capacity, ac.-ft. ⁶	248,685	736	128	13	.....	257	.....	86
38 Wells, flowing.....1940..number.....	167	2	16	.....	.....	.....	.....	4
39 1930..number.....	145	18	20	1	.....	6	.....	1
40 1920..number.....	713	17	18	13	.....	7	.....	1
41 1940..yield, g.p.m.....	17,405	(?)	1,760	.....	.....	.....	.....	490
42 1930..yield, g.p.m.....	21,835	4,200	4,010	744	.....	1,550	.....	50
43 1920..yield, g.p.m.....	164,294	2,000	3,808	2,700	.....	1,510	.....	700
44 Wells, pumped.....1940..number.....	10,857	1,347	1,306	239	13	191	93	799
45 1930..number.....	9,649	1,189	1,145	210	.....	212	.....	550
46 1920..number.....	7,068	688	697	118	.....	80	.....	136
47 1940..yield, g.p.m.....	6,030,433	693,680	1,316,770	236,151	5,412	134,677	17,122	647,032
48 1930..yield, g.p.m.....	5,317,927	566,306	955,015	249,285	.....	120,725	.....	451,019
49 1920..yield, g.p.m.....	3,054,724	166,255	422,195	66,393	.....	16,401	.....	92,049
50 Pumping plants.....1940..total number.....	11,652	1,396	1,238	243	13	199	101	929
51 1930..total number.....	8,866	1,129	767	189	.....	158	.....	945
52 Prime movers.....1940..capacity, hp.....	302,257	26,861	38,030	7,824	237	3,993	1,484	31,089
53 1930..capacity, hp.....	244,459	19,684	24,246	7,359	.....	3,511	.....	19,109
54 1920..capacity, hp.....	129,331	7,083	10,085	2,934	.....	1,611	.....	5,126
55 (a) Electric.....1940..number.....	9,380	1,075	1,131	229	13	163	97	857
56 1940..capacity, hp.....	239,729	21,147	36,692	7,339	237	3,302	1,424	29,267
57 (b) Internal-combustion.....1940..number.....	2,066	317	77	14	.....	33	4	66
58 1940..capacity, hp.....	61,031	5,682	2,285	485	.....	630	60	1,789
59 (c) Other.....1940..number.....	206	4	30	.....	.....	3	.....	6
60 1940..capacity, hp.....	1,497	32	53	.....	.....	61	.....	33
61 Pumps.....1940..total number.....	11,590	1,391	1,214	243	13	198	100	915
62 1930..number.....	9,357	1,157	785	194	.....	164	.....	584
63 1920..number.....	6,071	417	286	78	.....	84	.....	161
64 1940..capacity, g.p.m.....	6,653,967	742,285	1,340,956	261,174	5,907	141,887	19,597	711,438
65 1930..capacity, g.p.m.....	5,623,408	594,032	974,404	252,409	.....	137,660	.....	455,338
66 1920..capacity, g.p.m.....	3,694,090	203,845	424,002	204,534	.....	199,630	.....	102,184
67 (a) Centrifugal.....1940..number.....	2,447	206	249	21	.....	54	20	188
68 1940..capacity, g.p.m.....	1,419,837	114,860	287,125	17,448	.....	34,141	4,497	139,475
69 1940..average capacity, g.p.m.....	580	558	1,153	831	.....	632	225	742
70 (b) Turbine.....1940..number.....	7,624	1,171	923	221	13	138	59	702
71 1940..capacity, g.p.m.....	5,135,286	623,967	1,049,918	243,711	5,907	105,856	13,925	566,921
72 1940..average capacity, g.p.m.....	674	533	1,138	1,103	454	767	236	808
73 (c) Plunger.....1940..number.....	1,406	13	37	1	.....	5	20	20
74 1940..capacity, g.p.m.....	76,345	2,958	2,659	(?)	.....	1,790	1,160	3,056
75 1940..average capacity, g.p.m.....	54	228	72	(?)	.....	358	58	153
76 (d) Other.....1940..number.....	113	1	5	.....	.....	1	1	5
77 1940..capacity, g.p.m.....	22,498	(?)	1,254	.....	.....	(?)	(?)	1,986
78 Pumping lift, from all sources.....1940..average, feet.....	77	66	65	73	93	59	121	89
79 1930..average, feet.....	71	64	47	75	.....	39	.....	78
80 1920..average, feet.....	57	35	25	47	.....	30	.....	67
81 from pumped wells.....1940..average, feet.....	79	68	61	73	93	55	127	89
82 from surface sources.....1940..average, feet.....	55	34	23	14	.....	32	81	85

¹1930 and 1920 data for Santa Clara River only.
²Miscellaneous coastal streams north of Santa Maria River to San Francisco.
³Miscellaneous coastal streams south of Santa Ynez River to Santa Margarita River.
⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION - CALIFORNIA

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WORKS, 1940, 1930, AND 1920—Continued

PACIFIC OCEAN STREAMS—Continued (South of San Francisco Bay)										SACRAMENTO-SAN JOAQUIN DELTA					
Los Angeles and San Gabriel Rivers (27)	Santa Ana River (28)	Santa Margarita River (29)	San Luis Rey River (30)	San Dieguito River (31)	San Diego River (32)	Sweet-water River (33)	Otay and Tia Juana Rivers (34)	Other coastal streams (north) ² (35)	Other coastal streams (south) ² (36)	Total (37)	Direct (37)	Sacramento River			
												Total	Upper Sacramento River		
													Total	Total	Direct (38)
1,207	2,031	183	390	275	491	60	227	672	414	25,316	818	5,253	1,175	201	1
209	169	35	80	89	37	90	24	35	59	202	408	260	185	188	2
23	31	11	14	7	4	2	4	91	9	1,373	3	1,105	719	13	3
14	22	.....	.....	.....	3	.....	.....	.....	.....	781	.....	599	.....	.....	4
29	39	.....	.....	.....	4	.....	.....	.....	.....	1,128	.....	859	.....	.....	5
9	12	2	8	3	2	2	3	19	5	330	1	195	103	3	6
1	1	.....	.....	.....	1	.....	.....	13	.....	271	.....	241	178	1	7
12	17	5	3	3	1	.....	.....	45	4	450	2	360	241	7	8
1	1	4	3	.....	.....	.....	.....	14	.....	322	.....	309	197	2	9
77.5	222.9	8.4	17.3	18.1	4.2	0.7	.....	56.9	6.7	15,120.1	476.8	4,795.1	1,303.3	294.8	10
418	238	.....	.....	.....	36	.....	.....	.....	.....	13,314	.....	4,817	.....	.....	11
295	336	.....	.....	.....	4	.....	.....	.....	.....	19,428	.....	6,529	.....	.....	12
13	49	7	4	3	4	.....	.....	33	2	14,065	417	4,543	1,279	291	13
64.5	173.9	1.4	13.3	15.1	0.2	0.7	.....	23.9	4.7	1,055.1	59.8	252.1	24.3	3.8	14
1,236	1,206	70	115	134	59	7	24	350	62	71,974	6,246	24,039	4,870	579	15
792	826	.....	.....	.....	27	.....	.....	.....	.....	64,374	.....	19,097	.....	.....	16
4,206	2,096	.....	.....	.....	.....	.....	.....	.....	.....	79,142	.....	23,514	.....	.....	17
2,376.6	4,471.6	110.6	753.8	464.1	456.9	135.2	74.0	300.2	514.2	7,436.9	192.9	1,074.9	214.3	51.4	18
2,166.4	2,814.1	.....	.....	.....	312.5	.....	.....	.....	.....	4,819.4	.....	796.1	.....	.....	19
1,361.1	924.5	.....	.....	.....	145.2	.....	.....	.....	.....	1,757.8	.....	361.2	.....	.....	20
1,641.2	3,541.3	62.3	143.9	151.6	89.7	13.5	20.6	68.6	192.6	6,487.8	146.6	635.4	124.8	14.1	21
676.7	764.7	47.9	604.0	300.3	364.4	119.4	51.5	217.8	310.7	766.4	39.0	320.4	48.8	23.9	22
43.4	9.2	.....	5.7	10.1	3.5	1.5	0.3	10.7	3.5	131.0	4.9	81.6	10.2	2.5	23
15.3	156.4	0.4	0.2	2.1	1.3	0.8	1.6	3.1	7.4	51.7	2.4	37.5	30.5	10.9	24
21	56	20	9	4	4	6	3	55	16	355	1	163	90	5	25
11	17	.....	.....	.....	2	.....	.....	.....	.....	218	.....	140	.....	.....	26
4	12	.....	.....	.....	2	.....	.....	.....	.....	285	.....	200	.....	.....	27
13	13	1	1	2	2	6	.....	12	6	47	.....	30	3	1	28
8	40	19	8	2	2	.....	.....	39	9	294	1	124	83	2	29
.....	3	.....	.....	.....	.....	.....	.....	4	1	24	.....	9	4	2	30
220	180	27	50	17	43	10	15	146	65	1,305	2	196	98	6	31
218	161	26	48	16	39	10	15	140	54	1,186	2	103	48	6	32
.....	10	.....	.....	.....	.....	.....	.....	.....	.....	42	.....	34	.....	.....	33
2	9	1	1	1	4	.....	.....	.....	.....	77	.....	59	26	.....	34
12,098	117,046	1,328	203,304	7,367	6,560	50	24	2,618	7,905	2,611,430	(?)	1,554,168	179,187	61	35
117	132	.....	.....	.....	19	.....	.....	.....	.....	949	.....	176	.....	.....	36
110,843	79,082	.....	.....	.....	18,039	.....	.....	.....	.....	2,100,255	.....	949,274	.....	.....	37
9	127	4	4	.....	.....	.....	.....	.....	1	43	.....	29	19	1	38
1	90	.....	.....	.....	.....	.....	.....	.....	.....	72	.....	39	.....	.....	39
205	360	.....	.....	.....	1	.....	.....	.....	.....	181	.....	36	.....	.....	40
3,602	10,248	540	115	.....	.....	.....	.....	(?)	.....	3,368	.....	1,543	793	(?)	41
45	10,542	.....	.....	.....	.....	.....	.....	.....	.....	14,400	.....	3,630	.....	.....	42
53,326	62,693	.....	.....	.....	8	.....	.....	.....	.....	51,785	.....	2,957	.....	.....	43
1,522	2,445	159	479	332	625	82	255	566	504	32,415	349	5,406	620	131	44
1,260	2,379	.....	.....	.....	453	.....	.....	.....	.....	31,744	.....	5,450	.....	.....	45
1,883	1,816	.....	.....	.....	593	.....	.....	.....	.....	14,657	.....	3,508	.....	.....	46
824,775	1,650,930	30,725	84,022	40,806	61,238	13,738	47,169	125,523	100,623	20,042,058	231,857	3,606,042	244,627	60,099	47
785,993	1,526,546	.....	.....	.....	83,812	.....	.....	.....	.....	16,730,369	.....	2,932,411	.....	.....	48
1,000,970	1,002,743	.....	.....	.....	54,216	.....	.....	.....	.....	6,394,882	.....	1,473,602	.....	.....	49
1,650	2,372	170	487	346	616	84	255	795	558	34,878	1,154	6,083	742	159	50
1,245	2,290	.....	.....	.....	311	.....	.....	.....	.....	32,490	.....	6,147	.....	.....	51
56,122	108,706	1,234	4,155	2,423	4,040	687	1,581	7,808	6,983	552,187	23,056	106,300	6,717	1,590	52
46,570	89,251	.....	.....	.....	2,634	.....	.....	.....	.....	468,821	.....	104,346	.....	.....	53
41,868	45,345	.....	.....	.....	2,313	.....	.....	.....	.....	201,074	.....	64,153	.....	.....	54
1,277	2,032	80	315	276	498	55	137	639	506	30,011	898	5,050	563	110	55
36,079	81,128	830	2,668	2,100	3,486	489	1,196	6,104	6,241	473,862	19,538	91,003	4,478	1,037	56
360	529	68	148	63	93	26	66	151	51	4,779	254	1,010	166	47	57
19,271	25,240	374	1,456	315	514	190	328	1,673	739	77,576	3,497	15,152	2,188	551	58
13	11	22	24	7	25	3	52	5	1	88	2	23	13	2	59
772	338	30	31	8	40	8	57	31	(?)	749	(?)	205	51	(?)	60
1,662	2,586	169	477	340	612	82	246	797	545	34,827	1,161	6,097	748	160	61
1,301	2,467	.....	.....	.....	324	.....	.....	.....	.....	33,129	.....	6,289	.....	.....	62
1,776	1,836	.....	.....	.....	374	.....	.....	.....	.....	14,849	.....	3,898	.....	.....	63
948,717	1,866,098	37,259	87,485	53,227	82,276	14,146	47,770	183,826	109,919	29,694,351	2,604,039	8,580,013	394,389	84,775	64
830,498	1,609,257	.....	.....	.....	73,430	.....	.....	.....	.....	23,656,244	.....	8,309,204	.....	.....	65
1,038,085	1,048,090	.....	.....	.....	65,462	.....	.....	.....	.....	11,584,371	.....	4,184,240	.....	.....	66
308	428	22	118	115	164	28	109	354	63	15,186	900	3,276	432	99	67
212,591	342,174	11,511	24,518	27,529	49,346	5,889	25,512	104,141	19,080	15,552,658	2,091,141	5,724,025	217,111	43,266	68
690	799	523	208	239	301	210	234	294	303	1,024	2,323	1,747	503	437	69
1,276	2,053	25	149	90	97	34	35	270	368	18,312	233	2,703	274	54	70
720,072	1,499,516	22,930	55,497	20,187	22,754	7,720	19,448	72,870	84,087	13,494,822	464,710	2,403,618	171,969	41,265	71
564	730	917	372	224	235	227	556	270	228	737	1,994	889	628	764	72
47	97	118	191	132	336	20	101	164	104	1,187	11	69	27	7	73
10,675	16,313	2,735	6,121	5,452	9,688	537	2,805	5,894	4,487	97,687	327	5,019	746	244	74
227	168	23	32	41	29	27	28	36	43	82	30	73	28	35	75
31	8	4	19	3	15	.....	.....	1	9	142	17	49	15	.....	76
5,379	8,095	83	1,349	59	488	.....	(?)	921	2,265	549,184	47,861	447,351	4,563	.....	77
86	90	59	66	54	73	65	41	66	116	42	18	36	32	33	78
77	82	.....	.....	.....	62	.....	.....	.....	.....	42	.....	30	.....	.....	79
63	61	.....	.....	.....	56	.....	.....	.....	.....	31	.....	26	.....	.....	80
86	90	59	67	63	67	67	41	79	116	43	31	38	34	36	81
104	96	67	55	73	47	52	28	43	131	20	11	23	19	20	82

¹Includes siphons and farm pipe lines reported.
²Total capacity of all reservoirs regardless of size.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA—Continued						
		Sacramento River—Continued						
		Upper Sacramento River—Continued						
		Pit River			Clear Creek (41)	Cow Creek (42)	Bear Creek (43)	Cottonwood Creek (44)
Total	Direct (39)	Goose Lake (40)						
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
1	Enterprises.....1940..number.....	387	336	51	19	96	32	28
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	295	271	449	65	72	57	204
3	Diversion dams.....1940..total number.....	507	453	54	7	62	34	19
4	.....1930..total number.....	194	.....	.....	.....	14	.....	15
5	.....1920..total number.....	322	.....	.....	.....	40	.....	16
6	(a) Concrete and masonry.....1940..number.....	60	59	1	3	6	4	3
7	(b) Timber.....1940..number.....	136	113	23	.....	21	7	2
8	(c) Earth and rock.....1940..number.....	140	126	14	2	34	23	6
9	(d) Other, mixed, and not reported.....1940..number.....	171	155	16	2	1	.....	8
10	Main canals and laterals.....1940..total length, miles.....	482.2	430.2	62.0	16.0	144.1	42.7	42.2
11	.....1930..total length, miles.....	372	.....	.....	.....	51	.....	88
12	.....1920..total length, miles.....	808	.....	.....	.....	141	.....	108
13	(a) Earth.....1940..length, miles.....	485	423	62	16	142	42	42
14	(b) Lined.....1940..length, miles.....	7.2	7.2	.....	.....	2.1	0.7	0.2
15	.....1940..capacity, c.f.s. ¹	2,716	2,498	218	74	263	105	162
16	.....1930..capacity, c.f.s. ¹	2,125	.....	.....	.....	152	.....	131
17	.....1920..capacity, c.f.s. ¹	5,160	.....	.....	.....	367	.....	147
18	Pipe lines ².....1940..total length, miles.....	17.6	15.6	2.0	4.7	3.9	0.2	2.2
19	.....1930..total length, miles.....	1.6	.....	.....	.....	.....	.....	1.5
20	.....1920..total length, miles.....	2.9	.....	.....	.....	0.4	.....	0.6
21	(a) Concrete.....1940..length, miles.....	1.2	1.2	.....	.....	0.8	.....	.....
22	(b) Metal.....1940..length, miles.....	9.4	7.4	2.0	4.6	2.4	0.2	2.1
23	(c) Wood-stave.....1940..length, miles.....	6.8	6.8	.....	0.1	0.7	.....	.....
24	(d) Other.....1940..length, miles.....	0.2	0.2	.....	.....	.....	.....	0.1
25	Storage dams.....1940..total number.....	72	61	11	2	7	.....	2
26	.....1930..total number.....	32	.....	.....	.....	1	.....	3
27	.....1920..total number.....	63	.....	.....	.....	.....	.....	1
28	(a) Concrete and masonry.....1940..number.....	1	1	.....	.....	1	.....	1
29	(b) Earth and rock.....1940..number.....	70	59	11	2	6	.....	1
30	(c) Other, mixed, and not reported.....1940..number.....	1	1	.....	.....	1	.....	.....
31	Reservoirs.....1940..total number.....	78	66	12	2	7	.....	2
32	(a) 1-99 acre-feet capacity.....1940..number.....	30	24	6	1	7	.....	1
33	(b) 100-999 acre-feet capacity.....1940..number.....	23	23	.....	1	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	25	19	6	.....	.....	.....	1
35	.....1940..total capacity, ac.-ft. ³	173,236	165,185	8,051	(*)	23	.....	(*)
36	.....1930..total capacity, ac.-ft.....	40	.....	.....	.....	1	.....	3
37	.....1920..total capacity, ac.-ft.....	132,588	.....	.....	.....	5	.....	5,544
38	Wells, flowing.....1940..number.....	17	15	2	.....	.....	.....	.....
39	.....1930..number.....	14	.....	.....	.....	.....	.....	.....
40	.....1920..number.....	14	.....	.....	.....	.....	.....	.....
41	.....1940..yield, g.p.m.....	188	148	(*)	.....	.....	.....	.....
42	.....1930..yield, g.p.m.....	1,185	.....	.....	.....	.....	.....	.....
43	.....1920..yield, g.p.m.....	693	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	26	23	3	3	1	1	4
45	.....1930..number.....	4	.....	.....	.....	2	.....	8
46	.....1920..number.....	4	.....	.....	.....	.....	.....	.....
47	.....1940..yield, g.p.m.....	7,080	5,605	1,475	1,300	(*)	(*)	1,365
48	.....1930..yield, g.p.m.....	252	.....	.....	.....	700	.....	1,123
49	.....1920..yield, g.p.m.....	395	.....	.....	.....	.....	.....	.....
50	Pumping plants.....1940..total number.....	86	83	3	7	8	3	11
51	.....1930..total number.....	45	.....	.....	.....	8	.....	14
52	Prime movers.....1940..capacity, hp.....	881	831	50	45	37	20	72
53	.....1930..capacity, hp.....	449	.....	.....	.....	71	.....	106
54	.....1920..capacity, hp.....	440	.....	.....	.....	87	.....	76
55	(a) Electric.....1940..number.....	55	55	.....	2	3	.....	1
56	.....1940..capacity, hp.....	550	550	.....	(*)	18	.....	(*)
57	(b) Internal-combustion.....1940..number.....	23	20	3	5	5	3	9
58	.....1940..capacity, hp.....	298	248	50	39	19	20	61
59	(c) Other.....1940..number.....	8	8	.....	.....	.....	.....	1
60	.....1940..capacity, hp.....	33	33	.....	.....	.....	.....	(*)
61	Pumps.....1940..total number.....	86	83	3	7	8	3	13
62	.....1930..total number.....	46	.....	.....	.....	9	.....	14
63	.....1920..total number.....	36	.....	.....	.....	11	.....	10
64	.....1940..capacity, g.p.m.....	108,756	107,256	1,500	1,890	1,572	600	5,266
65	.....1930..capacity, g.p.m.....	46,790	.....	.....	.....	1,545	.....	3,183
66	.....1920..capacity, g.p.m.....	32,886	.....	.....	.....	8,955	.....	7,565
67	(a) Centrifugal.....1940..number.....	55	53	2	3	6	2	7
68	.....1940..capacity, g.p.m.....	74,011	73,311	(*)	1,075	1,155	(*)	4,130
69	.....1940..average capacity, g.p.m.....	1,346	1,383	(*)	358	182	(*)	633
70	(b) Turbine.....1940..number.....	19	18	1	.....	1	.....	1
71	.....1940..capacity, g.p.m.....	34,520	33,720	(*)	.....	(*)	.....	(*)
72	.....1940..average capacity, g.p.m.....	1,817	1,873	(*)	.....	(*)	.....	(*)
73	(c) Plunger.....1940..number.....	10	10	.....	3	.....	.....	1
74	.....1940..capacity, g.p.m.....	115	115	.....	215	.....	.....	(*)
75	.....1940..average capacity, g.p.m.....	12	12	.....	72	.....	.....	(*)
76	(d) Other.....1940..number.....	(*)	(*)	2	(*)	1	(*)	1
77	.....1940..capacity, g.p.m.....	(*)	(*)	.....	(*)	(*)	(*)	121
78	Pumping lift, from all sources.....1940..average, feet.....	18	17	27	35	28	25	45
79	.....1930..average, feet.....	13	.....	.....	.....	15	.....	31
80	.....1920..average, feet.....	18	.....	.....	.....	14	.....	33
81	from pumped wells.....1940..average, feet.....	31	31	30	40	(*)	(*)	57
82	from surface sources.....1940..average, feet.....	13	13	22	27	27	28	37

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — CALIFORNIA

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WORKS, 1940, 1930, AND 1920—Continued

SACRAMENTO-SAN JOAQUIN DELTA—Continued														
Sacramento River—Continued														
Upper Sacramento River—Continued							Middle Sacramento River							
Battle Creek (45)	Paynes Creek (46)	Redbank Creek group (47)	Antelope and Mill Creeks (48)	Thomas Creek (49)	Deer Creek (50)	Total	Direct (51)	Rock Creek (52)	Story Creek (53)	Chico Creek (54)	Butte Creek (55)	West side streams (56)	Feather River Total	
45	7	18	14	320	8	2,125	365	88	66	158	92	78	1,258	1
138	104	512	923	40	1,028	425	1,306	60	355	144	183	93	258	2
41	7	2	13	9	5	357	9	7	22	8	14		297	3
48									26				161	4
26									44				262	5
7	6	1	6	1	3	80	2		8	3	4		63	6
10	1					57	4						53	7
19		1	2	7		113	3		12		8		90	8
5			5	1	2	107		7		5	2		91	9
40.4	9.3	6.0	145.1	47.2	23.3	2,728.1	1,066.9	9.0	186.4	32.0	90.3	5.1	1,318.4	10
85									177				1,696	11
118									211				1,162	12
40	9	6	141	45	20	2,544	1,080	9	81	32	83	5	1,254	13
0.4	0.3		4.1	2.2	3.3	184.1	6.9		105.4		7.3	0.1	64.4	14
210	9	13	248	216	275	14,953	7,572	55	389	396	230	45	6,266	15
172									607				5,836	16
358									1,590				5,834	17
0.9	1.0	71.9	7.2	49.8	3.5	531.9	78.1	5.9	3.9	4.5	49.0	2.4	388.1	18
1.0									4.1				304.2	19
0.3									17.5				123.5	20
0.9		71.5	7.2	25.6	3.5	355.9	69.2	5.7	3.7	3.8	5.8	2.4	265.3	21
	1.0	0.4		4.8		128.5	6.8	0.2	0.2	0.7	6.2		114.4	22
				0.1		46.3	1.4				37.0		7.9	23
				19.3		1.2	0.7						0.5	24
		2				53			3		1	1	48	25
									5				67	26
									5				85	27
		2				23			3			1	19	28
						26					1		25	29
						4							4	30
		3				66	1		3		1		61	31
		3				32	1		1				30	32
						6							6	33
						28			2		1		25	34
		10				1,000,112	(*)		101,202		(*)		895,738	35
1									4				69	36
300									101,211				269,310	37
				1		8						1	7	38
				(*)		550						(*)	12	39
													11	40
													250	41
													368	42
													1,314	43
1	3	40	6	397	7	2,357	401	82	44	178	111	91	1,450	44
2									48				1,632	45
2									68				853	46
(*)	1,270	28,490	2,155	138,268	4,025	1,884,904	474,523	53,900	27,285	104,277	124,505	73,906	1,026,606	47
1,900									25,950				940,578	48
750									40,451				344,308	49
1	2	43	7	409	6	2,705	606	91	46	200	110	97	1,555	50
(*)	(*)	1,155	90	2,696	98	62,133	30,156	1,368	51				1,636	51
35									432	4,023	2,585	1,730	21,839	52
63									516				22,000	53
1		19	6	362	4	2,167	501	58	759				9,987	54
(*)		484	80	2,219	80	53,124	28,002	818	35	124	59	83	1,907	55
	2	24	1	45	2	534	104	33	364	2,654	1,422	1,488	18,376	56
	(*)	671	(*)	471	(*)	8,899	2,139	550	11	76	51	14	245	57
				2		4			68	1,369	1,163	242	3,368	58
				(*)		110	(*)	1					3	59
1	3	43	7	410	7	2,718	608	95					95	60
2									46	198	113	98	1,560	61
4									51				1,668	62
(*)	(*)	32,825	5,305	148,005	4,025	5,650,195	3,882,091	74,520	66				839	63
1,900									28,145	270,487	127,905	92,045	1,375,002	64
3,300									28,415				1,231,596	65
									45,959				397,428	66
1	1	6	3	243	6	1,443	336	49	27	107	22	50	852	67
(*)	(*)	5,410	655	83,159	3,100	4,158,166	3,067,568	36,155	14,755	180,067	15,405	48,400	796,796	68
35		902	218	342	517	2,882	9,130	798	546	1,683	700	968	335	69
63		36	3	158	1	1,234	258	46	18	88	89	44	691	70
1	1	27,405	1,500	64,254	(*)	1,266,742	410,998	38,365	12,940	87,630	111,210	40,895	564,704	71
	(*)	761	500	407	(*)	1,027	1,593	894	719	996	1,250	929	817	72
				4		1				2	1	2	14	73
	(*)			127		2,122				(*)	(*)	(*)	1,452	74
	(*)			32		113				(*)	(*)	(*)	104	75
				5		22							3	76
				465		422,165	403,625		(*)	(*)	(*)	(*)	12,050	77
(*)	(*)	47	27	33	52	33	32	33					42	78
43									27	29	37		28	79
25									17				22	80
(*)	(*)	49	26	33	52	34	37	34	25				28	81
		40	30	17		21	20	18	28	30	37	44	34	82

* Total capacity of all reservoirs regardless of size.

† Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		SACRAMENTO-SAN JOAQUIN DELTA—Continued							
		Sacramento River—Continued							
		Middle Sacramento River—Continued			Lower Sacramento River				
		Feather River—Continued			Total	Direct	American River	Cache Creek	Putah Creek
Direct	Yuba and Upper Bear Rivers ³	Lower Bear River	(57)	(58)						(59)	(60)	(61)	(62)	(63)
ENTERPRISES AND IRRIGATION WORKS									
JANUARY 1									
1	Enterprises.....1940..number.....	1,028	135	95	1,953	304	982	390	277
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	210	742	87	127	303	52	193	106
3	Diversion dams.....1940..total number.....	212	81	4	29	2	20	6	1
4	1930..total number.....	.....	20	.....	.....	.....	33	3	.....
5	1920..total number.....	.....	41	.....	.....	.....	51	6	.....
6	(a) Concrete and masonry.....1940..number.....	43	20	.....	12	.....	10	1	1
7	(b) Timber.....1940..number.....	51	1	1	6	.....	5	1	.....
8	(c) Earth and rock.....1940..number.....	36	52	2	6	.....	2	4	.....
9	(d) Other, mixed, and not reported.....1940..number.....	82	8	1	5	.....	3	.....	.....
10	Main canals and laterals.....1940..total length, miles.....	685.6	628.8	4.0	763.7	138.5	372.9	188.7	63.6
11	1930..total length, miles.....	.....	572	.....	.....	.....	304	227	.....
12	1920..total length, miles.....	.....	577	.....	.....	.....	1,872	302	.....
13	(a) Earth.....1940..length, miles.....	660	590	4	720	131	349	180	60
14	(b) Lined.....1940..length, miles.....	25.6	38.8	.....	43.7	7.5	23.9	8.7	3.6
15	1940..capacity, c.f.s. ⁴	3,801	2,445	20	4,216	1,010	1,852	1,082	272
16	1930..capacity, c.f.s. ⁴.....	.....	1,045	.....	.....	.....	356	679	.....
17	1920..capacity, c.f.s. ⁴.....	.....	1,235	.....	.....	.....	1,264	1,197	.....
18	Pipe lines ⁵.....1940..total length, miles.....	275.2	81.8	31.1	328.7	27.2	224.2	49.4	27.9
19	1930..total length, miles.....	.....	17.1	.....	.....	.....	135.2	10.0	.....
20	1920..total length, miles.....	.....	0.2	.....	.....	.....	77.8	0.4	.....
21	(a) Concrete.....1940..length, miles.....	230.2	4.8	30.3	154.7	21.1	81.8	29.2	22.6
22	(b) Metal.....1940..length, miles.....	41.2	72.4	0.8	143.1	6.1	115.1	16.6	5.3
23	(c) Wood-stave.....1940..length, miles.....	3.5	4.4	.....	25.1	.....	25.1	.....	.....
24	(d) Other.....1940..length, miles.....	0.3	0.2	.....	5.8	.....	2.2	3.6	.....
25	Storage dams.....1940..total number.....	9	38	1	20	1	15	2	2
26	1930..total number.....	.....	11	.....	.....	.....	17	2	.....
27	1920..total number.....	.....	33	.....	.....	.....	31	3	.....
28	(a) Concrete and masonry.....1940..number.....	2	16	1	4	.....	3	1	.....
29	(b) Earth and rock.....1940..number.....	5	20	.....	15	1	12	.....	2
30	(c) Other, mixed, and not reported.....1940..number.....	2	2	.....	1	.....	.....	1	.....
31	Reservoirs.....1940..total number.....	14	46	1	32	4	21	3	4
32	(a) 1-99 acre-feet capacity.....1940..number.....	11	19	.....	23	3	15	2	3
33	(b) 100-999 acre-feet capacity.....1940..number.....	.....	6	.....	4	1	3	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	3	21	1	5	.....	3	1	1
35	1940..total capacity, ac.-ft. ⁶	14,767	875,971	(?)	374,869	133	59,962	319,002	1,772
36	1930..total number.....	.....	9	.....	.....	.....	25	1	.....
37	1930..total capacity, ac.-ft. ⁶.....	.....	91,530	.....	.....	.....	14,517	420,000	.....
38	Wells, flowing.....1940..number.....	7	.....	.....	2	.....	.....	2	.....
39	1930..number.....	.....	.....	.....	.....	.....	4	.....	.....
40	1920..number.....	.....	2	.....	.....	.....	.....	(?)	.....
41	1940..yield, g.p.m.....	250	.....	.....	(?)	.....	.....	(?)	.....
42	1930..yield, g.p.m.....	.....	.....	.....	.....	.....	102	.....	.....
43	1920..yield, g.p.m.....	.....	30	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	1,276	41	133	2,429	337	1,245	503	344
45	1930..number.....	.....	11	.....	.....	.....	364	140	.....
46	1920..number.....	.....	8	.....	.....	.....	163	144	.....
47	1940..yield, g.p.m.....	873,864	48,622	104,120	1,476,511	269,028	543,745	448,963	214,785
48	1930..yield, g.p.m.....	.....	1,900	.....	.....	.....	111,215	291,733	.....
49	1920..yield, g.p.m.....	.....	2,725	.....	.....	.....	93,694	91,211	.....
50	Pumping plants.....1940..total number.....	1,356	65	134	2,636	442	1,291	513	390
51	1930..total number.....	.....	13	.....	.....	.....	430	277	.....
52	Prime movers.....1940..capacity, hp.....	18,988	822	2,029	37,510	10,685	12,148	8,436	6,241
53	1930..capacity, hp.....	.....	.....	.....	.....	.....	4,524	5,175	.....
54	1920..capacity, hp.....	.....	1,572	.....	.....	.....	2,356	1,524	.....
55	(a) Electric.....1940..number.....	1,133	47	127	2,320	378	1,206	384	362
56	1940..capacity, hp.....	15,768	661	1,947	33,411	9,694	11,253	6,789	5,655
57	(b) Internal-combustion.....1940..number.....	222	16	7	310	63	32	128	37
58	1940..capacity, hp.....	3,198	88	82	4,055	990	892	1,607	576
59	(c) Other.....1940..number.....	1	2	.....	6	1	3	.....	1
60	1940..capacity, hp.....	(?)	(?)	.....	44	(?)	3	(?)	(?)
61	Pumps.....1940..total number.....	1,360	66	134	2,631	445	1,279	516	391
62	1930..number.....	.....	13	.....	.....	.....	440	228	.....
63	1920..number.....	.....	11	.....	.....	.....	190	76	.....
64	1940..capacity, g.p.m.....	1,210,782	57,860	106,340	2,335,429	942,229	578,311	489,664	325,225
65	1930..capacity, g.p.m.....	.....	2,205	.....	.....	.....	193,128	302,383	.....
66	1920..capacity, g.p.m.....	.....	2,751	.....	.....	.....	95,638	92,391	.....
67	(a) Centrifugal.....1940..number.....	759	46	47	1,401	275	811	233	82
68	1940..capacity, g.p.m.....	717,033	47,963	31,800	1,347,748	704,832	377,297	208,725	56,894
69	1940..average capacity, g.p.m.....	945	1,043	677	962	2,563	465	896	694
70	(b) Turbine.....1940..number.....	592	12	87	1,195	161	448	279	307
71	1940..capacity, g.p.m.....	480,659	9,505	74,540	964,907	218,875	198,988	278,809	268,235
72	1940..average capacity, g.p.m.....	812	792	857	807	1,359	444	999	874
73	(c) Plunger.....1940..number.....	6	8	.....	23	2	18	6	2
74	1940..capacity, g.p.m.....	1,040	412	.....	2,151	(?)	2,003	30	(?)
75	1940..average capacity, g.p.m.....	173	52	.....	94	(?)	111	30	(?)
76	(d) Other.....1940..number.....	3	.....	.....	12	7	2	3	.....
77	1940..capacity, g.p.m.....	12,050	.....	.....	20,623	18,500	(?)	2,100	.....
78	Pumping lift, from all sources.....1940..average, feet.....	32	32	36	41	29	43	36	55
79	1930..average, feet.....	.....	16	.....	.....	.....	29	27	.....
80	1920..average, feet.....	.....	35	.....	.....	.....	26	24	.....
81	from pumped wells.....1940..average, feet.....	33	30	36	42	31	42	37	55
82	from surface sources.....1940..average, feet.....	19	35	.....	28	22	48	25	36

¹ 1920 data for Tule River only.

² Includes that portion of Tulare Lake area not under flood water in Census of 1940. Tulare Lake was dry and tabulated separately, Censuses of 1920 and 1930.

³ 1930 and 1920 data for Yuba River only.

⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — CALIFORNIA

DRAINAGE BASIN TABLE II— ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals for 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	SACRAMENTO-SAN JOAQUIN DELTA—Con.			INDEPENDENT BASINS				
	Calaveras River	Mokelumne River	Cosumnes River	Total*	Surprise Valley	Madeline Plains	Honey Lake	
	(78)	(79)	(80)		(82)	(83)	(86)	
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
1	Enterprises.....1940..number.....	931	1,306	212	1,848	163	9	165
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	41	73	39	152	274	448	336
3	Diversion dams.....1940..total number.....	13	18	12	427	84	2	179
4	1930..total number.....	16	21	6	253			55
5	1920..total number.....	22	31	6	247			152
6	(a) Concrete and masonry.....1940..number.....	8	3	9	60			17
7	(b) Timber.....1940..number.....		1		75	12		55
8	(c) Earth and rock.....1940..number.....	4	14	1	234	72	1	87
9	(d) Other, mixed, and not reported.....1940..number.....	1		2	58		1	20
10	Main canals and laterals.....1940..total length, miles.....	38.3	149.3	34.5	746.8	61.0	11.0	198.0
11	1930..total length, miles.....	43	195	76	903			84
12	1920..total length, miles.....	98	1,177	70	2,474			435
13	(a) Earth.....1940..length, miles.....	34	137	32	623	61	11	196
14	(b) Lined.....1940..length, miles.....	4.3	12.3	2.5	123.8			2.0
15	1940..capacity, c.f.s. ²	129	1,036	262	4,148	656	92	736
16	1930..capacity, c.f.s. ²	23	454	77	4,149			794
17	1920..capacity, c.f.s. ²	224	1,598	103	13,869			2,446
18	Pipe lines ³.....1940..total length, miles.....	132.0	366.8	25.2	1,676.8	0.4		2.5
19	1930..total length, miles.....	46.5	252.1	20.2	1,109.2			3.8
20	1920..total length, miles.....	29.4	82.2	5.5	769.3			4.1
21	(a) Concrete.....1940..length, miles.....	121.3	353.5	21.0	1,408.6	0.1		
22	(b) Metal.....1940..length, miles.....	10.7	9.4	3.8	256.6	0.3		2.5
23	(c) Wood-stave.....1940..length, miles.....		2.0		0.3			
24	(d) Other.....1940..length, miles.....		1.9	0.4	11.3			
25	Storage dams.....1940..total number.....	5	8	5	64		8	19
26	1930..total number.....	12	11	2	44			7
27	1920..total number.....	8	25		40			9
28	(a) Concrete and masonry.....1940..number.....	8	2	2	7			2
29	(b) Earth and rock.....1940..number.....	5	5	1	51		8	14
30	(c) Other, mixed, and not reported.....1940..number.....		1	2	6			3
31	Reservoirs.....1940..total number.....	7	15	5	301	3	8	25
32	(a) 1-99 acre-feet capacity.....1940..number.....	6	12	3	260	3	4	8
33	(b) 100-999 acre-feet capacity.....1940..number.....		3	2	26			11
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	1			15		4	6
35	1940..total capacity, ac.-ft. ⁴	10,912	622	404	93,982	15	15,023	46,559
36	1930..total capacity, ac.-ft.....	9	13	1	229			9
37	1920..total capacity, ac.-ft.....	3,665	3,983	1,200	319,055			32,476
38	Wells, flowing.....1940..number.....		1		221	112		1
39	1930..number.....	1	4		219			
40	1920..number.....	6	2		443			
41	1940..yield, g.p.m.....		(⁵)		13,936	3,111		(⁵)
42	1930..yield, g.p.m.....	3,000	58		28,243			
43	1920..yield, g.p.m.....	220	25		58,033			
44	Wells, pumped.....1940..number.....	1,149	1,728	241	1,815	1		20
45	1930..number.....	222	2,084	404	2,022			2
46	1920..number.....	565	709	117	1,117			2
47	1940..yield, g.p.m.....	745,671	1,023,664	123,964	869,551	(⁵)		11,625
48	1930..yield, g.p.m.....	168,311	1,117,397	219,665	1,036,310			4,750
49	1920..yield, g.p.m.....	169,181	356,156	50,870	417,266			555
50	Pumping plants.....1940..total number.....	1,196	1,817	282	1,914	2		26
51	1930..total number.....	255	2,122	414	1,919			2
52	Prime movers.....1940..capacity, hp.....	14,425	20,757	3,130	39,887	(⁵)		426
53	1930..capacity, hp.....	4,606	23,324	4,385	40,284			145
54	1920..capacity, hp.....	4,358	8,309	1,788	15,945			43
55	(a) Electric.....1940..number.....	1,069	1,607	213	1,403			12
56	1940..capacity, hp.....	12,804	17,920	2,257	26,803	(⁵)	1	291
57	(b) Internal-combustion.....1940..number.....	121	203	63	432		1	12
58	1940..capacity, hp.....	1,614	2,733	862	12,278	(⁵)		124
59	(c) Other.....1940..number.....	15	7	6	79			2
60	1940..capacity, hp.....	7	104	11	806			(⁵)
61	Pumps.....1940..total number.....	1,184	1,820	283	1,839	2		25
62	1930..number.....	256	2,179	418	1,947			2
63	1920..number.....	585	765	131	920			7
64	1940..capacity, g.p.m.....	779,349	1,233,294	183,184	895,601	(⁵)		17,805
65	1930..capacity, g.p.m.....	182,821	1,272,765	233,754	2,037,137			5,500
66	1920..capacity, g.p.m.....	200,337	451,434	84,740	462,061			4,640
67	(a) Centrifugal.....1940..number.....	556	1,077	184	310		2	12
68	1940..capacity, g.p.m.....	360,950	802,689	119,966	136,944	(⁵)		8,635
69	1940..average capacity, g.p.m.....	649	745	652	441	(⁵)		720
70	(b) Turbine.....1940..number.....	613	740	85	1,365			11
71	1940..capacity, g.p.m.....	418,021	430,318	62,548	741,433			9,050
72	1940..average capacity, g.p.m.....	682	582	736	543			823
73	(c) Plunger.....1940..number.....	14	2	12	155			1
74	1940..capacity, g.p.m.....	353	(⁵)	455	12,405			(⁵)
75	1940..average capacity, g.p.m.....	25	(⁵)	38	80			(⁵)
76	(d) Other.....1940..number.....	1	1	2	9			1
77	1940..capacity, g.p.m.....	(⁵)	(⁵)	(⁵)	5,119			(⁵)
78	Pumping lift, from all sources.....1940..average, feet.....	37	35	33	81	(⁵)		38
79	1930..average, feet.....	46	33	43	73			50
80	1920..average, feet.....	26	33	28	57			20
81	from pumped wells.....1940..average, feet.....	37	35	34	84	(⁵)		30
82	from surface sources.....1940..average, feet.....	28	23	26	33	(⁵)		46

*Data for 2 enterprises in Cowhead and Warner Lakes Drainage Basin (81), 2 enterprises in Smoke Creek Drainage Basin (85), and 1 enterprise in Adobe Meadows Drainage Basin (82) (number refers to separate map) are included with Independent Basins total.

**Data for corresponding basins in Nevada not tabulated under "Independent Basins."

¹Joins "Amargosa River Drainage Basin" in Nevada.

²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

³Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - CALIFORNIA

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WORKS, 1940, 1930, AND 1920—Continued

INDEPENDENT BASINS—Continued												COLORADO RIVER			
Pyramid Lake Basin and Truckee River** (87)	Lahontan Lake Basin and Carson River** (88)	Walker Lake			Mono Lake (91)	Owens River (93)	Amargosa River and Dry Lakes† (95)	Antelope Valley (97)	Mojave River (98)	San Jacinto River (99)	Whitewater River (100)	Total	Direct	Imperial Valley (102)	
		Total	West Walker River** (89)	East Walker River** (90)												Total
7	16	32	15	17	12	52	17	477	183	272	438	52	3	49	1
239	516	1,200	1,190	1,210	80	309	80	86	56	107	62	11,843	29,741	10,748	2
14	38	45	28	17	1	26	.....	2	14	6	14	5	.....	5	3
.....	15	15	.....	.....	6	18	.....	7	11	.....	.....	.....	.....	.....	4
.....	15	7	.....	.....	4	6	.....	2	7	.....	3	3	.....	.....	5
1	2	12	12	.....	.....	7	.....	1	3	3	14	5	.....	5	6
.....	6	6	6	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	7
2	29	21	8	13	.....	14	.....	1	3	2	.....	.....	.....	.....	8
11	7	6	2	4	1	3	.....	3	1	.....	.....	.....	.....	.....	9
6.0	42.0	130.0	90.0	40.0	16.0	113.9	6.0	38.8	9.3	68.2	42.6	2,192.8	282.8	1,910.0	10
.....	10	60	.....	.....	45	180	.....	.....	33	123	.....	2,266	.....	.....	11
.....	21	166	.....	.....	34	142	.....	.....	27	64	49	2,488	.....	.....	12
6	42	130	90	40	16	104	1	19	7	9	14	2,185	290	1,905	13
.....	.....	.....	.....	.....	.....	9.9	2.0	19.8	2.3	59.2	28.6	7.8	2.8	5.0	14
51	163	916	527	389	35	411	9	875	30	96	71	8,541	1,000	7,541	15
.....	25	383	.....	.....	184	654	.....	.....	143	201	.....	10,200	.....	.....	16
.....	52	925	.....	.....	525	1,598	.....	.....	189	251	57	6,577	.....	.....	17
1.7	.....	.....	.....	.....	41.6	2.8	553.8	114.3	533.1	426.6	61.8	4.1	57.7	18	
.....	0.5	.....	.....	.....	29.0	.....	.....	106.8	445.8	.....	.....	.....	.....	.....	19
.....	.....	.....	.....	.....	388.5	.....	.....	28.8	145.0	77.5	0.4	.....	.....	.....	20
1.7	.....	.....	.....	.....	35.6	2.0	513.1	106.1	378.2	373.5	36.5	.....	.....	36.5	21
.....	.....	.....	.....	.....	6.0	0.8	40.5	8.2	150.7	45.9	19.9	.....	.....	19.9	22
.....	.....	.....	.....	.....	.....	.....	.....	.....	0.3	.....	0.1	.....	0.1	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	0.2	3.9	7.2	5.3	.....	4.0	1.3	24
.....	10	3	.....	3	1	1	.....	4	3	12	1	5	.....	5	25
.....	1	.....	.....	.....	6	9	.....	.....	7	8	.....	.....	.....	.....	26
.....	.....	.....	.....	.....	3	4	.....	.....	.....	11	.....	1	.....	.....	27
.....	.....	.....	.....	.....	.....	.....	.....	2	1	2	.....	.....	.....	.....	28
10	3	.....	3	.....	1	1	.....	2	2	7	1	5	.....	5	29
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	30
.....	10	3	.....	3	.....	4	2	111	51	75	7	7	.....	7	31
.....	10	3	.....	3	.....	2	2	109	51	73	7	7	.....	7	32
.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	33
.....	4,000	1,000	.....	1,000	.....	803	(5)	11,293	101	13,760	22	57	.....	57	34
.....	.....	.....	.....	.....	6	20	.....	.....	75	60	.....	.....	.....	.....	36
.....	.....	.....	.....	.....	42,801	24,620	.....	.....	179	23,312	.....	.....	.....	.....	37
.....	.....	.....	.....	.....	2	.....	.....	1	1	32	72	.....	.....	.....	38
.....	.....	.....	.....	.....	9	.....	.....	.....	17	3	.....	.....	.....	.....	39
.....	.....	.....	.....	.....	23	.....	.....	.....	31	9	242	.....	.....	.....	40
.....	.....	.....	.....	.....	(5)	.....	(5)	(5)	(5)	1,230	9,313	.....	.....	.....	41
.....	.....	.....	.....	.....	295	.....	.....	.....	7,664	500	.....	.....	.....	.....	42
.....	.....	.....	.....	.....	537	.....	.....	.....	4,874	115	36,860	.....	.....	.....	43
.....	.....	.....	.....	.....	7	10	622	216	397	542	34	.....	.....	34	44
.....	.....	.....	.....	.....	41	.....	.....	240	443	.....	1	.....	.....	.....	45
.....	.....	.....	.....	.....	9	.....	.....	88	236	325	1	.....	.....	.....	46
.....	.....	.....	.....	.....	4,560	2,115	341,957	111,676	136,448	261,020	14,771	.....	.....	14,771	47
.....	.....	.....	.....	.....	44,260	.....	.....	133,557	208,168	.....	700	.....	.....	.....	48
.....	.....	.....	.....	.....	4,088	.....	.....	45,477	66,833	121,466	900	.....	.....	.....	49
1	.....	.....	.....	.....	.....	7	11	633	225	415	593	44	6	38	50
(5)	.....	.....	.....	.....	.....	41	.....	.....	231	426	.....	3	.....	.....	51
.....	.....	.....	.....	.....	.....	150	178	18,771	3,044	8,765	8,523	1,013	472	541	52
.....	.....	.....	.....	.....	.....	1,892	.....	.....	3,203	9,060	.....	415	.....	.....	53
.....	.....	.....	.....	.....	.....	137	.....	.....	2,145	3,546	3,212	73	.....	.....	54
.....	.....	.....	.....	.....	.....	4	2	494	109	269	512	16	.....	.....	55
.....	.....	.....	.....	.....	.....	85	(5)	13,877	1,181	4,700	6,636	388	(5)	1	56
.....	.....	.....	.....	.....	.....	3	7	127	90	117	74	19	5	14	57
.....	.....	.....	.....	.....	.....	65	145	4,885	1,836	3,795	1,403	616	372	244	58
(5)	.....	.....	.....	.....	.....	.....	2	12	26	29	7	.....	.....	.....	59
1	.....	.....	.....	.....	.....	7	(5)	9	27	270	484	9	.....	.....	60
.....	.....	.....	.....	.....	.....	.....	11	625	218	404	545	43	6	37	61
.....	.....	.....	.....	.....	.....	32	.....	.....	233	436	.....	4	.....	.....	62
.....	.....	.....	.....	.....	.....	12	.....	.....	66	203	247	2	.....	.....	63
(5)	.....	.....	.....	.....	.....	4,660	2,485	343,019	113,887	150,249	261,574	169,077	154,200	14,877	64
.....	.....	.....	.....	.....	.....	944,750	.....	.....	126,776	243,830	.....	140,200	.....	.....	65
.....	.....	.....	.....	.....	.....	4,558	.....	.....	45,960	76,386	126,356	2,000	.....	.....	66
.....	.....	.....	.....	.....	.....	4	1	13	100	28	149	11	4	7	67
.....	.....	.....	.....	.....	.....	2,260	(5)	3,506	54,509	12,313	53,421	79,585	73,200	6,385	68
.....	.....	.....	.....	.....	.....	565	(5)	270	545	440	359	7,235	18,300	912	69
.....	.....	.....	.....	.....	.....	3	7	589	82	294	379	13	.....	.....	70
.....	.....	.....	.....	.....	.....	2,400	2,225	338,001	53,555	131,303	204,899	7,874	.....	7,874	71
.....	.....	.....	.....	.....	.....	800	318	653	447	447	541	606	.....	606	72
(5)	.....	.....	.....	.....	.....	.....	3	22	32	79	17	16	.....	16	73
(5)	.....	.....	.....	.....	.....	.....	160	1,508	3,958	3,403	3,254	595	.....	595	74
.....	.....	.....	.....	.....	.....	53	69	124	43	191	37	.....	.....	37	75
.....	.....	.....	.....	.....	.....	.....	1	4	3	.....	.....	3	(5)	2	76
(5)	.....	.....	.....	.....	.....	.....	(5)	1,865	3,230	.....	.....	81,023	(5)	(5)	77
.....	.....	.....	.....	.....	.....	85	110	114	45	98	52	.....	4	55	78
.....	.....	.....	.....	.....	.....	85	.....	.....	44	79	.....	22	.....	.....	79
.....	.....	.....	.....	.....	.....	24	.....	.....	80	73	41	42	.....	.....	80
(5)	.....	.....	.....	.....	.....	85	119	114	46	100	52	54	.....	54	81
.....	.....	.....	.....	.....	.....	.....	20	60	20	30	17	29	4	62	82

*Total capacity of all reservoirs regardless of size.
 †Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
 ‡Windmills with very low horsepower.

CENSUS OF IRRIGATION - CALIFORNIA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL	Alameda	Alpine	Amador	Butte		
						Enterprises		Enterprises
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1 All farms.....1940...number.....	132,658	2,447	13	407	2,584		
2 .....1930...number.....	135,676	2,627	19	371	2,603		
3 Irrigated farms.....1940...number.....	84,310	679	13	51	1,500		
4 .....1930...number.....	85,784	545	15	68	1,445		
5 Increase or decrease (-), 1930-1940.....percent.....	-1.7	24.6	-13.3	-25.0	-3.8		
Operated by—							
6 (a) Owners and managers.....1940...number.....	69,306	506	13	46	1,290		
7 .....1930...number.....	71,911	434	13	57	1,263		
8 (b) Tenants.....1940...number.....	15,004	173	.....	5	210	
9 .....1930...number.....	13,873	111	2	11	182		
10 Land in all farms.....1940...acres.....	30,524,324	248,443	11,225	307,457	582,779		
11 Land in irrigated farms.....1940...acres.....	14,071,222	50,524	11,225	102,428	310,846		
12 Average per farm.....1940...acres.....	167	74	863	2,008	207		
13 (a) Operated by owners and managers.....1940...acres.....	12,016,422	35,887	11,225	98,178	280,156		
14 Average per farm.....1940...acres.....	173	71	863	2,134	217		
15 (b) Operated by tenants.....1940...acres.....	2,054,800	14,637	.....	4,250	30,690	
16 Average per farm.....1940...acres.....	137	85	.....	650	146	
17 Approximate land area.....1940...acres.....	100,353,920	469,120	462,720	380,160	1,065,600		
IRRIGATED AND IRRIGABLE AREAS							
18 Area irrigated.....1939...acres.....	5,069,568	20,403	8,327	1,403	79,865		
19 (a) Cropland harvested.....1939...acres.....	4,621,791	20,126	1,818	1,130	68,681		
20 (b) Crop failure.....1939...acres.....	22,084	124	10	.....	405	
21 (c) Pasture.....1939...acres.....	425,693	153	6,499	273	10,799		
22 Area irrigated.....1929...acres.....	4,746,632	8,494	1,925	678	67,008		
23 .....1919...acres.....	4,219,040	9,346	4,459	326	93,559		
24 Increase or decrease (-), 1929-1939.....percent.....	6.8	140.2	332.6	106.9	19.2		
25 Irrigable area in enterprises.....1940...acres.....	8,039,175	31,973	8,482	2,852	239,079		
26 .....1930...acres.....	8,075,895	9,165	2,595	863	204,297		
27 .....1920 ¹ ...acres.....	7,805,207	16,543	7,027	1,093	123,524		
28 Excess of irrigable area over the area irrigated.....1940...acres.....	2,969,607	11,570	156	1,449	159,194		
29 .....1930...acres.....	3,329,263	671	670	185	137,259		
30 Area works were capable of supplying with water.....1940...acres.....	7,398,576	31,789	8,482	2,481	145,213		
31 .....1930...acres.....	6,815,250	9,079	2,455	824	159,017		
32 .....1920...acres.....	5,894,466	13,357	4,819	489	114,754		
33 Increase or decrease (-), 1930-1940.....percent.....	8.6	250.1	245.5	201.1	-8.7		
34 Excess, capability of works over area irrigated.....1940...acres.....	2,329,008	11,986	155	1,078	65,328		
35 .....1930...acres.....	2,068,618	585	530	146	91,979		
36 Proportion which area irrigated is of all lands in irrigated farms.....1939...percent.....	36.0	40.4	74.2	1.4	25.7		
37 .....1929...percent.....	39.5	20.1	24.1	1.3	25.4		
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	68.5	64.2	98.2	56.5	55.0		
39 .....1929...percent.....	69.6	93.6	78.4	82.3	42.2		
CAPITAL INVESTED TO JANUARY 1							
40 Total investment in all enterprises.....1940...dollars....	318,889,218	1,430,993	54,930	288,068	7,691,460		
41 (a) Cost of irrigation works and equipment.....1940...dollars....	306,729,175	1,426,843	53,780	238,868	6,979,653		
42 (b) Investment in water rights (reported).....1940...dollars....	12,160,043	4,150	49,200	49,200	711,807		
43 Total investment in all enterprises.....1930...dollars....	310,967,979	687,678	2,250	698,108	6,111,209		
44 .....1920...dollars....	194,886,388	530,053	40,385	91,295	3,383,646		
45 Increase or decrease (-), 1930-1940.....percent.....	2.5	108.1	2,341.3	-58.7	25.9		
46 Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars....	43.10	45.02	6.48	116.11	52.97		
47 .....1930...dollars....	45.63	75.74	0.92	847.22	38.43		
48 .....1920...dollars....	33.06	39.68	8.38	186.70	29.49		
49 Average investment per acre irrigated.....1939...dollars....	62.90	70.14	6.60	205.32	96.28		
50 Estimated final investment in existing enterprises.....1940...dollars....	327,593,311	1,437,883	54,930	288,583	10,195,895		
51 .....1930...dollars....	325,930,535	688,528	2,250	700,108	7,320,184		
52 .....1920...dollars....	225,799,123	538,538	41,385	91,295	3,776,271		
53 Increase or decrease (-), 1930-1940.....percent.....	0.5	108.8	2,341.3	-58.8	39.3		
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars....	40.75	44.97	6.48	101.19	42.65		
55 .....1930...dollars....	40.36	75.13	0.87	811.25	35.83		
56 .....1920 ¹ ...dollars....	28.93	32.55	5.89	83.53	30.57		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57 Enterprises reporting maintenance and operation.....1939...number.....	29,243	7,457	506	15	20	383	4
	Enterprises		Enterprises		Enterprises		Enterprises
58 Area irrigated in these enterprises.....1939...acres.....	4,831,550	439,235	19,821	8,105	1,325	76,671	39
59 Cost of maintenance and operation.....1939...dollars....	21,229,685	1,620,218	141,770	1,654	4,848	351,872	208
60 Average cost, per acre irrigated.....1939...dollars....	4.39	3.69	7.15	0.20	3.66	4.59	5.33
61 .....1929...dollars....	6.10	11.73	0.40	47.33	4.78
62 Total annual charges (reported) ³.....1939...dollars....	12,789,209	252,555	18,932	54	1,226	311,278
63 Average annual charge per acre irrigated.....1939...dollars....	4.24	2.51	5.93	0.06	5.84	5.49
64 Area against which charges were assessed.....1939...acres.....	4,212,679	96,930	5,750	953	210	91,430
65 Average annual charge per acre assessed.....1939...dollars....	3.04	2.61	3.29	0.06	5.84	3.40
66 Total charges collected ⁴.....1939...dollars....	10,519,461	403,248	9,504	27	288,312
67 Indebtedness to December 31 (reported) ⁵.....1939...dollars....	94,170,982	1,523,911	92,577	1,607,823
WATER DELIVERED TO IRRIGATORS							
68 Enterprises reporting water delivered.....1939...number.....	29,522	7,507	526	15	24	456	1
69 Area irrigated in these enterprises.....1939...acres.....	4,840,760	414,972	20,279	7,327	1,360	79,571	(5)
70 Water delivered in these enterprises.....1939...acre-feet.....	12,657,820	761,982	32,678	26,020	3,726	393,763	(5)
71 Average water delivered per acre irrigated.....1939...acre-feet.....	2.6	1.8	1.6	3.6	2.7	4.9	(5)
72 Average cost of water per acre irrigated.....1939...dollars....	5.06	4.00	7.34	0.20	3.66	5.23	(5)
DRAINAGE OF IRRIGATED LAND							
73 Enterprises reporting land drained or needing drainage.....1939...number.....	908	5	17
74 Irrigable area in these enterprises.....1939...acres.....	2,598,196	379	116,278
75 Irrigated area in these enterprises.....1939...acres.....	1,711,027	214	35,644
76 Area for which drains have been installed.....1939...acres.....	1,509,832	116	69,743
77 Additional area needing drainage.....1939...acres.....	394,963	125	17,125

* Census of Agriculture.

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

² Revised.

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION - CALIFORNIA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Calaveras		Colusa		Contra Costa		El Dorado		Fresno		Glenn		Humboldt		Imperial		Inyo		Kern	
469	730	1,936	863	9,550	1,376	2,065	2,696	228	2,188	1									
481	884	1,890	886	10,334	1,463	2,045	3,176	218	2,397	2									
116	400	433	411	8,640	1,061	200	2,405	117	1,774	3									
170	359	456	412	9,449	997	133	2,875	195	2,020	4									
-31.8	11.4	-5.0	-0.2	-8.6	6.4	50.4	-16.3	-40.0	-12.2	5									
108	299	348	373	7,397	894	170	1,475	54	1,267	6									
161	275	362	401	8,131	848	97	1,718	79	1,497	7									
8	101	85	38	1,243	167	30	930	63	507	8									
9	84	94	11	1,318	149	36	1,157	116	523	9									
378,532	437,030	304,424	256,504	1,463,868	541,555	816,680	418,029	183,564	1,673,524	10									
94,886	196,771	66,024	107,140	922,572	258,807	96,725	403,610	162,854	1,027,597	11									
818	492	152	261	107	244	484	168	1,392	579	12									
92,526	157,840	53,610	101,397	812,279	220,380	84,149	306,434	42,413	937,755	13									
857	528	154	272	110	247	495	209	785	740	14									
2,360	38,931	12,414	5,743	110,293	38,427	12,576	95,176	120,441	89,842	15									
295	385	146	151	89	230	419	102	1,912	177	16									
657,920	737,920	469,760	1,104,000	3,830,400	842,880	2,286,720	2,741,760	6,458,240	5,228,800	17									
1,832	82,890	32,386	7,535	561,068	101,557	2,205	422,834	11,889	259,038	18									
1,587	80,197	31,131	6,443	533,762	97,191	1,763	410,834	6,541	220,067	19									
5	321	164	.....	2,297	62	.....	4,000	.....	594	20						
240	2,372	1,091	1,092	25,009	4,304	442	8,000	5,348	38,377	21									
1,996	58,369	53,159	10,134	533,992	60,306	1,506	432,240	27,488	180,106	22									
2,859	44,097	33,079	6,731	547,587	105,004	355	415,304	74,958	223,593	23									
-8.2	42.0	-39.1	-25.6	5.1	68.4	46.4	-2.2	-56.7	43.8	24									
3,294	216,271	51,029	21,877	782,453	188,300	4,130	542,545	18,402	493,268	25									
6,971	190,190	72,200	44,064	725,944	143,602	2,417	1,014,559	9,214	427,979	26									
42,093	88,948	67,876	16,848	1,098,755	202,399	664	530,855	97,998	475,645	27									
1,462	133,381	18,643	14,342	221,385	86,743	1,925	119,711	6,513	234,230	28									
4,975	131,821	19,041	33,930	192,952	83,296	911	582,319	.....	247,873	29								
3,046	212,874	50,906	9,486	729,755	182,269	3,650	539,607	14,860	488,474	30									
3,776	172,304	70,943	29,658	659,545	131,354	1,919	529,560	16,142	421,109	31									
33,828	69,149	46,482	9,833	838,048	126,992	500	457,815	79,771	329,773	32									
-19.3	23.3	-28.2	-68.0	10.6	38.8	90.2	1.9	-7.9	16.0	33									
1,214	129,984	18,520	1,951	168,687	80,712	1,445	116,773	2,971	229,436	34									
1,780	114,235	17,784	19,524	125,553	71,048	413	97,320	.....	241,003	35								
1.9	42.1	49.1	7.0	60.8	39.2	2.3	.....	7.3	25.2	36								
1.7	48.6	51.6	14.6	78.7	32.5	8.8	.....	30.9	26.3	37								
60.1	38.9	63.6	79.4	76.9	55.7	60.4	78.4	80.0	53.0	38									
52.9	33.8	74.9	34.2	81.0	45.9	78.5	81.6	.....	42.8	39								
242,297	4,499,923	2,579,509	1,048,908	20,959,849	5,811,655	151,896	17,758,339	240,112	12,389,454	40									
241,215	4,495,664	2,579,409	1,048,301	20,777,490	5,741,376	151,649	17,753,852	240,112	12,388,930	41									
1,092	4,259	100	607	182,359	70,279	247	4,687	.....	524	42								
343,525	4,006,824	2,838,120	939,937	18,112,479	6,451,120	106,238	16,656,841	220,754	8,673,199	43									
1,315,617	2,594,164	1,380,210	498,269	8,067,930	5,586,804	37,298	14,223,585	2,487,561	18,419,752	44									
-29.5	12.3	-9.1	11.6	15.7	-9.9	43.0	6.6	8.8	42.8	45									
79.55	21.14	50.67	110.57	28.72	31.89	41.62	32.91	16.16	25.36	46									
90.98	23.21	40.01	31.69	27.46	49.11	55.36	31.45	13.68	20.60	47									
38.89	37.52	29.69	50.77	9.63	43.99	74.60	31.07	31.18	55.86	48									
132.26	54.29	79.65	139.20	37.36	57.23	68.89	42.00	20.20	47.83	49									
249,064	4,511,272	2,580,054	1,054,108	21,049,544	5,854,991	172,049	17,758,414	274,012	12,764,615	50									
371,725	4,167,013	2,948,745	1,644,487	18,427,677	6,470,610	108,573	16,656,841	252,254	8,812,564	51									
1,329,119	2,861,964	1,587,960	702,269	9,249,514	7,283,303	37,798	14,323,585	2,607,111	18,829,815	52									
-33.0	8.3	-9.4	-35.9	14.2	-9.5	58.5	6.6	8.6	44.8	53									
75.61	20.86	50.56	48.18	26.90	31.09	41.66	32.73	14.89	25.88	54									
53.32	21.91	39.46	37.32	25.35	45.06	44.92	16.42	27.38	20.59	55									
31.58	32.40	23.40	41.68	8.42	35.98	56.92	26.98	26.60	39.59	56									
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.								
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises									
52	3	107	5	31	1,981	4,652	244	4	57	5	24								
1,760	26	81,572	26,975	6,605	547,197	196,533	101,334	801	2,050	422,834	8,866								
4,888	315	239,135	146,340	694	65,895	1,464,746	647,458	262,564	2,237	7,403	1,297,320								
2.78	12.12	2.93	5.43	7.31	9.98	2.68	3.29	2.59	2.79	3.61	3.07								
8.37	2.91	4.63	10.53	4.14	5.93	7.61	3.37								
3,950	105,132	139,057	28,809	599,425	1,883	159,297	2,500	1,715,291	4,400								
4.65	1.67	6.69	4.80	1.48	0.08	1.87	2.48	4.06								
850	77,892	32,023	32,005	573,479	4,700	98,684	1,008	575,314	5,903								
4.65	1.35	4.34	0.90	1.05	0.40	1.61	2.48	0.75								
1,500	101,332	135,525	15,216	609,051	750	141,915	1,696,203								
15,000	2,280,374	1,294,481	728,816	2,069,780	3,286,629	15,548,321								
63	3	109	141	42	1,948	4,712	239	4	38	5	49								
1,567	26	81,486	27,953	(5) 2	7,193	544,211	184,149	101,527	801	1,945	422,834								
3,367	54	359,048	46,759	(5)	21,530	1,057,437	331,538	464,412	1,549	11,060	1,192,848								
2.1	2.1	4.4	1.7	(5)	3.0	1.9	1.8	4.6	1.9	6.0	4.1								
3.24	12.12	2.03	6.97	(5)	4.77	3.09	3.62	2.21	2.79	3.60	4.06								
(5) 1	15	21	4	7	14	3	(5) 2								
(5)	189,707	42,074	54	185,213	148,153	120	540,000								
(5)	69,621	26,527	54	122,689	73,413	68	422,789								
(5)	182,042	16,778	23	6,561	105,695	2	208,000								
(5)	570	2,500	1	6,006	3,603	9	315,000								
.....								

⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.
⁵ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁶ Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - CALIFORNIA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Kings	Lake	Lassen	Los Angeles		
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940..number.....	2,132	876	486	12,475		
2	.....1930..number.....	2,156	1,057	472	12,653	
3	Irrigated farms.....1940..number.....	1,788	141	301	8,259		
4	.....1930..number.....	1,799	110	241	8,537	
5	Increase or decrease (-), 1930-1940.....percent.....	-0.6	28.2	24.9	-3.3		
Operated by—							
6	(a) Owners and managers.....1940..number.....	1,403	127	250	6,398		
7	.....1930..number.....	1,420	100	199	7,247	
8	(b) Tenants.....1940..number.....	385	14	51	1,861		
9	.....1930..number.....	379	10	42	1,290	
10	Land in all farms.....1940..acres.....	507,165	229,854	606,335	596,552		
11	Land in irrigated farms.....1940..acres.....	397,471	56,802	511,973	297,358		
12	Average per farm.....1940..acres.....	222	403	1,701	96		
13	(a) Operated by owners and managers.....1940..acres.....	331,626	55,298	498,262	236,896		
14	Average per farm.....1940..acres.....	236	435	1,953	37		
15	(b) Operated by tenants.....1940..acres.....	65,845	1,504	23,711	60,462		
16	Average per farm.....1940..acres.....	171	107	465	32		
17	Approximate land area.....1940..acres.....	892,800	803,840	2,910,720	2,605,440		
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres.....	315,618	3,281	62,243	185,380		
19	(a) Cropland harvested.....1939..acres.....	299,654	3,127	40,883	184,276		
20	(b) Crop failure.....1939..acres.....	724	7	521	383		
21	(c) Pasture.....1939..acres.....	15,240	147	20,839	721		
22	Area irrigated.....1929..acres.....	269,994	1,916	39,893	205,837		
23	.....1919..acres.....	187,868	1,107	53,884	248,412	
24	Increase or decrease (-), 1929-1939.....percent.....	16.9	71.2	56.0	-9.9		
25	Irrigable area in enterprises.....1940..acres.....	588,426	4,758	87,640	294,567		
26	.....1930..acres.....	639,135	4,272	76,373	291,970	
27	.....1920 ¹ ..acres.....	490,835	1,831	85,873	364,574	
28	Excess of irrigable area over the area irrigated.....1940..acres.....	272,808	1,477	25,397	109,187		
29	.....1930..acres.....	369,141	2,356	36,482	86,133	
30	Area works were capable of supplying with water.....1940..acres.....	556,462	4,672	80,286	288,550		
31	.....1930..acres.....	586,332	3,345	67,735	274,206	
32	.....1920..acres.....	376,906	1,517	71,582	319,368	
33	Increase or decrease (-), 1930-1940.....percent.....	-5.1	39.7	18.5	5.2		
34	Excess, capability of works over area irrigated.....1940..acres.....	240,844	1,391	18,043	103,170		
35	.....1930..acres.....	316,338	1,429	27,842	68,369	
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	79.4	5.8	12.2	62.3		
37	.....1929..percent.....	75.3	3.7	13.2	65.4	
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	56.7	70.2	77.5	64.2		
39	.....1929..percent.....	46.0	57.3	58.9	75.1	
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars.....	7,890,358	254,825	499,965	22,316,928		
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	7,002,248	254,632	471,012	21,267,631		
42	(b) Investment in water rights (reported).....1940..dollars.....	888,110	293	28,953	1,049,297		
43	Total investment in all enterprises.....1930..dollars.....	8,373,919	227,899	1,693,616	32,205,278		
44	.....1920 ¹ ..dollars.....	3,989,358	116,286	519,656	21,038,616	
45	Increase or decrease (-), 1930-1940.....percent.....	-5.8	11.8	-70.5	-30.7		
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	14.18	54.54	6.23	77.94		
47	.....1930..dollars.....	14.28	68.13	25.00	117.45	
48	.....1920 ¹ ..dollars.....	10.58	76.66	7.26	65.88	
49	Average investment per acre irrigated.....1939..dollars.....	25.00	77.67	8.03	120.38		
50	Estimated final investment in existing enterprises.....1940..dollars.....	7,959,903	256,965	504,905	22,827,690		
51	.....1930..dollars.....	8,533,394	236,040	1,814,716	32,690,243	
52	.....1920 ¹ ..dollars.....	4,362,178	216,346	583,456	23,271,909	
53	Increase or decrease (-), 1930-1940.....percent.....	-6.7	8.8	-72.2	-30.2		
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	13.53	54.43	5.76	77.50		
55	.....1930..dollars.....	13.35	55.72	23.76	111.96	
56	.....1920 ¹ ..dollars.....	8.89	118.16	6.79	63.83	
MAINTENANCE AND OPERATION CHARGES AND INDEBTEDNESS							
		Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number.....	515	717	109	4	1,547	15
58	Area irrigated in these enterprises.....1939..acres.....	312,946	36,782	3,074	394	140,663	5,705
59	Cost of maintenance and operation.....1939..dollars.....	369,000	137,451	18,253	733	1,649,517	57,222
60	Average cost, per acre irrigated.....1939..dollars.....	1.18	3.74	5.94	1.86	11.73	10.03
611929..dollars.....	3.20	8.42	11.84
62	Total annual charges (reported) ⁴.....1939..dollars.....	265,519	578	18,646	1,372,996	52,760
63	Average annual charge per acre irrigated.....1939..dollars.....	1.08	5.56	1.56	11.54	11.12
64	Area against which charges were assessed.....1939..acres.....	352,509	104	12,706	125,739	4,744
65	Average annual charge per acre assessed.....1939..dollars.....	0.75	5.56	1.47	10.92	11.12
66	Total charges collected ⁵.....1939..dollars.....	293,482	10,060	939,089	51,116
67	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	598,548	51,000	1,543,160	118,293
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number.....	508	698	110	189	4	14
69	Area irrigated in these enterprises.....1939..acres.....	281,102	37,205	3,016	59,282	494	182,940
70	Water delivered in these enterprises.....1939..acre-feet.....	523,927	72,785	5,612	97,955	367	425,846
71	Average water delivered per acre irrigated.....1939..acre-feet.....	1.9	2.0	1.9	1.7	0.7	2.3
72	Average cost of water per acre irrigated.....1939..dollars.....	1.58	3.73	6.11	0.60	0.69	11.61
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number.....	17	6	4	40
74	Irrigable area in these enterprises.....1939..acres.....	17,437	126	890	4,609
75	Irrigated area in these enterprises.....1939..acres.....	9,753	55	760	3,087
76	Area for which drains have been installed.....1939..acres.....	6,075	20	621	1,943
77	Additional area needing drainage.....1939..acres.....	170	39	200	85

* Census of Agriculture.

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

² Revised.

CENSUS OF IRRIGATION - CALIFORNIA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"]

Madera		Mendocino		Merced		Modoc		Mono		Monterey		Napa		Nevada		Orange		Placer	
1,538	1,843	3,777	686	92	1,999	1,764	492	6,109	1,451	1									
1,629	1,672	3,830	621	76	1,891	1,666	539	4,960	1,628	2									
1,136	162	3,422	532	79	1,054	207	304	5,442	912	3									
1,118	174	3,389	418	60	803	92	368	4,503	1,005	4									
1.6	-6.9	1.0	27.3	31.7	31.3	125.0	-17.4	20.9	-9.3	5									
948	135	2,568	451	63	575	177	271	5,015	769	6									
851	153	2,493	360	55	463	74	314	4,230	829	7									
198	27	854	81	16	479	30	33	427	143	8									
267	21	896	58	5	340	18	54	273	176	9									
510,234	986,410	873,949	583,189	56,671	1,329,341	359,491	114,108	215,923	214,784	10									
197,773	86,210	575,441	471,868	51,354	366,659	47,412	83,066	162,094	104,364	11									
174	532	168	887	650	348	229	273	30	114	12									
178,652	73,682	483,735	417,054	44,647	245,755	40,121	75,491	123,316	93,440	13									
188	546	188	925	709	427	227	25	125	122	14									
19,121	12,528	91,706	54,814	6,707	120,904	7,291	7,575	38,778	10,924	15									
102	464	107	677	419	252	243	230	91	76	16									
1,374,720	2,246,400	1,269,120	2,620,160	1,948,800	2,127,360	505,600	626,560	500,480	915,840	17									
104,522	5,904	273,886	92,419	42,676	105,344	2,630	7,557	119,274	30,071	18									
92,002	5,099	248,554	71,642	7,313	944,548	2,348	3,367	118,199	26,812	19									
86	23	12	51	.....	298	3	200	473	1,501	20								
12,434	782	25,320	35,363	1,102	279	3,990	602	1,758	21										
140,637	3,663	318,244	70,025	29,542	80,981	1,886	6,255	112,025	30,041	22									
100,220	1,255	212,851	82,845	46,012	47,336	660	3,441	87,330	27,520	23									
-25.7	61.2	-13.9	32.0	44.5	30.1	39.4	20.8	6.5	0.1	24									
176,996	8,497	391,305	149,428	44,787	114,074	4,373	128,276	153,508	65,974	25									
210,151	7,586	420,614	95,140	34,191	91,780	3,384	133,684	140,414	46,471	26									
161,032	11,686	457,494	112,200	121,878	59,659	1,405	5,601	113,026	40,000	27									
72,474	2,593	117,419	57,009	2,091	8,730	1,743	120,719	34,234	35,903	28									
69,514	3,923	102,370	25,115	4,649	10,799	1,498	127,429	28,389	16,430	29									
176,696	7,950	361,085	133,921	43,712	113,762	4,344	41,260	150,520	35,252	30									
194,886	5,532	411,069	88,081	30,166	88,903	2,991	10,442	129,496	35,945	31									
118,672	11,566	288,157	89,801	56,159	89,305	1,284	5,002	102,076	27,520	32									
-9.3	43.7	-12.2	52.0	44.9	28.0	45.2	295.1	16.2	-1.7	33									
72,174	2,046	87,209	41,502	1,036	8,438	1,714	33,703	31,249	5,161	34									
54,249	1,869	92,645	18,056	624	7,922	1,105	4,187	17,471	5,804	35									
52.8	6.8	47.6	19.6	83.1	28.7	5.5	9.1	73.6	28.8	36									
81.1	4.2	70.0	22.6	55.9	19.4	7.5	6.6	49.9	38.0	37									
59.2	74.3	75.8	69.0	97.6	92.6	60.5	18.3	79.2	85.3	38									
72.2	66.2	77.4	79.5	97.9	91.1	63.1	59.9	86.5	83.8	39									
3,518,584	304,212	23,223,738	2,321,396	140,520	6,048,728	280,629	1,342,427	12,193,642	2,746,515	40									
3,243,897	304,170	23,068,047	2,210,992	136,310	6,047,303	280,019	1,338,703	11,762,589	2,745,238	41									
274,687	42	155,691	110,404	4,210	1,425	610	3,724	431,053	1,277	42									
2,479,625	331,469	22,519,291	1,107,372	2,083,515	4,582,435	217,875	2,376,379	7,987,996	4,246,132	43									
1,351,854	582,640	6,614,674	663,660	5,679,375	2,450,643	70,168	1,190,790	6,501,903	1,162,774	44									
41.9	-8.2	3.1	109.6	-93.3	32.0	28.8	-43.5	52.7	-35.3	45									
19.91	38.27	64.31	17.33	3.21	53.16	64.60	32.54	81.01	77.91	46									
12.72	59.92	54.78	69.07	69.07	51.54	72.84	227.58	61.68	118.46	47									
11.39	50.38	22.96	7.39	63.57	43.64	54.65	238.06	63.70	42.25	48									
33.66	51.53	84.79	25.12	3.29	57.42	106.70	177.64	102.23	91.33	49									
3,520,459	315,977	23,702,821	2,530,588	141,920	6,065,592	285,789	1,432,322	12,207,623	2,770,904	50									
2,483,496	352,319	23,583,521	1,123,872	2,083,515	4,826,590	233,375	2,368,921	8,364,813	4,249,607	51									
1,366,599	588,040	13,106,429	760,435	7,045,875	2,460,643	72,668	1,190,790	6,758,018	1,163,209	52									
41.8	-10.3	0.5	125.2	-93.2	25.7	22.5	-40.0	45.9	-34.8	53									
19.89	37.19	60.57	16.94	3.17	63.17	65.35	11.17	79.52	42.00	54									
11.82	46.44	56.07	11.81	60.94	52.59	68.96	17.87	59.57	91.45	55									
8.49	50.32	28.65	6.78	57.81	41.25	51.72	212.60	59.79	29.08	56									
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
1,005	100	82	386	58	326	2	48	903	21	120	34	997	10	66	7	57			
104,184	5,504	5,772	273,553	5,062	85,975	(*)	38,840	104,151	2,003	2,303	7,335	113,497	694	29,978	341	58			
536,699	34,541	30,449	653,766	42,640	37,649	(*)	10,067	671,865	14,535	15,987	27,746	802,346	4,014	128,075	2,898	59			
5.15	6.28	5.28	2.39	8.42	0.44	(*)	0.26	6.45	7.26	6.94	3.78	7.07	5.78	4.27	8.50	60			
3.73	9.78	6.71	0.26	0.50	7.94	9.03	11.25	10.62	4.89	61			
33,098	13,250	670,956	21,596	15,540	3,661	17,170	26,646	539,585	882	116,523	62			
1.79	4.66	2.75	0.83	1.22	0.25	3.78	4.01	7.53	7.60	4.05	63			
22,068	5,344	304,383	32,365	12,687	14,643	4,611	191,989	74,093	116	82,865	64			
1.50	2.48	2.20	0.67	1.22	0.25	3.72	0.14	7.28	7.60	1.41	65			
27,261	12,000	651,319	7,112	15,400	4,466	13,241	33,162	370,900	882	48,321	66			
4,139	62,000	17,477,608	1,197,835	145,767	1,253	3,150	1,191,804	742,870	521,906	67			
991	100	80	384	46	288	2	50	920	23	168	48	1,045	11	71	8	68			
92,102	5,504	5,678	273,708	5,077	85,953	(*)	40,700	105,327	2,010	2,545	7,557	117,396	703	30,042	381	69			
301,760	15,423	10,875	772,685	9,746	182,617	(*)	56,533	255,501	5,153	4,604	13,611	159,196	590	56,943	1,536	70			
3.3	2.8	1.9	2.8	1.9	1.9	(*)	1.4	2.4	2.6	1.8	1.8	1.4	0.8	1.9	4.0	71			
5.53	6.28	5.27	3.13	5.51	0.49	(*)	0.26	6.41	7.26	6.85	3.78	7.29	5.78	4.13	8.50	72			
.....	3	5	6	89	13	50	73			
.....	98	236,405	27,618	9,811	574	23,711	74			
.....	67	175,357	15,195	9,115	343	21,698	75			
.....	36	169,921	21,791	5,870	215	5,882	76			
.....	3	10,084	230	1,185	83	714	77			

* Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
 † Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
 ‡ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - CALIFORNIA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Plumas	Riverside	Sacramento	San Benito	San Bernardino			
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS¹									
1	All farms.....1940..number....	167	4,672	3,456	1,001	6,110			
2	.....1930..number....	178	4,746	3,882	1,077	7,062		
3	Irrigated farms.....1940..number....	130	3,112	2,176	589	4,678			
4	.....1930..number....	119	3,779	2,613	572	6,148		
5	Increase or decrease (-), 1930-1940.....percent....	9.2	-17.7	-16.7	3.0	-23.9			
Operated by—									
6	(a) Owners and managers.....1940..number....	117	2,746	1,760	482	4,405			
7	.....1930..number....	97	3,399	2,214	509	5,910		
8	(b) Tenants.....1940..number....	13	366	416	107	272			
9	.....1930..number....	22	380	399	63	238		
10	Land in all farms.....1940..acres....	160,513	634,742	431,379	698,056	714,584			
11	Land in irrigated farms.....1940..acres....	145,510	358,198	240,908	122,582	171,610			
12	Average per farm.....1940..acres....	1,119	115	111	208	37			
13	(a) Operated by owners and managers.....1940..acres....	138,654	332,256	196,655	108,857	155,671			
14	Average per farm.....1940..acres....	1,185	121	112	226	35			
15	(b) Operated by tenants.....1940..acres....	6,856	25,942	44,253	13,725	15,939			
16	Average per farm.....1940..acres....	527	71	106	128	59			
17	Approximate land area.....1940..acres....	1,644,800	4,594,560	630,400	893,440	12,883,840			
IRRIGATED AND IRRIGABLE AREAS									
18	Area irrigated.....1939..acres....	29,481	122,040	81,635	21,937	111,041			
19	(a) Cropland harvested.....1939..acres....	14,887	119,164	75,391	21,748	107,140			
20	(b) Crop failure.....1939..acres....	53	767	410	14	476			
21	(c) Pasture.....1939..acres....	14,541	2,109	5,854	175	3,425			
22	Area irrigated.....1929..acres....	16,774	135,617	98,667	20,237	108,482			
23	.....1919..acres....	22,852	106,212	72,900	12,468	105,306		
24	Increase or decrease (-), 1929-1939.....percent....	75.8	-10.0	-17.2	8.4	2.4			
25	Irrigable area in enterprises.....1940..acres....	35,939	244,580	156,118	46,707	153,105			
26	.....1930..acres....	24,776	255,215	141,045	25,749	159,020		
27	.....1920 ¹ ..acres....	28,265	226,927	141,275	23,017	184,024		
28	Excess of irrigable area over the area irrigated.....1940..acres....	6,458	122,940	74,463	24,770	42,064			
29	.....1930..acres....	8,002	119,598	42,378	5,512	50,598		
30	Area works were capable of supplying with water.....1940..acres....	35,611	206,684	127,059	40,367	145,180			
31	.....1930..acres....	20,637	206,720	126,001	24,440	127,564		
32	.....1920..acres....	25,478	128,788	103,271	17,186	120,798		
33	Increase or decrease (-), 1930-1940.....percent....	72.7	(²)	0.8	65.2	13.8			
34	Excess, capability of works over area irrigated.....1940..acres....	6,160	84,644	45,404	18,430	34,139			
35	.....1930..acres....	3,863	71,103	27,334	4,203	19,082		
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	20.3	34.1	33.9	17.9	64.7			
37	.....1929..percent....	17.0	32.7	28.0	13.4	45.3		
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	82.7	59.0	64.3	54.3	76.5			
39	.....1929..percent....	81.3	65.6	78.3	82.8	85.0		
CAPITAL INVESTED TO JANUARY 1									
40	Total investment in all enterprises.....1940..dollars....	66,937	17,648,837	3,452,182	1,413,207	18,887,694			
41	(a) Cost of irrigation works and equipment.....1940..dollars....	66,180	16,122,602	3,446,322	1,409,762	13,980,645			
42	(b) Investment in water rights (reported).....1940..dollars....	757	1,526,235	5,860	3,445	4,907,049			
43	Total investment in all enterprises.....1930..dollars....	94,720	17,454,534	5,440,853	1,406,248	15,592,270			
44	.....1920..dollars....	226,717	12,473,520	3,810,695	754,861	8,738,603		
45	Increase or decrease (-), 1930-1940.....percent....	-29.3	1.1	-36.6	0.5	21.1			
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	1.88	85.39	27.17	35.01	130.10			
47	.....1930..dollars....	4.59	84.44	43.18	57.54	122.23		
48	.....1920..dollars....	8.90	96.85	36.90	43.92	72.34		
49	Average investment per acre irrigated.....1939..dollars....	2.27	144.62	42.28	64.42	170.10			
50	Estimated final investment in existing enterprises.....1940..dollars....	67,142	18,027,038	3,462,614	1,775,357	19,034,816			
51	.....1930..dollars....	94,720	18,460,584	5,602,672	1,423,808	16,373,415		
52	.....1920..dollars....	226,717	14,796,051	4,291,620	767,701	8,938,516		
53	Increase or decrease (-), 1930-1940.....percent....	-29.1	-2.3	-38.2	24.7	16.3			
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	1.87	73.71	22.18	38.01	124.33			
55	.....1930..dollars....	3.82	72.33	39.72	55.30	102.96		
56	.....1920 ¹ ..dollars....	8.02	65.20	30.38	33.35	48.57		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary Sup.		Primary Sup.		Primary Sup.			
		Enterprises		Enterprises		Enterprises			
57	Enterprises reporting maintenance and operation.....1939..number....	81	773	16	1,472	405	7	857	14
58	Area irrigated in these enterprises.....1939..acres....	22,021	117,770	6,059	75,244	21,078	317	108,805	15,947
59	Cost of maintenance and operation.....1939..dollars....	5,091	1,164,882	32,695	368,749	139,004	1,910	937,783	33,553
60	Average cost, per acre irrigated.....1939..dollars....	0.23	9.89	5.40	4.90	6.59	6.03	8.62	2.10
611929..dollars....	0.50	15.75	6.41	8.07	15.45
62	Total annual charges (reported) ³.....1939..dollars....	502	739,971	23,355	74,135	20,636	1,284,502	78,446
63	Average annual charge per acre irrigated.....1939..dollars....	0.16	8.67	4.41	4.78	7.30	16.34	5.15
64	Area against which charges were assessed.....1939..acres....	3,166	92,304	5,296	33,595	20,749	93,429	15,551
65	Average annual charge per acre assessed.....1939..dollars....	0.16	8.02	4.41	2.21	0.99	13.75	5.04
66	Total charges collected ³.....1939..dollars....	115	704,686	23,374	115,070	15,764	771,671	77,465
67	Indebtedness to December 31 (reported) ⁴.....1939..dollars....	2,648,102	12,371	377,248	2,565,785	312,322
WATER DELIVERED TO IRRIGATORS									
68	Enterprises reporting water delivered.....1939..number....	75	856	16	1,535	411	7	904	14
69	Area irrigated in these enterprises.....1939..acres....	19,370	121,120	6,182	78,916	21,843	317	107,461	16,009
70	Water delivered in these enterprises.....1939..acre-feet....	31,659	575,071	8,444	210,858	36,718	301	240,715	39,021
71	Average water delivered per acre irrigated.....1939..acre-feet....	1.6	4.7	1.4	2.7	1.7	0.9	2.2	2.4
72	Average cost of water per acre irrigated.....1939..dollars....	0.22	9.46	5.00	4.51	6.85	6.03	14.14	5.16
DRAINAGE OF IRRIGATED LAND									
73	Enterprises reporting land drained or needing drainage.....1939..number....	3	15	68	14	17
74	Irrigable area in these enterprises.....1939..acres....	640	16,932	40,982	1,129	2,349
75	Irrigated area in these enterprises.....1939..acres....	640	1,814	16,091	685	1,281
76	Area for which drains have been installed.....1939..acres....	1,297	40,371	702	1,181
77	Additional area needing drainage.....1939..acres....	45	10,026	5	60	124

¹Census of Agriculture.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Less than one-tenth of 1 percent.

CENSUS OF IRRIGATION - CALIFORNIA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"]

San Diego	San Francisco	San Joaquin	San Luis Obispo	San Mateo	Santa Barbara	Santa Clara	Santa Cruz	Shasta	Sierra	
5,814	91	5,375	1,916	829	1,339	5,608	1,712	1,229	86	1
3,902	112	5,730	1,923	841	1,408	6,237	1,855	1,213	92	2
3,320	89	4,444	373	380	682	3,432	464	865	65	3
2,415	59	4,368	373	403	551	3,708	317	809	54	4
62.3	40.7	1.7	.....	-4.2	23.8	-7.4	46.4	9.4	20.4	5
3,507	59	3,532	201	177	518	2,879	312	727	39	6
2,209	31	3,505	237	244	416	3,294	223	701	50	7
413	24	912	172	209	164	553	152	158	6	8
206	28	863	136	159	135	414	94	108	4	9
949,405	390	752,712	1,449,352	125,066	821,150	606,800	105,059	534,691	60,105	10
467,004	338	518,641	160,026	21,934	205,740	251,527	35,560	395,201	46,872	11
119	4	117	429	57	302	73	77	447	721	12
435,942	211	389,134	105,172	8,570	155,547	227,628	23,475	347,149	45,099	13
124	4	110	523	48	300	79	75	478	764	14
31,092	127	129,507	54,854	13,364	50,193	23,899	12,085	48,052	1,773	15
75	5	142	319	64	306	43	80	304	296	16
2,725,120	28,800	902,400	2,128,640	290,560	1,756,800	835,200	280,960	2,461,440	613,120	17
51,664	294	317,790	13,453	9,635	42,200	95,959	10,868	37,273	7,307	18
50,672	294	300,136	12,646	9,175	40,345	95,371	10,763	25,088	6,517	19
184	.....	164	120	443	489	182	54	112	5	20
808	.....	17,490	687	17	1,366	406	51	12,073	785	21
42,510	585	281,629	12,013	8,362	36,418	96,130	5,136	41,173	9,104	22
24,996	372	183,923	5,302	7,142	16,335	70,312	1,294	50,215	15,292	23
21.5	-49.7	12.8	12.0	15.2	15.9	-0.2	111.6	-9.5	-19.7	24
90,693	370	415,044	15,897	12,593	59,320	136,352	12,927	69,543	16,240	25
90,585	606	357,408	14,329	9,287	53,788	104,434	6,512	70,150	10,070	26
68,401	412	324,404	11,229	9,449	37,795	86,761	2,700	110,382	18,547	27
39,029	76	97,254	2,444	2,958	17,120	40,393	2,059	32,270	8,933	28
48,075	21	75,779	2,316	925	17,375	6,304	1,375	28,977	966	29
87,644	370	408,038	15,734	11,447	57,438	133,968	12,840	63,635	15,740	30
76,283	603	346,221	13,476	8,599	50,078	102,243	5,832	60,253	9,110	31
32,148	412	231,125	10,872	8,164	34,408	75,348	2,069	58,903	15,873	32
15.0	-38.6	17.9	16.8	33.1	14.7	31.0	120.2	5.6	72.8	33
35,980	76	90,248	2,281	1,812	15,238	38,009	1,972	26,362	8,433	34
33,713	18	64,592	1,463	237	13,660	6,113	696	19,080	6	35
11.1	87.0	61.3	8.4	43.9	20.5	38.2	30.6	9.4	15.6	36
10.0	84.8	65.2	5.4	25.5	21.3	47.6	29.4	10.6	17.1	37
58.9	79.5	77.9	85.5	84.2	73.5	71.6	84.6	58.6	46.4	38
55.8	97.0	81.3	89.1	97.2	72.7	94.0	88.1	68.3	99.9	39
20,289,949	56,177	14,771,795	789,432	892,727	4,129,250	8,347,290	669,730	2,491,232	50,444	40
20,167,866	56,153	14,723,444	785,947	889,844	4,093,831	8,336,818	668,780	2,477,281	50,295	41
122,063	24	48,351	3,485	2,883	35,419	10,472	950	13,951	149	42
12,451,607	112,075	12,927,594	1,027,917	975,360	6,943,723	8,379,870	405,568	2,462,686	25,000	43
4,948,939	70,831	7,432,763	304,119	488,856	1,418,022	4,364,803	388,145	3,020,700	100,810	44
63.0	-49.9	14.3	-23.2	-8.5	-40.5	-8.4	65.1	1.2	101.8	45
231.50	151.83	36.20	50.17	77.99	71.89	62.31	52.16	39.15	3.20	46
153.36	185.86	37.34	76.28	113.43	138.66	81.95	69.54	40.87	2.74	47
153.94	171.92	32.16	27.97	59.88	41.21	57.93	187.60	51.28	6.35	48
392.73	191.08	46.48	58.68	92.65	97.85	86.99	61.62	66.84	6.90	49
20,609,905	56,177	14,988,118	819,633	894,692	4,164,231	8,374,626	672,479	2,505,428	52,444	50
12,836,986	113,200	13,050,129	1,053,867	976,727	7,199,523	8,390,475	411,168	2,672,036	25,000	51
5,592,954	70,831	7,516,649	317,729	491,356	1,498,233	4,551,153	388,645	3,344,079	101,940	52
60.5	-50.4	14.9	-22.2	-8.4	-42.2	-0.2	63.6	-6.2	109.8	53
227.25	151.83	36.11	51.56	71.05	70.20	61.42	52.02	36.03	3.23	54
141.73	186.80	36.51	73.55	105.17	133.84	80.34	63.14	38.09	2.48	55
81.77	171.92	23.17	28.30	52.00	39.94	52.46	143.94	30.30	5.50	56
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	
1,394	70	67	25	295	241	557	6	2119	3	28
50,279	16,320	271	1,530	12,822	8,846	41,298	286	94,476	569	7
478,362	53,419	6,133	5,952	91,967	93,740	324,081	1,862	788,638	3,794	46
9.51	3.27	22.63	3.84	7.17	10.60	7.85	6.51	8.35	6.67	140
15.15	.....	21.32	3.82	11.44	12.72	11.71	.....	10.84	.....	0.32
506,962	33,472	748,027	.....	1,121	16,771	39,063	.....	153,489	.....	0.31
15.32	2.61	5.98	.....	5.84	7.51	17.72	.....	9.63	.....	0.40
57,609	12,814	154,575	.....	221	2,280	2,265	.....	16,242	.....	2,400
8.80	2.61	4.84	.....	5.07	7.36	17.25	.....	9.45	.....	0.40
519,295	209,636	705,960	.....	1,137	3,060	67,820	.....	1,692	.....	12,000
8,476,532	904,500	7,948,643	.....	.....	.....	622,579	.....	19,795	.....	0.20
1,425	72	2,499	27	289	262	572	6	2,125	2	66
50,341	3,328	286,022	1,680	12,855	9,521	41,747	291	95,459	(5)	29
70,741	2,356	784,019	3,295	33,186	17,077	89,600	512	128,800	(5)	1,227
1.4	0.7	2.7	2.0	2.6	1.8	2.1	1.8	1.3	(5)	3,255
13.40	4.32	5.09	3.84	7.13	11.39	8.21	5.25	8.78	(5)	2.7
20	.....	82	.....	8	12	16	.....	9	.....	71
5,232	.....	224,351	.....	862	360	1,944	.....	792	.....	72
3,627	.....	171,733	.....	740	280	1,807	.....	583	.....	74
1,111	.....	189,315	.....	389	119	457	.....	137	.....	75
265	.....	7,063	.....	185	10	26	.....	14	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.
⁵ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Siskiyou	Solano	Sonoma	Stanislaus		
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS¹							
1	All farms.....1940..number....	1,208	1,466	6,209	5,734		
2	.....1930..number....	1,155	1,479	6,562	5,743	
3	Irrigated farms.....1940..number....	915	453	181	5,315		
4	.....1930..number....	744	339	247	5,172	
5	Increase or decrease (-), 1930-1940.....percent....	23.0	33.6	-26.7	2.8		
Operated by—							
6	(a) Owners and managers.....1940..number....	732	344	155	4,319		
7	.....1930..number....	658	273	208	4,211	
8	(b) Tenants.....1940..number....	183	109	26	986		
9	.....1930..number....	86	66	39	961	
10	Land in all farms.....1940..acres....	699,495	520,263	700,077	689,461		
11	Land in irrigated farms.....1940..acres....	589,742	250,065	51,768	470,158		
12	Average per farm.....1940..acres....	645	552	286	88		
13	(a) Operated by owners and managers.....1940..acres....	535,041	205,705	48,788	392,756		
14	Average per farm.....1940..acres....	731	598	315	91		
15	(b) Operated by tenants.....1940..acres....	54,701	44,360	2,980	77,402		
16	Average per farm.....1940..acres....	299	407	115	78		
17	Approximate land area.....1940..acres....	4,040,320	529,280	1,010,560	963,840		
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres....	91,783	53,694	4,267	286,151		
19	(a) Cropland harvested.....1939..acres....	61,640	45,583	3,961	257,814		
20	(b) Crop failure.....1939..acres....	40	2,028	34	10		
21	(c) Pasture.....1939..acres....	30,103	6,083	272	28,327		
22	Area irrigated.....1929..acres....	58,655	30,370	2,530	241,712		
23	.....1919..acres....	65,602	23,650	2,126	197,249	
24	Increase or decrease (-), 1929-1939.....percent....	56.5	76.8	68.7	18.4		
25	Irrigable area in enterprises.....1940..acres....	119,922	83,467	5,026	335,745		
26	.....1930..acres....	123,016	36,642	3,595	355,721	
27	.....1920 ² ..acres....	130,654	36,078	11,256	375,270	
28	Excess of irrigable area over the area irrigated.....1940..acres....	28,139	29,773	769	49,594		
29	.....1930..acres....	64,361	6,272	1,065	114,009	
30	Area works were capable of supplying with water.....1940..acres....	102,516	61,586	4,992	316,101		
31	.....1930..acres....	99,183	32,513	3,379	340,827	
32	.....1920..acres....	70,987	28,702	3,091	309,362	
33	Increase or decrease (-), 1930-1940.....percent....	3.4	150.9	47.7	-7.3		
34	Excess, capability of works over area irrigated.....1940..acres....	10,733	27,892	725	29,950		
35	.....1930..acres....	40,528	2,143	849	99,115	
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	15.6	21.5	8.2	60.9		
37	.....1929..percent....	14.1	24.7	3.5	56.4	
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	89.5	65.8	85.5	90.5		
39	.....1929..percent....	59.1	93.4	74.9	70.9	
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars....	3,814,940	1,094,222	201,129	17,735,912		
41	(a) Cost of irrigation works and equipment.....1940..dollars....	3,768,249	1,094,007	200,689	17,270,880		
42	(b) Investment in water rights (reported).....1940..dollars....	45,691	215	440	465,032		
43	Total investment in all enterprises.....1930..dollars....	4,029,713	616,992	282,856	17,206,732		
44	.....1920..dollars....	1,589,073	535,348	107,314	9,639,519	
45	Increase or decrease (-), 1930-1940.....percent....	-5.3	77.3	-2.89	3.1		
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	37.21	13.41	40.29	56.11		
47	.....1930..dollars....	40.63	18.98	83.71	50.49	
48	.....1920..dollars....	22.39	18.65	34.72	31.16	
49	Average investment per acre irrigated.....1939..dollars....	41.56	20.38	47.14	61.98		
50	Estimated final investment in existing enterprises.....1940..dollars....	3,959,061	1,143,532	211,053	19,717,590		
51	.....1930..dollars....	4,793,538	618,992	290,306	22,405,085	
52	.....1920..dollars....	1,614,803	560,348	125,064	17,006,504	
53	Increase or decrease (-), 1930-1940.....percent....	-17.4	84.7	-27.3	-12.0		
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	33.01	13.70	41.99	58.73		
55	.....1930..dollars....	36.97	16.89	80.75	62.98	
56	.....1920 ² ..dollars....	13.89	15.53	11.11	45.32	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number....	454	6	417	³ 1	138	85
58	Area irrigated in these enterprises.....1939..acres....	79,970	1,912	50,026	2,217	4,004	286,007
59	Cost of maintenance and operation.....1939..dollars....	86,752	1,351	141,267	509	27,826	810,985
60	Average cost, per acre irrigated.....1939..dollars....	1.08	0.71	2.82	0.23	6.95	2.84
611929..dollars....	2.24	4.00	12.20	2.23
62	Total annual charges (reported) ⁴.....1939..dollars....	85,390	816	3,779	509	848,006
63	Average annual charge per acre irrigated.....1939..dollars....	2.33	0.60	10.00	0.23	3.08
64	Area against which charges were assessed.....1939..acres....	45,265	1,360	378	2,217	330,359
65	Average annual charge per acre assessed.....1939..dollars....	1.89	0.60	10.00	0.23	2.57
66	Total charges collected ⁴.....1939..dollars....	53,391	1,540	509	1,013,779
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	4,354,323	30,658	22,048	9,425,634
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number....	279	4	435	³ 1	144	85
69	Area irrigated in these enterprises.....1939..acres....	69,396	1,672	59,518	2,217	4,168	286,025
70	Water delivered in these enterprises.....1939..acre-feet....	136,226	3,410	160,012	2,217	7,368	813,637
71	Average water delivered per acre irrigated.....1939..acre-feet....	2.0	2.0	3.0	1.0	1.8	2.8
72	Average cost of water per acre irrigated.....1939..dollars....	1.70	0.54	2.85	0.23	6.90	3.12
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number....	27	52	5	16
74	Irrigable area in these enterprises.....1939..acres....	22,962	55,806	320	308,875
75	Irrigated area in these enterprises.....1939..acres....	20,493	31,825	184	282,336
76	Area for which drains have been installed.....1939..acres....	18,085	46,880	21	178,346
77	Additional area needing drainage.....1939..acres....	362	5,000	16	11,210

¹Census of Agriculture.
²Del Norte, Marin, and Mariposa Counties.
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁴Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - CALIFORNIA

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939--Continued

[Irrigation data omitted from any of the counties listed are included under "All other counties"]

Sutter	Tehama	Trinity	Tulare	Tuolumne	Ventura	Yolo	Yuba	All other counties ¹		
1,425	1,744	329	6,372	403	1,745	1,339	562	1,245	1	
1,768	1,805	325	7,154	293	1,656	1,641	548	1,125	2	
1,084	961	199	5,474	172	1,302	668	370	36	3	
1,287	953	193	6,239	198	1,199	620	335	44	4	
-13.8	2.9	3.1	-12.3	-13.1	8.6	5.9	10.4	-13.6	5	
956	829	166	4,625	153	1,189	635	297	31	6	
1,137	861	169	5,016	192	1,052	647	256	37	7	
128	152	33	8,49	16	113	233	73	7	8	
120	92	25	1,223	6	147	173	47	7	9	
317,113	1,227,205	180,445	1,470,782	231,562	457,560	477,258	213,032	502,366	10	
230,610	447,830	57,685	841,685	48,351	337,988	268,521	98,207	15,074	11	
213	457	290	154	281	260	369	255	397	12	
191,598	415,439	45,377	704,260	46,760	321,723	214,034	86,338	14,349	13	
200	501	273	152	300	271	337	291	463	14	
39,012	32,361	12,311	137,425	1,621	16,265	54,467	11,869	725	15	
305	213	373	162	101	144	234	163	104	16	
368,480	1,903,360	2,042,240	3,100,800	1,456,000	1,188,480	661,750	406,320	1,906,560	17	
102,119	34,453	4,753	366,542	3,608	86,134	115,301	24,538	171	18	
99,099	25,030	2,990	329,645	2,851	85,562	111,626	18,618	150	19	
1,011	338	1	1,150	4	251	929	538	3	20	
2,009	9,065	1,762	35,747	153	311	3,352	5,362	16	21	
96,771	32,110	5,263	410,683	1,596	86,519	84,656	30,248	112	22	
47,305	23,153	5,810	398,662	2,892	31,716	42,493	20,773	630	23	
3.4	7.3	-9.7	-10.7	86.5	-2.7	35.9	-18.9	52.7	24	
159,897	58,578	6,938	567,364	4,384	116,181	256,001	43,337	362	25	
108,207	50,313	8,351	548,859	25,635	110,440	192,104	79,473	133	26	
102,945	44,670	15,010	764,733	25,371	50,737	104,716	71,995	822	27	
57,778	24,125	2,185	200,822	1,376	30,047	140,700	18,799	191	28	
89,436	18,203	3,088	138,176	24,239	21,921	107,246	49,225	21	29	
145,496	58,475	6,493	524,713	4,346	115,048	215,780	39,503	345	30	
122,526	48,685	7,460	531,730	7,830	100,965	153,811	51,196	111	31	
96,984	39,415	9,041	658,386	2,943	35,875	65,440	24,049	793	32	
18.7	20.1	-13.0	-1.3	-44.5	13.9	40.3	-22.8	210.8	33	
43,377	24,022	1,740	158,171	1,338	28,914	100,479	14,965	174	34	
23,755	16,575	2,197	121,047	6,234	12,446	68,955	20,948	.....	35
44.3	7.7	8.2	43.5	6.2	25.5	42.9	25.0	1.1	36	
53.3	8.1	11.3	64.7	1.2	34.1	39.6	20.6	1.6	37	
70.2	58.9	73.2	69.9	69.2	74.9	53.4	62.1	49.6	38	
80.6	66.0	70.5	77.2	20.4	87.7	55.2	59.1	.....	39
5,438,769	1,670,599	101,019	20,186,062	217,480	8,963,658	5,734,424	1,535,916	8,335	40	
5,330,957	1,670,004	100,740	20,069,853	216,075	8,633,170	5,287,482	1,532,316	8,330	41	
107,802	595	279	96,229	1,405	330,488	446,942	-3,600	8	42	
6,308,195	1,849,577	217,513	20,330,935	666,901	9,162,945	6,682,734	1,625,633	8,043	43	
2,931,118	1,048,959	206,875	12,529,432	965,667	2,691,027	2,003,591	1,486,598	19,517	44	
-13.8	-9.7	-53.6	-0.7	-67.3	-2.2	-14.2	-5.5	3.6	45	
37.38	28.57	15.56	38.47	50.04	77.91	26.58	38.88	24.16	46	
51.48	37.99	29.16	38.24	85.04	90.75	43.45	31.75	.....	47
30.22	26.61	22.88	19.03	328.12	75.01	30.62	61.82	.....	48
53.26	48.49	21.25	55.07	72.30	104.07	49.73	62.59	48.74	49	
5,553,107	1,710,424	114,071	20,331,615	221,710	9,037,358	5,743,606	1,565,778	8,635	50	
6,399,095	1,877,992	226,413	20,372,856	667,401	9,488,354	6,804,434	1,853,133	8,445	51	
3,239,043	1,081,145	215,025	12,973,985	965,667	3,066,027	3,629,826	1,981,373	19,517	52	
-13.2	-8.9	-49.6	-0.2	-66.8	-4.8	-15.6	-15.5	4.6	53	
34.73	29.20	16.44	35.84	50.57	77.79	22.44	36.13	24.41	54	
38.04	37.33	27.11	37.12	25.83	85.91	35.42	23.32	.....	55
31.46	24.20	14.33	16.97	38.06	60.43	34.66	27.52	.....	56
	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
	Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
737	447	10	140	3,057	1,514	42	535	26	145	5
97,541	33,689	366	4,423	358,299	86,374	2,926	84,738	4,432	109,782	22,369
514,371	134,901	1,138	11,081	2,327,985	416,964	15,043	641,163	57,730	403,144	8,926
5.27	4.00	3.11	2.51	6.50	4.88	5.14	7.57	13.03	3.07	0.40
4.76	4.39	2.24	8.47	20.69	10.12	2.80
230,439	67,134	769,712	12,320	14,000	274,641	27,752	76,498	4,820	67,912
3.81	3.29	4.68	8.80	5.60	9.44	18.27	2.83	0.23	4.05
77,740	33,323	261,319	15,400	2,500	30,317	1,519	32,207	20,526	22,531
2.96	2.01	2.95	0.80	5.60	9.06	18.27	2.38	0.23	3.01
211,752	60,814	339,841	667	197,407	18,635	83,009	4,814	48,564
54,000	943,700	1,758,038	168,406	852,065	361,563
775	446	10	102	2,963	1,546	48	593	18	560	25
96,150	19,390	366	2,442	344,419	91,166	2,959	85,348	2,947	113,993	22,333
411,256	43,068	313	7,754	923,855	187,994	2,545	145,645	3,973	305,723	22,769
4.3	2.2	0.9	3.2	2.7	2.1	0.9	1.7	1.3	2.7	1.0
5.22	4.96	3.11	3.12	7.06	4.96	5.15	7.92	15.04	3.98	0.40
20	3	16	1	63	36
97,611	96	93,300	(⁶)	27,660	87,588
56,510	79	55,361	(⁶)	15,764	33,409
85,453	9	785	(⁶)	20,457	62,244
4	21	42	(⁶)	1,015	868

¹ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
² Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.
³ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - CALIFORNIA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS.
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920]

ITEM (For definitions and explanations, see text)	STATE TOTAL	Alameda	Alpine	Amador	Butte	Calaveras	Colusa
FARM VALUES, 1940*							
1 Land and buildings, all farms.....dollars..	2,166,452,648	42,482,171	497,500	4,789,934	29,531,486	5,359,159	20,675,982
2 Land and buildings, irrigated farms.....dollars..	1,591,824,377	17,287,348	497,500	1,401,725	20,941,122	1,297,742	12,850,404
Operated by—							
3 (a) Owners and managers.....dollars..	1,336,867,338	13,121,403	497,500	1,330,845	18,329,450	1,211,712	10,290,544
4 (b) Tenants.....dollars..	254,957,039	4,165,945	.....	70,880	2,611,672	49,000	2,559,860
5 Average, land and buildings, per farm.....dollars..	13,880.61	25,460.01	38,269.23	27,484.80	13,960.75	10,868.47	32,128.01
6 per acre in farms.....dollars..	113.13	342.16	44.32	13.68	67.37	13.29	65.31
7 Buildings, irrigated farms reporting value.....number..	78,626	636	13	49	1,421	113	356
8 Total reported.....dollars..	250,220,347	2,820,148	72,750	193,490	4,012,588	365,096	1,712,028
9 Average, per irrigated farm reporting.....dollars..	3,182.41	4,434.13	5,596.15	3,948.78	2,823.78	3,230.85	4,809.07
10 per acre on all irrigated farms.....dollars..	17.78	55.82	6.48	1.89	12.91	3.85	8.70
11 Buildings, nonirrigated farms reporting value.....number..	46,019	1,706	.....	347	1,000	346	303
12 Total reported.....dollars..	129,487,709	5,531,346	.....	635,310	1,660,592	616,040	1,085,070
13 Average, per nonirrigated farm reporting.....dollars..	2,813.79	3,244.05	.....	1,800.86	1,660.59	1,780.46	3,584.37
14 per acre on all nonirrigated farms.....dollars..	7.87	27.95	.....	3.10	6.11	2.17	4.52
15 Implements and machinery, irrigated farms reporting value.....number..	66,427	568	13	51	1,130	112	339
16 Total reported.....dollars..	99,181,718	1,138,971	26,500	79,689	1,677,641	67,931	1,188,277
17 Average, per irrigated farm reporting.....dollars..	1,493.09	2,005.23	2,038.46	1,562.53	1,484.61	606.53	3,505.24
18 per acre, on all irrigated farms.....dollars..	7.05	22.54	2.36	0.78	5.40	0.72	6.04
19 Implements and machinery, nonirrigated farms reporting value.....number..	35,025	1,305	.....	301	604	305	254
20 Total reported.....dollars..	33,155,391	1,195,742	.....	152,325	457,376	161,227	644,332
21 Average, per acre, on all nonirrigated farms.....dollars..	2.02	6.04	.....	0.74	1.68	0.57	2.68
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940...number.....	140,038	534	17	31	514	70	119
23 1930...number.....	138,148	327	8	33	464	139	88
24 1920...number.....	24,115	264	15	35	197	140	99
25 Average size of enterprise based on irrigable area.....1940...acres.....	201	60	499	92	465	47	1,817
26 1930...acres.....	212	28	324	26	440	50	2,161
27 1920 ² ...acres.....	324	63	468	31	627	301	378
28 Diversion dams.....1940...number.....	2,714	.....	39	11	40	35	7
29 Main canals and laterals.....1940...length, miles.....	19,799.1	25.4	46.0	39.3	630.0	104.1	397.4
30 1930...length, miles.....	18,602	1	10	74	460	166	396
31 1920...length, miles.....	27,384	31	21	94	252	378	378
32 1940...capacity, c. f. s. ³	91,776	17	164	90	3,614	695	1,481
33 1930...capacity, c. f. s. ³	84,944	30	25	84	3,239	310	1,799
34 1920...capacity, c. f. s. ³	115,237	23	52	53	2,751	466	2,695
35 Pipe lines ⁴.....1940...length, miles.....	22,690.2	204.0	1.5	6.1	127.6	10.2	4.0
36 Storage dams.....1940...number.....	709	2	10	9	9	13	1
37 Reservoirs.....1940...number.....	2,652	10	10	14	12	13	51
38 1930...number.....	1,769	7	.....	4	5	18	1
39 1920...number.....	3,030	10	2	18	8	47	2
40 1940...capacity, acre-feet.....	3,581,621	33	4,000	634	17,832	122,929	51,000
41 1930...capacity, acre-feet.....	3,225,675	8,005	.....	3,010	17,622	32,514	51,000
42 1920...capacity, acre-feet.....	1,091,394	1	4	196	30	10,935	51,000
43 Wells, flowing.....1940...number.....	436	.....	.....	.....	3	.....	.....
44 1930...number.....	449	3	.....	.....	4	.....	.....
45 1920...number.....	1,415	.....	.....	.....	5	.....	.....
46 1940...yield, g. p. m.....	34,767	.....	.....	.....	100	.....	.....
47 1930...yield, g. p. m.....	65,763	74	.....	.....	.....	58	.....
48 1920...yield, g. p. m.....	287,187	.....	.....	.....	.....	65	.....
49 Wells, pumped.....1940...number.....	48,568	689	.....	18	548	18	84
50 1930...number.....	46,737	451	.....	13	462	25	43
51 1920...number.....	25,401	382	.....	4	153	20	66
52 1940...yield, g. p. m.....	28,297,969	238,835	.....	14,250	446,641	1,480	112,043
53 1930...yield, g. p. m.....	24,265,167	105,362	.....	2,810	299,157	1,502	45,360
54 1920...yield, g. p. m.....	10,608,476	95,329	.....	150	53,890	1,205	48,735
55 Pumping plants.....1940...number.....	52,217	711	.....	23	618	23	148
56 1930...number.....	46,728	428	.....	16	490	55	93
57 1920...number.....	21,561	290	.....	9	157	32	103
58 Prime movers.....1940...capacity, hp.....	968,351	9,881	.....	359	11,364	136	7,492
59 1930...capacity, hp.....	820,767	4,374	.....	152	8,761	492	9,843
60 1920...capacity, hp.....	386,200	3,797	.....	34	2,863	234	6,931
61 Pumps.....1940...capacity, g. p. m.....	39,147,470	278,414	.....	18,360	752,272	3,530	905,530
62 1930...capacity, g. p. m.....	33,240,589	115,677	.....	6,214	362,497	7,572	947,395
63 1920...capacity, g. p. m.....	16,773,692	112,508	.....	1,890	113,036	7,886	528,610
64 Pumping lift, from all sources.....1940...average, feet.....	55	57	.....	22	31	51	42
65 1930...average, feet.....	53	86	.....	25	28	45	29
66 1920...average, feet.....	41	40	.....	32	24	41	25
67 from pumped wells.....1940...average, feet.....	57	57	.....	26	32	58	59
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷							
68 Enterprises reporting pay roll.....number.....	892	1	1	2	13	2	12
69 Irrigated area in these enterprises.....acres.....	2,949,047	(⁶)	(⁶)	(⁶)	53,293	(⁶)	68,006
70 Wages and salaries paid and payable.....dollars..	4,901,580	(⁶)	(⁶)	(⁶)	128,791	(⁶)	65,887
71 Persons employed during week ending April 29.....number..	4,425	(⁶)	.....	(⁶)	96	(⁶)	66

* Census of Agriculture.

¹ Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — CALIFORNIA

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1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Contra Costa	El Dorado	Fresno	Glenn	Humboldt	Imperial	Inyo	Kern	Kings	Lake	Lassen	Los Angeles	
35,987,198	7,624,443	108,196,176	22,393,963	24,794,775	32,566,637	6,872,340	67,508,884	31,781,929	8,834,919	6,673,291	221,442,231	1
11,440,278	4,841,901	100,899,012	15,534,527	2,204,614	31,533,645	5,909,510	60,615,974	28,320,822	2,613,789	5,777,300	172,996,795	2
9,812,535	4,535,601	89,590,581	13,607,675	1,755,935	24,756,390	1,642,060	49,096,635	22,799,182	2,510,989	5,305,800	143,456,726	3
1,827,743	306,300	11,308,431	1,926,852	448,879	6,777,255	4,267,450	11,009,339	5,522,640	102,800	471,500	29,540,069	4
26,420.87	11,780.78	11,678.13	14,841.40	11,023.07	13,111.70	50,508.63	34,169.09	15,839.39	18,537.51	19,193.69	3,916.16	5
173.27	45.19	109.37	60.02	22.79	78.13	36.29	58.99	71.25	46.02	11.28	581.78	6
419	403	8,441	1,025	198	2,163	99	1,731	1,757	194	293	7,335	7
1,742,982	1,251,520	18,946,464	3,175,061	462,335	2,897,216	445,010	5,227,103	3,796,752	526,932	1,127,140	28,625,433	8
4,159.81	3,105.51	2,244.58	3,097.62	2,335.03	1,399.44	4,495.05	3,019.70	2,160.93	3,932.33	3,846.89	3,902.58	9
26.40	11.68	20.54	12.27	4.78	7.18	2.73	5.09	9.55	9.28	2.20	96.27	10
1,465	440	837	286	1,828	237	98	378	329	671	175	4,063	11
6,289,389	840,436	1,185,178	800,590	5,033,932	186,080	150,165	613,242	413,049	1,384,890	248,655	13,124,234	12
4,293.10	1,810.08	1,415.98	2,799.23	2,753.79	785.15	1,532.30	1,622.33	1,255.47	2,063.79	1,427.74	3,230.13	13
26.38	5.63	2.19	2.83	6.99	12.91	7.25	0.95	3.77	8.00	2.65	43.87	14
370	358	7,417	908	178	1,789	101	1,620	1,665	123	283	5,933	15
905,224	400,000	7,964,995	1,551,066	175,002	3,107,574	208,546	3,810,237	2,575,227	172,701	490,980	6,440,364	16
2,446.55	1,117.32	1,073.88	1,708.22	983.16	1,737.05	2,064.81	2,352.00	1,546.68	1,404.07	1,734.91	1,104.13	17
13.71	3.73	8.63	5.99	1.81	7.70	1.28	3.71	6.48	3.04	0.96	21.66	18
1,059	337	537	258	1,571	142	76	279	243	511	148	3,254	19
1,144,745	163,915	345,526	469,987	1,319,009	103,370	48,945	288,350	217,108	391,318	143,735	2,765,988	20
4.80	1.10	0.64	1.66	1.83	7.17	2.38	0.45	1.98	2.26	1.52	9.24	21
163	45	7,190	256	72	5	50	1,433	1,341	121	216	1,655	22
187	82	6,813	274	81	3	48	1,439	992	104	121	1,380	23
56	91	2,968	213	33	17	87	375	345	70	175	1,863	24
313	486	109	736	57	108,509	368	344	439	39	406	178	25
460	537	107	524	30	338,186	192	297	644	41	631	212	26
1,212	185	370	950	20	31,227	1,126	544	1,423	26	491	196	27
3	24	41	16	13	1	23	12	13	5	229	29	28
149.7	321.7	1,838.2	517.9	63.0	1,979.8	105.9	1,942.4	715.3	5.3	265.3	136.4	29
286	284	1,423	367	27	2,050	229	1,257	684	7	173	306	30
361	1,378	3,342	510	40	3,227	136	594	783	19	513	553	31
384	272	12,599	4,042	152	7,500	387	4,547	7,984	65	1,194	2,141	32
280	156	9,206	2,723	73	9,200	604	4,749	8,911	10	1,038	1,392	33
339	390	10,765	2,515	200	10,575	1,368	6,314	13,586	242	2,732	5,059	34
96.2	26.7	1,506.2	70.2	10.6	18.6	38.8	1,206.5	110.6	23.7	2.1	2,775.7	35
2	14	2	3	1	.....	1	83	3	3	36	22	36
9	13	8	6	2	.....	4	644	9	4	42	338	37
2	11	46	6	6	.....	20	415	6	2	18	147	38
1	35	72	9	3	.....	18	536	20	9	31	411	39
20	11,826	2,514	50,200	(^e)	.....	803	234,363	3,061	320,702	94,581	23,483	40
101	11,110	148	50,215	22	.....	44,619	209,794	27	422,000	49,331	101,000	41
5	19,966	141	8	6	.....	1,006	61,183	6,063	181	194,422	37,591	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	4	2	.....	.....	.....	9	.....	.....	.....	.....	10	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	123	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,629	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,215	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41,336	49
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,118	50
181	10	9,058	279	21	.....	3	2,172	1,792	133	29	1,919	51
162	9	8,658	295	14	.....	23	1,844	1,943	70	3	2,223	52
49	6	2,281	263	.....	.....	1	983	498	17	4	1,180,953	53
38,231	985	5,346,337	255,558	13,650	(^e)	3,160	1,645,637	1,220,107	49,635	12,157	1,188,056	54
46,800	740	4,782,984	200,228	7,060	.....	27,945	1,026,277	769,051	26,920	6,215	1,331,797	55
5,897	780	1,280,347	176,251	.....	.....	900	4,088	202,967	5,545	1,305	.....	56
227	14	9,255	325	33	.....	4	2,203	1,839	147	39	2,262	57
196	24	8,557	315	31	.....	.....	1,818	1,360	83	9	1,351	58
56	6	2,130	215	3	.....	1	869	346	33	11	1,854	59
5,511	97	107,774	12,130	352	.....	157	67,638	25,913	1,037	531	72,246	60
6,215	151	98,813	11,643	458	.....	.....	1,261	36,893	19,603	247	64,622	61
3,236	15	32,361	9,214	36	.....	38	137	12,504	5,225	241	45,752	62
466,450	2,797	5,756,112	1,875,398	19,025	.....	28,300	3,260	1,637,796	1,303,681	59,955	1,297,372	63
362,421	3,230	4,866,219	1,751,668	14,904	.....	.....	927,895	1,054,207	779,826	36,935	7,415	64
74,004	830	1,442,383	1,065,729	2,000	.....	900	4,558	1,219,402	283,339	13,111	6,990	65
79	100	29	30	36	.....	19	32	91	28	33	93	66
55	56	31	26	24	.....	.....	53	67	37	27	86	67
44	37	22	23	11	.....	70	24	53	23	22	60	68
92	137	29	31	35	(^e)	.....	36	91	23	33	93	69
3	4	23	7	5	.....	.....	.....	.....	.....	.....	147	70
20,792	6,005	402,380	85,337	1,008	.....	3	422,789	3,903	119,384	.....	115,146	71
50,149	15,202	263,458	96,211	9,208	.....	.....	890,621	23,547	149,288	.....	528,531	72
26	22	274	60	16	.....	.....	523	.....	.....	.....	473	73

4 Includes siphons and farm pipe lines reported.
 5 Data for less than 3 enterprises shown with permission of the enterprise involved.
 6 Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
 7 Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — CALIFORNIA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Madera	Mendocino	Merced	Modoc	Mono	Monterey	Napa
FARM VALUES, 1940^a							
1 Land and buildings, all farms.....dollars..	23,312,999	21,369,769	51,442,798	11,449,054	1,790,079	66,426,711	25,120,711
2 Land and buildings, irrigated farms.....dollars..	18,048,007	4,091,557	45,396,790	10,222,964	1,630,142	47,651,826	4,185,023
Operated by—							
3 (a) Owners and managers.....dollars..	15,851,767	3,406,087	35,294,074	8,423,554	1,328,942	23,770,136	3,617,591
4 (b) Tenants.....dollars..	2,196,300	685,470	10,112,716	1,799,410	331,200	23,681,690	567,432
5 Average, land and buildings, per farm.....dollars..	15,887.98	25,256.52	13,266.16	19,215.10	21,014.46	45,210.46	20,217.50
6 per acre in farms.....dollars..	91.26	47.46	78.89	21.66	32.33	129.96	88.27
7 Buildings, irrigated farms reporting value.....number..	1,119	156	3,316	514	73	1,001	206
8 Total reported.....dollars..	2,823,048	1,006,474	8,115,460	1,594,181	252,242	4,810,358	1,396,293
9 Average, per irrigated farm reporting.....dollars..	2,522.93	6,451.76	2,447.36	3,101.52	3,455.37	4,805.55	6,778.12
10 per acre on all irrigated farms.....dollars..	14.27	11.67	14.10	3.38	4.91	13.12	29.45
11 Buildings, nonirrigated farms reporting value.....number..	389	1,633	333	144	10	912	1,520
12 Total reported.....dollars..	712,828	3,967,401	651,970	202,410	30,400	3,529,592	6,391,561
13 Average, per nonirrigated farm reporting.....dollars..	1,832.46	2,429.52	1,957.87	1,405.62	3,040.00	3,870.17	4,204.99
14 per acre on all nonirrigated farms.....dollars..	2.28	4.51	2.18	1.82	5.72	3.07	20.48
15 Implements and machinery, irrigated farms reporting value.....number..	1,091	156	3,178	500	62	963	186
16 Total reported.....dollars..	1,636,543	307,695	3,826,825	880,372	102,415	3,549,963	365,434
17 Average, per irrigated farm reporting.....dollars..	1,500.04	1,972.40	1,204.16	1,760.74	1,651.85	3,686.36	1,964.70
18 per acre, on all irrigated farms.....dollars..	8.27	3.57	6.65	1.87	1.99	9.68	7.71
19 Implements and machinery, nonirrigated farms reporting value.....number..	318	1,238	285	123	6	781	1,294
20 Total reported.....dollars..	532,919	876,946	345,894	134,816	3,850	1,191,739	1,256,280
21 Average, per acre, on all nonirrigated farms.....dollars..	1.71	1.00	1.16	1.21	0.72	1.24	4.03
ENTERPRISES AND IRRIGATION WORKS							
JANUARY 1							
22 Enterprises.....1940...number.....	1,150	85	530	347	54	952	175
23 ..1930...number.....	1,108	99	616	334	42	632	97
24 ..1920...number.....	689	64	479	376	73	189	32
25 Average size of enterprise based on							
26 irrigable area.....1940...acres.....	154	100	738	431	829	120	25
27 ..1930...acres.....	190	77	683	285	814	145	35
28 ..1920...acres.....	234	183	955	298	1,670	316	44
29 Diversion dams.....1940...number.....	4	5	13	416	49	15	5
30 Main canals and laterals.....1940...length, miles.....	182.0	13.0	2,150.0	442.8	163.0	37.3	2.6
31 ..1930...length, miles.....	221	38	1,634	404	131	212	6
32 ..1920...length, miles.....	189	378	1,236	756	237	206	1
33 ..1940...capacity, c.f.s. ²	1,226	87	2,703	2,121	2,484	146	122
34 ..1930...capacity, c.f.s. ²	2,731	47	8,026	1,607	619	776	40
35 ..1920...capacity, c.f.s. ²	2,066	86	3,972	3,078	1,526	528	20
Pipe lines ³.....1940...length, miles.....	153.4	34.2	240.9	8.9	2.8	791.0	79.7
36 Storage dams.....1940...number.....	1	2	4	60	6	1	9
37 Reservoirs.....1940...number.....	37	4	8	66	5	10	10
38 ..1930...number.....	13	2	36	40	6	14	8
39 ..1920...number.....	107	10	64	71	12	9	3
40 ..1940...capacity, acre-feet.....	81	93	283,035	579,781	44,300	117	378
41 ..1930...capacity, acre-feet.....	32	128	379,045	591,080	42,801	34	77
42 ..1920...capacity, acre-feet.....	418	296	20,651	80,285	44,740	54	1
43 Wells, flowing.....1940...number.....	.....	.....	.....	114	2	.....	2
44 ..1930...number.....	.....	1	1	70	.....	.....	1
45 ..1920...number.....	8	.....	13	71	.....	1	.....
46 ..1940...yield, g.p.m.....	.....	.....	.....	3,151	(⁴)	.....	(⁴)
47 ..1930...yield, g.p.m.....	.....	5	1,500	1,532	.....	.....	45
48 ..1920...yield, g.p.m.....	2,100	.....	3,212	5,607	.....	400	1,000
49 Wells, pumped.....1940...number.....	1,859	50	785	6	3	1,351	129
50 ..1930...number.....	1,469	44	813	3	12	1,176	70
51 ..1920...number.....	753	14	543	7	10	806	11
52 ..1940...yield, g.p.m.....	1,384,073	29,367	642,284	2,081	900	1,348,392	41,173
53 ..1930...yield, g.p.m.....	941,356	21,850	607,767	2,007	5,680	1,012,242	16,682
54 ..1920...yield, g.p.m.....	189,455	1,859	299,395	675	5,919	407,310	9,005
55 Pumping plants.....1940...number.....	1,891	110	880	14	3	1,320	197
56 ..1930...number.....	1,476	93	799	5	12	855	102
57 ..1920...number.....	701	39	539	11	9	203	31
58 Prime movers.....1940...capacity, hp.....	30,627	1,215	15,970	270	25	39,749	1,004
59 ..1930...capacity, hp.....	29,088	863	12,948	59	316	25,331	1,020
60 ..1920...capacity, hp.....	8,307	481	6,094	146	214	9,531	314
61 Pumps.....1940...capacity, g.p.m.....	1,396,168	74,199	851,245	39,044	900	1,379,356	68,915
62 ..1930...capacity, g.p.m.....	1,141,943	61,710	689,547	3,055	6,160	1,023,793	43,586
63 ..1920...capacity, g.p.m.....	396,483	18,424	349,580	3,250	5,919	406,617	21,126
64 Pumping lift, from all sources.....1940...average, feet.....	54	27	31	26	15	59	37
65 ..1930...average, feet.....	49	22	34	33	96	47	35
66 ..1920...average, feet.....	33	33	22	30	34	33	24
67 from pumped wells.....1940...average, feet.....	54	34	32	38	15	60	48
PAY ROLL AND NUMBER OF EMPLOYEES							
1939⁵							
68 Enterprises reporting pay roll.....number.....	3	2	8	14	1	6	.....
69 Irrigated area in these enterprises.....acres.....	18,472	(⁴)	242,294	25,546	(⁴)	4,544	.....
70 Wages and salaries paid and payable.....dollars..	11,446	(⁴)	290,881	21,993	(⁴)	5,064	.....
71 Persons employed during week ending April 29.....number..	12	(⁴)	241	43	(⁴)	12	.....

^aCensus of Agriculture.¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION—CALIFORNIA

1930, AND 1920: AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Nevada	Orange	Placer	Plumas	Riverside	Sacramento	San Benito	San Bernardino	San Diego	San Francisco	San Joaquin	San Luis Obispo	
3,250,032	131,224,245	12,224,957	2,756,019	63,385,967	43,549,790	20,076,389	86,507,495	64,763,677	1,752,099	104,917,721	34,559,739	1
2,338,719	122,805,100	8,117,042	2,441,340	53,059,052	31,925,483	11,825,555	75,290,520	48,265,894	1,641,885	91,813,796	8,967,002	2
2,060,919	109,757,859	7,272,442	2,295,240	49,652,399	25,151,568	9,992,975	72,270,188	44,308,929	1,397,950	71,726,104	5,129,872	3
277,800	13,047,241	844,600	146,100	3,406,653	6,773,915	1,832,580	3,010,332	3,956,965	244,035	20,087,692	3,837,130	4
7,693.15	22,566.17	8,900.27	18,779.54	17,049.82	14,671.64	20,077.34	16,092.46	12,312.73	19,781.75	20,660.17	24,040.22	5
28.15	757.62	77.78	16.78	148.13	132.52	96.47	438.67	103.35	4,857.65	177.03	56.03	6
289	4,212	901	125	2,831	2,137	573	3,935	3,702	79	4,287	357	7
751,005	12,728,992	2,345,219	619,090	8,438,263	6,989,605	1,975,820	13,493,607	10,792,349	609,086	13,433,068	1,123,288	8
2,598.63	3,022.08	2,602.91	4,952.72	2,980.67	3,270.76	3,448.20	3,429.13	2,915.26	7,709.95	3,133.44	3,146.46	9
9.04	78.53	22.47	4.25	23.56	29.01	16.12	78.63	23.11	1,802.03	25.90	7.02	10
180	567	523	33	1,469	1,240	401	1,267	1,824	7	1,063	1,459	11
309,200	1,307,510	979,565	98,200	2,516,872	3,309,951	1,173,103	3,618,086	3,686,410	22,064	2,332,019	3,891,935	12
1,717.78	2,306.01	1,872.87	2,875.76	1,713.32	2,669.32	2,925.44	2,855.63	2,021.06	3,152.00	2,193.81	2,667.54	13
9.96	24.29	8.87	6.55	9.10	17.38	2.04	6.66	7.64	424.31	9.96	3.02	14
278	2,581	785	119	2,186	1,831	545	2,393	2,522	70	3,848	333	15
204,870	3,160,313	574,447	172,053	2,654,081	2,628,705	962,160	2,412,543	2,204,086	80,745	6,685,852	753,011	16
736.94	1,224.45	731.78	1,445.82	1,214.13	1,435.67	1,765.43	1,006.17	873.95	1,153.50	1,737.49	2,261.29	17
2.47	19.50	5.50	1.18	7.41	10.91	7.85	14.06	4.72	238.89	12.89	4.71	18
155	292	377	28	959	929	375	685	1,101	7	885	1,175	19
64,142	304,177	260,549	20,234	811,573	755,496	506,893	594,469	844,563	7,500	852,153	1,908,652	20
2.07	5.65	2.36	1.35	2.93	3.97	0.88	1.09	1.75	144.23	3.64	1.48	21
49	1,117	81	122	982	1,575	428	996	1,638	79	2,565	316	22
94	1,035	53	116	1,034	2,083	383	936	776	50	2,572	328	23
96	1,012	64	102	807	1,159	217	622	637	33	1,233	128	24
2,618	137	814	295	249	99	109	154	55	5	162	50	25
1,422	136	877	214	247	68	170	170	117	12	139	44	26
58	112	625	277	281	122	106	296	107	12	263	88	27
42	6	21	190	36	2	37	34	40	.....	5	37	28
306.7	67.9	167.9	59.0	402.3	123.9	46.0	90.3	48.3	.....	759.7	8.1	29
401	64	342	91	510	242	25	118	72	.....	740	11	30
345	155	347	201	431	417	93	171	155	.....	1,977	20	31
338	260	1,755	545	1,322	1,702	97	864	434	.....	3,853	111	32
406	375	511	614	1,720	1,556	29	334	187	.....	2,413	8	33
454	780	657	1,369	2,649	1,937	264	1,291	1,653	.....	2,609	53	34
53.0	1,838.6	31.1	2.2	1,783.0	243.7	116.7	2,308.1	1,984.1	24.4	579.1	131.6	35
23	18	16	1	54	2	6	30	34	.....	.....	12	36
30	58	21	3	158	7	16	146	146	.....	.....	2	37
15	45	44	2	125	19	7	130	77	.....	.....	8	38
25	27	17	1	201	7	19	99	134	.....	.....	25	39
134,065	29,512	741,216	33	29,257	214	4,228	73,404	218,565	(*)	.....	190	40
90,286	3,958	277,215	5,640	25,782	4,620	538	72,957	56,959	.....	92,546	111	41
50,021	1,044	10,112	240	113,996	698	5,996	1,399	22,142	.....	36,037	21	42
.....	.....	.....	4	129	.....	2	106	4	.....	.....	1	43
2	21	.....	.....	163	.....	4	17	52	.....	.....	2	44
3	365	.....	.....	306	.....	.....	134	5	.....	.....	3	45
.....	(*)	.....	.....	.....	.....	(*)	.....	.....	.....	(*)	.....	46
270	1,240	.....	.....	12,108	.....	.....	9,315	115	.....	.....	2,060	47
38	34,199	.....	.....	21,397	1,400	4,000	13,186	10	.....	3,300	4,010	48
1	1,368	.....	.....	69,110	.....	600	20,310	231	.....	180	3,908	49
8	1,377	41	5	1,288	.....	1,793	479	1,156	.....	3,072	303	50
5	1,151	21	2	1,471	.....	2,344	444	1,107	.....	3,037	363	51
(*)	.....	.....	.....	837	.....	1,433	365	1,122	.....	1,376	161	52
1,985	894,338	18,438	1,803	642,786	850,425	231,761	753,382	254,027	1,687	1,959,689	146,930	53
146	804,155	4,225	25	736,630	954,129	202,077	709,901	213,697	2,376	1,751,843	141,177	54
7	549,010	4,532	.....	378,010	480,229	104,860	400,293	147,860	1,725	630,697	35,862	55
16	1,411	73	8	1,418	2,111	488	1,196	1,939	65	3,408	363	56
8	1,321	40	3	1,361	2,701	410	1,100	996	60	3,212	367	57
85	1,002	44	2	628	1,465	183	583	651	48	1,371	119	58
69	49,997	599	112	30,513	22,665	9,767	53,781	13,635	182	49,494	4,943	59
38	40,961	249	11	30,492	26,202	7,892	43,075	9,013	286	44,440	4,992	60
3,334	24,495	276	170	15,473	17,283	4,009	20,120	5,190	154	19,987	1,692	61
3,160	918,533	29,079	4,225	846,097	1,468,598	253,596	860,053	297,563	1,637	3,427,855	175,030	62
484	837,770	6,875	175	932,097	1,651,959	226,727	731,627	223,812	3,306	2,528,498	199,611	63
54	604,759	8,131	9,000	404,046	788,172	114,960	423,835	161,517	1,807	997,850	62,519	64
44	83	35	30	71	36	76	94	62	.....	92	33	65
(*)	70	44	25	60	34	71	90	58	.....	98	32	66
31	51	29	10	58	28	34	82	52	.....	83	28	67
(*)	84	35	36	72	38	38	94	62	.....	92	35	68
(*)	78	5	1	68	7	13	145	24	.....	17	.....	69
(*)	64,642	28,772	(*)	84,777	9,783	2,481	76,256	30,834	.....	120,024	(*)	70
(*)	167,657	111,395	(*)	280,879	27,451	11,017	220,509	208,451	.....	229,653	(*)	71
(*)	180	73	(*)	400	27	29	309	188	.....	218	(*)	72

* Includes siphons and farm pipe lines reported.
 † Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
 ‡ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - CALIFORNIA

COUNTY TABLE II--FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		San Mateo	Santa Barbara	Santa Clara	Santa Cruz	Shasta	Sierra	Siskiyou
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	19,635,055	55,108,479	91,979,956	18,952,530	11,116,599	1,196,985	14,320,652
2	Land and buildings, irrigated farms.....dollars..	7,306,530	36,279,045	64,255,837	8,574,425	8,923,424	1,016,495	12,566,630
	Operated by—							
3	(a) Owners and managers.....dollars..	4,175,975	29,755,245	56,770,514	6,369,735	7,679,330	983,685	10,733,780
4	(b) Tenants.....dollars..	3,130,555	6,523,800	7,485,323	2,204,690	1,244,094	32,800	1,832,900
5	Average, land and buildings, per farm.....dollars..	18,923.83	53,195.08	18,722.56	18,479.36	10,082.96	15,636.23	13,734.08
6	per acre in farms.....dollars..	333.11	176.33	255.46	241.13	23.58	31.69	21.31
7	Buildings, irrigated farms reporting value.....number..	367	622	3,276	444	846	62	903
8	Total reported.....dollars..	1,863,705	5,321,692	11,488,661	1,403,610	1,941,750	264,600	2,662,020
9	Average, per irrigated farm reporting.....dollars..	5,076.22	8,555.77	3,506.92	3,161.28	2,295.21	4,267.74	2,947.97
10	per acre on all irrigated farms.....dollars..	84.97	25.87	45.68	39.47	4.91	5.65	4.51
11	Buildings, nonirrigated farms reporting value.....number..	421	612	2,077	1,215	326	20	286
12	Total reported.....dollars..	3,051,190	2,152,841	7,572,941	2,947,610	468,020	56,350	474,510
13	Average, per nonirrigated farm reporting.....dollars..	7,247.48	3,517.71	3,646.10	2,426.02	1,435.64	2,817.50	1,659.13
14	per acre on all nonirrigated farms.....dollars..	29.59	3.50	21.32	42.41	3.36	4.26	4.32
15	Implements and machinery, irrigated farms reporting value.....number..	352	580	2,974	422	730	56	796
16	Total reported.....dollars..	540,114	1,697,041	4,605,776	739,973	570,590	87,126	1,207,004
17	Average, per irrigated farm reporting.....dollars..	1,534.41	2,925.93	1,548.68	1,753.49	781.63	1,555.82	1,516.34
18	per acre, on all irrigated farms.....dollars..	24.62	8.25	18.31	20.81	1.44	1.86	2.05
19	Implements and machinery, nonirrigated farms reporting value.....number..	406	528	1,657	995	262	16	209
20	Total reported.....dollars..	597,546	860,658	1,162,165	528,911	148,327	18,380	156,608
21	Average, per acre, on all nonirrigated farms.....dollars..	5.79	1.40	3.27	7.61	1.06	1.39	1.43
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22	Enterprises.....1940...number.....	285	598	2,215	310	428	34	558
23	.....1930...number.....	353	516	2,207	182	402	16	383
24	.....1920...number.....	206	275	1,561	67	336	70	455
25	Average size of enterprise based on irrigable area.....1940...acres.....	48	99	62	42	162	478	215
26	.....1930...acres.....	26	104	47	36	175	629	321
27	.....1920...acres.....	46	137	56	40	329	265	287
28	Diversion dams.....1940...number.....	23	13	40	28	259	37	442
29	Main canals and laterals.....1940...length, miles.....	38.1	9.0	31.6	23.2	648.3	21.2	785.1
30	.....1930...length, miles.....	6	36	27	3	432	14	832
31	.....1920...length, miles.....	7	39	51	2	701	95	959
32	.....1940...capacity, c.f.s. ³	170	59	338	80	2,161	140	1,878
33	.....1930...capacity, c.f.s. ³	149	96	242	1	1,910	103	2,630
34	.....1920...capacity, c.f.s. ³	13	312	323	7	3,970	282	4,255
35	Pipe lines ⁴.....1940...length, miles.....	144.4	654.3	657.7	124.9	32.5	5.2	42.1
36	Storage dams.....1940...number.....	36	21	7	13	18	1	22
37	Reservoirs.....1940...number.....	90	69	12	56	22	1	23
38	.....1930...number.....	44	43	18	5	10	3	8
39	.....1920...number.....	157	83	8	10	12	1	29
40	.....1940...capacity, acre-feet.....	2,513	7,772	659	74	6,095	(⁵)	70,204
41	.....1930...capacity, acre-feet.....	223	308	18	189	12,477	14	133,199
42	.....1920...capacity, acre-feet.....	1,244	14,052	21	38	6,312		4,591
43	Wells, flowing.....1940...number.....					7		4
44	.....1930...number.....	2	6			5	10	3
45	.....1920...number.....	17	33	80	1	3		8
46	.....1940...yield, g.p.m.....					68		47
47	.....1930...yield, g.p.m.....	9	2,294	1,166		490	98	200
48	.....1920...yield, g.p.m.....	25,723	4,341	13,075	125	150		1,350
49	Wells, pumped.....1940...number.....	256	736	2,503	295	38	1	51
50	.....1930...number.....	385	697	2,562	189	39		14
51	.....1920...number.....	229	296	2,159	44	4	1	26
52	.....1940...yield, g.p.m.....	19,850	381,899	1,176,537	111,149	12,297	(⁵)	31,608
53	.....1930...yield, g.p.m.....	38,678	378,410	1,134,255	60,056	6,029		22,802
54	.....1920...yield, g.p.m.....	27,009	101,925	649,247	11,076	1,340	500	9,995
55	Pumping plants.....1940...number.....	365	793	2,626	352	122	1	86
56	.....1930...number.....	463	630	2,516	213	108		42
57	.....1920...number.....	251	235	1,572	59	51	1	45
58	Prime movers.....1940...capacity, hp.....	3,650	15,152	64,277	5,755	1,008	(⁵)	2,432
59	.....1930...capacity, hp.....	4,552	13,917	59,059	2,365	984		3,281
60	.....1920...capacity, hp.....	2,219	5,657	33,721	685	594		2,903
61	Pumps.....1940...capacity, g.p.m.....	42,267	419,502	1,258,183	131,569	116,470	(⁵)	151,613
62	.....1930...capacity, g.p.m.....	81,731	403,885	1,202,581	69,064	72,522		250,081
63	.....1920...capacity, g.p.m.....	26,400	543,273	780,874	19,378	47,896	500	125,674
64	Pumping lift, from all sources.....1940...average, feet.....	106	91	104	77	18	(⁵)	37
65	.....1930...average, feet.....	100	80	100	72	18		39
66	.....1920...average, feet.....	78	51	56	42	17	6	40
67	from pumped wells.....1940...average, feet.....	122	92	106	82	23	(⁵)	42
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁶								
68	Enterprises reporting pay roll.....number.....	6	8	32	2	8	1	15
69	Irrigated area in these enterprises.....acres.....	926	1,909	5,487	(⁵)	9,999	(⁵)	36,256
70	Wages and salaries paid and payable.....dollars..	3,108	6,960	10,323	(⁵)	17,048	(⁵)	36,805
71	Persons employed during week ending April 29.....number..	7	16	45	(⁵)	26		62

*Census of Agriculture.

¹Del Norte, Marin, and Mariposa Counties.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — CALIFORNIA

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Solano	Sonoma	Stanislaus	Sutter	Tehama	Trinity	Tulare	Tuolumne	Ventura	Yolo	Yuba	All other counties ¹	
34,807,542	60,848,296	75,119,376	34,315,852	17,855,708	2,123,765	105,957,416	3,858,081	96,843,976	47,096,429	10,436,780	17,003,913	1
19,862,367	5,477,013	69,109,716	29,721,029	10,572,332	1,202,920	97,090,608	1,152,070	87,087,167	36,654,094	7,920,703	414,167	2
14,618,884	5,124,551	55,841,712	26,802,084	9,493,549	1,012,220	83,530,475	1,068,300	79,926,568	28,788,818	7,144,927	397,897	3
5,243,483	352,462	13,266,004	2,918,945	1,088,793	190,700	13,560,133	83,770	7,133,599	7,865,276	775,776	16,270	4
43,846.28	30,259.74	13,002.77	27,417.92	10,777.10	6,044.82	17,736.68	6,698.08	66,866.49	42,228.22	21,407.31	10,899.13	5
79.43	105.80	146.99	128.88	23.61	20.85	115.35	23.81	257.58	136.50	80.65	27.48	6
443	179	5,190	1,022	906	197	5,174	168	1,218	815	360	35	7
2,680,877	1,225,867	15,172,770	4,140,497	2,217,334	340,355	14,238,796	372,840	8,570,354	4,171,419	1,428,357	77,757	8
5,915.75	6,847.41	2,923.46	4,051.37	2,447.99	1,727.69	2,751.99	2,219.29	7,036.42	5,118.31	3,967.66	2,221.63	9
10.48	23.68	32.27	17.95	4.95	5.90	16.22	7.71	25.36	15.53	14.54	5.16	10
973	5,900	404	298	682	126	789	222	409	433	170	1,175	11
2,729,545	19,238,296	908,685	725,520	1,202,190	190,485	1,718,340	433,290	1,878,105	1,392,716	354,945	3,458,415	12
2,805.29	3,280.73	2,249.17	2,451.08	1,762.65	1,511.79	2,177.87	1,951.78	4,591.94	3,216.43	2,084.38	2,943.33	13
10.10	29.67	4.14	8.39	1.54	1.48	2.73	2.37	15.71	6.67	3.09	7.10	14
406	171	4,753	956	627	189	4,519	154	1,125	792	328	32	15
1,348,795	380,060	5,217,141	2,552,248	742,498	89,795	6,883,211	101,562	3,648,460	3,018,981	573,586	34,706	16
3,322.16	2,222.57	1,097.65	2,689.72	1,184.21	531.33	1,523.17	659.49	3,243.08	3,811.84	1,748.74	1,084.56	17
5.39	7.34	11.10	11.07	1.66	1.56	6.18	2.10	10.79	11.24	5.84	2.30	18
696	4,495	317	275	474	89	551	185	279	379	137	867	19
930,332	3,382,510	376,714	366,193	376,459	45,726	586,709	109,167	405,198	738,745	151,438	927,242	20
3.44	5.22	1.72	4.23	0.48	0.36	0.93	0.60	3.39	3.54	1.32	1.90	21
446	152	127	799	495	189	4,874	50	636	601	163	26	22
314	234	81	1,008	492	185	5,545	85	607	411	175	21	23
251	93	106	487	333	222	3,570	53	130	254	78	13	24
187	33	2,644	200	118	37	116	88	183	426	266	14	25
117	15	4,392	167	104	45	99	304	182	467	454	6	26
144	121	3,540	211	134	68	214	479	390	412	923	63	27
1	9	5	4	56	144	85	24	20	14	14	10	28
203.1	4.2	1,972.9	401.1	300.6	179.9	945.1	51.5	28.7	274.4	218.3	8.0	29
8	.....	935	468	264	172	933	134	65	437	374	.....	30
80	2	1,681	282	419	260	2,022	193	72	294	293	3	31
1,448	82	5,743	1,967	1,004	598	3,800	779	164	3,316	519	32	32
27	.....	5,341	1,116	689	772	3,003	79	116	1,726	1,066	.....	33
111	6	6,150	1,168	1,111	1,536	8,018	251	169	1,641	786	6	34
44.1	30.1	403.9	213.3	158.9	6.8	2,011.0	6.2	1,383.9	80.3	39.5	3.3	35
4	3	6	.....	2	2	63	3	11	1	1	2	36
6	6	8	1	4	5	358	5	68	1	2	2	37
4	6	15	.....	3	6	198	20	44	3	7	1	38
4	4	4	4	14	41	527	15	23	3	9	4	39
1,508	56	112,557	(^b)	82	4	3,669	289,019	443	(^b)	(^b)	(^b)	40
8	80	421,763	.....	123	35	4,318	6,583	323	116	1,570	1	41
.....	.....	75,156	2	185	90,458	112,806	6,086	2,749	151	6,651	3	42
.....	.....	5	.....	1	.....	.....	5	4	.....	.....	.....	43
.....	.....	4	.....	1	.....	.....	1	2	.....	.....	.....	44
4	1	1	2	.....	.....	23	.....	42	.....	.....	.....	45
.....	.....	1,125	(^b)	.....	.....	.....	16	490	.....	.....	.....	46
.....	.....	3,375	.....	25	.....	.....	112	185	.....	.....	.....	47
.....	.....	400	600	.....	.....	7,173	.....	11,435	.....	.....	.....	48
494	138	224	1,162	558	2	7,603	3	838	648	198	3	49
356	210	176	1,425	521	2	8,066	10	824	540	239	13	50
322	78	100	742	281	5	4,515	2	149	285	49	7	51
235,233	68,684	253,546	747,431	223,128	(^b)	3,750,828	190	602,832	736,357	182,065	315	52
154,261	73,166	216,418	857,617	255,961	150	3,277,594	693	564,417	405,118	153,488	763	53
145,982	28,381	84,205	319,535	96,585	605	1,776,335	25	86,734	166,698	30,551	308	54
642	197	376	1,279	586	7	7,797	6	970	1,018	208	4	55
411	237	185	1,478	541	8	7,964	19	823	536	232	15	56
281	99	114	628	281	12	3,758	4	105	276	41	4	57
8,722	2,054	14,720	22,568	5,303	43	116,717	35	30,848	23,718	3,373	12	58
5,381	1,885	11,181	24,329	4,985	150	98,530	84	28,589	15,992	3,500	85	59
4,547	614	4,803	10,541	2,130	69	45,032	12	5,592	8,852	2,365	19	60
769,529	105,264	845,316	1,711,239	251,621	3,477	3,932,777	2,090	676,789	1,965,963	222,425	815	61
335,782	99,804	400,616	1,730,400	263,013	8,425	3,310,741	3,148	587,253	1,423,790	212,908	1,558	62
189,892	33,524	232,785	626,690	106,285	3,990	2,331,179	25	94,130	549,814	29,852	325	63
50	34	40	33	34	14	62	40	95	30	31	49	64
46	41	33	26	31	25	65	20	97	30	30	.....	65
34	19	31	21	27	15	43	36	82	26	24	.....	66
56	36	57	34	34	(^b)	62	57	95	39	31	.....	67
3	.....	8	8	10	.....	64	2	36	8	7	.....	68
378	.....	275,169	58,871	19,966	.....	155,804	(^b)	28,869	26,985	16,788	.....	69
322	.....	425,921	91,241	25,709	.....	168,301	(^b)	67,646	29,948	17,424	.....	70
2	.....	301	74	37	.....	191	(^b)	90	24	19	.....	71

¹ Includes siphons and farm pipe lines reported.
² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
³ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION—COLORADO

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940,

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	*66,538,880	66,341,120	66,341,120	66,341,120	66,341,120	66,341,120	66,341,120
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	51,436	63,644	59,956	59,934	46,170	24,700	16,389
Land in all farms.....acres.....	31,527,240	29,978,472	28,876,171	24,462,014	13,532,113	9,474,588	4,598,941
Farms irrigated: ¹							
Farms.....number.....	29,766	30,321	31,288	28,756	25,857	17,613	9,659
Increase or decrease (-) over preceding census.....percent.....	² -4.9	.....	8.8	11.2	46.8	82.3	.....
Proportion of all farms.....percent.....	57.9	47.6	52.2	48.0	56.0	71.3	58.9
Land in farms.....acres.....	12,522,458	(³)	10,390,299	(³)	(³)	(³)	(³)
Proportion of all farm land.....percent.....	39.7	(³)	36.0	(³)	(³)	(³)	(³)
Area irrigated.....acres.....	*2,467,548	⁵ 1,882,888	⁶ 2,291,927	(⁷)	(⁷)	1,611,271	890,735
Increase or decrease (-) over preceding census.....percent.....	² 7.7	.....	.....	.....	.....	80.9	.....
Proportion of total land area of State.....percent.....	3.7	2.8	3.5	.....	.....	2.4	1.3
Proportion of all farm land.....percent.....	7.8	6.3	7.9	.....	.....	17.0	19.4
Value of irrigated farms (land and buildings).....dollars..	268,377,191	(³)	386,053,889	(³)	(³)	(³)	(³)
Average per farm.....dollars.....	9,016.23	(³)	12,338.72	(³)	(³)	(³)	(³)
Average per acre.....dollars.....	21.43	(³)	37.16	(³)	(³)	(³)	(³)
Value of farm implements and machinery ⁸.....dollars..	25,650,123	(³)	28,127,021	(³)	(³)	(³)	(³)
Average per farm ⁸.....dollars.....	861.73	(³)	898.97	(³)	(³)	(³)	(³)
Average per acre ⁸.....dollars.....	2.05	(³)	2.71	(³)	(³)	(³)	(³)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number.....	8,713	(³)	6,509	6,634	9,065	(³)	(³)
Farms irrigated.....number.....	41,228	(³)	(³)	(³)	(³)	(³)	(³)
Area irrigated.....acres.....	3,220,685	(³)	3,393,619	3,348,385	2,792,032	(³)	(³)
Area existing works were capable of supplying with water.....acres.....	3,913,542	(³)	4,078,712	3,855,348	3,990,166	(³)	(³)
Area irrigable.....acres.....	4,283,250	(³)	4,528,251	⁹ 5,220,568	⁹ 5,917,457	(³)	(³)
Additional area existing works were capable of supplying with water.....acres.....	692,857	(³)	685,093	506,963	1,198,134	(³)	(³)
Additional irrigable area in enterprises not supplied with water.....acres.....	1,062,565	(³)	1,134,632	⁹ 1,872,203	⁹ 3,125,425	(³)	(³)
Investment in irrigation enterprises.....dollars..	106,849,343	(³)	87,603,240	88,302,442	56,636,443	11,758,703	6,368,755
Increase or decrease (-) over preceding census.....percent.....	² 22.0	(³)	-0.8	55.9	381.7	84.6	.....
Average per acre based on area works were capable of supplying with water.....dollars.....	27.30	(³)	21.48	22.90	14.19	(³)	(³)
Increase or decrease (-) over preceding census.....percent.....	² 27.1	(³)	-6.2	61.4	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	109,808,466	(³)	91,845,804	95,198,423	76,449,239	(³)	(³)
Average per acre based on irrigable area in enterprises.....dollars.....	25.64	(³)	20.28	⁹ 18.24	⁹ 12.92	(³)	(³)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	0.81	(³)	0.85	0.87	0.75	(³)	(³)

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³Not available. ⁴Irrigated land from which crops were harvested plus 330,794 acres of irrigated land used only for pasture. ⁵Irrigated land from which crops were harvested. ⁶Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ^{*}The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	51,436	31,527,240	4,769,671	2,136,754	330,794	388,343,947	12.32	84,847,413	2.69	39,021,614	1.24
Owners and managers.....	32,298	24,205,864	2,966,333	1,293,367	273,908	258,977,728	10.70	60,034,721	2.48	25,308,464	1.05
Tenants.....	19,138	7,321,376	1,803,338	843,387	56,886	129,366,119	17.67	24,812,692	3.39	13,713,150	1.87
Irrigated farms, total.....	29,766	12,522,458	2,378,532	2,136,754	330,794	288,377,191	21.43	59,423,593	4.75	25,650,123	2.05
Owners and managers.....	18,865	10,181,139	1,462,811	1,293,367	273,908	173,643,424	17.06	41,409,603	4.07	16,152,793	1.59
Tenants.....	10,901	2,341,319	915,721	843,387	56,886	94,733,767	40.46	18,013,990	7.69	9,497,330	4.06
Wholly irrigated farms.....	24,618	8,577,333	1,831,105	1,631,105	278,178	212,757,063	24.80	48,309,579	5.63	20,645,863	2.41
Owners and managers.....	15,528	6,915,864	1,113,138	1,113,138	230,757	135,581,418	19.60	33,404,980	4.83	12,860,859	1.86
Tenants.....	9,090	1,661,469	717,967	517,967	47,421	77,176,665	46.45	14,904,599	8.97	7,785,004	4.69
Partly irrigated farms.....	5,148	3,945,125	547,427	305,649	52,616	55,620,108	14.10	11,114,014	2.82	5,004,260	1.27
Owners and managers.....	3,337	3,265,275	349,673	180,229	43,151	38,062,006	11.66	8,004,623	2.45	3,291,934	1.01
Tenants.....	1,811	679,850	197,754	125,420	9,465	17,558,102	25.83	3,109,391	4.57	1,712,326	2.52
Nonirrigated farms, total.....	21,670	19,004,782	2,391,139	.....	.....	119,966,656	6.31	25,423,820	1.34	13,371,491	0.70

¹Does not include irrigated fallow land and land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Cost ¹		
								Quantity	Cost	Quantity and cost	Quantity delivered per acre ¹	Per acre	Per acre- foot
Number	Acres	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total	8,713	4,283,250	3,913,642	3,220,685	3,393,619	3,348,385	-5.1	3,039,354	3,119,691	2,968,361	2.6	1.10	0.43
Primary sources:													
Streams, gravity.....	5,185	3,996,460	3,649,834	3,010,172	3,138,966	3,028,787	-4.1	2,858,389	2,899,261	2,796,338	2.4	0.85	0.36
Streams, pumped.....	68	10,649	8,351	4,691	27,765	12,747	-83.1	2,906	4,388	2,668	1.7	2.13	1.23
Streams, gravity and pumped.....	23	46,834	36,246	24,334	2,628	9,430	760.5	24,232	24,296	24,194	3.7	2.49	0.66
Wells, pumped.....	911	80,090	76,587	56,771	12,143	10,114	367.5	56,252	55,993	55,946	2.4	3.86	1.64
Wells, flowing.....	124	6,506	6,506	6,256	3,786	4,191	65.2	6,052	2,035	2,005	1.7	0.73	0.44
Wells, pumped and flowing.....	4	902	902	482	.....	85	.....	482	370	370	1.6	0.33	0.21
Lakes, gravity.....	24	5,886	5,823	5,025	9,857	2,867	-49.0	4,461	4,975	4,411	2.9	0.68	0.23
Lakes, pumped.....	4	148	138	134	405	871	-66.9	134	134	134	2.6	4.37	1.68
Springs.....	293	16,258	14,748	12,826	10,606	10,856	20.9	12,046	11,295	10,710	2.8	0.61	0.22
Springs and streams.....	61	20,574	19,141	16,856	.....	.....	.....	16,131	16,269	15,807	2.8	0.28	0.10
Stored storm water.....	69	7,226	6,765	4,299	5,675	16,909	-24.2	3,366	3,875	3,011	1.5	0.60	0.41
City water.....	5	69	53	.....	85	11	-37.6	52	48	48	0.9	2.40	2.67
Sewage.....	1	(²)	(²)	(²)	220	195	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Streams, gravity; wells, pumped...	44	18,948	16,486	15,046	8,956	16,258	68.0	11,926	14,895	11,805	3.1	1.82	0.58
Streams, gravity; wells, flowing.....	21	42,780	42,780	39,094	8,700	67,880	349.4	19,414	19,301	19,301	0.7	0.58	0.90
Streams, pumped; wells, pumped...	1	(³)	(³)	(³)	.....	.....	.....	(³)	(³)	(³)	(³)	(³)	(³)
Waste water, seepage or drainage...	152	9,443	2,021	2,124	.....	.....	.....	² 6,219	² 5,830	² 5,059	² 2.8	² 0.56	² 0.20
Other mixed.....	94	² 21,477	² 20,161	² 17,522	158,539	165,825	³ -88.9	³ 17,262	³ 16,726	³ 16,554	³ 2.1	³ 1.03	³ 0.49
Other and not reported.....	.....	.....	.....	.....	5,088	1,359	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:⁴													
Streams, gravity and/or storage...	271	606,585	594,754	510,133	.....	.....	.....	472,111	470,922	455,714	0.6	0.41	0.72
Streams, pumped.....	23	11,624	11,603	8,892	527	.....	(⁵)	8,644	8,755	8,755	4.1	3.72	0.82
Wells, pumped.....	1,291	128,503	126,120	104,909	1,343	.....	(⁵)	104,140	103,738	103,669	1.9	3.05	1.62
Wells, flowing.....	44	5,875	5,755	4,681	.....	.....	.....	3,205	3,587	2,161	0.4	0.07	0.19

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Data for 1 enterprise with "Sewage" source of supply are included with enterprises reporting "Waste water, seepage or drainage" source of supply in the 1940 Census. ³Data for 1 enterprise with "Streams, pumped; wells, pumped" source of supply are included with enterprises reporting "Other mixed" source of supply in the 1940 Census. ⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ⁵Percent not shown when more than 1,000.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars	
Total	106,849,343	100.0	27.30	87,603,240	100.0	21.48	5.82	3,128,787	0.81	3,235,629	0.65	-0.04	3,030,771	0.87
Primary sources:														
Streams, gravity.....	85,543,712	80.1	23.44	78,971,382	90.1	20.90	2.54	2,948,272	0.56	2,989,051	0.82	-0.26	2,729,530	0.82
Streams, pumped.....	142,190	0.1	17.03	5,451,389	6.2	112.79	-95.76	4,406	1.79	27,348	3.89	-2.10	11,617	9.49
Streams, gravity and pumped.....	3,270,498	3.1	90.23	90,360	0.1	29.60	60.43	24,296	3.29	2,828	2.72	0.57	9,430	2.34
Wells, pumped.....	1,300,983	1.2	16.99	474,053	0.5	30.66	-13.67	56,002	3.87	11,403	5.36	-1.49	9,350	4.54
Wells, flowing.....	85,501	0.1	13.14	55,900	0.1	12.20	0.94	2,035	0.72	3,781	0.26	0.46	3,847	0.52
Wells, pumped and flowing.....	11,630	(³)	12.89	.....	.....	.....	.....	370	0.33	.....	.....	.....	85	4.78
Lakes, gravity.....	259,453	0.2	44.56	184,943	0.2	17.45	27.11	4,975	0.74	8,506	0.89	-0.15	1,751	1.14
Lakes, pumped.....	1,575	(³)	11.41	13,100	(³)	31.95	-20.54	134	4.37	401	3.21	1.16	801	3.21
Springs.....	121,388	0.1	8.23	153,608	0.2	11.67	-3.44	11,295	0.62	8,939	1.06	-0.44	7,695	1.20
Springs and streams.....	240,685	0.2	12.57	.....	.....	.....	.....	16,289	0.22	.....	.....	.....	.....	.....
Stored storm water.....	128,817	0.1	19.04	274,852	0.3	25.32	-6.28	3,875	0.59	5,517	0.79	-0.20	14,948	1.25
City water.....	1,465	(³)	27.64	5,200	(³)	61.18	-33.54	48	2.40	83	12.08	-9.68	11	1.82
Sewage.....	(⁴)	(⁴)	(⁴)	2,050	(⁵)	7.32	(⁴)	(⁴)	(⁴)	220	0.55	(⁴)	95	0.71
Streams, gravity; wells, pumped...	209,737	0.2	12.72	212,058	0.2	22.53	-9.81	14,935	1.80	8,956	1.74	0.06	15,913	0.75
Streams, gravity; wells, flowing.....	987,874	0.9	22.62	241,271	0.3	14.83	7.79	19,301	0.58	8,700	4.80	-4.22	67,880	0.59
Streams, pumped; wells, pumped...	(⁶)	(⁶)	(⁶)	.....	.....	.....	.....	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
Waste water, seepage or drainage...	⁴ 113,223	⁴ 0.1	⁴ 12.65	.....	.....	.....	.....	⁴ 5,868	⁴ 0.57	.....	.....	.....	.....	.....
Other mixed.....	⁵ 472,591	⁵ 0.4	⁵ 23.44	1,257,588	1.4	7.70	⁵ 16.74	⁵ 16,726	⁵ 1.03	155,729	0.26	⁵ 0.77	156,697	1.07
Other and not reported.....	.....	.....	.....	92,836	0.1	18.41	.....	.....	.....	4,167	0.89	.....	1,121	1.69
Supplemental sources:⁶														
Streams, gravity and/or storage...	11,016,432	10.3	18.57	.....	.....	.....	.....	492,418	0.28	.....	.....	.....	.....	.....
Streams, pumped.....	856,433	0.9	82.43	67,000	0.1	123.62	-41.19	4.84	8,755	6.15	-1.31	.....	.....
Wells, pumped.....	1,947,019	1.8	15.44	55,350	0.1	24.83	-9.39	103,738	3.06	1,160	5.17	-2.11	.....	.....
Wells, flowing.....	28,337	(⁷)	4.92	.....	.....	.....	.....	3,587	0.10	.....	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Data for 1 enterprise with "Sewage" source of supply are included with enterprises reporting "Waste water, seepage or drainage" source of supply in the 1940 Census. ⁵Data for 1 enterprise with "Streams, pumped; wells, pumped" source of supply are included with enterprises reporting "Other mixed" source of supply in the 1940 Census. ⁶Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION—COLORADO

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930				1940		1930		
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>
Total.....	3,220,685	628,015	3,393,619	3,348,385	-5.1	Commercial.....	97,801	53,581	311,873	226,641	-68.6
Individual and partnership....	907,754	133,143	969,708	1,014,412	-6.4	Bureau of Reclamation ³	121,746	16,336	116,034	4,135,265	4.9
Cooperative, incorporated.....	1,795,814	427,098	1,789,909	1,789,385	8.8	Office of Indian Affairs ³	7,200	(?)	15,681	14,900	-54.1
Cooperative, unincorporated....	151,956	6,119	230,400	248,409	-18.9	State.....	(?)	(?)	(?)	80	.....
Irrigation district.....	186,925	(?)	286,846	212,138	-76.7	City and/or sewage.....	34,467	(?)	26,700	5,825	29.1
Commercial.....	66,699	48,581	81,883	471,145	1.5	Other.....	610	(?)	4,360	15,350	-86.0
Bureau of Reclamation ³	93,137	13,074	4,813	4,266	42.8	IRRIGABLE AREA⁶					
Office of Indian Affairs ³	6,875	(?)	80	80	.....	Total.....	4,283,250	752,587	4,528,251	5,220,588	-5.4
State.....	(?)	(?)	26,700	5,825	-21.1	Individual and partnership....	1,170,148	174,383	1,334,545	1,730,635	-12.3
City and/or sewage.....	21,068	(?)	3,360	2,725	-86.4	Cooperative, incorporated....	2,302,380	2,461,765	2,314,837	2,419,267	8.0
Other.....	457	(?)	4,078,712	3,855,348	-4.0	Cooperative, unincorporated....	198,721	7,522	383,051	504,973	-20.2
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						Irrigation district.....	305,486	35,000	319,473	368,243	-67.6
Total.....	3,913,542	738,232	4,078,712	3,855,348	-4.0	Commercial.....	103,576	57,581	126,154	4,150,515	19.6
Individual and partnership....	1,110,597	166,538	1,194,132	1,194,422	-7.0	Bureau of Reclamation ³	150,871	16,336	15,681	15,100	8.2
Cooperative, incorporated.....	2,112,655	459,265	2,065,779	1,993,361	11.7	Office of Indian Affairs ³	16,966	(?)	30,150	6,425	14.4
Cooperative, unincorporated....	194,625	7,522	344,153	269,504	-32.1	State.....	(?)	(?)	4,360	34,350	-86.0
Irrigation district.....	233,841	35,000	1,194,132	1,194,422	-7.0	City and/or sewage.....	34,492	(?)	30,150	6,425	14.4
						Other.....	610	(?)	4,360	34,350	-86.0

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises." See text, p. 4, for explanation. ²Data for 1 "State" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³U. S. Dept. of the Interior. ⁴Does not include about 8,500 acres to which water was supplied under the Warren Act. ⁵For 1920 relates to total area. Irrigable area for that year was not reported. ⁶For explanation of areas, see text, p. 188.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940, AND AREA IRRIGATED, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total ✓	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area ✓	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	8,713	944	4,283,250	3,913,542	22.57	0.65	18.32	0.82	41,228	3,220,685	2,796,075	73,844	350,766
Individual and partnership....	7,865	194	1,170,148	1,110,597	7.48	0.68	14.89	2.54	8,592	907,754	713,585	18,941	175,228
Cooperative, incorporated.....	500	475	2,302,380	2,112,655	22.36	0.53	17.78	0.23	22,936	1,795,814	1,637,376	38,084	120,354
Cooperative, unincorporated....	251	204	198,721	194,625	5.62	0.27	11.51	0.22	2,153	151,956	115,135	1,917	34,904
Irrigation district.....	21	21	305,486	233,841	58.59	1.00	8.27	.....	2,564	186,925	172,167	10,485	4,273
Commercial.....	53	34	103,576	97,801	44.84	1.28	24.07	0.54	1,579	66,699	61,786	1,086	3,827
U. S. Bureau of Reclamation ³	5	5	150,871	121,746	96.22	1.89	74.27	4.45	2,240	83,137	74,885	200	8,552
U. S. Office of Indian Affairs ³	6	1	16,966	7,200	98.75	2.09	.....	.....	149	6,875	3,744	87	3,044
State.....	1	1	.....	.....	.....	.....	(?)	.....	.....	.....	.....	.....	.....
City and/or sewage.....	12	9	34,492	34,467	33.99	1.93	.....	.....	1,011	21,068	17,475	3,014	579
Other.....	4	.....	610	610	5.74	2.96	.....	.....	4	457	422	30	5

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 1 "State" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ⁵Data for less than 3 enterprises shown with permission of the enterprise involved. ⁶For explanation of areas and investment, see text, p. 188.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							Increase or decrease (-) 1930-40	AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940				1930		1920		Primary enterprises	Supplemental enterprises		
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment	Investment in water rights	Dollars						
Total.....	106,849,343	8,829,100	2,519,204	10,782,796	565,508	10,815,909	11,599,883	4.9	7.95	15.13	4,046	517,537
Individual and partnership....	11,345,304	8,829,100	2,519,204	10,782,796	565,508	10,815,909	11,599,883	4.9	7.95	15.13	4,046	517,537
Cooperative, incorporated.....	57,614,846	49,041,375	8,573,471	25,405,708	2,209,138	25,405,708	25,405,708	28.8	23.21	18.67	235,298	869,750
Cooperative, unincorporated....	1,214,947	1,126,874	88,073	1,181,013	33,934	1,181,013	1,181,013	.....	5.79	11.71	9,498	20,880
Irrigation district.....	15,621,957	15,332,373	289,584	13,989,959	1,631,998	12,657,718	16,269,026	23.4	65.57	8.27	390,446	225,000
Commercial.....	6,228,398	4,933,743	1,294,655	5,674,819	553,579	5,624,989	5,711,887	10.7	50.45	24.16	12,303	10,250
U. S. Bureau of Reclamation ³	12,928,239	11,715,005	1,213,234	12,928,239	.....	11,551,307	10,253,231	11.9	96.22	74.27	220,021	595,536
U. S. Office of Indian Affairs ³	711,032	711,032	(?)	711,032	.....	225,025	220,979	216.0	98.75	(?)	46,899	720,000
State.....	(?)	(?)	(?)	(?)	.....	.....	3,994	.....	.....	(?)	.....	.....
City and/or sewage.....	1,177,965	1,177,965	.....	1,171,685	6,280	498,575	117,665	136.3	34.18	.....	10,166	.....
Other.....	3,655	3,655	.....	3,500	155	578,000	1,214,742	-99.4	5.99	.....	.....	150

¹Only for enterprises serving 5 or more farms. ²Data for 1 "State" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³For explanation of investment, see text, p. 188.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter-prises 1940	Area		Total indebted-ness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ⁵	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri-gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
Total.....	Number 207	Acres 2,182,747	Acres 1,967,944	Dollars 22,810,607	Dollars 13.12	Dollars 12.88	Number 20	Dollars 1,699,096	Dollars 1,837,538	Dollars 5.61	Acres 3,098,782	Dollars 2,491,161	Dollars 2,283,876
Partnership.....	2	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	.....	.....	.....	.....	100,335	30,328	9,997
Cooperative, incorporated.....	165	1,600,985	1,505,448	8,947,155	7.21	6.73	6	326,700	341,873	15.49	2,312,518	1,760,713	1,685,867
Cooperative, unincorporated.....	8	23,008	23,608	11,615	0.42	0.49	1	2,000	1,925	.....	142,893	52,985	24,360
Irrigation district.....	14	289,945	218,500	2,356,201	6.97	11.95	7	876,273	891,669	6.61	273,071	251,133	261,773
Commercial.....	13	87,905	78,870	397,581	5.15	4.83	3	242,296	239,296	6.78	123,649	137,154	85,139
Bureau of Reclamation ⁷	4	163,438	134,318	11,093,457	104.51	83.06	3	251,827	163,775	2.56	107,845	193,598	169,862
Office of Indian Affairs ⁷	1	16,966	7,200	2,598	0.35	0.36	.....	.....	.....	.....	7,439	2,635	2,680
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31,032	62,615	44,198
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$6.31. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$5.60. ⁵Based on primary enterprises only; State average for supplemental enterprises is \$3.73. ⁶Data for 2 "Partnership" enterprises are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁷U. S. Dept. of the Interior. ⁸Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁹Data for less than 3 enterprises shown with permission of the enterprise involved. ¹⁰Represents construction costs of irrigation works less cancellations and repayments. ¹¹For explanation of areas and investment, see text, p. 188.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
Total.....	Acres 3,128,787	Dollars 2,035,680	Acres 608,498	Dollars 496,440	Dollars 0.65	Dollars 0.82	Number 700	Dollars 1,167,624	Number 3,068
Individual and partnership.....	829,716	562,911	130,063	330,844	0.68	2.54	67	8,232	149
Cooperative, incorporated.....	1,789,029	948,454	414,035	96,018	0.53	0.23	436	640,945	1,886
Cooperative, unincorporated.....	144,977	39,147	5,934	1,291	0.27	0.22	136	19,354	370
Irrigation district.....	186,925	186,553	.....	.....	1.00	.....	18	122,149	119
Commercial.....	66,607	85,426	48,581	26,281	1.28	0.54	30	67,670	169
U. S. Bureau of Reclamation.....	83,137	156,855	9,885	44,006	1.89	4.45	4	241,537	223
U. S. Office of Indian Affairs.....	6,875	14,351	.....	.....	2.09	.....	2	32,938	121
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	21,064	40,630	.....	.....	1.93	.....	8	34,689	31
Other.....	457	1,353	.....	.....	2.96	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for less than 3 enterprises shown with permission of the enterprise involved. ³For explanation of areas and investment, see text, p. 188.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS	PUMPED WELLS	PUMPING PLANTS					
	Diver-sion	Storage	Capac-ity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Num-ber	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
Total.....	Number 4,792	Number 1,015	Sec.-ft. 139,780	Miles 19,707	Miles 157.0	1,071	Ac.-ft. 2,071,522	Miles 245.1	886	G. p. m. 54,859	2,878	G. p. m. 1,929,798	2,806	#p. 49,157	2,915	G. p. m. 2,253,375
Individual and partnership.....	4,107	607	39,574	9,572	94.1	616	62,219	97.8	983	53,959	2,841	1,905,573	2,752	44,804	2,784	2,116,410
Cooperative, incorporated.....	389	342	79,866	6,898	24.7	352	1,300,028	40.9	.....	16	5,455	25	1,508	25	48,329
Cooperative, unincorporated.....	213	14	5,010	890	4.2	17	7,470	6.9	.....	17	14,520	17	353	17	15,620
Irrigation district.....	17	17	6,520	914	5.8	18	345,047	0.8	.....	.....	.....	3	30	3	3,090
Commercial.....	41	29	3,958	484	6.1	30	243,874	69.1	3	900	1	1,700	1	25	1	1,700
Bureau of Reclamation ⁴	10	2	3,620	742	18.9	2	110,814	19.0	.....	.....	.....	5	2,375	5	75,566
Office of Indian Affairs ⁴	1	.....	350	85	1.5	.....	.....	0.6	.....	.....	.....	.....	.....	.....	.....
State.....	.....	(³)	.....	.....	(³)	(³)	(³)	(³)	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	11	1	868	156	1.3	3	1,979	10.0	.....	.....	.....	.....	.....	.....	.....
Other.....	3	14	6	0.1	3	91	3	2,550	3	60	3	2,550

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³Data for 1 "State" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ⁴U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
Total.....	Number 4,792	Number 1,015	Number 3,672	Number 706	Earth and rock.....	Number 2,838	Number 951	Number	Number 523
Concrete or masonry.....	367	19	273	16	Other and mixed.....	1,112	33	1,506	136
Timber.....	427	2	742	.....	Not reported.....	48	10	151	31

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	2,818	100.0	2,263,375	100.0	32	Total, 1940.....	2,806	100.0	49,157	100.0
Electric motor.....	1,041	36.9	803,404	35.5	35	Centrifugal pump.....	1,475	52.6	22,329	45.4
Centrifugal.....	443	15.7	322,110	14.2	28	Electric.....	421	15.0	5,329	10.8
Turbine.....	580	20.6	478,106	21.2	40	Internal-combustion.....	1,040	37.1	16,774	34.1
Plunger.....	9	0.3	203	(¹)	129	Other.....	14	0.5	226	0.5
Other.....	9	0.3	2,985	0.1	23	Turbine pump.....	1,039	37.0	23,946	48.7
Internal-combustion engine.....	1,577	56.0	1,285,954	56.8	30	Electric.....	537	19.8	7,733	15.7
Centrifugal.....	1,062	37.8	780,185	34.5	23	Internal-combustion.....	474	16.9	13,743	28.0
Turbine.....	480	17.0	491,365	21.7	47	Other.....	8	0.3	2,470	5.0
Plunger.....	14	0.5	564	(¹)	31	Plunger pump.....	99	3.5	189	0.4
Other.....	21	0.7	13,840	0.6	28	Electric.....	10	0.4	30	0.1
Other kinds of motive power.....	94	3.3	91,879	4.1	44	Internal-combustion.....	14	0.5	57	0.1
Centrifugal.....	11	0.4	12,855	0.6	19	Other.....	75	2.6	102	0.2
Turbine.....	8	0.3	78,078	3.5	52	Other and mixed types of pumps.....	193	6.9	2,693	5.5
Plunger.....	72	2.5	913	(¹)	49	Electric.....	100	3.6	1,104	2.2
Other.....	3	0.1	33	(¹)	50	Internal-combustion.....	84	3.0	1,575	3.3
Mixed kinds of motive power.....	106	3.8	82,138	3.6	33	Other.....	9	0.3	14	(¹)
Centrifugal.....	48	1.7	36,776	1.6	27	Total, 1930.....	² 516	.....	11,204	.....
Turbine.....	50	1.9	44,242	2.0	39	Increase or decrease (-) 1930-1940.....	2,290	.....	37,953	.....
Plunger.....	7	0.2	120	(¹)	30					
Other.....	1	(¹)	1,000	(¹)	30					
Total, 1930.....	540	.....	437,250	.....	25					
Increase or decrease (-) 1930-1940..	2,278	.....	1,826,125	.....	7					

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 245.1	Miles 131.9	Percent 85.8	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	9.1	5.4	68.5
1 to 12 inches.....	57.6	55.7	3.4	13 to 24 inches.....	2.2	.....	.....
13 to 24 inches.....	7.4	.....	.....	Over 24 inches.....	12.4	12.1	20.7
Over 24 inches.....	21.7	12.3	136.6	Clay and other:			
Metal:				1 to 12 inches.....	14.6	8.9	64.0
1 to 12 inches.....	51.9	21.0	147.1	13 to 24 inches.....	17.5	.....	.....
13 to 24 inches.....	14.4	.....	.....	Over 24 inches.....	9.1	1.2	(³)
Over 24 inches.....	27.2	15.3	171.9				

¹ Includes siphons and farm pipe lines reported. when more than 1,000.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

³ Percent not shown

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 83,137 acres within the Grand Valley and Uncompahgre Projects which were irrigated with a primary supply of water in 1939. This acreage is not reported under any other classification. Classified as receiving supplemental water from the Bureau of Reclamation is 21,474 acres which is shown under other classifications as receiving a primary supply. Included in this latter area are acreages under the Orchard Mesa Irrigation District of the Grand Valley Project and the Fruitgrowers Dam, which are served under special contracts. (See text for explanation of supplemental enterprises.)

The investment attributed to the Bureau of Reclamation in State table 7 includes the construction costs incurred by the United States in providing both primary and

supplemental supplies. Drainage costs and the non-Federal funds advanced for the construction of a power plant on the Grand Valley Project are not included.

Data relating to Bureau of Reclamation irrigation in Colorado do not include figures on the Colorado-Big Thompson Project under construction in the northern part of the State, the San Luis Valley and the Pine River Projects under construction in southern Colorado, or the Paonia Project authorized for construction in western Colorado. These projects when completed will provide supplemental water for 1,054,074 acres. The Pine River Project will also bring 36,400 acres of new land under irrigation.

Data relating to the Mancos Project being constructed on the West Mancos River under the Water Conservation and Utilization Program are not included in the 1940 Census of Irrigation.

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	238	301	480	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	687,246	1,018,260	¹ 1,528,311	(a) Enterprises reporting lands drained and/or needing drainage..percent..	25.6	³ 21.2	¹ 17.5
Area irrigated in these enterprises.....acres...	466,804	(2)	(2)	(b) All irrigation enterprises.....percent..	3.7	6.4	3.4
Area for which drains have been installed..acres...	119,286	215,600	113,869	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	35,792	148,693	220,711	(a) Irrigable area reporting.....percent..	22.6	35.8	¹ 21.9
				(b) Irrigated area reporting.....percent..	33.2	(2)	(2)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census.

²Not available.

³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	5,508,935	5,863,140	13,877,292	4,618,024	3,786,028	4,848,103	890,911	2,077,112	9,029,189
Area irrigated by these enterprises.....acres...	2,237,327	2,103,937	2,446,702	1,929,547	1,562,291	1,752,587	307,780	541,646	694,115
Average water per acre irrigated.....acre-feet..	2.5	2.8	5.7	2.4	2.4	2.8	2.9	3.8	13.0
Total water delivered to irrigators.....acre-feet..	7,083,593	1,640,805	3,233,531	3,113,469	1,699,100	1,832,530	3,970,124	141,705	1,401,001
Area irrigated by these enterprises.....acres...	2,961,117	1,001,425	1,504,593	2,006,987	933,468	1,089,659	954,130	67,957	414,934
Average water per acre irrigated.....acre-feet..	2.4	1.8	2.1	1.6	1.8	1.7	4.2	2.1	3.4
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	174,598	.....	.....	584	.....	.....	174,014	.....	.....
Area irrigated by these enterprises.....acres...	78,237	.....	.....	449	.....	.....	77,788	.....	.....
Average water per acre irrigated.....acre-feet..	2.2	.....	.....	1.3	.....	.....	2.2	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	275,502	.....	.....	186,958	.....	.....	88,544	.....	.....
Area irrigated by these enterprises.....acres...	352,958	.....	.....	252,600	.....	.....	100,358	.....	.....
Average water per acre irrigated.....acre-feet..	0.8	.....	.....	0.7	.....	.....	0.9	.....	.....
Total water delivered to irrigators.....acre-feet..	302,118	.....	.....	167,841	.....	.....	134,277	.....	.....
Area irrigated by these enterprises.....acres...	480,955	.....	.....	248,407	.....	.....	232,548	.....	.....
Average water per acre irrigated.....acre-feet..	0.6	.....	.....	0.7	.....	.....	0.6	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	198,149	.....	.....	.....	.....	.....	198,149	.....	.....
Area irrigated by these enterprises.....acres...	107,345	.....	.....	.....	.....	.....	107,345	.....	.....
Average water per acre irrigated.....acre-feet..	1.8	.....	.....	.....	.....	.....	1.8	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	3,220,685	100.0	628,015	3,393,619	100.0	3,348,385	100.0
Appropriation ²	1,309,467	40.7	227,402	352,171	10.4	323,878	9.7
Underground.....	63,432	2.0	104,982	15,597	0.5	14,558	0.4
Appropriation and underground.....	7,756	0.2	697	.....	.....	.....	.....
Adjudicated by court.....	1,797,841	55.8 ¹	293,470	3,003,119	88.4	2,918,383	87.2
Other mixed and not reported.....	42,189	1.3	1,454	22,732	0.7	91,566	2.7

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).

²"Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use" and "Notice filed and posted."

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED

PRIMARY ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 farms and more
1	Enterprises, 1940.....number.....	7,084	252	5,000	985	609	165	73
2	Irrigated farms, 1939.....number.....	41,228	.....	5,000	2,419	5,971	7,869	19,909
3	Area irrigated, 1939.....acres.....	3,220,685	.....	595,627	233,658	522,860	664,814	1,203,526
4	(a) From which crops were harvested.....acres.....	2,796,075	.....	454,565	168,103	425,241	597,135	1,131,030
5	(b) On which crops failed.....acres.....	73,484	.....	13,485	4,074	15,255	17,995	23,634
6	(c) Irrigated pasture.....acres.....	350,766	.....	127,576	41,681	82,364	50,283	48,862
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars.....	92,871,122	3,597,667	6,347,413	2,308,061	8,420,524	12,156,666	60,040,791
8	(a) Cost of irrigation works and equipment.....dollars.....	88,326,799	2,316,917	5,988,422	2,172,798	8,006,416	11,778,633	58,063,673
9	(b) Investment in water rights.....dollars.....	4,544,323	1,280,750	358,991	135,323	414,108	378,033	1,977,118
10	Area works were capable of supplying with water.....acres.....	3,913,542	45,148	709,510	287,136	652,752	756,235	1,462,761
11	Average investment per acre irrigated.....dollars.....	28.84	.....	10.66	9.87	16.10	18.29	49.89
12	Average investment per acre which the works could supply with water.....dollars.....	23.73	79.69	8.95	8.04	12.90	16.03	41.05
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number.....	6,345	167	4,452	913	578	162	73
14	(a) Area irrigated in these enterprises.....acres.....	3,128,787	.....	536,502	221,905	503,800	663,054	1,203,526
15	(b) Cost of maintenance and operation.....dollars.....	2,035,680	33,192	433,554	115,831	199,316	281,627	972,160
16	(c) Average cost per irrigated acre reporting.....dollars.....	0.65	.....	0.81	0.52	0.40	0.42	0.81
17	Total annual charges ².....dollars.....	2,278,099	8,771	60	1,043	265,606	517,216	1,485,403
18	Average charge per irrigated acre reporting.....dollars.....	0.96	.....	0.09	0.45	0.53	0.78	1.23
19	Area against which charges were assessed.....acres.....	2,637,673	13,700	670	2,310	539,816	802,866	1,278,311
20	Average annual charge per acre assessed.....dollars.....	0.86	0.64	0.09	0.45	0.49	0.64	1.16
21	Total charges collected ².....dollars.....	2,077,506	8,215	68,734	752	153,539	341,256	1,504,980
INDEBTEDNESS AND ARREARAGE, 1939								
22	Enterprises reporting indebtedness ³.....number.....	182	6	.....	.....	57	68	51
23	(a) Area irrigated in these enterprises.....acres.....	1,341,131	.....	.....	.....	85,574	260,859	994,698
24	(b) Indebtedness.....dollars.....	20,851,011	765,759	.....	.....	1,214,921	1,508,357	17,361,974
25	(c) Average indebtedness per acre irrigated.....dollars.....	15.55	.....	.....	.....	14.20	5.78	17.45
26	(d) Cost of irrigation works and equipment.....dollars.....	64,074,943	1,204,410	.....	.....	3,168,868	6,641,165	53,080,500
27	(e) Investment in water rights.....dollars.....	3,128,628	1,251,098	.....	.....	152,637	294,758	1,430,135
28	(f) Total investment.....dollars.....	67,203,571	2,455,508	.....	.....	3,321,505	6,935,923	54,490,635
29	(g) Maintenance and operation.....dollars.....	1,104,716	22,321	.....	.....	66,640	171,163	844,592
30	(h) Total annual charges ².....dollars.....	1,691,808	2,587	.....	.....	76,439	328,684	1,284,098
31	(i) Total charges collected ².....dollars.....	1,719,926	70,660	.....	.....	66,720	226,562	1,355,984
32	(j) Area against which annual charges were assessed.....acres.....	1,533,252	5,320	.....	.....	92,270	322,462	1,113,200
33	(k) Average indebtedness per acre assessed.....dollars.....	13.12	6.50	.....	.....	13.17	4.67	15.60
34	(l) Average charges per acre assessed.....dollars.....	1.10	0.49	.....	.....	0.83	1.02	1.15
35	(m) Average charges per acre irrigated.....dollars.....	1.26	.....	.....	.....	0.89	1.26	1.29
36	Enterprises reporting arrearage ³.....number.....	17	2	.....	.....	5	5	5
37	(a) Area assessed in these enterprises.....acres.....	258,899	.....	.....	.....	4,367	81,770	172,762
38	(b) Total arrearage.....dollars.....	1,636,240	(⁴)	.....	.....	370,021	665,224	420,267
39	(c) Average arrearage per acre assessed.....dollars.....	5.61	.....	.....	.....	84.73	8.11	2.43
40	(d) Indebtedness.....dollars.....	13,012,967	(⁴)	.....	.....	989,280	733,116	10,639,369
TYPE, 1940								
41	Individual and partnership.....number.....	6,308	231	4,958	937	180	2	.....
42	Cooperative (incorporated and unincorporated).....number.....	693	15	26	40	412	145	55
43	Irrigation district.....number.....	20	4	.....	.....	4	3	9
44	Commercial.....number.....	44	2	10	7	9	13	3
45	U. S. Bureau of Reclamation.....number.....	62	.....	.....	.....	.....	.....	2
46	U. S. Office of Indian Affairs.....number.....	5	.....	.....	.....	.....	.....	1
47	All other.....number.....	16	6	1	4	2	2	3
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
48	Enterprises reporting pay roll.....number.....	645	3	3	4	407	160	68
49	Wages and salaries paid and payable for 1939.....dollars.....	1,061,194	4,030	10,976	141	110,253	178,721	757,073
50	Persons employed during week ending April 29, 1939.....number.....	2,922	2	29	9	1,009	644	1,229
SOURCE OF WATER SUPPLY, 1939								
51	Streams, gravity.....number.....	5,185	169	3,349	846	593	160	68
52	Streams, pumped.....number.....	68	7	57	1	2	1	.....
53	Wells, pumped.....number.....	911	33	820	58	.....	.....	.....
54	Wells, pumped and flowing; or wells flowing.....number.....	128	1	126	1	.....	.....	.....
55	Lakes, gravity or pumped.....number.....	28	2	20	4	2	.....	.....
56	Streams and springs; or springs.....number.....	354	15	309	24	4	2	.....
57	Mixed, streams and wells.....number.....	89	10	65	7	3	.....	4
58	Other mixed or stored storm water.....number.....	321	15	254	44	5	2	1
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 farms and more
1	Enterprises, 1940.....number.....	1,629	91	1,313	160	28	25	12
2	Irrigated farms, 1939.....number.....	6,015	.....	1,313	377	304	1,332	2,689
3	Area irrigated, 1939.....acres.....	628,015	.....	105,201	27,091	34,765	120,073	340,865
CAPITAL INVESTMENT, 1940								
4	Total capital investment in all enterprises.....dollars.....	13,978,221	582,844	1,972,725	442,632	996,565	2,110,670	7,872,755
5	(a) Cost of irrigation works and equipment.....dollars.....	13,521,952	581,894	1,941,606	434,983	975,891	2,097,370	7,490,208
6	(b) Investment in water rights.....dollars.....	456,269	950	31,119	7,649	20,704	13,300	382,547
7	Area works were capable of supplying with water.....acres.....	738,232	42,025	123,346	31,352	45,433	127,764	368,312
8	Average investment per acre irrigated.....dollars.....	22.26	.....	18.75	16.24	28.67	17.58	23.10
9	Average investment per acre which the works could supply with water.....dollars.....	18.93	13.87	15.99	14.12	21.94	16.52	21.38
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
10	Enterprises reporting maintenance and operation.....number.....	1,504	47	1,239	157	26	24	11
11	(a) Area irrigated in these enterprises.....acres.....	608,498	.....	102,259	26,768	32,667	116,884	329,920
12	(b) Cost of maintenance and operation.....dollars.....	498,440	814	280,161	49,818	8,565	44,813	114,269
13	(c) Average cost per irrigated acre reporting.....dollars.....	0.82	.....	2.74	1.86	0.28	0.38	0.35
14	Total annual charges ².....dollars.....	213,062	.....	.....	.....	13,085	63,598	136,379
15	Average charge per irrigated acre reporting.....dollars.....	0.46	.....	.....	.....	0.42	0.60	0.41
16	Area against which charges were assessed.....acres.....	461,100	.....	.....	.....	32,467	96,567	332,075
17	Average annual charge per acre assessed.....dollars.....	0.46	.....	.....	.....	0.40	0.66	0.41
18	Total charges collected ².....dollars.....	206,370	11,087	.....	.....	12,710	37,708	144,865

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION—COLORADO

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
252	3,996	1,568	985	210	63	6,284	494	239	64	13	1
.....	4,853	3,166	8,720	8,668	15,831	10,569	3,735	7,807	12,921	6,196	2
.....	145,769	258,114	683,415	726,815	1,406,572	838,007	405,594	557,218	828,288	591,578	3
.....	122,251	215,570	552,946	599,953	1,306,455	674,156	323,190	475,622	762,996	560,111	4
.....	5,274	7,303	15,551	18,850	26,866	18,840	10,764	15,167	20,798	8,275	5
.....	18,244	35,241	115,018	106,012	74,251	145,011	71,640	66,429	44,494	23,182	6
3,597,667	2,968,134	3,283,000	10,174,105	13,187,806	59,650,410	5,904,319	3,819,033	8,556,545	31,333,703	43,257,522	7
2,316,917	2,770,406	3,087,219	9,800,960	12,024,984	58,326,313	5,464,353	3,593,653	8,296,894	27,917,979	43,053,930	8
1,280,760	197,728	205,781	373,145	1,162,822	1,324,097	439,966	225,390	259,661	3,415,724	203,592	9
45,148	222,347	326,062	815,416	820,290	1,684,259	1,047,039	468,155	673,940	966,416	758,982	10
.....	20.36	12.76	14.89	18.14	42.41	7.05	9.42	15.36	37.83	73.12	11
79.69	13.35	10.10	12.48	16.06	35.42	5.64	8.21	12.70	32.36	56.99	12
167	3,513	1,469	938	205	63	5,548	469	231	64	13	13
.....	131,210	240,230	646,320	704,455	1,406,572	754,325	401,472	553,124	828,288	591,578	14
33,192	216,346	202,656	313,988	393,579	866,519	467,520	185,244	317,169	578,413	487,334	15
.....	1.65	0.94	0.48	0.54	0.63	0.62	0.46	0.57	0.70	0.82	16
8,771	2,057	18,178	261,776	500,865	1,486,452	66,334	152,568	388,106	840,444	830,647	17
.....	1.36	0.74	0.74	0.63	1.08	0.34	0.62	0.77	1.02	1.40	18
13,700	2,529	28,223	390,974	626,586	1,575,661	206,830	268,659	560,694	934,662	666,628	19
.....	0.64	0.81	0.67	0.80	0.94	0.32	0.57	0.69	0.90	1.25	20
8,215	70,004	12,275	185,594	379,867	1,421,531	34,487	75,735	310,585	787,814	868,875	21
6	.....	4	59	68	45	11	28	72	59	12	22
.....	.....	690	57,859	278,836	1,003,776	13,234	42,111	242,363	576,974	466,449	23
765,759	.....	37,850	1,197,432	1,257,175	17,592,795	5,271	49,370	754,700	5,069,522	14,972,148	24
.....	.....	57.35	20.70	4.51	17.53	0.40	1.17	3.11	8.79	32.10	25
1,204,410	.....	166,000	3,019,503	7,501,748	52,183,282	26,935	256,441	3,140,596	19,810,806	40,840,165	26
1,251,098	.....	43,000	131,270	646,163	1,057,097	7,100	5,833	119,512	2,792,591	203,592	27
2,455,508	.....	209,000	3,150,773	8,147,911	53,240,379	34,035	262,274	3,260,108	22,603,397	41,043,757	28
.....	.....	2,215	65,356	241,446	773,378	3,827	27,198	160,751	443,184	469,756	29
2,587	.....	653	87,844	316,623	1,284,101	5,756	40,977	219,930	611,915	813,230	30
70,660	.....	2,800	76,476	283,127	1,287,063	4,732	27,682	196,696	638,427	852,389	31
5,320	.....	526	67,223	290,720	1,169,463	14,696	50,430	275,636	650,991	541,499	32
6.50	.....	68.16	16.82	4.26	15.04	0.36	0.98	2.08	6.94	27.65	33
0.49	.....	1.24	1.31	1.09	1.10	0.39	0.61	0.80	0.94	1.50	34
.....	.....	1.42	1.44	1.14	1.28	0.43	0.97	0.91	1.06	1.74	35
2	.....	1	5	1	8	.....	1	4	8	4	36
(4)	.....	(4)	4,367	(4)	248,742	.....	13,943	.....	87,694	157,262	37
(4)	.....	(4)	370,021	(4)	1,063,191	.....	100,921	.....	1,116,052	419,267	38
(4)	.....	(4)	84.73	(4)	4.35	.....	0.07	.....	11.78	2.67	39
(4)	.....	(4)	969,280	(4)	11,370,185	.....	106,380	.....	2,491,218	10,416,369	40
231	3,927	1,475	627	46	2	5,949	311	48	.....	.....	41
15	49	88	343	150	48	286	160	180	59	8	42
4	.....	.....	5	2	9	.....	2	2	11	2	43
2	16	1	13	11	1	18	9	5	11	1	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
3	15	74	334	159	60	225	155	173	79	13	48
4,030	11,819	9,932	125,064	228,867	681,462	28,443	50,394	169,581	377,801	434,975	49
2	30	144	1,042	770	934	517	487	536	761	621	50
169	2,531	1,300	930	194	61	4,450	422	221	80	12	51
7	53	7	.....	.....	.....	62	3	3	.....	.....	52
33	699	161	18	.....	.....	878	32	1	.....	.....	53
1	113	7	.....	.....	.....	126	2	.....	.....	.....	54
2	16	6	.....	.....	.....	23	3	1	.....	.....	55
15	296	29	11	3	.....	344	4	6	.....	.....	56
10	36	21	10	10	2	76	7	3	2	1	57
15	252	37	14	.....	.....	808	11	4	.....	.....	58
ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999		
91	985	450	64	22	17	1,513	64	30	22	1	
.....	1,063	570	503	797	3,062	2,172	232	876	2,736	2	
.....	40,591	71,901	35,564	77,074	402,685	152,226	26,067	75,121	374,601	3	
582,844	997,929	1,128,325	1,125,608	1,685,730	8,457,785	1,891,160	467,666	1,303,610	10,315,785	4	
581,894	978,855	1,113,368	1,107,077	1,666,520	8,074,238	1,861,277	461,380	1,271,107	9,928,188	5	
930	19,074	14,957	18,531	19,210	363,547	29,883	6,286	32,503	387,597	6	
42,025	53,390	80,812	44,744	82,949	434,312	180,859	32,714	85,063	439,596	7	
.....	24.58	15.69	31.65	21.87	20.99	12.42	17.94	17.35	27.54	8	
13.87	18.69	13.96	25.16	20.32	19.47	10.46	14.30	15.33	23.47	9	
47	914	443	64	20	16	1,399	63	28	20	10	
.....	38,363	70,746	35,564	71,885	391,820	149,048	26,067	72,936	360,447	11	
814	142,062	163,711	32,708	30,353	128,797	294,884	35,860	32,469	135,233	12	
.....	3.51	2.31	0.92	0.42	0.33	1.98	1.38	0.45	0.38	13	
.....	619	300	12,573	52,352	147,208	7,629	3,633	33,283	168,507	14	
.....	3.75	0.86	0.79	0.79	0.39	0.77	0.28	0.64	0.43	15	
.....	165	350	16,449	67,070	377,075	9,921	14,875	63,601	372,512	16	
.....	3.75	0.86	0.76	0.78	0.39	0.77	0.24	0.52	0.45	17	
11,087	400	262	11,889	27,152	155,580	1,150	3,944	31,448	169,928	18	

¹Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
²Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
³Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION—COLORADO

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 farms and more
INDEBTEDNESS AND ARREARAGE, 1939								
19	Enterprises reporting indebtedness ².....number...	25	³ 1			8	9	7
20	(a) Area irrigated in these enterprises.....acres...	282,182				8,692	58,923	214,567
21	(b) Indebtedness.....dollars...	1,959,596	166,000			60,812	388,419	1,344,365
22	(c) Average indebtedness per acre irrigated.....dollars...	6.94				7.00	6.59	6.27
23	(d) Cost of irrigation works and equipment.....dollars...	6,017,004	289,334			269,670	1,150,006	4,307,994
24	(e) Investment in water rights.....dollars...	270,650	250			1,400	1,000	268,000
25	(f) Total investment.....dollars...	6,287,654	289,584			271,070	1,151,006	4,575,994
26	(g) Maintenance and operation.....dollars...	124,688	1			2,594	27,768	94,325
27	(h) Total annual charges ³.....dollars...	156,223	1			6,028	37,079	113,116
28	(i) Total charges collected ³.....dollars...	168,322	9,985			8,468	28,148	121,721
29	(j) Area against which annual charges were assessed.....acres...	282,972				8,292	58,923	215,757
30	(k) Average indebtedness per acre assessed.....dollars...	6.31				6.42	6.59	6.23
31	(l) Average charges per acre assessed.....dollars...	0.55				0.73	0.63	0.52
32	(m) Average charges per acre irrigated.....dollars...	0.56				0.83	0.63	0.53
33	Enterprises reporting arrearage ².....number...	3				1	1	1
34	(a) Area assessed in these enterprises.....acres...	16,855				(4)	(4)	(4)
35	(b) Total arrearage.....dollars...	62,856				(4)	(4)	(4)
36	(c) Average arrearage per acre assessed.....dollars...	3.73				(4)	(4)	(4)
37	(d) Indebtedness.....dollars...	941,384				(4)	(4)	(4)
TYPE, 1940								
38	Individual and partnership.....number...	1,557	84	1,313	155	5		
39	Cooperative (incorporated and unincorporated).....number...	58	5		5	19		11
40	Irrigation district.....number...	³ 1	1					
41	Commercial.....number...	9	1			4		4
42	U. S. Bureau of Reclamation.....number...	3						2
43	All other.....number...	1				1		
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
44	Enterprises reporting pay roll.....number...	55	4			20	21	10
45	Wages and salaries paid and payable for 1939.....dollars...	106,430	22,330			3,609	21,791	58,700
46	Persons employed during week ending April 29, 1939.....number...	146	4			28	59	55
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939								
47	Streams, pumped.....number...	23	2	20				1
48	Wells, pumped or flowing.....number...	1,335	65	1,170	98	2		
49	Streams, gravity or storage.....number...	271	24	123	62	26	25	11

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
³Data for less than 3 enterprises shown with permission of the enterprise involved.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND WEATHER STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.—Dec.		Jan.—Mar.		Apr.—June		July—Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
North Platte River		Feet	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Degrees F.	Degrees F.	
Walden.....	Jackson.....	8,100	7.09	(2)	1.52		1.78		1.81		1.98	(2)	(2)	
South Platte River														
Longs Peak.....	Larimer.....	8,956	16.46	-5.33	3.51	+0.06	3.97	-0.03	4.79	-2.03	4.19	-3.33	38.4	+1.1
Kassler.....	Jefferson.....	5,492	15.35	-1.94	4.51	+1.45	4.56	+2.04	4.12	-2.44	2.16	-2.99	53.0	+2.4
Denver.....	Denver.....	5,221	8.43	-5.62	2.01	-0.32	3.03	+1.06	2.40	-3.25	0.99	-3.11	52.9	+2.9
Fort Collins.....	Larimer.....	4,985	9.20	-6.09	2.02	-0.31	2.61	+0.59	3.41	-3.12	1.16	-3.25	49.7	+3.3
Fort Morgan.....	Morgan.....	4,319	5.14	-8.72	0.53	-1.08	1.91	+0.77	1.93	-3.99	0.77	-4.42	50.4	+3.0
Julesburg.....	Sedgwick.....	3,583	13.90	-4.24	0.64	-1.51	2.38	+0.83	8.21	+0.59	2.67	-4.15	50.8	+2.3
Averages*.....			11.41	-5.32	2.20	-0.28	3.08	+0.88	4.14	-2.37	1.99	-3.54	49.2	+2.5
Republican River														
Wray.....	Yuma.....	3,512	13.02	-5.35	0.28	-1.87	3.18	+1.59	5.81	-2.20	3.75	-2.87	50.9	+0.2
Cheyenne Wells.....	Cheyenne.....	4,279	12.38	-6.93	0.21	-1.82	2.86	-1.29	6.28	-0.49	3.03	-3.33	53.3	+3.3
Averages*.....			12.70	-6.14	0.24	-1.84	3.02	+0.15	6.04	-1.34	3.39	-3.10	52.1	+1.8
Arkansas River														
Leadville.....	Lake.....	10,152	16.69	-1.94	4.92	+1.65	5.15	+0.85	2.78	-1.46	3.84	-2.98	37.4	+2.1
Salida.....	Chaffee.....	7,035	8.08	-4.25	3.37	+0.92	2.11	+0.13	0.79	-2.29	1.81	-3.01	(2)	(2)
Canon City.....	Fremont.....	5,343	6.79	-6.19	1.42	-0.63	2.00	+0.27	2.00	-2.22	1.37	-3.61	53.8	+0.9
Trinidad.....	Las Animas.....	6,300	14.36	-2.94	3.02	+0.11	3.05	+0.53	3.21	-2.65	5.08	-0.93	51.8	+0.4
Rocky Ford.....	Otero.....	4,177	8.89	-3.30	0.92	-0.78	3.22	+2.25	2.70	-2.39	1.99	-2.38	53.5	+1.3
Springfield.....	Baca.....	4,375	12.88	-5.57	2.39	-0.44	3.59	+1.20	4.39	-2.96	2.67	-3.37	(2)	(2)
Holly.....	Prowers.....	3,386	9.53	-5.84	0.94	-0.95	3.51	+2.11	4.22	-1.74	0.86	-5.26	54.8	+1.2
Averages*.....			11.04	-4.29	2.43	-0.02	3.22	+1.05	2.87	-2.24	2.52	-3.08	50.3	+1.2
Rio Grande														
Saguache.....	Saguache.....	7,745	6.20	-2.94	2.37	+0.99	1.39	+0.40	0.55	-1.80	1.89	-2.53	41.9	-2.0
Garnett.....	Alamosa.....	7,576	6.47	-0.46	1.89	+0.82	1.31	+0.50	1.18	-0.71	2.09	-1.17	(2)	(2)
Manassa.....	Conejos.....	7,700	3.49	-3.09	1.41	+0.23	1.01	+0.28	0.14	-1.53	0.93	-2.07	41.7	0.0
Averages*.....			5.39	-2.16	1.89	+0.68	1.24	+0.43	0.62	-1.35	1.64	-1.92	41.8	-1.0
Colorado River (direct)														
Fraser.....	Grand.....	8,560	13.12	-6.95	3.21	-0.73	4.87	-0.18	2.59	-2.74	2.45	-3.30	31.9	-0.1
Gunnison.....	Gunnison.....	7,670	9.66	-0.46	2.86	+1.00	2.39	+0.32	1.13	-1.07	3.28	-0.71	39.6	+2.8
Trout Lake.....	San Miguel.....	9,800	22.73	-5.07	5.38	+0.04	6.71	-1.11	2.57	-3.05	8.07	-0.85	(2)	(2)
Montrose.....	Montrose.....	5,811	7.71	-1.91	2.34	+0.14	1.73	-0.08	0.34	-2.03	3.30	+0.05	49.5	+1.3
Glenwood Springs.....	Garfield.....	5,823	19.51	+4.50	3.98	+0.70	7.21	+3.31	3.42	+0.05	4.90	+0.44	48.5	+2.9
Grand Junction.....	Mesa.....	4,587	8.20	-0.83	1.49	-0.56	2.82	+0.88	0.50	-1.54	3.39	+0.69	53.7	+1.7
Averages*.....			13.49	-1.75	3.21	+0.08	4.29	+0.52	1.76	-1.73	4.23	-0.63	44.6	+1.7
Green River														
Steamboat Springs.....	Routt.....	6,750	22.18	-0.94	6.17	+0.75	8.05	+1.08	3.83	-1.45	4.03	-1.32	40.0	+2.2
Sunbeam (near).....	Moffat.....	5,472	9.38	-1.05	3.20	+0.59	1.80	+0.03	1.72	-0.85	2.66	-0.72	43.7	(2)
Meeker (near).....	Rio Blanco.....	6,500	16.75	(2)	34.66	(2)	34.68	(2)	32.82	(2)	34.59	(2)	54.0	(2)
Averages*.....			15.78	-1.00	4.66	+0.67	4.92	+0.56	2.82	-1.20	3.34	-1.02	40.0	+2.2
San Juan River														
Silverton.....	San Juan.....	9,415	20.37	-4.65	5.65	+0.35	5.09	-1.24	2.37	-2.19	7.26	-1.57	35.1	+0.3
Durango.....	La Plata.....	6,554	12.96	-6.86	2.14	-2.74	4.57	-0.65	0.95	-2.62	5.30	-0.95	45.2	-1.0
Cortez.....	Montezuma.....	6,177	10.43	-3.19	2.66	-0.42	3.32	-0.26	0.65	-1.45	3.80	-1.06	48.4	+1.0
Averages*.....			14.59	-4.90	3.48	-0.94	4.33	-0.68	1.32	-2.09	5.45	-1.19	42.9	+0.1

¹Departure from normal.

²Data not available.

³Not used in averages.

*Average for drainage basin.

CENSUS OF IRRIGATION — COLORADO

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	
3 ¹		2	6	7	9	1	5	7	12	
		(4)	4,237	26,078	251,567	4,437		27,578	250,167	19
166,000		(4)	7,382	391,469	1,392,615	2,912		74,200	1,882,484	20
		(4)	1,74	15,01	5,54	0,86		2,69	7,52	21
289,304		(4)	128,360	831,986	4,757,014	50,670		335,000	5,631,334	22
250			100	1,300	269,000	100		500	270,050	23
289,584		(4)	128,460	833,286	5,026,014	50,770		335,500	5,901,384	24
1		(4)	1,917	20,075	102,544	943		10,422	113,323	25
		(4)	3,460	31,268	121,445	443		21,213	134,567	26
9,985		(4)	6,617	21,547	129,996	1,858		21,255	145,109	27
		(4)	3,037	27,078	252,757	3,437		27,668	251,867	28
		(4)	0,58	14,46	5,51	0,09		2,50	6,82	29
		(4)	1,14	1,15	0,48	0,13		0,77	0,53	30
		(4)	1,14	1,20	0,48	0,13		0,78	0,54	31
				(4)	1			(4)	1	2
				(4)	(4)			(4)	(4)	34
				(4)	(4)			(4)	(4)	35
				(4)	(4)			(4)	(4)	36
				(4)	(4)			(4)	(4)	37
84	983	445	44	1		1,500	49	7	1	38
5	2	4	19	14	14	12	13	19	14	39
1									3	40
1		1	1	4	2	1	2	3	3	41
				2	1				3	42
				1				1		43
4		3	19	15	14	2	12	23	18	44
22,330		170	4,163	16,547	63,280	1,460		19,099	85,871	45
4		2	50	27	63	35		38	73	46
2	16	4			1	22			1	47
65	851	391	27	1		1,293	40	2		48
24	118	55	37	21	16	198	24	28	21	49

¹Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

In 1939, a deficiency in precipitation was pronounced and State-wide, the year averaging the driest in the more than half a century of Colorado climatic history. In the calendar year precipitation averaged from 5 inches to more than 8 inches below normal in the South Platte Valley, the Culebra Mountains, and extreme southern counties east of the Continental Divide, at the upper reaches of the Arkansas and Gunnison Rivers, and in the San Juan Mountains. There was an abundance of precipitation the first month, which averaged the eighth wettest January of record. February also had slightly more precipitation than normal; however, a deficiency continued the rest of the year and the growing season, April to September, averaged the driest of record.

All areas had a good snow cover up to the early part of March, but the snow disappeared rapidly from the eastern plains upon arrival of warm weather. The supply of moisture in the surface soil was adequate and in most districts there was an unusual amount of reserve moisture in the subsoil the first 4 months, but by the close of May, most crops began to show the effects of drought and drying winds. Summer precipitation was inadequate in the agricultural districts, where many canals went dry, and pumped water was substituted for gravity water wherever it was available. The continued droughty conditions became acute in most of the eastern section. Stream flow was the lowest in many years and some wells showed signs of failure, indicating soil moisture depletion to a great depth. The consumption of irrigation water during July was unusually great.

For the State as a whole, all months except February were warmer than normal. An excess in average temperature was State-wide, only 6 scattered stations reporting cooler weather than normal for the year. After March

every month was warmer than normal, with the maxima occurring at most stations from July 10 to 20. During this period the temperature equaled the highest of record at many stations. Likewise, the growing season averaged the third warmest of record.

Both precipitation and temperature conditions of 1939 contrasted sharply with those of 1929, when Weather Bureau stations representing about two-thirds of the State reported precipitation above normal for the calendar year, with August and September the third wettest of the corresponding months then of record. The total mean annual precipitation was about 1 inch in excess of normal. Mean annual temperature for 1929 was 1.3° below normal, although June, July, and August were warmer than normal.

On the eastern slope and in San Luis Valley the 1929 water supply was subnormal, especially during the early part of the growing season. This condition was due either to deficient snowfall in the mountains or to low temperatures during the spring months. Carry-over storage from 1928, together with copious rainfall beginning in July, furnished abundant water for the later part of the growing season. On the western slope the water supply was generally above normal.

Run-off from Colorado watersheds during the water year 1939 averaged about 72 percent of the normal. Proportions of the normal recorded for principal watersheds, including those of main streams and important tributaries, as indicated by discharges measured by the United States Geological Survey at appropriate stations, were approximately as follows: South Platte, 75 percent; Arkansas, 78 percent; Rio Grande, 68 percent; Colorado, 71 percent. Similar records for 1929 indicated run-off generally in excess of normal in that year.

CENSUS OF IRRIGATION - COLORADO

DRAINAGE BASIN TABLE I.-AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSOURI RIVER							
		Total	Platte River				Total	North Platte River	
			Total	Total		Total		Total	
				Primary	Sup.			Primary	Sup.
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	11,228	15,240		15,176		319		
2	Area irrigated.....1939..acres.....	3,220,685	1,271,419		1,271,419		158,377		
3	(a) Cropland harvested.....1939..acres.....	2,796,075	1,164,707		1,161,891		114,848		
4	(b) Crop failure.....1939..acres.....	73,844	34,632		34,517		.....	
5	(c) Pasture.....1939..acres.....	350,766	75,270		75,011		13,529		
6	Area irrigated.....1929..acres.....	3,393,619	1,351,713		1,348,338		121,915		
7	.....1919..acres.....	3,348,385	1,331,453		1,322,982		143,102		
8	Increase or decrease (-), 1929-1939.....percent.....	-5.1	-5.7		-5.7		26.8		
9	Irrigable area in enterprises.....1940..acres.....	4,283,250	1,483,661		1,478,684		185,348		
10	.....1930..acres.....	4,528,251	1,681,411		1,676,726		175,580		
11	.....1920 ² ..acres.....	5,220,588	1,858,549		1,843,012		235,628		
12	Excess of irrigable area over the area irrigated.....1940..acres.....	1,062,565	209,052		207,265		26,971		
13	.....1930..acres.....	1,134,632	329,668		328,388		50,665		
14	.....1920 ² ..acres.....	1,872,203	527,096		520,030		92,526		
15	Area works were capable of supplying with water.....1940..acres.....	3,913,542	1,431,381		1,426,740		172,583		
16	.....1930..acres.....	4,078,712	1,545,206		1,540,711		151,550		
17	.....1920..acres.....	3,855,348	1,446,269		1,435,832		155,485		
18	Increase or decrease (-), 1930-1940.....percent.....	-4.0	-7.4		-7.4		13.9		
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	692,857	156,772		155,321		14,206		
20	.....1930..acres.....	685,093	193,463		192,373		26,535		
21	.....1920..acres.....	506,963	114,816		112,850		12,363		
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	82.3	89.0		89.1		91.8		
23	.....1929..percent.....	83.2	87.5		87.5		82.4		
24	.....1919..percent.....	86.9	92.1		92.1		92.0		
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	106,849,343	42,155,132		42,110,190		814,027		
26	(a) Cost of irrigation works and equipment.....1940..dollars....	101,848,751	39,913,729		39,874,362		782,010		
27	(b) Investment in water rights (reported).....1940..dollars....	5,000,592	2,241,403		2,235,828		32,017		
28	Total investment in irrigation enterprises.....1930..dollars....	87,603,240	36,893,486		36,848,126		714,740		
29	.....1920..dollars....	86,302,442	36,945,712		36,855,049		835,578		
30	Increase or decrease (-), 1930-1940.....percent.....	22.0	14.3		14.3		13.9		
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	27.30	29.45		29.51		4.72		
32	.....1930..dollars....	21.48	23.88		23.92		4.72		
33	.....1920..dollars....	22.90	25.55		25.67		5.37		
34	Average investment per acre irrigated.....1939..dollars....	33.18	33.07		33.12		5.14		
35	Estimated final investment in existing enterprises.....1940..dollars....	109,808,468	42,344,548		42,298,781		828,902		
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	25.64	28.54		29.61		1.47		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
	Enterprises	Enterprises		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	6,371	1,505	1,558	1,038	1,529	1,038	219	1
38	Area irrigated in these enterprises.....1939..acres.....	3,128,787	608,498	1,264,095	392,471	1,260,955	392,471	156,411	(3)
39	Cost of maintenance and operation.....1939..dollars....	2,035,680	498,440	868,812	343,456	864,648	343,456	51,159	(3)
40	Average cost, per acre irrigated.....1939..dollars....	0.65	0.82	0.69	0.88	0.69	0.88	0.33	(3)
41	Total annual charges (reported) ⁴.....1939..dollars....	2,278,099	213,062	969,144	137,582	968,238	137,582	1,250	.....
42	Average annual charge per acre irrigated.....1939..dollars....	0.96	0.46	0.96	0.44	0.96	0.44	0.08	.....
43	Area against which charges were assessed.....1939..acres.....	2,637,673	461,109	1,060,643	309,287	1,059,381	309,287	18,535	.....
44	Average annual charge per acre assessed.....1939..dollars....	0.86	0.46	0.91	0.44	0.91	0.44	0.07	.....
45	Total charges collected ⁴.....1939..dollars....	2,077,505	206,370	962,227	127,254	961,364	127,254	.....	.....
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	20,851,011	1,959,596	3,724,928	489,619	3,721,648	489,619	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	6,260	1,505	1,534	1,032	1,506	1,032	225	1
48	Area irrigated by these enterprises.....1939..acres.....	3,039,354	588,300	1,212,742	391,911	1,209,602	391,911	146,358	(3)
49	Water delivered.....1939..acre-feet.....	7,258,191	500,267	2,099,075	329,080	2,093,297	329,080	455,324	(3)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	0.9	1.7	0.8	1.7	0.8	3.1	(3)
51	Average cost of water per acre irrigated.....1939..dollars....	0.92	0.94	0.99	1.00	0.99	1.00	0.34	(3)
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.39	1.10	0.57	1.19	0.57	1.19	0.11	(3)
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	238	.....	81	.....	80	.....	1	.....
54	Irrigable area in these enterprises.....1939..acres.....	687,246	.....	144,395	.....	144,195	.....	(3)	.....
55	Irrigated area in these enterprises.....1939..acres.....	466,804	.....	123,874	.....	123,874	.....	(3)	.....
56	Area for which drains have been installed.....1939..acres.....	119,286	.....	25,439	.....	25,436	.....	(3)	.....
57	Additional area needing drainage.....1939..acres.....	35,792	.....	5,364	.....	5,364	.....	(3)	.....

¹Data for 3 enterprises in Pawnee Creek Drainage Basin (72) (number refers to separate map) are included with South Platte River Drainage Basin total.
²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

MISSOURI RIVER—Continued														
Platte River—Continued														
North Platte River—Continued					South Platte River									
Direct (6)	Laramie River (5)	Total ¹	Direct (32)	Plum Creek (31)	Bear Creek (29)	Cherry Creek (19)	Clear Creek (28)							
303	16	14,857	5,925	29	144	57	2,718						1	
154,279	4,098	1,113,042	535,987	1,497	12,032	1,913	78,845						2	
111,190	3,656	1,047,043	303,133	1,497	11,189	1,853	76,456						3	
.....	.....	34,517	18,432	.....	3	15	1,079						4
43,089	440	31,482	14,372	.....	840	45	1,310						5
7,470	11,075	1,223,423	456,917	.....	12,824	.....	85,576						6
2,520	6,160	1,179,880	348,130	.....	8,778	.....	79,172						7
(^b)	-63.0	-9.0	17.3	.....	-6.2	.....	-8.0						8
181,240	4,108	1,293,336	634,361	2,724	12,407	3,729	83,306						9	
9,370	12,850	1,501,146	524,025	.....	12,908	.....	148,582						10
23,520	6,425	1,607,384	500,912	.....	12,093	.....	84,450						11
26,961	10	180,294	98,374	1,227	375	1,816	4,461						12	
1,900	1,775	277,723	67,108	.....	84	.....	62,906						13
21,000	265	427,504	158,782	.....	3,315	.....	5,278						14
168,475	4,108	1,254,157	624,318	2,724	12,287	3,373	83,194						15	
7,870	11,075	1,389,161	488,897	.....	12,908	.....	131,778						16
2,520	6,160	1,280,347	379,720	.....	10,373	.....	79,940						17
(^b)	-62.9	-9.7	27.7	.....	-4.8	.....	-36.9						18
14,196	10	141,115	88,331	1,227	255	1,460	4,349						19	
400	.....	165,738	31,980	.....	84	.....	46,102						20
.....	.....	100,467	34,590	.....	1,595	.....	768						21
91.6	99.8	88.7	85.9	55.0	97.9	56.7	94.8						22	
94.9	100.0	88.1	93.5	.....	99.3	.....	65.0						23
100.0	100.0	92.2	90.9	.....	84.6	.....	99.0						24
789,850	24,177	41,296,163	24,249,996	134,025	962,948	17,735	1,325,105						25	
760,935	21,075	39,092,352	22,433,467	134,025	953,610	17,625	1,240,196						26	
28,915	3,102	2,203,811	1,816,829	.....	9,338	110	84,909						27
31,550	69,650	36,133,386	17,537,820	.....	839,800	.....	2,771,458						28
41,200	51,800	36,019,471	9,111,900	.....	137,240	.....	862,209						29
(^b)	-65.3	14.3	38.3	.....	14.7	.....	-52.2						30
4.69	5.89	32.93	38.84	49.20	78.37	5.26	15.93						31	
4.01	6.29	26.01	35.87	.....	65.06	.....	21.03						32
16.35	8.41	28.13	24.00	.....	13.23	.....	10.79						33
5.12	5.90	37.10	45.24	89.53	80.03	9.27	16.81						34	
804,725	24,177	41,469,679	24,281,862	134,025	963,288	17,885	1,325,205						35	
4.44	5.89	32.06	38.28	49.20	77.64	4.80	15.92						36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
204	1	15	1,310	1,037	537	600	29	1	25	1	33	69	54	37
152,343	(^c)	4,068	1,104,544	392,371	534,677	179,113	1,337	(^c)	11,965	(^c)	1,778	77,992	543	38
48,589	(^c)	2,570	813,489	343,406	430,004	160,823	2,055	(^c)	10,604	(^c)	1,962	56,650	3,904	39
0.32	(^c)	0.63	0.74	0.88	0.80	0.90	1.54	(^c)	0.89	(^c)	1.10	0.73	7.19	40
1,250	966,988	137,582	507,226	24,627	9,142	201	56,421	41
0.08	0.97	0.44	1.07	0.20	0.82	0.08	0.74	42
18,535	1,040,846	309,287	509,124	126,084	11,160	2,510	79,238	43
0.07	0.93	0.44	1.00	0.20	0.82	0.08	0.71	44
.....	961,364	127,254	538,702	23,011	6,467	300	71,516	45
.....	3,721,648	489,619	1,908,098	1,250	19,000	110,886	46
209	1	16	1,281	1,031	519	594	27	1	27	1	32	53	53	47
142,260	(^c)	4,098	1,063,244	391,811	501,607	179,252	1,497	(^c)	10,331	(^c)	1,828	71,849	543	48
430,990	(^c)	24,334	1,637,973	328,604	920,327	166,471	580	(^c)	10,463	(^c)	1,957	110,388	805	49
3.0	(^c)	5.9	1.5	0.8	1.8	0.9	0.4	(^c)	1.0	(^c)	1.1	1.5	1.5	50
0.33	(^c)	0.63	1.08	1.00	1.12	0.90	1.24	(^c)	1.03	(^c)	1.09	0.79	7.19	51
0.11	(^c)	0.11	0.70	1.20	0.61	0.97	3.19	(^c)	1.01	(^c)	1.02	0.52	4.85	52
(^c)	1	79	16	(^c)	2	(^c)	1	53
(^c)	136,195	93,717	(^c)	(^c)	(^c)	54
(^c)	117,674	80,422	(^c)	(^c)	(^c)	55
(^c)	25,036	8,446	(^c)	(^c)	(^c)	56
(^c)	4,964	3,350	(^c)	(^c)	(^c)	57

¹Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
²Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
³Percent not shown when more than 1,000.

CENSUS OF IRRIGATION - COLORADO

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued								
	Platte River—Continued								
	South Platte River—Continued								
	St. Vrain Creek				Thompson River				
	Total	Direct (15)	Boulder Creek (20)	Thompson River (14)					
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	2,308	980	1,328			1,097		
2	Area irrigated.....1939..acres.....	159,855	78,725	81,130			77,893		
3	(a) Cropland harvested.....1939..acres.....	144,266	74,176	70,090			77,294		
4	(b) Crop failure.....1939..acres.....	2,872	1,795	1,077			280		
5	(c) Pasture.....1939..acres.....	12,717	2,754	9,963			399		
6	Area irrigated.....1929..acres.....	179,569					92,704		
7	.....1919..acres.....	244,831					96,678	
8	Increase or decrease (-), 1929-1939.....percent.....	-11.0					-16.0		
9	Irrigable area in enterprises.....1940..acres.....	186,013	83,415	102,598			84,251		
10	.....1930..acres.....	208,295					100,818	
11	.....1920 ⁴ ..acres.....	281,467					105,673	
12	Excess of irrigable area over the area irrigated.....1940..acres.....	26,168	4,690	21,468			6,368		
13	.....1930..acres.....	28,726					8,114	
14	.....1920 ⁴ ..acres.....	36,636					8,995	
15	Area works were capable of supplying with water.....1940..acres.....	180,603	82,915	97,688			80,221		
16	.....1930..acres.....	205,401					100,763	
17	.....1920..acres.....	265,731					98,711	
18	Increase or decrease (-), 1930-1940.....percent.....	-12.1					-20.4		
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	20,748	4,190	16,558			2,328		
20	.....1930..acres.....	25,832					8,049	
21	.....1920..acres.....	20,900					2,033	
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	88.5	94.9	83.1			97.1		
23	.....1929..percent.....	87.4					92.0	
24	.....1919..percent.....	92.1					97.9	
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	2,149,009	887,983	1,261,026			1,662,449		
26	(a) Cost of irrigation works and equipment.....1940..dollars....	2,123,808	867,397	1,256,411			1,423,305		
27	(b) Investment in water rights (reported).....1940..dollars....	25,201	20,586	4,615			239,144		
28	Total investment in irrigation enterprises.....1930..dollars....	1,964,750					2,317,830		
29	.....1920..dollars....	9,298,122					1,102,316	
30	Increase or decrease (-), 1930-1940.....percent.....	9.4					-28.3		
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	11.90	10.71	12.91			20.72		
32	.....1930..dollars....	9.57					23.01	
33	.....1920..dollars....	34.99					11.17	
34	Average investment per acre irrigated.....1939..dollars....	13.44	11.28	15.54			21.34		
35	Estimated final investment in existing enterprises.....1940..dollars....	2,162,824	891,283	1,271,541			1,722,954		
36	Investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	11.63	10.68	12.39			20.45		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	128	35	67	17	61	16	52	11
38	Area irrigated in these enterprises.....1939..acres.....	156,401	23,875	77,552	15,771	78,849	8,104	77,770	16,295
39	Cost of maintenance and operation.....1939..dollars....	57,232	8,820	23,427	6,675	33,805	2,145	45,897	3,280
40	Average cost, per acre irrigated.....1939..dollars....	0.37	0.37	0.30	0.42	0.43	0.26	0.59	0.20
41	Total annual charges (reported) ⁵.....1939..dollars....	93,631	18,371	40,750	6,094	52,881	12,277	48,910	3,734
42	Average annual charge per acre irrigated.....1939..dollars....	0.62	0.60	0.55	0.39	0.68	0.82	0.65	0.23
43	Area against which charges were assessed.....1939..acres.....	157,000	30,476	76,264	15,560	80,796	14,918	76,960	16,035
44	Average annual charge per acre assessed.....1939..dollars....	0.60	1.66	0.53	0.39	0.65	0.82	0.64	0.23
45	Total charges collected ⁵.....1939..dollars....	97,459	20,114	34,446	15,551	63,013	4,563	59,907	3,700
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars....	346,792	76,650	148,780	53,980	188,012	24,670	268,145	1,350
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	137	42	62	20	75	22	56	12
48	Area irrigated by these enterprises.....1939..acres.....	158,535	22,766	77,557	6,034	80,978	16,732	76,993	16,506
49	Water delivered.....1939..acre-feet.....	174,611	15,219	86,091	5,566	88,520	9,633	94,254	9,116
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.1	0.7	1.1	0.9	1.1	0.6	1.2	0.6
51	Average cost of water per acre irrigated.....1939..dollars....	0.63	0.73	0.57	0.43	0.68	0.82	0.67	0.32
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.67	1.10	0.51	0.47	0.63	1.42	0.55	0.57
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	13		7		6		6	
54	Irrigable area in these enterprises.....1939..acres.....	19,960		4,600		15,360		1,766	
55	Irrigated area in these enterprises.....1939..acres.....	16,030		4,320		11,710		1,641	
56	Area for which drains have been installed.....1939..acres.....	1,726		125		1,601		283	
57	Additional area needing drainage.....1939..acres.....	1,190		360		830		95	

¹Data for 2 enterprises in Timpas Creek Drainage Basin (51) (number refers to separate map) are included with Arkansas River "Direct" Drainage Basin (33).
²Data for 1 enterprise in Smoky Hill River Drainage Basin (71) and 1 enterprise in White Woman Creek Drainage Basin (73) (number refers to separate map) are included with Republican River Drainage Basin total.
³Data for 3 enterprises in Frenchman Creek Drainage Basin (82) (number refers to separate map) are included with Arikaree River Drainage Basin (17).

CENSUS OF IRRIGATION - COLORADO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSOURI RIVER—Continued							MISSISSIPPI RIVER (Exclusive of Missouri River)								
Platte River—Continued				Kansas River			Arkansas River								
South Platte River—Continued				Republican River			Total	Direct ¹	Texas Creek						
Cache la Poudre River (4)	Crow Creek (2)	Bijou Creek group (16)	Horsetail Creek (1)	Total ²	Direct (18)	Arikaree River ³ (17)					(33)	(77)			
2,340	20	206	11	64	8	54	7,837	5,890	43	1					
221,924	1,996	20,597	383	3,190	371	2,794	469,535	359,578	3,827	2					
211,516	1,908	17,366	390	2,816	301	2,490	416,854	329,780	3,661	3					
8,617	88	3,146	.....	115	60	55	17,092	9,191	15	4				
1,791	.....	65	3	259	10	249	35,589	20,607	151	5				
286,607	996	8,470	.....	3,405	.....	.....	558,072	356,186	.....	6	
266,676	1,945	6,429	.....	8,471	.....	.....	641,476	431,452	.....	7	
-22.6	100.4	143.2	.....	-6.3	.....	.....	-15.9	1.0	.....	8	
252,040	2,603	30,957	765	4,977	784	4,158	672,627	472,543	5,438	9					
378,984	1,649	10,520	.....	4,685	.....	.....	762,208	407,657	.....	10	
410,429	7,450	11,825	.....	16,537	.....	.....	938,533	502,954	.....	11	
30,116	607	10,360	382	1,787	413	1,374	203,082	112,955	1,611	12					
92,377	653	2,059	.....	1,290	.....	.....	204,136	51,471	.....	13	
143,753	5,505	5,396	.....	7,066	.....	.....	287,057	71,502	.....	14	
236,303	2,279	27,910	765	4,641	784	3,822	622,846	439,791	5,272	15					
325,980	1,226	10,470	.....	4,495	.....	.....	690,955	364,928	.....	16	
283,975	2,250	10,699	.....	10,437	.....	.....	709,068	448,808	.....	17	
-27.5	85.9	166.6	.....	3.2	.....	.....	-9.9	14.3	.....	18	
14,379	283	7,313	382	1,451	413	1,038	153,311	80,213	1,445	19					
39,373	230	2,000	.....	1,090	.....	.....	132,883	78,742	.....	20	
17,299	305	4,270	.....	1,966	.....	.....	67,582	17,356	.....	21	
93.9	87.6	73.8	50.1	68.7	47.3	72.8	75.4	81.8	72.6	22					
87.9	81.2	80.9	.....	75.8	.....	.....	80.8	92.5	.....	23	
83.9	86.4	60.1	.....	81.2	.....	.....	90.5	96.1	.....	24	
10,057,990	108,313	624,293	3,000	44,942	6,750	36,817	20,370,917	16,317,477	9,623	25					
10,030,280	108,313	623,423	3,000	39,367	4,825	33,167	19,615,167	15,812,690	9,005	26					
27,710	.....	670	.....	5,575	1,925	3,650	755,750	504,787	618	27			
9,529,172	30,475	68,500	.....	45,360	.....	.....	15,756,524	8,727,700	.....	28	
10,638,693	51,700	52,600	.....	90,663	.....	.....	19,710,289	11,058,245	.....	29	
5.5	255.4	811.4	.....	-0.9	.....	.....	29.3	87.0	.....	30	
42.56	47.53	22.37	3.92	9.68	8.61	9.63	32.71	37.10	1.83	31					
29.23	24.86	6.54	.....	10.09	.....	.....	22.80	22.67	.....	32	
37.46	22.98	4.92	.....	8.69	.....	.....	27.80	24.64	.....	33	
45.32	54.27	30.31	7.83	14.09	18.19	13.22	43.39	45.38	2.51	34					
10,109,420	109,413	635,253	3,450	45,767	6,750	37,642	20,487,170	16,349,333	9,623	35					
40.11	42.03	20.52	4.51	9.20	8.61	9.05	30.46	34.60	1.77	36					
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.						
Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises						
273	256	15	12	144	65	3	29	4	24	1,251	137	551	122	42	37
219,767	159,095	1,888	1,265	20,476	9,075	383	3,140	371	2,764	462,063	19,556	356,627	18,346	3,820	38
142,751	126,719	4,734	5,326	61,210	33,893	290	4,164	580	3,564	359,323	21,858	285,796	20,826	629	39
0.65	0.80	2.51	4.21	2.99	3.73	0.76	1.33	1.56	1.29	0.78	1.12	0.80	1.14	0.16	40
250,043	90,649	1,503	112	906	200	706	557,595	10,980	484,522	10,980	41
1.23	0.68	0.89	0.31	0.73	0.92	0.69	1.50	1.79	1.51	1.79	42
205,324	134,180	1,690	360	1,262	217	1,045	416,223	6,142	357,941	6,142	43
1.22	0.68	0.89	0.31	0.72	0.92	0.69	1.34	1.79	1.35	1.79	44
185,695	80,129	1,408	210	863	863	557,803	1,275	501,148	1,275	45
1,048,227	408,369	500	3,280	3,280	3,863,724	3,261,804	46
270	251	17	12	138	65	3	28	4	23	1,204	132	527	116	44	47
217,558	159,294	1,966	1,265	20,547	9,075	383	3,140	371	2,764	447,738	21,563	347,526	18,353	3,827	48
277,893	112,327	5,130	3,239	42,136	19,065	235	5,778	1,194	4,584	900,286	19,552	773,433	17,704	4,990	49
1.3	0.7	2.6	2.6	2.1	2.1	0.6	1.8	3.2	1.7	2.0	0.9	2.2	1.0	1.3	50
1.37	1.03	2.51	4.21	2.99	3.73	0.46	1.36	1.56	1.32	1.36	1.93	1.46	2.06	0.16	51
1.07	1.47	0.98	1.64	1.46	1.78	0.75	0.74	0.49	0.80	0.68	2.14	0.66	2.14	0.13	52
39	1	1	1	60	36	53
16,845	107,696	102,147	54
15,719	88,299	84,439	55
14,557	18,985	18,876	56
159	2,753	2,523	57

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵ Annual charges may include costs of maintenance and operation, and assessments for principal and interest on bonds, notes, warrants, and for special reasons.
⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁷ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSISSIPPI RIVER--Continued (Exclusive of Missouri River)							
	Arkansas River--Continued				Huerfano River			
	Grape Creek (46)	Turkey Creek (47)	Fountain Creek (48)	St. Charles River (49)	Total			
IRRIGATED FARMS AND AREAS								
1 Irrigated farms.....1939..number.....	417	25	245	102	406			
2 Area irrigated.....1939..acres.....	18,198	1,498	14,430	6,802	26,776			
3 (a) Cropland harvested.....1939..acres.....	13,998	1,468	12,866	4,378	22,261			
4 (b) Crop failure.....1939..acres.....	234	7	811	1,743	2,707			
5 (c) Pasture.....1939..acres.....	3,966	23	783	681	1,808			
6 Area irrigated.....1929..acres.....			22,664	10,177	54,193			
7 ..1919..acres.....			20,465	11,865	55,528			
8 Increase or decrease (-), 1929-1939.....percent.....			-36.2	-33.2	-50.0			
9 Irrigable area in enterprises.....1940..acres.....	27,811	18,319	23,690	12,429	52,496			
10 ..1930..acres.....			35,736	11,734	97,692			
11 ..1920 ¹ ..acres.....			39,224	22,310	103,554			
12 Excess of irrigable area over the area irrigated.....1940..acres.....	9,613	16,821	9,230	5,627	25,720			
13 ..1930..acres.....			13,072	1,557	43,499			
14 ..1920 ¹ ..acres.....			18,759	10,455	48,026			
15 Area works were capable of supplying with water...1940..acres.....	26,449	17,570	22,949	11,429	40,209			
16 ..1930..acres.....			35,356	11,330	76,051			
17 ..1920..acres.....			24,964	13,791	64,474			
18 Increase or decrease (-), 1930-1940.....percent.....			-35.1	0.9	-47.1			
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	8,251	16,072	8,489	4,627	13,433			
20 ..1930..acres.....			12,692	1,153	21,858			
21 ..1920..acres.....			4,499	1,936	8,946			
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	68.8	8.5	63.0	59.5	66.6			
23 ..1929..percent.....			64.1	89.8	71.3			
24 ..1919..percent.....			82.0	86.0	86.1			
CAPITAL INVESTED TO JANUARY 1								
25 Total investment in irrigation enterprises.....1940..dollars.....	181,981	326,310	571,361	72,630	853,592			
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	134,911	322,800	558,905	71,205	819,042			
27 (b) Investment in water rights (reported).....1940..dollars.....	47,070	3,510	12,456	1,425	34,550			
28 Total investment in irrigation enterprises.....1930..dollars.....			419,889	133,306	1,590,384			
29 ..1920..dollars.....			965,287	241,884	3,204,519			
30 Increase or decrease (-), 1930-1940.....percent.....			36.1	-45.5	-46.3			
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	6.88	18.57	24.90	6.35	21.23			
32 ..1930..dollars.....			11.88	11.77	20.91			
33 ..1920..dollars.....			38.67	17.54	49.70			
34 Average investment per acre irrigated.....1939..dollars.....	10.00	217.83	39.51	10.68	31.86			
35 Estimated final investment in existing enterprises.....1940..dollars.....	183,201	329,310	576,866	84,630	899,192			
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	6.59	17.98	24.35	6.81	17.13			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
			Primary	Sup.	Primary	Sup.	Primary	Sup.
			Enterprises		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation.....1939..number.....	93	13	73	7	69	1	208	2
38 Area irrigated in these enterprises.....1939..acres.....	16,435	1,476	13,250	727	6,624	(²)	26,236	(²)
39 Cost of maintenance and operation.....1939..dollars.....	2,994	1,683	10,725	423	2,539	(²)	18,215	(²)
40 Average cost, per acre irrigated.....1939..dollars.....	0.18	1.14	0.81	0.58	0.38	(²)	0.69	(²)
41 Total annual charges (reported) ³.....1939..dollars.....	6,250	400	15,203		10		20,451	
42 Average annual charge per acre irrigated.....1939..dollars.....	3.40	0.50	2.17		0.10		1.53	
43 Area against which charges were assessed.....1939..acres.....	1,840	800	7,464		100		16,873	
44 Average annual charge per acre assessed.....1939..dollars.....	3.40	0.50	2.04		0.10		1.21	
45 Total charges collected ³.....1939..dollars.....	6,264	400	12,412				12,164	
46 Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	38,500		266,050				162,250	
WATER DELIVERED TO IRRIGATORS, 1939								
47 Enterprises reporting water delivered.....1939..number.....	94	11	68	8	71	1	190	2
48 Area irrigated by these enterprises.....1939..acres.....	17,929	1,441	11,321	2,727	6,702	(²)	24,026	(²)
49 Water delivered.....1939..acre-feet.....	17,984	1,296	16,999	1,549	7,236	(²)	28,325	(²)
50 Average water delivered per acre irrigated.....1939..acre-feet.....	1.0	0.9	1.5	0.6	1.1	(²)	1.2	(²)
51 Average cost of water per acre irrigated.....1939..dollars.....	0.53	1.13	1.73	0.58	0.39	(²)	1.09	(²)
52 Average cost of water per acre-foot delivered.....1939..dollars.....	0.52	1.26	1.16	1.03	0.36	(²)	0.93	(²)
DRAINAGE OF IRRIGATED LAND								
53 Enterprises reporting land drained or needing drainage.....1939..number.....	12	1	1				3	
54 Irrigable area in these enterprises.....1939..acres.....	2,642	(²)	(²)				159	
55 Irrigated area in these enterprises.....1939..acres.....	1,507		(²)				159	
56 Area for which drains have been installed.....1939..acres.....	99		(²)					
57 Additional area needing drainage.....1939..acres.....	158	(²)					14	

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSISSIPPI RIVER—Continued (Exclusive of Missouri River)							RIO GRANDE							
Arkansas River—Continued							Total	Direct						
Huerfano River—Continued		Apishapa River (52)	Purgatoire River (69)	Big Sandy Creek (30)	Two Butte and Bear Creeks (50)	Cimarron River (70)								
Direct (54)	Cucharas River (53)						(57)							
318	148	90	465	12	61	21	3,825	1,691	1					
18,005	8,771	3,981	30,487	253	3,308	367	560,476	366,823	2					
14,663	7,598	3,519	21,080	217	3,288	338	458,761	306,953	3					
2,290	411	55	2,285	36	.....	8	11,571	3,082	4				
1,046	762	407	7,122	.....	20	21	90,144	58,788	5				
.....	.....	5,199	32,799	.....	.....	139	551,142	356,069	6		
.....	.....	8,292	43,533	.....	.....	.....	519,563	328,688	7	
.....	.....	-23.4	-7.0	.....	.....	164.0	1.7	3.0	8		
39,552	12,944	9,781	45,482	438	3,413	787	797,667	502,922	9					
.....	.....	28,659	52,509	.....	.....	293	736,197	413,175	10		
.....	.....	65,615	51,172	.....	.....	.....	846,338	508,127	11	
21,547	4,173	5,800	14,995	185	105	420	237,191	136,099	12					
.....	.....	23,360	19,710	.....	.....	154	185,055	57,106	13		
.....	.....	57,323	7,639	.....	.....	.....	326,775	181,439	14	
28,901	11,308	9,461	45,412	414	3,413	477	726,474	484,118	15					
.....	.....	25,509	48,089	.....	.....	140	674,196	379,874	16		
.....	.....	11,430	47,402	.....	.....	.....	638,938	420,140	17	
.....	.....	-62.9	-5.6	.....	.....	240.7	7.8	27.4	18		
10,896	2,537	5,480	14,925	161	105	110	165,998	117,295	19					
.....	.....	20,310	15,290	.....	.....	1	123,054	23,805	20		
.....	.....	3,138	3,869	.....	.....	.....	119,375	93,452	21	
62.3	77.6	42.1	67.1	61.1	96.9	76.9	77.2	75.8	22					
.....	.....	20.4	68.2	.....	.....	99.3	81.7	93.7	23		
.....	.....	72.5	91.8	.....	.....	.....	81.3	77.8	24	
692,640	160,952	223,143	1,178,674	11,842	605,720	18,564	12,850,070	7,771,971	25					
688,890	130,152	206,528	1,044,482	11,832	605,720	18,047	11,775,572	7,229,631	26					
3,750	30,800	16,615	134,192	10	.....	517	874,498	542,340	27				
.....	.....	794,372	1,546,150	.....	.....	9,705	6,778,334	2,364,919	28		
.....	.....	1,190,695	491,450	.....	.....	.....	4,538,300	1,526,753	29	
.....	.....	-71.9	-23.8	.....	.....	91.3	86.6	228.6	30		
23.97	14.23	23.59	25.96	28.60	177.47	38.92	17.41	16.05	31					
.....	.....	31.14	32.15	.....	.....	69.32	10.05	6.23	32		
.....	.....	104.17	10.37	.....	.....	.....	7.10	3.63	33	
38.47	18.35	56.05	38.66	46.81	183.11	50.58	22.57	21.19	34					
719,090	180,102	229,243	1,180,774	13,422	606,020	25,556	12,694,478	7,809,504	35					
18.18	13.91	23.44	25.96	30.64	177.56	32.47	15.91	15.53	36					
Primary	Sup.	Primary		Sup.		Primary		Sup.		Primary	Sup.			
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises				
118	2	90	48	113	4	14	1	20	499	191	328	182		
17,763	(2)	8,473	3,973	29,729	147	253	(2)	3,274	366	547,465	148,836	358,963	118,744	
12,882	(2)	5,333	2,684	27,528	290	1,063	(2)	3,392	2,075	172,444	78,109	111,513	76,932	
0.73	(2)	0.63	0.68	0.93	1.97	4.20	(2)	1.04	5.67	0.31	0.52	0.31	0.65	40
18,966	1,485	1,240	25,546	3,973	237,085	20,305	103,801	15,160	41
1.90	0.43	0.82	1.06	1.25	0.50	0.18	0.33	0.14	42
13,458	3,415	1,656	26,471	3,178	595,017	115,715	376,745	105,100	43
1.41	0.43	0.75	0.97	1.25	0.40	5.70	0.28	0.14	44
12,164	20,989	4,426	143,135	17,225	80,701	11,875	45
102,250	16,000	114,770	1,350	2,524,189	318,250	1,611,946	268,150	46
110	2	60	41	116	4	11	1	10	21	561	208	381	202	47
16,628	(2)	7,400	3,731	27,319	147	253	(2)	3,296	367	549,557	128,998	363,767	117,906	48
18,381	(2)	9,944	3,976	35,935	82	245	(2)	9,428	439	827,631	58,467	532,409	51,689	49
1.1	(2)	1.3	1.1	1.3	0.6	1.0	(2)	2.9	1.2	1.5	0.5	1.5	0.4	50
1.28	(2)	0.65	0.65	1.04	1.97	4.19	(2)	1.28	5.67	0.53	0.58	0.41	0.59	51
1.16	(2)	0.48	0.61	0.79	3.54	4.33	(2)	0.45	4.74	0.35	1.27	0.28	1.33	52
.....	3	7	12	6	53
.....	159	2,565	167,599	101,229	54
.....	159	2,184	92,065	73,878	55
.....	42,364	38,084	56
.....	14	43	15,570	15,500	57

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - COLORADO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	RIO GRANDE—Continued				INDEPENDENT BASINS IN RIO GRANDE BASIN		
	Alamosa and La Jara Creeks	Trinchera Creek	Conejos River	Costilla Creek	Total		
	(65)	(66)	(67)	(68)			
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	391	115	988	640	184	
2	Area irrigated.....1939..acres.....	56,723	14,444	89,362	33,104	71,571	
3	(a) Cropland harvested.....1939..acres.....	41,101	12,342	68,493	29,882	53,474	
4	(b) Crop failure.....1939..acres.....	4,281	.....	4,007	201	257
5	(c) Pasture.....1939..acres.....	11,341	2,102	16,862	3,021	17,840	
6	Area irrigated.....1929..acres.....	39,396	14,538	80,318	.....	76,249
7	.....1919..acres.....	46,228	12,485	88,676	.....	89,361
8	Increase or decrease (-), 1929-1939.....percent.....	44.0	-2.7	10.5	.....	-6.1
9	Irrigable area in enterprises.....1940..acres.....	69,407	62,310	115,486	47,542	86,179	
10	.....1930..acres.....	54,715	63,536	112,313	.....	87,255
11	.....1920 ¹ ..acres.....	87,952	59,699	115,987	.....	217,318
12	Excess of irrigable area over the area irrigated.....1940..acres.....	12,684	47,866	26,104	14,438	14,608	
13	.....1930..acres.....	15,319	48,698	31,395	.....	11,006
14	.....1920 ¹ ..acres.....	41,724	47,214	27,211	.....	127,957
15	Area works were capable of supplying with water.....1940..acres.....	67,491	16,140	111,833	46,892	83,089	
16	.....1930..acres.....	54,215	63,228	99,808	.....	86,006
17	.....1920..acres.....	52,556	19,319	95,660	.....	107,672
18	Increase or decrease (-), 1930-1940.....percent.....	24.5	-74.5	12.0	.....	-3.4
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	10,768	1,696	22,451	13,788	11,518	
20	.....1930..acres.....	14,819	48,390	18,890	.....	9,757
21	.....1920..acres.....	6,328	6,834	7,004	.....	18,311
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.0	89.5	79.9	70.6	86.1	
23	.....1929..percent.....	72.7	23.5	81.1	.....	88.7
24	.....1919..percent.....	88.0	64.6	92.7	.....	83.0
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	1,132,985	628,730	1,338,053	1,778,431	178,709	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	1,067,415	628,680	1,128,898	1,720,948	118,802	
27	(b) Investment in water rights (reported).....1940..dollars.....	65,470	50	209,155	57,483	59,907	
28	Total investment in irrigation enterprises.....1930..dollars.....	819,150	677,000	836,676	.....	132,090
29	.....1920..dollars.....	587,184	659,890	564,739	.....	287,360
30	Increase or decrease (-), 1930-1940.....percent.....	38.3	-7.1	59.4	.....	35.3
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	16.79	38.95	11.96	37.93	2.15	
32	.....1930..dollars.....	15.11	10.71	8.41	.....	1.54
33	.....1920..dollars.....	11.17	34.16	5.90	.....	2.67
34	Average investment per acre irrigated.....1939..dollars.....	19.97	43.53	14.97	53.72	2.50	
35	Estimated final investment in existing enterprises.....1940..dollars.....	1,135,160	628,730	1,341,403	1,779,681	180,054	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	16.36	10.09	11.62	37.43	2.09	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	67	2	69	7	28	4
38	Area irrigated in these enterprises.....1939..acres.....	54,074	(²)	14,207	22,477	32,853	3,735
39	Cost of maintenance and operation.....1939..dollars.....	8,198	(²)	11,666	16,633	24,434	265
40	Average cost, per acre irrigated.....1939..dollars.....	0.15	(²)	0.82	0.19	0.74	0.07
41	Total annual charges (reported) ³.....1939..dollars.....	14,368	4,970	56,000	22,357	40,559	800
42	Average annual charge per acre irrigated.....1939..dollars.....	0.36	0.65	5.60	0.30	1.33	1.00
43	Area against which charges were assessed.....1939..acres.....	45,850	8,115	56,000	75,528	2,500	40,894
44	Average annual charge per acre assessed.....1939..dollars.....	0.31	0.61	1.00	0.30	0.07	1.00
45	Total charges collected ³.....1939..dollars.....	7,393	4,798	10,476	16,048	562	28,517
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	69,992	50,000	658,124	16,700	166,427
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	72	2	11	64	4	33
48	Area irrigated by these enterprises.....1939..acres.....	55,335	(²)	14,414	82,937	3,477	33,104
49	Water delivered.....1939..acre-feet.....	75,775	(²)	16,530	142,424	3,678	60,493
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.4	(²)	1.1	1.7	1.1	1.8
51	Average cost of water per acre irrigated.....1939..dollars.....	0.32	(²)	4.04	0.29	0.07	1.24
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.23	(²)	3.52	0.17	0.06	0.69
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	3	1	2
54	Irrigable area in these enterprises.....1939..acres.....	4,250	(²)	(²)	(²)
55	Irrigated area in these enterprises.....1939..acres.....	3,632	(²)	(²)	(²)
56	Area for which drains have been installed.....1939..acres.....	3,200	(²)	(²)	(²)
57	Additional area needing drainage.....1939..acres.....	70

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

INDEPENDENT BASINS IN RIO GRANDE BASIN—Continued				COLORADO RIVER												
San Luis Creek			San Luis Lake (66)	Total	Direct (13)	Fraser River (21)	Williams River (22)	Muddy Creek (12)	Blue River (27)	Eagle River (26)						
Total	Direct (45)	Saguache Creek (44)														
179	108	71	5	14,142	3,059	83	36	27	67	184	1					
87,561	37,124	30,437	4,010	844,494	132,966	8,929	4,370	6,030	10,855	20,642	2					
50,274	28,991	21,263	3,200	702,279	118,948	7,523	3,397	5,610	10,034	16,245	3					
257	227	30	.....	10,292	1,024	54	30	40	60	1,432	4				
17,030	7,906	9,124	810	131,923	13,014	1,352	943	380	761	3,065	5					
57,812	37,591	20,221	.....	856,413	84,865	4,194	.....	6,448	10,725	12,590	6			
89,361	51,329	38,032	.....	766,532	71,968	9,331	.....	5,050	10,541	15,118	7			
16.9	-1.2	50.5	.....	-1.4	105.1	114.4	.....	-6.5	1.2	64.0	8			
79,989	43,164	36,825	6,190	1,243,116	197,242	12,930	7,228	7,005	11,863	22,157	9					
68,818	43,157	25,661	.....	1,261,180	124,876	5,882	.....	9,919	15,869	13,677	10			
217,318	175,871	41,447	.....	1,359,850	125,422	27,010	.....	7,255	16,297	29,435	11			
12,428	6,040	6,388	2,190	398,622	64,256	4,001	2,658	975	1,003	1,515	12					
11,006	5,566	5,440	.....	404,767	60,021	1,718	.....	3,471	5,144	1,087	13			
127,957	124,542	3,415	.....	593,318	53,464	17,679	.....	2,205	5,756	13,317	14			
77,899	43,104	34,795	5,190	1,049,752	175,816	11,296	6,568	7,005	11,653	22,117	15					
67,569	42,068	25,501	.....	1,082,349	96,629	4,652	.....	8,509	15,675	13,523	16			
107,672	68,309	39,363	.....	953,401	101,249	10,795	.....	5,075	11,771	15,586	17			
15.3	2.5	36.4	.....	-3.0	81.9	142.8	.....	-17.7	-25.7	63.6	18			
10,338	5,980	4,358	1,180	205,258	42,830	2,367	2,198	975	798	1,475	19					
9,767	4,477	5,280	.....	225,936	31,774	488	.....	2,061	4,950	933	20			
18,311	16,980	1,331	.....	186,869	29,291	1,464	.....	25	1,200	468	21			
86.7	86.1	87.5	77.3	80.4	75.6	79.0	66.5	86.1	93.2	93.3	22					
85.6	89.4	79.3	.....	79.1	67.1	89.5	.....	75.8	68.4	93.1	23			
83.0	75.1	96.6	.....	80.4	71.1	86.4	.....	99.5	89.6	97.0	24			
169,009	60,117	108,892	9,700	31,494,515	6,562,787	117,945	111,503	49,347	133,499	289,593	25					
109,102	53,671	55,431	9,700	30,425,481	6,079,318	110,650	105,648	44,900	116,140	266,780	26					
59,907	6,446	53,461	.....	1,069,034	483,469	7,295	5,855	4,447	17,359	22,813	27				
112,240	56,775	55,465	.....	28,042,806	5,698,045	12,155	.....	110,650	115,210	322,084	28			
287,360	184,312	108,048	.....	26,820,781	5,923,462	55,860	.....	33,122	116,606	109,012	29			
50.6	5.9	96.3	.....	12.0	870.3	15.9	.....	-55.4	15.9	-10.1	30			
2.17	1.39	3.13	1.87	30.00	37.33	10.44	16.98	7.04	11.46	13.09	31					
1.66	1.35	2.18	.....	25.91	58.97	2.61	.....	13.00	7.35	23.82	32			
2.67	2.70	2.62	.....	28.13	58.50	5.17	.....	6.53	9.91	6.99	33			
2.50	1.62	3.58	2.42	37.29	49.35	13.21	25.52	8.18	12.30	14.03	34					
169,354	60,412	108,942	10,700	34,102,216	6,881,327	149,120	121,878	57,597	136,759	291,393	35					
2.12	1.40	2.96	1.73	27.43	34.89	11.53	16.86	8.22	11.53	13.15	36					
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.					
Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises					
89	4	41	3	48	1	5	2,969	135	358	13	41	24	26	65	140	37
35,668	3,735	10,504	1,580	25,164	(5)	3,850	815,646	43,900	128,199	10,071	8,924	4,133	6,030	10,655	20,346	38
5,414	265	1,619	125	3,595	(5)	1,135	628,552	54,752	154,306	40,067	4,353	2,312	5,360	9,789	11,633	39
0.15	0.07	0.17	0.08	0.14	(5)	0.29	0.77	1.25	1.20	3.98	0.49	0.56	0.89	0.92	0.57	40
600	600	513,675	44,195	126,286	29,950	1,168	2,090	41
1.00	1.00	1.00	1.58	1.44	3.22	0.55	0.39	42
600	600	565,190	29,965	97,695	10,500	4,605	5,901	43
1.00	1.00	0.91	1.47	1.31	2.85	0.25	0.39	44
600	600	413,741	60,616	98,069	43,349	600	45
.....	10,788,170	1,151,727	2,789,107	818,515	159	46
148	8	83	3	65	5	5	2,808	125	362	12	42	30	26	66	122	47
46,957	3,809	16,520	1,580	30,437	2,229	3,850	778,510	42,019	122,406	10,179	8,929	4,370	6,030	10,855	15,395	48
42,321	1,270	21,622	885	20,699	365	3,821	3,385,057	91,898	591,599	37,616	43,188	15,376	46,522	76,531	169,655	49
0.9	0.3	1.3	0.6	0.7	0.2	1.0	4.3	2.2	4.8	3.7	4.8	3.6	7.7	7.1	11.0	50
0.15	0.07	0.17	0.08	0.14	0.06	0.29	0.86	1.26	1.19	3.03	0.54	0.56	0.89	0.92	0.63	51
0.17	0.21	0.13	0.14	0.21	0.38	0.30	0.20	0.57	0.25	0.82	0.11	0.15	0.12	0.13	0.06	52
.....	85	6	5	(2)	1	(2)	53
.....	267,554	42,006	825	(2)	(2)	(2)	54
.....	162,566	20,632	820	(2)	(2)	(2)	55
.....	32,498	12,850	(2)	(2)	(2)	56
.....	12,105	333	70	(2)	(2)	(2)	57

⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — COLORADO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued				
	Roaring fork	Elk Creek	Roan Creek	Plateau River	Gunnison River
	(34)	(78)	(25)	(35)	Total
IRRIGATED FARMS AND AREAS					
1 Irrigated farms.....1939..number.....	494	83	79	373	5,948
2 Area irrigated.....1939..acres.....	40,610	3,918	4,915	24,699	286,112
3 (a) Cropland harvested.....1939..acres.....	33,390	3,261	4,687	16,074	237,633
4 (b) Crop failure.....1939..acres.....	245	24	111	288	2,503
5 (c) Pasture.....1939..acres.....	6,975	633	117	8,337	55,976
6 Area irrigated.....1929..acres.....	36,283	.....	.....	64,833	258,872
7 Area irrigated.....1919..acres.....	30,738	.....	.....	26,260	250,913
8 Increase or decrease (-), 1929-1939.....percent.....	11.9	.....	.....	-61.9	14.4
9 Irrigable area in enterprises.....1940..acres.....	45,966	4,040	7,755	31,256	409,120
10 Area irrigated.....1930..acres.....	49,971	.....	.....	78,034	347,959
11 Area irrigated.....1920 ¹ ..acres.....	47,305	.....	.....	40,757	408,934
12 Excess of irrigable area over the area irrigated.....1940..acres.....	5,356	122	2,840	6,557	113,008
13 Area irrigated.....1930..acres.....	13,688	.....	.....	13,201	89,087
14 Area irrigated.....1920 ¹ ..acres.....	16,567	.....	.....	14,497	159,021
15 Area works were capable of supplying with water...1940..acres.....	45,273	4,169	6,952	30,464	366,864
16 Area works were capable of supplying with water...1930..acres.....	47,055	.....	.....	68,486	322,837
17 Area works were capable of supplying with water...1920..acres.....	34,104	.....	.....	25,616	329,756
18 Increase or decrease (-), 1930-1940.....percent.....	-3.8	.....	.....	-55.5	13.6
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	4,663	251	2,037	5,765	70,752
20 Excess of area works were capable of supplying with water over area irrigated.....1930..acres.....	10,772	.....	.....	3,653	63,965
21 Excess of area works were capable of supplying with water over area irrigated.....1920..acres.....	3,366	.....	.....	.....	78,843
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	89.7	94.0	70.7	81.1	80.7
23 Area irrigated.....1929..percent.....	77.1	.....	.....	94.7	80.2
24 Area irrigated.....1919..percent.....	90.1	.....	.....	.....	76.1
CAPITAL INVESTED TO JANUARY 1					
25 Total investment in irrigation enterprises.....1940..dollars....	826,499	71,461	87,025	472,910	13,225,366
26 (a) Cost of irrigation works and equipment.....1940..dollars....	722,640	69,574	76,265	457,090	13,094,265
27 (b) Investment in water rights (reported).....1940..dollars....	43,859	1,887	10,760	15,820	131,101
28 Total investment in irrigation enterprises.....1930..dollars....	559,953	.....	.....	315,135	10,558,635
29 Total investment in irrigation enterprises.....1920..dollars....	407,266	.....	.....	341,755	10,745,767
30 Increase or decrease (-), 1930-1940.....percent.....	47.6	.....	.....	50.1	25.5
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	18.26	17.14	12.52	15.52	36.05
32 Average investment based on area works were capable of supplying with water, per acre.....1930..dollars....	11.90	.....	.....	4.60	32.64
33 Average investment based on area works were capable of supplying with water, per acre.....1920..dollars....	11.94	.....	.....	13.34	32.59
34 Average investment per acre irrigated.....1939..dollars....	20.35	18.24	17.71	19.15	44.66
35 Estimated final investment in existing enterprises.....1940..dollars....	878,549	71,661	87,025	479,995	13,929,282
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	19.11	17.74	11.22	15.36	34.05
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
	Primary	Sup.		Primary	Sup.
	Enterprises			Enterprises	
37 Enterprises reporting maintenance and operation...1939..number.....	210	6	24	38	19
38 Area irrigated in these enterprises.....1939..acres.....	37,503	983	3,918	4,915	7,266
39 Cost of maintenance and operation.....1939..dollars....	20,939	2,340	2,397	1,823	1,094
40 Average cost, per acre irrigated.....1939..dollars....	0.56	2.38	0.61	0.37	0.14
41 Total annual charges (reported) ^{2 3}.....1939..dollars....	9,418	.....	1,839	575	3,889
42 Average annual charge per acre irrigated.....1939..dollars....	0.65	.....	1.08	0.24	0.77
43 Area against which charges were assessed.....1939..acres.....	14,587	.....	1,745	2,413	5,070
44 Average annual charge per acre assessed.....1939..dollars....	0.65	.....	1.05	0.24	0.77
45 Total charges collected ².....1939..dollars....	2,177	.....	1,787	.....	1,940
46 Indebtedness to December 31 (reported) ³.....1939..dollars....	22,548	.....	.....	65	.....
WATER DELIVERED TO IRRIGATORS, 1939					
47 Enterprises reporting water delivered.....1939..number.....	220	3	21	34	18
48 Area irrigated by these enterprises.....1939..acres.....	39,649	428	3,918	4,915	7,036
49 Water delivered.....1939..acre-feet..	256,702	4,798	19,624	25,565	13,506
50 Average water delivered per acre irrigated.....1939..acre-feet..	6.5	11.2	5.0	5.2	1.9
51 Average cost of water per acre irrigated.....1939..dollars....	0.60	0.44	0.69	0.36	0.60
52 Average cost of water per acre-foot delivered.....1939..dollars....	0.09	0.04	0.14	0.07	0.31
DRAINAGE OF IRRIGATED LAND					
53 Enterprises reporting land drained or needing drainage.....1939..number.....	1	.....	1	.....	.....
54 Irrigable area in these enterprises.....1939..acres.....	(*)	.....	(*)	.....	41
55 Irrigated area in these enterprises.....1939..acres.....	(*)	.....	(*)	.....	136,099
56 Area for which drains have been installed.....1939..acres.....	.....	.....	.....	.....	87,047
57 Additional area needing drainage.....1939..acres.....	(*)	.....	(*)	.....	19,685

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION - COLORADO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLORADO RIVER—Continued													
Gunnison River—Continued								Dolores River					
Direct	Taylor River	Slate River	Tomichi Creek	Smith Fork	North Fork	Uncompahgre River	Salt Creek group	Total	Direct				
(40)	(42)	(41)	(43)	(38)	(39)	(37)	(24)		(36)				
1,862	3	44	141	234	1,355	2,189	13	713	232	1			
87,981	741	6,506	33,104	20,407	52,779	94,644	984	49,356	11,788	2			
65,845	470	5,694	23,889	17,170	43,699	80,866	814	40,099	8,864	3			
268	.....	155	53	1,004	287	716	90	333	238	4			
21,798	271	657	9,162	2,233	8,793	13,062	80	8,924	2,686	5			
20,302	380	.....	17,336	19,329	38,725	88,679	.....	80,436	.....	6			
18,813	560	.....	21,752	15,314	31,006	86,119	.....	74,916	.....	7			
333.1	95.0	.....	91.0	5.6	36.3	5.5	.....	-38.6	.....	8			
104,814	741	8,822	48,069	22,490	70,078	154,106	1,107	133,933	33,245	9			
24,451	580	.....	22,839	26,161	53,395	118,174	.....	159,796	.....	10			
21,649	620	.....	30,298	31,340	57,189	139,756	.....	180,611	.....	11			
16,883	.....	2,316	14,965	2,083	17,299	59,462	123	84,577	21,457	12			
4,149	200	.....	5,503	6,832	14,670	28,495	.....	79,360	.....	13			
4,836	60	.....	8,946	16,026	26,183	53,637	.....	105,695	.....	14			
97,434	741	8,382	47,901	21,104	62,020	129,282	1,107	66,254	16,848	15			
22,256	580	.....	22,407	23,876	51,977	109,767	.....	106,457	.....	16			
19,909	620	.....	23,068	25,600	33,891	137,756	.....	84,973	.....	17			
337.8	27.8	.....	113.8	-11.6	19.3	17.8	.....	-37.8	.....	18			
9,503	.....	1,876	14,797	697	9,241	34,638	123	16,898	5,060	19			
1,954	200	.....	5,071	4,547	13,252	20,088	.....	26,021	.....	20			
3,096	60	.....	1,316	10,286	2,885	51,637	.....	10,057	.....	21			
90.2	100.0	77.6	69.1	96.7	85.1	73.2	88.9	74.5	70.0	22			
91.2	65.5	.....	77.4	81.0	74.5	81.7	.....	75.6	.....	23			
84.4	90.3	.....	94.3	59.8	91.5	62.5	.....	88.2	.....	24			
2,052,695	7,200	76,238	118,939	573,039	1,271,099	9,126,156	21,756	1,635,041	843,761	25			
1,991,069	7,175	70,793	110,995	563,509	1,244,797	9,106,927	20,598	1,548,747	763,462	26			
61,626	25	5,445	7,944	9,530	26,302	20,229	1,158	86,294	80,299	27			
784,520	7,700	.....	112,835	484,950	764,243	6,993,474	.....	6,482,945	.....	28			
1,001,819	6,900	.....	129,243	396,075	622,647	6,945,702	.....	4,847,569	.....	29			
161.6	-6.5	.....	5.4	18.2	66.3	30.5	.....	-74.8	.....	30			
21.07	9.72	9.10	2.48	27.15	20.49	70.59	19.65	24.68	50.08	31			
35.25	13.28	.....	5.04	20.31	14.70	63.71	.....	60.90	.....	32			
50.32	11.13	.....	5.60	15.47	18.37	50.42	.....	57.05	.....	33			
23.34	9.72	11.72	3.59	28.08	24.08	96.43	22.11	33.13	71.58	34			
2,349,100	7,200	83,038	118,959	573,039	1,423,299	9,374,647	21,806	1,792,831	858,991	35			
22.41	9.72	9.41	2.47	25.48	20.31	60.63	19.70	13.39	25.84	36			
Primary	Sup.			Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises				Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
350	34	3	35	80	32	3	151	23	141	6	9	152	5
83,456	13,076	741	6,506	31,929	20,407	879	52,379	5,385	94,089	684	876	48,708	526
48,063	8,027	106	2,610	7,428	4,734	105	36,420	874	129,039	263	1,205	25,745	241
0.58	0.61	0.14	0.40	0.23	0.23	0.12	0.70	0.16	1.37	0.38	1.38	0.53	0.46
41,901	8,318	.....	148	1,870	10,350	.....	43,412	685	135,845	.....	.....	35,385	.....
0.98	0.84	.....	0.30	0.16	0.56	.....	0.98	1.25	1.61	.....	.....	0.91	.....
45,216	10,375	.....	500	11,392	18,872	.....	47,514	550	98,596	.....	.....	42,159	.....
0.93	0.80	.....	0.30	0.16	0.55	.....	0.91	1.25	1.38	.....	.....	0.84	.....
34,171	4,231	.....	.....	720	10,101	.....	41,752	462	111,369	.....	.....	31,625	.....
17,607	167,212	.....	.....	.....	68,000	.....	108,315	.....	7,483,106	.....	.....	106,434	.....
342	34	2	33	82	30	3	150	23	132	7	12	130	4
75,378	13,123	(*)	6,492	32,854	19,860	879	52,501	1,841	91,302	3,873	984	45,304	532
404,225	14,609	(*)	41,782	148,293	58,894	1,224	176,284	3,629	481,176	9,827	2,143	126,341	1,145
5.4	1.1	(*)	6.4	4.5	3.0	1.4	3.4	2.0	5.3	2.5	2.2	2.8	2.2
0.79	0.79	(*)	0.40	0.22	0.54	0.12	0.92	0.65	1.53	0.38	1.38	0.89	0.42
0.15	0.71	(*)	0.06	0.05	0.18	0.09	0.27	0.33	0.29	0.15	0.63	0.32	0.20
20	.....	.....	.....	2	.....	1	.....	7	.....	11	.....	9	.....
17,589	.....	.....	.....	(*)	(*)	.....	2,931	.....	114,239	.....	.....	8,957	.....
15,778	.....	.....	.....	(*)	(*)	.....	2,621	.....	67,308	.....	.....	7,622	.....
1,748	.....	.....	.....	(*)	(*)	.....	5	.....	17,800	.....	.....	80	.....
1,582	.....	.....	.....	(*)	(*)	.....	259	.....	5,585	.....	.....	511	.....

* Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
 * Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

DRAINAGE BASIN TABLE I—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued							
	Dolores River—Con.			Green River				
	San Miguel River	Garfield Creek	Little Dolores River	Total	Direct	Yampa River		
	(58)	(76)	(81)		(9)	Total		
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....1939..number.....	461	25	24	947	13	683	
2	Area irrigated.....1939..acres.....	37,568	2,004	2,319	99,817	1,272	63,014	
3	(a) Cropland harvested.....1939..acres.....	31,235	1,841	1,701	86,350	408	54,419	
4	(b) Crop failure.....1939..acres.....	95	.....	138	1,066	31	653
5	(c) Pasture.....1939..acres.....	6,238	163	480	12,401	833	7,942	
6	Area irrigated.....1929..acres.....	.....	.....	.....	103,888	.....	74,753
7	.....1919..acres.....	.....	.....	.....	94,003	.....	68,198
8	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	-3.9	.....	-15.7
9	Irrigable area in enterprises.....1940..acres.....	100,688	3,304	4,471	138,168	1,732	93,819	
10	.....1930..acres.....	.....	.....	.....	185,944	.....	117,951
11	.....1920..acres.....	.....	.....	.....	165,279	.....	124,598
12	Excess of irrigable area over the area irrigated.....1940..acres.....	63,120	1,300	2,152	35,351	460	30,805	
13	.....1930..acres.....	.....	.....	.....	52,056	.....	43,198
14	.....1920..acres.....	.....	.....	.....	71,276	.....	56,400
15	Area works were capable of supplying with water.....1940..acres.....	49,406	3,304	4,471	122,226	1,639	79,940	
16	.....1930..acres.....	.....	.....	.....	137,120	.....	103,940
17	.....1920..acres.....	.....	.....	.....	115,921	.....	86,503
18	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	-10.9	.....	-23.1
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	11,838	1,300	2,152	22,409	367	16,926	
20	.....1930..acres.....	.....	.....	.....	33,232	.....	29,187
21	.....1920..acres.....	.....	.....	.....	21,918	.....	18,305
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	76.0	60.7	51.9	81.7	77.6	78.8	
23	.....1929..percent.....	.....	.....	.....	75.8	.....	71.9
24	.....1919..percent.....	.....	.....	.....	81.1	.....	78.8
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars.....	791,280	22,700	41,725	1,356,339	5,031	830,883	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	785,285	22,500	33,575	1,300,944	4,671	792,553	
27	(b) Investment in water rights (reported).....1940..dollars.....	5,995	200	8,150	55,495	360	38,330	
28	Total investment in irrigation enterprises.....1930..dollars.....	.....	.....	.....	1,337,707	.....	862,557
29	.....1920..dollars.....	.....	.....	.....	1,372,889	.....	923,673
30	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	1.4	.....	-3.7
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	16.02	6.87	9.33	11.10	3.07	10.39	
32	.....1930..dollars.....	.....	.....	.....	9.76	.....	8.30
33	.....1920..dollars.....	.....	.....	.....	11.84	.....	10.68
34	Average investment per acre irrigated.....1939..dollars.....	21.06	11.33	17.99	13.59	3.96	13.19	
35	Estimated final investment in existing enterprises.....1940..dollars.....	933,840	22,700	42,725	1,623,119	5,311	1,091,038	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	9.27	6.87	9.56	11.75	3.07	11.63	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Sup.		Primary	Sup.	Primary	Sup.
	Enterprises	Enterprises		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation.....1939..number.....	57	1	17	26	7	11	4
38	Area irrigated in these enterprises.....1939..acres.....	37,468	(²)	2,004	2,319	2,947	1,029	2,371
39	Cost of maintenance and operation.....1939..dollars.....	14,932	(²)	336	1,226	346	571	236
40	Average cost, per acre irrigated.....1939..dollars.....	0.40	(²)	0.17	0.53	0.12	0.55	0.10
41	Total annual charges (reported) ^{3 4}.....1939..dollars.....	18,971	25	14,182	150	150
42	Average annual charge per acre irrigated.....1939..dollars.....	0.57	0.06	0.45	0.08	0.08
43	Area against which charges were assessed.....1939..acres.....	34,369	412	35,096	2,000	2,000
44	Average annual charge per acre assessed.....1939..dollars.....	0.55	0.06	0.40	0.08	0.08
45	Total charges collected ⁵.....1939..dollars.....	18,247	3,980	150	150
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	30,934	88,901
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	50	15	21	545	11	13	8
48	Area irrigated by these enterprises.....1939..acres.....	34,880	1,721	2,281	94,091	3,057	1,272	2,481
49	Water delivered.....1939..acre-feet.....	89,038	6,110	4,907	323,736	3,478	1,956	2,486
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	3.6	2.2	3.4	1.1	1.5	1.0
51	Average cost of water per acre irrigated.....1939..dollars.....	0.88	0.18	0.48	0.62	0.12	0.65	0.10
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.24	0.05	0.22	0.18	0.10	0.36	0.10
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....	8	8	4
54	Irrigable area in these enterprises.....1939..acres.....	8,897	6,850	4,375
55	Irrigated area in these enterprises.....1939..acres.....	7,562	5,480	3,520
56	Area for which drains have been installed.....1939..acres.....	80	2
57	Additional area needing drainage.....1939..acres.....	491	1,210	745

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLORADO RIVER—Continued															
Green River—Continued					San Juan River										
Yampa River—Continued				White River (23)	Total	Direct (64)	Los Pinos River (63)	Animas River (62)							
Direct (10)	Trout Creek (11)	Elk River (7)	Little Snake River (8)												
487	36	100	60	251	2,087	207	580	242		1					
42,926	2,748	10,597	6,743	35,531	135,948	14,301	40,822	24,515		2					
37,513	2,369	9,043	5,494	31,523	114,672	12,066	32,917	22,086		3					
518	4	100	31	382	2,954	164	87	220		4					
4,895	375	1,454	1,218	3,826	18,322	2,071	7,818	2,199		5					
22,138	.....	.....	7,884	27,773	129,811	2,282	42,881	27,283		6			
18,029	.....	.....	9,617	25,625	87,228	1,451	28,762	17,819		7			
93.9	.....	.....	-14.5	27.9	4.7	526.7	-4.8	-10.1		8			
65,902	4,019	14,051	9,847	42,617	205,571	17,358	55,947	34,765		9					
34,996	.....	.....	11,423	36,263	179,781	2,917	63,177	35,214		10			
28,221	.....	.....	16,242	40,441	152,934	2,989	52,946	38,043		11			
22,976	1,271	3,454	3,104	7,086	69,623	3,057	15,125	10,250		12					
12,858	.....	.....	3,539	8,490	49,970	635	20,296	7,931		13			
10,192	.....	.....	6,825	14,816	65,706	1,538	24,184	20,224		14			
53,948	3,900	12,563	9,629	40,647	164,213	17,229	45,394	29,500		15					
28,187	.....	.....	11,003	31,648	159,187	2,876	57,832	29,374		16			
18,882	.....	.....	12,449	29,238	103,675	1,634	40,773	19,519		17			
91.0	.....	.....	-12.5	28.4	3.2	499.1	-21.5	0.4		18			
10,922	1,152	1,966	2,886	5,116	28,265	2,928	4,562	4,985		19					
6,049	.....	.....	3,119	3,875	29,376	594	14,951	2,081		20			
803	.....	.....	2,832	3,613	16,447	183	12,011	1,700		21			
79.7	70.5	84.4	70.0	87.4	82.8	83.0	89.9	83.1		22					
78.5	.....	.....	71.7	87.8	81.5	79.3	74.1	82.9		23			
95.7	.....	.....	77.3	87.6	84.1	86.8	70.5	91.3		24			
656,773	34,730	76,810	62,570	520,425	6,469,019	102,812	1,142,220	589,843		25					
633,913	31,850	67,260	59,530	503,620	6,295,947	90,362	1,098,179	508,372		26					
22,880	2,880	9,550	3,040	16,805	173,072	12,450	44,041	80,471		27					
296,435	.....	.....	108,877	460,500	1,346,440	19,889	559,550	360,177		28			
162,768	.....	.....	237,254	447,141	1,166,170	25,200	521,590	323,638		29			
120.1	.....	.....	-42.5	13.0	380.5	417.7	104.1	63.8		30			
12.26	8.91	6.11	6.50	12.80	39.39	5.97	25.17	19.99		31					
10.59	.....	.....	9.90	14.55	8.46	6.91	9.68	12.26		32			
8.64	.....	.....	19.06	15.29	11.25	15.42	12.79	16.58		33			
15.30	12.64	7.25	9.28	14.65	47.58	7.19	27.98	24.06		34					
903,093	36,730	87,385	63,830	526,770	7,514,449	103,797	1,864,315	592,133		35					
13.70	9.14	6.22	6.48	12.36	36.55	5.98	33.32	17.03		36					
Primary	Sup.			Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.				
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises					
207	4	21	67	47	132	3	427	19	131	2	57	5	72	5	37
35,016	2,371	2,668	10,342	6,618	34,569	576	134,719	2,083	14,159	(2)	40,791	61	23,865	312	38
27,321	236	769	3,913	4,384	19,065	110	98,492	1,455	7,645	(2)	29,561	24	12,183	112	39
0.78	0.10	0.29	0.38	0.66	0.55	0.19	0.73	0.70	0.54	(2)	0.72	0.39	0.51	0.36	40
7,981	150	100	75	1,526	4,500	83,962	1,203	2,276	16,451	12,073	41
0.57	0.08	0.11	0.09	1.05	0.32	0.74	1.07	0.40	0.42	0.57	42
14,379	2,000	937	796	2,595	16,389	127,563	1,470	6,060	41,718	22,425	43
0.56	0.08	0.11	0.09	0.59	0.27	0.66	0.82	0.38	0.39	0.54	44
1,674	150	1,528	778	74,703	10,484	1,990	15,917	13,659	45
87,950	201	750	53,929	166,000	49	6,598	37,650	46
260	8	22	67	48	135	3	255	10	41	35	3	51	3	47
38,564	2,481	2,748	9,392	6,743	35,372	576	115,371	1,071	7,453	(2)	34,878	45	20,370	312	48
137,008	2,486	8,954	26,340	14,326	135,152	992	293,498	2,066	14,347	(2)	99,259	35	58,828	1,300	49
3.6	1.0	3.3	2.8	2.1	3.8	1.7	2.5	1.9	1.9	(2)	2.8	0.8	2.9	4.2	50
0.78	0.10	0.29	0.32	0.65	0.54	0.19	0.73	0.85	0.38	(2)	0.43	0.31	0.56	0.35	51
0.22	0.10	0.09	0.11	0.40	0.14	0.11	0.29	0.44	0.20	(2)	0.15	0.40	0.19	0.08	52
3	(2) 1	4	10	5	(2) 1	(2) 1	53
3,635	(2) 1	2,475	71,247	2,200	(2) 1	(2) 1	54
2,840	(2) 1	1,960	40,315	2,039	(2) 1	(2) 1	55
.....	(2) 1	2	1	(2) 1	(2) 1	56
705	(2) 1	465	2,136	26	(2) 1	(2) 1	57

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - COLORADO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued							
	San Juan River—Continued							
	La Plata River		Mancos River		McElmo Creek		Piedra River	
	(61)	(60)	(59)	(79)				
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....1939..number.....	206	165	514	79			
2	Area irrigated.....1939..acres.....	9,908	10,410	32,358	3,634			
3	(a) Cropland harvested.....1939..acres.....	7,126	7,526	29,857	2,984			
4	(b) Crop failure.....1939..acres.....	1,536	775	42	130			
5	(c) Pasture.....1939..acres.....	1,246	2,109	2,359	520			
6	Area irrigated.....1929..acres.....	24,308	13,167					
7	.....1919..acres.....	17,174	9,040					
8	Increase or decrease (-), 1929-1939.....percent.....	-59.2	-20.9					
9	Irrigable area in enterprises.....1940..acres.....	26,790	12,540	53,492	4,679			
10	.....1930..acres.....	33,255	17,945					
11	.....1920..acres.....	20,473	18,149					
12	Excess of irrigable area over the area irrigated.....1940..acres.....	16,662	2,130	21,134	1,045			
13	.....1930..acres.....	8,947	4,778					
14	.....1920..acres.....	3,299	9,109					
15	Area works were capable of supplying with water.....1940..acres.....	18,212	12,511	36,718	4,659			
16	.....1930..acres.....	29,920	16,200					
17	.....1920..acres.....	17,935	9,494					
18	Increase or decrease (-), 1930-1940.....percent.....	-39.1	-22.8					
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	8,304	2,101	4,360	1,025			
20	.....1930..acres.....	5,612	3,033					
21	.....1920..acres.....	761	454					
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	54.4	83.2	68.1	78.0			
23	.....1929..percent.....	81.2	81.3					
24	.....1919..percent.....	95.8	95.2					
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars.....	143,217	146,285	4,313,972	30,670			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	136,302	125,645	4,307,762	28,325			
27	(b) Investment in water rights (reported).....1940..dollars.....	6,915	20,640	6,210	2,345			
28	Total investment in irrigation enterprises.....1930..dollars.....	120,119	113,355					
29	.....1920..dollars.....	94,613	35,477					
30	Increase or decrease (-), 1930-1940.....percent.....	19.2	29.1					
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	7.86	11.69	117.49	6.58			
32	.....1930..dollars.....	4.01	7.00					
33	.....1920..dollars.....	5.26	3.74					
34	Average investment per acre irrigated.....1939..dollars.....	14.45	14.05	133.32	8.44			
35	Estimated final investment in existing enterprises.....1940..dollars.....	246,827	161,685	4,514,622	31,070			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	9.21	12.89	84.40	6.64			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Supplemental	Primary	Supplemental	Primary	Supplemental	
	Enterprises	Enterprises		Enterprises				
37	Enterprises reporting maintenance and operation.....1939..number.....	42	4	45	1	40	2	40
38	Area irrigated in these enterprises.....1939..acres.....	9,868	1,002	10,319	(^e)	32,220	(^e)	3,497
39	Cost of maintenance and operation.....1939..dollars.....	3,416	559	3,960	(^e)	39,949	(^e)	1,758
40	Average cost, per acre irrigated.....1939..dollars.....	0.35	0.56	0.39	(^e)	1.24	(^e)	0.50
41	Total annual charges (reported) ^{3 4}.....1939..dollars.....	4,159	503	1,754	700	46,849		400
42	Average annual charge per acre irrigated.....1939..dollars.....	0.47	0.69	0.24	1.75	1.54		0.78
43	Area against which charges were assessed.....1939..acres.....	15,160	1,070	7,885	400	33,785		510
44	Average annual charge per acre assessed.....1939..dollars.....	0.27	0.47	0.22	1.75	1.39		0.78
45	Total charges collected ².....1939..dollars.....	4,133		1,327	499	37,427		230
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	57		700		8,875		166,000
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	32	2	25	1	31		40
48	Area irrigated by these enterprises.....1939..acres.....	9,693	(^e)	8,859	(^e)	31,134		2,984
49	Water delivered.....1939..acre-feet.....	12,544	(^e)	13,000	(^e)	91,896		3,624
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.3	(^e)	1.5	(^e)	3.0		1.2
51	Average cost of water per acre irrigated.....1939..dollars.....	0.46	(^e)	0.24	(^e)	1.53		0.40
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.36	(^e)	0.16	(^e)	0.52		0.33
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....	1		1		1		
54	Irrigable area in these enterprises.....1939..acres.....	(^e)		(^e)		(^e)		
55	Irrigated area in these enterprises.....1939..acres.....	(^e)		(^e)		(^e)		
56	Area for which drains have been installed.....1939..acres.....	(^e)		(^e)		(^e)		
57	Additional area needing drainage.....1939..acres.....	(^e)		(^e)		(^e)		

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - COLORADO

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DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	STATE TOTAL	MISSOURI RIVER							
		Total	Platte River					Total ¹	Direct (32)
			Total	North Platte River		South Platte River			
				Total	Direct (6)	Laramie River (5)	Total			Direct
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	2,874	2,781	2,750	231	215	16	2,519	1,190
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	448	515	519	747	784	257	498	525
3	Diversion dams.....1940..total number.....	4,792	1,282	1,258	331	325	6	927	380
4	1930..total number.....	3,672	889	885	208	1	58	677	96
5	1920..total number.....	3,647	1,124	1,099	268	3	32	631	103
6	(a) Concrete and masonry.....1940..number.....	367	147	144	.....	.....	.....	144	30
7	(b) Timber.....1940..number.....	427	62	61	10	10	.....	51	16
8	(c) Earth and rock.....1940..number.....	2,838	851	841	301	296	5	540	222
9	(d) Other, mixed, and not reported.....1940..number.....	1,160	222	212	20	19	1	192	112
10	Main canals and laterals.....1940..total length, miles.....	19,864.0	5,991.1	5,936.8	1,198.0	1,193.0	5.0	4,736.8	2,419.7
11	1930..total length, miles.....	21,381	5,934	5,925	673	40	109	5,252	2,078
12	1920..total length, miles.....	27,593	8,093	7,986	896	16	74	7,090	1,725
13	(a) Earth.....1940..length, miles.....	19,707	5,923	5,869	1,198	1,193	5	4,671	2,415
14	(b) Lined.....1940..length, miles.....	157.0	68.1	67.8	.....	.....	.....	67.8	4.7
15	1940..capacity, c.f.s. ³	139,780	43,390	43,140	5,943	5,708	235	37,197	18,534
16	1930..capacity, c.f.s. ³	123,652	42,439	42,430	4,305	213	693	38,125	16,435
17	1920..capacity, c.f.s. ³	119,558	43,121	42,444	5,607	310	478	36,837	12,674
18	Pipe lines ⁴.....1940..total length, miles.....	245.1	83.5	83.3	0.5	0.5	.....	82.8	20.0
19	1930..total length, miles.....	131.9	23.1	23.0	.....	.....	.....	23.0	3.4
20	1920..total length, miles.....	217.3	46.9	46.8	.....	.....	.....	46.8	9.7
21	(a) Concrete.....1940..length, miles.....	86.7	20.9	20.9	.....	.....	.....	20.9	10.0
22	(b) Metal.....1940..length, miles.....	93.5	42.2	42.0	0.5	0.5	.....	41.5	6.1
23	(c) Wood-stave.....1940..length, miles.....	23.7	1.5	1.5	.....	.....	.....	1.5	0.4
24	(d) Other.....1940..length, miles.....	41.2	18.9	18.9	.....	.....	.....	18.9	3.5
25	Storage dams.....1940..total number.....	1,015	377	372	11	11	.....	361	90
26	1930..total number.....	706	237	235	14	.....	.....	221	20
27	1920..total number.....	803	313	305	11	2	1	294	14
28	(a) Concrete and masonry.....1940..number.....	19	7	7	.....	.....	.....	7	2
29	(b) Earth and rock.....1940..number.....	951	354	349	10	10	.....	339	78
30	(c) Other, mixed, and not reported.....1940..number.....	45	16	16	1	1	.....	15	10
31	Reservoirs.....1940..total number.....	5,107	386	380	12	12	.....	368	98
32	(a) 1-99 acre-feet capacity.....1940..number.....	491	133	128	7	7	.....	121	32
33	(b) 100-999 acre-feet capacity.....1940..number.....	348	127	126	4	4	.....	122	16
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	229	126	126	1	1	.....	125	50
35	1940..total capacity, ac.-ft. ⁵	2,071,522	763,972	763,497	7,118	7,118	.....	756,379	401,562
36	1930..total capacity, ac.-ft. ⁵	765	276	276	15	.....	.....	261	23
37	1920..total capacity, ac.-ft. ⁵	1,924,982	800,263	800,257	16,714	.....	.....	783,543	386,654
38	Wells, flowing.....1940..number.....	886	4	4	.....	.....	.....	4	4
39	1930..number.....	621	.....	.....	.....	.....	.....	.....	.....
40	1920..number.....	476	4	4	.....	.....	.....	4	3
41	1940..yield, g.p.m.....	54,859	165	165	.....	.....	.....	165	165
42	1930..yield, g.p.m.....	39,644	.....	.....	.....	.....	.....	.....	.....
43	1920..yield, g.p.m.....	20,139	230	230	.....	.....	.....	230	170
44	Wells, pumped.....1940..number.....	2,878	1,989	1,982	2	2	.....	1,980	1,022
45	1930..number.....	654	457	457	.....	.....	.....	457	4
46	1920..number.....	527	283	283	.....	.....	.....	283	90
47	1940..yield, g.p.m.....	1,929,798	1,387,043	1,381,325	(?)	(?)	.....	1,381,165	797,199
48	1930..yield, g.p.m.....	237,903	155,912	155,912	.....	.....	.....	155,912	3,415
49	1920..yield, g.p.m.....	210,094	124,338	124,338	.....	.....	.....	124,338	42,452
50	Pumping plants.....1940..total number.....	2,806	1,909	1,899	2	2	.....	1,897	990
51	1930..total number.....	516	334	334	.....	.....	.....	334	11
52	Prime movers.....1940..capacity, hp.....	49,157	32,582	32,269	(?)	(?)	.....	32,239	16,786
53	1930..capacity, hp.....	11,204	4,441	4,441	.....	.....	.....	4,441	220
54	1920..capacity, hp.....	8,635	3,103	3,103	.....	.....	.....	3,103	1,096
55	(a) Electric.....1940..number.....	1,088	902	902	.....	.....	.....	902	386
56	1940..capacity, hp.....	14,196	10,985	10,985	.....	.....	.....	10,985	5,740
57	(b) Internal-combustion.....1940..number.....	1,612	998	988	2	2	.....	987	598
58	1940..capacity, hp.....	32,149	21,525	21,213	(?)	(?)	.....	21,183	10,987
59	(c) Other.....1940..number.....	106	9	8	.....	.....	.....	8	6
60	1940..capacity, hp.....	2,812	72	71	.....	.....	.....	71	59
61	Pumps.....1940..total number.....	2,818	1,919	1,909	2	2	.....	1,907	1,000
62	1930..number.....	540	348	348	.....	.....	.....	348	12
63	1920..number.....	435	241	241	.....	.....	.....	241	78
64	1940..capacity, g.p.m.....	2,263,375	1,473,005	1,463,837	(?)	(?)	.....	1,463,602	833,261
65	1930..capacity, g.p.m.....	437,250	192,615	192,615	.....	.....	.....	192,615	9,364
66	1920..capacity, g.p.m.....	299,726	166,263	166,263	.....	.....	.....	166,263	50,812
67	(a) Centrifugal.....1940..number.....	1,564	968	964	2	2	.....	962	602
68	1940..capacity, g.p.m.....	1,151,926	656,057	652,057	(?)	(?)	.....	651,822	442,786
69	1940..average capacity, g.p.m.....	737	678	678	(?)	(?)	.....	678	736
70	(b) Turbine.....1940..number.....	1,118	912	907	.....	.....	.....	907	382
71	1940..capacity, g.p.m.....	1,091,791	808,852	803,102	.....	.....	.....	803,102	386,972
72	1940..average capacity, g.p.m.....	977	887	885	.....	.....	.....	885	1,013
73	(c) Plunger.....1940..number.....	102	19	18	.....	.....	.....	18	11
74	1940..capacity, g.p.m.....	1,800	521	503	.....	.....	.....	503	323
75	1940..average capacity, g.p.m.....	18	27	28	.....	.....	.....	28	29
76	(d) Other.....1940..number.....	34	20	20	.....	.....	.....	20	5
77	1940..capacity, g.p.m.....	17,858	8,175	8,175	.....	.....	.....	8,175	3,180
78	Pumping lift, from all sources.....1940..average, feet.....	32	36	36	(?)	(?)	.....	36	33
79	1930..average, feet.....	25	24	24	.....	.....	.....	24	20
80	1920..average, feet.....	23	22	22	.....	.....	.....	22	22
81	from pumped wells.....1940..average, feet.....	33	36	36	(?)	(?)	.....	36	34
82	from surface sources.....1940..average, feet.....	24	23	23	(?)	(?)	.....	23	15

¹Data for 3 enterprises in Pawnee Creek Drainage Basin (72) (number refers to separate map) are included with South Platte River Drainage Basin total. ²Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1. ³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁴Includes siphons and farm pipe lines reported. ⁵Includes 3 reservoirs for which capacity was not reported. ⁶Total capacity of all reservoirs regardless of size. ⁷Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued							
	Platte River—Continued							
	South Platte River—Continued							
	Plum Creek (31)	Bear Creek (29)	Cherry Creek (19)	Clear Creek (28)	St. Vrain Creek			Thompson River (14)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1 Enterprises.....1940..number.....	41	33	37	138	201	95	105	76
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	66	372	91	603	899	873	922	1,056
3 Diversion dams.....1940..total number.....	34	39	21	42	119	59	60	56
4 1930..total number.....	8	6	.....	17	87	.....	.....	38
5 1920..total number.....	29	9	.....	81	171	.....	.....	33
6 (a) Concrete and masonry.....1940..number.....	9	.....	.....	14	47	22	25	13
7 (b) Timber.....1940..number.....	4	.....	.....	7	13	9	4	7
8 (c) Earth and rock.....1940..number.....	33	18	21	16	42	22	20	28
9 (d) Other, mixed, and not reported.....1940..number.....	1	8	.....	5	17	6	11	8
10 Main canals and laterals.....1940..total length, miles.....	55.0	87.9	47.0	313.4	712.5	307.7	404.8	308.6
11 1930..total length, miles.....	71	.....	.....	324	690	.....	.....	269
12 1920..total length, miles.....	62	.....	.....	271	2,005	.....	.....	387
13 (a) Earth.....1940..length, miles.....	55	82	47	308	708	306	402	306
14 (b) Lined.....1940..length, miles.....	.....	5.9	.....	5.4	4.5	1.7	2.8	2.6
15 1940..capacity, c.f.s. ⁴	175	611	113	3,186	4,758	1,708	3,050	3,515
16 1930..capacity, c.f.s. ⁴	409	.....	.....	2,274	4,113	.....	.....	2,939
17 1920..capacity, c.f.s. ⁴	359	.....	.....	1,806	5,600	.....	.....	2,810
18 Pipe lines ⁵.....1940..total length, miles.....	0.1	1.9	.....	6.4	4.6	3.1	1.5	11.7
19 1930..total length, miles.....	.....	0.5	.....	6.2	2.3	.....	.....	6.0
20 1920..total length, miles.....	.....	1.0	.....	0.1	12.7	.....	.....	1.9
21 (a) Concrete.....1940..length, miles.....	.....	1.2	.....	0.3	.....	.....	.....	0.7
22 (b) Metal.....1940..length, miles.....	0.1	0.7	.....	5.7	2.4	1.2	1.2	7.2
23 (c) Wood-stave.....1940..length, miles.....	.....	.....	.....	0.1	.....	.....	.....	0.1
24 (d) Other.....1940..length, miles.....	.....	.....	.....	0.3	2.2	1.9	0.3	3.7
25 Storage dams.....1940..total number.....	2	22	3	45	59	35	24	32
26 1930..total number.....	8	.....	.....	30	28	.....	.....	22
27 1920..total number.....	7	.....	.....	5	83	.....	.....	23
28 (a) Concrete and masonry.....1940..number.....	.....	.....	.....	2	2	.....	2	.....
29 (b) Earth and rock.....1940..number.....	2	22	3	43	56	35	21	31
30 (c) Other, mixed, and not reported.....1940..number.....	.....	.....	.....	.....	1	.....	1	1
31 Reservoirs.....1940..total number.....	3	20	2	48	63	38	25	24
32 (a) 1-99 acre-feet capacity.....1940..number.....	3	2	2	22	15	9	6	8
33 (b) 100-999 acre-feet capacity.....1940..number.....	.....	18	.....	26	33	19	14	6
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	.....	.....	.....	.....	15	10	5	10
35 1940..total capacity, ac.-ft. ⁶	24	5,986	(?)	30,179	64,676	34,567	30,109	79,326
36 1930..total number.....	28	.....	.....	21	37	.....	.....	28
37 1930..total capacity, ac.-ft.....	.....	8,670	.....	27,068	45,853	.....	.....	90,758
38 Wells, flowing.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....
39 1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....
40 1920..number.....	.....	.....	.....	.....	.....	.....	.....	.....
41 1940..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
42 1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
43 1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
44 Wells, pumped.....1940..number.....	.....	1	7	75	12	5	7	20
45 1930..number.....	.....	.....	.....	7	5	.....	.....	.....
46 1920..number.....	.....	.....	.....	.....	1	.....	.....	1
47 1940..yield, g.p.m.....	.....	(?)	7,200	14,659	7,360	3,800	3,560	10,040
48 1930..yield, g.p.m.....	.....	.....	.....	384	1,050	.....	.....	.....
49 1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	1,200
50 Pumping plants.....1940..total number.....	.....	1	9	75	16	7	9	19
51 1930..total number.....	.....	.....	.....	12	7	.....	.....	3
52 Prime movers.....1940..capacity, hp.....	.....	(?)	233	670	303	187	116	351
53 1930..capacity, hp.....	.....	.....	.....	54	152	.....	.....	85
54 1920..capacity, hp.....	.....	.....	.....	.....	100	.....	.....	106
55 (a) Electric.....1940..number.....	7	1	1	39	5	3	2	3
56 1940..capacity, hp.....	(?)	(?)	(?)	117	51	35	(?)	40
57 (b) Internal-combustion.....1940..number.....	.....	.....	8	55	11	4	7	15
58 1940..capacity, hp.....	.....	.....	225	547	252	152	100	305
59 (c) Other.....1940..number.....	.....	.....	.....	(?)	1	.....	.....	(?)
60 1940..capacity, hp.....	.....	.....	.....	.....	.....	.....	.....	.....
61 Pumps.....1940..total number.....	.....	1	8	75	16	7	9	20
62 1930..number.....	.....	.....	.....	12	7	.....	.....	3
63 1920..number.....	.....	5	.....	.....	.....	.....	.....	6
64 1940..capacity, g.p.m.....	.....	(?)	8,760	17,039	10,940	6,650	4,290	14,190
65 1930..capacity, g.p.m.....	.....	.....	.....	865	7,450	.....	.....	4,290
66 1920..capacity, g.p.m.....	.....	.....	.....	.....	1,000	.....	.....	5,831
67 (a) Centrifugal.....1940..number.....	.....	.....	1	59	12	5	7	14
68 1940..capacity, g.p.m.....	.....	.....	(?)	13,700	8,500	5,250	3,250	10,370
69 1940..average capacity, g.p.m.....	.....	.....	(?)	232	708	1,050	464	741
70 (b) Turbine.....1940..number.....	.....	.....	6	11	4	2	2	5
71 1940..capacity, g.p.m.....	.....	.....	6,000	3,075	2,440	(?)	(?)	3,800
72 1940..average capacity, g.p.m.....	.....	.....	1,000	280	610	(?)	(?)	760
73 (c) Plunger.....1940..number.....	.....	1	.....	3	.....	.....	.....	1
74 1940..capacity, g.p.m.....	.....	(?)	.....	54	.....	.....	.....	(?)
75 1940..average capacity, g.p.m.....	.....	(?)	.....	18	.....	.....	.....	(?)
76 (d) Other.....1940..number.....	.....	.....	1	2	.....	.....	.....	.....
77 1940..capacity, g.p.m.....	.....	.....	(?)	(?)	.....	.....	.....	.....
78 Pumping lift, from all sources.....1940..average, feet.....	.....	(?)	34	27	25	23	26	21
79 1930..average, feet.....	.....	.....	.....	29	23	.....	.....	17
80 1920..average, feet.....	.....	40	.....	.....	22	.....	.....	35
81 from pumped wells.....1940..average, feet.....	.....	(?)	26	28	25	22	27	35
82 from surface sources.....1940..average, feet.....	.....	.....	54	19	25	28	22	18

¹Data for 2 enterprises in Timpas Creek Drainage Basin (51) (number refers to separate map) are included with Arkansas River "Direct" Drainage Basin (83).
²Data for 1 enterprise in Smoky Hill River Drainage Basin (71) and 1 enterprise in White Woman Creek Drainage Basin (73) (number refers to separate map) are included with Republican River Drainage Basin total.
³Data for 3 enterprises in Frenchman Creek Drainage Basin (82) (number refers to separate map) are included with Arikaree River Drainage Basin (17).

CENSUS OF IRRIGATION — COLORADO

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WORKS, 1940, 1930, AND 1920—Continued

MISSOURI RIVER—Continued					MISSISSIPPI RIVER (Exclusive of Missouri River)									
Platte River—Continued				Kansas River			Arkansas River							
South Platte River—Continued				Republican River			Total	Direct ¹	Texas Creek	Grape Creek	Turkey Creek	Fountain Creek	St. Charles River	
Cache la Poudre River (4)	Crow Creek (2)	Bijou Creek group (16)	Horsetail Creek (1)	Total ²	Direct	Arikaree River ³								(33)	(77)	(46)	(47)	(48)	(49)
555	30	212	3	31	4	25	1,550	754	44	111	15	93	77	1
428	76	132	285	155	196	153	402	583	120	238	1,171	247	148	2
225	2	9	.....	24	2	22	706	259	12	25	6	51	39	3
126	3	10	.....	4	.....	.....	689	65	.....	.....	.....	4	68	4
98	6	4	.....	25	.....	.....	919	88	.....	.....	.....	6	87	5
30	.....	1	.....	3	.....	3	55	21	.....	1	4	2	6	6
4	.....	.....	.....	1	1	.....	40	26	4	.....	.....	1	7	1
151	1	8	.....	10	1	9	325	119	6	23	2	22	16	8
40	1	.....	.....	10	.....	10	288	93	2	1	.....	28	16	9
726.7	9.0	58.0	1.0	54.3	9.0	44.3	3,589.4	2,285.1	56.0	93.6	4.1	148.0	151.0	10
1,225	6	40	.....	9	.....	.....	4,362	2,318	.....	.....	.....	196	92	11
1,567	17	27	.....	107	.....	.....	6,058	2,957	.....	.....	.....	240	186	12
682	9	58	1	54	9	44	3,565	2,273	56	93	4	148	151	13
44.7	.....	.....	.....	0.3	.....	0.3	24.4	12.1	.....	0.6	0.1	.....	.....	14
5,885	11	404	3	250	59	190	41,217	24,874	134	468	29	684	346	15
5,779	32	819	.....	9	.....	.....	38,431	21,963	.....	.....	.....	619	178	16
8,386	105	226	.....	677	.....	.....	28,647	10,766	.....	.....	.....	1,046	757	17
36.0	0.2	1.9	.....	0.2	.....	0.2	100.1	80.0	0.4	0.2	2.6	10.7	0.9	18
0.6	.....	0.1	.....	0.1	.....	.....	83.3	6.3	.....	.....	.....	0.5	.....	19
18.0	.....	.....	.....	0.1	.....	.....	118.6	13.8	.....	.....	.....	11.7	0.4	20
8.0	.....	0.7	.....	.....	.....	.....	59.5	58.7	0.2	.....	.....	0.5	.....	21
18.7	0.2	0.4	.....	0.2	.....	0.2	18.9	7.9	0.2	0.2	0.1	8.6	0.9	22
0.8	.....	0.1	.....	.....	.....	.....	13.3	9.2	.....	.....	.....	.....	.....	23
8.5	.....	0.7	.....	.....	.....	.....	8.4	4.2	.....	.....	2.5	1.6	.....	24
94	5	9	.....	5	.....	5	210	114	2	4	1	23	1	25
85	2	.....	.....	2	.....	.....	124	11	.....	.....	.....	.....	1	26
90	9	.....	.....	8	.....	.....	154	29	.....	.....	.....	9	12	27
1	.....	.....	.....	.....	.....	.....	6	4	.....	.....	.....	.....	.....	28
91	4	9	.....	5	.....	5	190	100	1	4	1	20	1	29
2	1	.....	.....	.....	.....	.....	14	10	1	.....	.....	3	.....	30
95	5	9	1	6	.....	5	218	123	1	4	1	25	3	31
29	.....	7	1	5	.....	4	148	86	1	.....	.....	18	1	32
16	5	2	.....	1	.....	1	34	14	.....	4	.....	6	2	33
50	.....	.....	.....	.....	.....	.....	36	23	.....	.....	1	1	.....	34
171,337	1,600	1,681	(?)	475	.....	480	736,443	652,245	(?)	2,763	(?)	2,470	953	35
86	4	.....	.....	3	.....	.....	135	17	.....	.....	.....	12	1	36
180,630	1,130	.....	.....	6	.....	.....	701,802	524,801	.....	.....	.....	8,704	900	37
.....	.....	.....	.....	.....	.....	.....	22	18	.....	.....	1	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	39
1	.....	.....	.....	.....	.....	.....	18	2	.....	.....	.....	3	.....	40
.....	.....	.....	.....	.....	.....	.....	2,276	2,175	.....	(?)	.....	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	870	.....	.....	.....	.....	.....	.....	42
60	.....	.....	.....	.....	.....	.....	3,140	315	.....	.....	.....	30	.....	43
536	59	245	2	7	.....	6	449	372	1	2	3	29	2	44
137	9	.....	.....	.....	.....	.....	194	67	.....	.....	.....	1	3	45
143	.....	.....	.....	.....	.....	.....	243	167	.....	.....	.....	19	3	46
291,837	23,375	227,245	(?)	5,718	.....	5,700	173,254	133,763	(?)	(?)	2,100	18,088	(?)	47
37,690	4,200	.....	.....	.....	.....	.....	81,226	25,354	.....	.....	.....	200	250	48
60,611	.....	.....	.....	.....	.....	.....	85,756	66,235	.....	.....	.....	7,700	818	49
502	39	241	2	10	2	7	429	344	1	2	2	33	7	50
63	5	2	.....	.....	.....	.....	145	49	.....	.....	.....	2	4	51
5,428	431	7,960	(?)	313	(?)	225	4,988	3,695	(?)	(?)	(?)	687	177	52
895	104	48	.....	.....	.....	.....	1,854	633	.....	.....	.....	50	73	53
1,538	.....	63	.....	.....	.....	.....	1,536	1,536	.....	.....	.....	126	16	54
392	32	63	.....	.....	.....	.....	114	100	.....	.....	.....	8	1	55
3,601	266	1,159	.....	.....	.....	.....	955	845	.....	.....	.....	67	(?)	56
110	7	.....	.....	9	.....	7	232	182	.....	2	2	20	6	57
1,827	165	6,801	(?)	312	(?)	225	3,731	2,696	.....	(?)	(?)	499	169	58
.....	.....	.....	.....	.....	.....	.....	83	82	1	.....	.....	5	.....	59
500	40	242	2	10	2	7	302	152	(?)	.....	.....	121	.....	60
63	5	2	.....	.....	.....	.....	434	351	1	2	3	32	7	61
127	.....	6	.....	.....	.....	.....	149	51	.....	.....	.....	2	4	62
312,432	22,675	240,165	(?)	9,768	(?)	7,250	229,179	179,277	(?)	(?)	(?)	22,655	7,730	63
49,240	5,900	2,750	.....	.....	.....	.....	110,336	34,629	.....	.....	.....	10,200	3,150	64
85,103	.....	15,250	.....	.....	.....	.....	105,287	83,896	.....	.....	.....	8,200	475	65
217	11	43	2	4	2	2	269	229	.....	1	2	17	7	67
133,206	5,850	33,210	(?)	4,000	(?)	(?)	168,509	132,785	.....	(?)	(?)	13,180	7,730	68
614	532	772	(?)	1,000	(?)	(?)	626	580	.....	(?)	(?)	775	1,104	69
272	28	197	.....	5	.....	5	74	53	.....	1	1	13	.....	70
178,835	16,225	205,855	.....	5,760	.....	5,750	54,261	40,949	.....	(?)	(?)	9,262	.....	71
630	579	1,045	.....	1,150	.....	1,150	733	733	.....	(?)	(?)	713	.....	72
(?)	.....	.....	.....	.....	.....	.....	79	60	1	.....	.....	1	.....	73
(?)	.....	.....	.....	(?)	.....	.....	1,076	910	(?)	.....	.....	(?)	.....	74
9	.....	.....	.....	.....	.....	.....	14	15	(?)	.....	.....	(?)	.....	75
2,335	(?)	(?)	.....	.....	.....	.....	5,333	4,633	.....	.....	.....	(?)	1	76
33	35	58	(?)	59	(?)	66	27	25	(?)	(?)	(?)	33	18	78
21	25	26	.....	.....	.....	.....	23	23	.....	.....	.....	29	29	79
21	.....	26	.....	.....	.....	.....	24	23	.....	.....	.....	21	32	80
33	35	58	(?)	74	.....	74	27	25	(?)	(?)	(?)	36	(?)	81
30	.....	23	.....	37	.....	11	15	25	.....	.....	.....	20	18	82

⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁵Includes siphons and farm pipe lines reported.

⁶Total capacity of all reservoirs regardless of size.

⁷Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

DRAINAGE BASIN TABLE II-- ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSISSIPPI RIVER--Continued (Exclusive of Missouri River)							
		Arkansas River--Continued							
		Huerfano River			Apishapa River (52)	Purgatoire River (69)	Big Sandy Creek (30)	Two Butte and Bear Creeks (50)	Cimarron River (70)
		Total	Direct (54)	Cucharas River (53)					
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940. number.....	221	126	95	56	129	15	14	21
2	Average size of enterprise based on area works were capable of supplying with water.....1940. acres.....	182	229	119	169	352	28	244	23
3	Diversion dams.....1940. total number.....	132	74	58	57	105	2	4	14
4	1930. total number.....	133	.....	.....	29	77	.....	.....	3
5	1920. total number.....	285	.....	.....	39	101	.....	.....	.....
6	(a) Concrete and masonry.....1940. number.....	7	1	6	4	6	.....	.....	4
7	(b) Timber.....1940. number.....	2	2	.....	2	4	.....	.....	.....
8	(c) Earth and rock.....1940. number.....	36	5	31	37	48	2	4	10
9	(d) Other, mixed, and not reported.....1940. number.....	87	66	21	14	47	.....	.....	.....
10	Main canals and laterals.....1940. total length, miles.....	373.6	245.5	128.1	82.0	344.9	2.1	28.0	21.0
11	1930. total length, miles.....	481	.....	.....	102	268	.....	.....	9
12	1920. total length, miles.....	931	.....	.....	135	386	.....	.....	.....
13	(a) Earth.....1940. length, miles.....	373	245	128	82	344	2	28	11
14	(b) Lined.....1940. length, miles.....	0.6	0.5	0.1	.....	0.9	0.1	.....	10.0
15	1940. capacity, c.f.s. ¹	2,806	2,049	757	10,473	1,216	15	127	45
16	1930. capacity, c.f.s. ¹	3,434	.....	.....	5,637	1,547	.....	.....	7
17	1920. capacity, c.f.s. ¹	4,336	.....	.....	1,806	2,606	.....	.....	.....
18	Pipe lines ².....1940. total length, miles.....	0.2	0.1	0.1	0.2	4.2	0.1	0.5	0.1
19	1930. total length, miles.....	6.4	.....	.....	0.2	.....	.....	.....	.....
20	1920. total length, miles.....	4.5	.....	.....	0.3	0.1	.....	.....	.....
21	(a) Concrete.....1940. length, miles.....	.....	.....	.....	.....	.....	.....	.....	0.1
22	(b) Metal.....1940. length, miles.....	0.1	.....	0.1	0.2	0.7	.....	.....	.....
23	(c) Wood-stave.....1940. length, miles.....	0.1	0.1	.....	.....	3.5	.....	0.5	.....
24	(d) Other.....1940. length, miles.....	.....	.....	.....	.....	0.1	.....	.....	.....
25	Storage dams.....1940. total number.....	30	11	19	4	10	9	6	6
26	1930. total number.....	17	.....	.....	6	4	.....	.....	2
27	1920. total number.....	22	.....	.....	15	9	.....	.....	.....
28	(a) Concrete and masonry.....1940. number.....	.....	.....	.....	1	1	.....	.....	.....
29	(b) Earth and rock.....1940. number.....	30	11	19	3	9	9	6	6
30	(c) Other, mixed, and not reported.....1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Reservoirs.....1940. total number.....	29	11	18	6	6	10	6	4
32	(a) 1-99 acre-feet capacity.....1940. number.....	17	4	13	3	4	9	5	4
33	(b) 100-999 acre-feet capacity.....1940. number.....	6	2	4	.....	1	1	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940. number.....	6	5	1	3	1	.....	1	.....
35	1940. total capacity, ac.-ft. ³	13,606	10,769	2,837	5,806	15,367	125	30,061	44
36	1930. total capacity, ac.-ft. ³	15	.....	.....	5	1	.....	.....	2
37	1920. total capacity, ac.-ft. ³	49,471	.....	.....	28,052	20,000	.....	.....	2,339
38	Wells, flowing.....1940. number.....	.....	.....	.....	.....	.....	.....	3	.....
39	1930. number.....	.....	.....	.....	.....	.....	.....	.....	.....
40	1920. number.....	.....	.....	.....	.....	.....	.....	.....	.....
41	1940. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	93	.....
42	1930. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
43	1920. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940. number.....	8	4	4	2	9	12	6	3
45	1930. number.....	7	.....	.....	3	.....	.....	.....	.....
46	1920. number.....	11	.....	.....	1	.....	.....	.....	.....
47	1940. yield, g.p.m.....	1,063	2,250	1,813	(4)	228	4,164	1,034	8,002
48	1930. yield, g.p.m.....	5,875	.....	.....	4,220	.....	.....	.....	.....
49	1920. yield, g.p.m.....	2,070	.....	.....	144	.....	.....	.....	.....
50	Pumping plants.....1940. total number.....	9	4	5	3	9	11	5	3
51	1930. total number.....	7	.....	.....	3	2	.....	.....	.....
52	Prime movers.....1940. capacity, hp.....	72	50	22	22	104	91	33	71
53	1930. capacity, hp.....	81	.....	.....	43	50	.....	.....	.....
54	1920. capacity, hp.....	36	.....	.....	20	7	.....	.....	.....
55	(a) Electric.....1940. number.....	3	3	.....	.....	.....	2	.....	.....
56	1940. capacity, hp.....	4	25	.....	.....	.....	(4)	.....	.....
57	(b) Internal-combustion.....1940. number.....	4	1	.....	.....	.....	.....	(4)	1
58	1940. capacity, hp.....	43	(4)	18	(4)	5	79	(4)	(4)
59	(c) Other.....1940. number.....	2	.....	2	2	4	2	4	1
60	1940. capacity, hp.....	(4)	.....	(4)	(4)	6	(4)	13	(4)
61	Pumps.....1940. total number.....	9	4	5	2	9	10	5	3
62	1930. number.....	7	.....	.....	3	2	.....	.....	.....
63	1920. number.....	6	.....	.....	1	.....	.....	.....	.....
64	1940. capacity, g.p.m.....	4,173	2,330	1,843	(4)	278	3,264	1,034	8,002
65	1930. capacity, g.p.m.....	5,875	.....	.....	4,270	3,000	.....	.....	.....
66	1920. capacity, g.p.m.....	2,045	.....	.....	144	500	.....	.....	.....
67	(a) Centrifugal.....1940. number.....	3	2	1	.....	3	4	1	2
68	1940. capacity, g.p.m.....	2,030	(4)	(4)	.....	184	1,450	(4)	(4)
69	1940. average capacity, g.p.m.....	677	(4)	(4)	.....	61	362	(4)	(4)
70	(b) Turbine.....1940. number.....	3	2	1	.....	.....	3	.....	.....
71	1940. capacity, g.p.m.....	2,100	(4)	(4)	.....	.....	1,350	.....	.....
72	1940. average capacity, g.p.m.....	700	(4)	(4)	.....	.....	450	.....	.....
73	(c) Plunger.....1940. number.....	3	.....	3	2	5	2	4	1
74	1940. capacity, g.p.m.....	43	.....	43	(4)	54	(4)	34	(4)
75	1940. average capacity, g.p.m.....	14	.....	14	(4)	11	(4)	8	(4)
76	(d) Other.....1940. number.....	.....	.....	.....	.....	1	.....	.....	.....
77	1940. capacity, g.p.m.....	.....	.....	.....	.....	(4)	(4)	.....	.....
78	Pumping lift, from all sources.....1940. average, feet.....	29	34	25	20	59	25	81	31
79	1930. average, feet.....	23	.....	.....	22	14	.....	.....	.....
80	1920. average, feet.....	40	.....	.....	14	7	.....	.....	.....
81	from pumped wells.....1940. average, feet.....	29	34	20	(4)	59	27	81	16
82	from surface sources.....1940. average, feet.....	28	.....	28	.....	.....	10	.....	60

¹ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

² Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - COLORADO

WORKS, 1940, 1930, AND 1920—Continued

RIO GRANDE						INDEPENDENT BASINS IN RIO GRANDE BASIN					COLORADO RIVER			
Total	Direct	Alamosa and La Jara Creeks	Trinchera Creek	Conejos River	Costilla Creek	Total	San Luis Creek			San Luis Lake	Total	Direct	Fraser River	
							Total	Direct	Saguache Creek					
	(57)	(65)	(55)	(67)	(68)		(66)	(45)	(44)	(66)	(13)	(21)		
814	608	77	12	84	33	175	169	97	72	6	3,421	416	42	1
892	796	877	1,345	1,331	1,421	472	461	462	520	865	307	423	269	2
361	161	72	5	83	40	195	183	21	162	12	2,248	193	19	3
325	32	41	21	70	.....	86	83	13	70	.....	1,683	17	17	4
374	47	60	27	103	.....	192	192	40	152	.....	1,038	9	14	5
68	21	24	3	12	.....	8	.....	.....	.....	.....	97	10	.....	6
31	13	3	.....	4	11	33	21	9	12	12	261	17	.....	7
199	99	27	2	54	17	71	71	12	59	.....	1,392	154	19	8
63	28	18	.....	13	4	91	91	.....	91	.....	498	12	.....	9
1,799.6	963.3	227.2	89.0	287.0	233.1	188.5	166.5	86.5	80.0	22.0	8,295.4	1,152.1	85.0	10
2,529	1,141	244	137	414	.....	427	363	197	166	.....	8,129	442	44	11
2,469	995	279	186	369	.....	668	668	419	249	.....	10,305	594	113	12
1,794	963	227	84	287	233	185	163	83	80	22	8,240	1,137	84	13
5.6	0.3	0.2	5.0	.....	0.1	3.5	3.5	3.5	.....	.....	55.4	15.1	1.0	14
16,582	6,976	1,506	1,736	4,960	1,404	1,416	1,221	664	557	195	37,175	6,484	473	15
13,885	5,826	1,435	193	4,312	.....	2,005	1,716	1,159	557	.....	26,882	2,538	142	16
12,332	5,599	1,711	159	3,188	.....	2,422	2,422	1,670	752	.....	33,036	2,541	352	17
2.4	2.4	.....	.....	.....	.....	0.2	0.2	0.2	.....	.....	58.9	22.5	.....	18
2.0	.....	.....	.....	.....	.....	0.4	0.4	0.2	0.2	.....	23.1	4.0	.....	19
5.7	.....	0.1	4.0	0.1	.....	0.2	0.2	0.2	.....	.....	45.9	11.9	.....	20
0.5	0.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.8	1.1	.....	21
1.9	1.9	.....	.....	.....	.....	0.2	0.2	0.2	.....	.....	30.3	9.8	.....	22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.9	4.0	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.9	7.6	.....	24
25	15	3	2	2	3	2	2	.....	2	.....	401	32	3	25
17	1	1	2	1	.....	9	9	2	7	.....	319	.....	.....	26
21	8	2	2	2	.....	2	2	2	.....	.....	313	5	2	27
2	.....	.....	2	.....	.....	1	1	.....	1	.....	3	.....	.....	28
20	15	2	.....	.....	3	1	1	.....	1	.....	386	31	3	29
3	.....	1	.....	2	.....	.....	.....	.....	.....	.....	12	1	.....	30
29	18	2	2	2	5	4	4	2	2	.....	494	36	3	31
7	7	.....	.....	.....	.....	3	3	1	2	.....	203	20	3	32
7	.....	.....	.....	.....	.....	1	1	1	.....	.....	179	15	.....	33
15	4	2	2	2	5	.....	.....	.....	.....	.....	52	1	.....	34
304,386	128,494	(*)	(*)	(*)	114,125	300	300	(*)	(*)	.....	266,421	7,616	151	35
16	1	1	2	1	.....	9	9	2	7	.....	326	.....	1	36
281,557	51,113	17,500	24,000	6,500	.....	437	437	176	261	.....	140,923	.....	8	37
533	519	10	.....	4	.....	320	313	199	114	7	7	.....	.....	38
542	300	.....	.....	4	.....	72	72	17	55	.....	2	.....	.....	39
344	329	8	.....	1	.....	105	105	105	.....	.....	5	.....	.....	40
40,577	39,567	450	.....	560	.....	11,168	11,033	6,107	4,926	135	673	.....	.....	41
35,042	15,000	.....	.....	.....	.....	2,372	2,372	360	2,012	.....	360	.....	.....	42
13,822	13,585	207	.....	20	.....	2,847	2,847	2,847	.....	.....	100	.....	.....	43
429	417	10	.....	2	.....	4	4	3	1	.....	7	.....	.....	44
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	45
366,613	361,913	3,000	.....	(*)	.....	1,300	1,300	700	(*)	.....	1,588	.....	.....	46
450	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	315	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
380	373	5	.....	2	.....	4	4	1	3	.....	84	31	1	50
3	1	.....	.....	(*)	.....	26	26	(*)	19	.....	34	6	.....	51
7,003	6,888	78	.....	.....	.....	.....	.....	.....	.....	.....	4,558	3,894	(*)	52
41	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,868	3,307	.....	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,596	2,660	.....	54
55	54	1	.....	.....	.....	.....	.....	.....	.....	.....	17	9	.....	55
980	976	(*)	.....	.....	.....	.....	.....	.....	.....	.....	1,276	1,220	.....	56
324	318	4	.....	2	.....	4	4	1	3	.....	54	15	1	57
5,993	5,882	74	.....	(*)	.....	26	26	(*)	19	.....	874	294	(*)	58
(*)	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	7	.....	59
381	374	5	.....	2	.....	4	4	1	3	.....	2,406	2,380	.....	60
3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	80	30	1	61
400,102	394,472	3,930	.....	(*)	.....	1,500	1,500	(*)	700	.....	40	9	.....	62
900	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	43	14	.....	63
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	158,989	112,839	(*)	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	133,399	80,500	.....	65
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,176	15,070	.....	66
256	250	4	.....	2	.....	4	4	1	3	.....	67	24	1	67
249,990	245,360	2,930	.....	(*)	.....	1,500	1,500	(*)	700	.....	75,870	37,098	(*)	68
977	981	732	.....	(*)	.....	375	375	(*)	233	.....	1,132	1,546	(*)	69
125	124	1	.....	.....	.....	.....	.....	.....	.....	.....	7	5	.....	70
150,112	149,112	(*)	.....	.....	.....	.....	.....	.....	.....	.....	78,566	75,566	.....	71
1,206	1,203	(*)	.....	.....	.....	.....	.....	.....	.....	.....	11,224	15,113	.....	72
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	1	.....	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	203	(*)	.....	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51	(*)	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	2	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77
23	23	25	.....	(*)	.....	18	18	(*)	18	.....	25	32	(*)	78
10	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	49	.....	79
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32	42	.....	80
23	23	30	.....	(*)	.....	19	19	(*)	(*)	.....	20	.....	.....	81
9	10	6	.....	.....	.....	15	15	.....	15	.....	26	32	(*)	82

³ Total capacity of all reservoirs regardless of size.
⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	COLORADO RIVER—Continued								
	Williams River	Muddy Creek	Blue River	Eagle River	Roaring Fork	Elk Creek	Roan Creek	Plateau River	
	(22)	(12)	(27)	(26)	(34)	(78)	(25)	(35)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	30	26	68	144	244	24	36	171
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	219	269	171	154	186	174	183	178
3	Diversion dams.....1940..total number.....	1	41	55	19	118	5	38	154
4	1930..total number.....		29	7	3	33			34
5	1920..total number.....		49	40	12	17			2
6	(a) Concrete and masonry.....1940..number.....					1			3
7	(b) Timber.....1940..number.....	1		1		6	1	35	8
8	(c) Earth and rock.....1940..number.....		41	12	16	97	1		121
9	(d) Other, mixed, and not reported.....1940..number.....			42	3	14	3	3	22
10	Main canals and laterals.....1940..total length, miles.....	58.3	37.0	161.0	281.1	460.7	52.9	63.1	316.2
11	1930..total length, miles.....		94	115	153	483			197
12	1920..total length, miles.....		64	179	212	471			294
13	(a) Earth.....1940..length, miles.....	58	37	161	277	485	52	63	315
14	(b) Lined.....1940..length, miles.....	0.3			4.1	5.7	0.8	0.1	1.2
15	1940..capacity, c.f.s. ¹	202	318	942	1,096	3,129	138	295	859
16	1930..capacity, c.f.s. ¹		437	300	342	1,220			386
17	1920..capacity, c.f.s. ¹		254	467	449	1,314			790
18	Pipe lines ².....1940..total length, miles.....	0.5		0.2	2.1	10.4	0.2		0.2
19	1930..total length, miles.....			0.8		2.6			1.0
20	1920..total length, miles.....		0.1	1.2	5.2	0.3			0.1
21	(a) Concrete.....1940..length, miles.....				0.5	0.1			
22	(b) Metal.....1940..length, miles.....	0.5		0.2	1.6	4.0			
23	(c) Wood-stave.....1940..length, miles.....					0.2	0.2		0.2
24	(d) Other.....1940..length, miles.....					6.1			
25	Storage dams.....1940..total number.....	7	3	3	4	12	2		48
26	1930..total number.....		6	1		1			41
27	1920..total number.....		10	3	4	4			41
28	(a) Concrete and masonry.....1940..number.....					1			
29	(b) Earth and rock.....1940..number.....	7	3	1	4	11	2		45
30	(c) Other, mixed, and not reported.....1940..number.....								3
31	Reservoirs.....1940..total number.....	9			5	13	4		51
32	(a) 1-99 acre-feet capacity.....1940..number.....	8			2	8			21
33	(b) 100-999 acre-feet capacity.....1940..number.....				3	4			24
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	1				1			6
35	1940..total capacity, ac.-ft. ³	1,356			318	4,774			14,894
36	1930..total capacity, ac.-ft. ³		7	3		5			38
37	1920..total capacity, ac.-ft. ³		2,628	14		1,330			11,969
38	Wells, flowing.....1940..number.....								
39	1930..number.....								
40	1920..number.....								
41	1940..yield, g.p.m.....								
42	1930..yield, g.p.m.....								
43	1920..yield, g.p.m.....								
44	Wells, pumped.....1940..number.....			1					
45	1930..number.....								
46	1920..number.....								
47	1940..yield, g.p.m.....			(?)					
48	1930..yield, g.p.m.....								
49	1920..yield, g.p.m.....								
50	Pumping plants.....1940..total number.....			1		1			
51	1930..total number.....					1			
52	Prime movers.....1940..capacity, hp.....			(?)		(?)			
53	1930..capacity, hp.....					40			
54	1920..capacity, hp.....				33				
55	(a) Electric.....1940..number.....								
56	1940..capacity, hp.....								
57	(b) Internal-combustion.....1940..number.....			(?)	1	(?)	1		
58	1940..capacity, hp.....								
59	(c) Other.....1940..number.....								
60	1940..capacity, hp.....								
61	Pumps.....1940..total number.....			1		1			
62	1930..number.....					1			
63	1920..number.....				2				
64	1940..capacity, g.p.m.....			(?)		(?)			
65	1930..capacity, g.p.m.....					1,000			
66	1920..capacity, g.p.m.....				1,000				
67	(a) Centrifugal.....1940..number.....			1		1			
68	1940..capacity, g.p.m.....			(?)		(?)			
69	1940..average capacity, g.p.m.....			(?)		(?)			
70	(b) Turbine.....1940..number.....								
71	1940..capacity, g.p.m.....								
72	1940..average capacity, g.p.m.....								
73	(c) Plunger.....1940..number.....								
74	1940..capacity, g.p.m.....								
75	1940..average capacity, g.p.m.....								
76	(d) Other.....1940..number.....								
77	1940..capacity, g.p.m.....								
78	Pumping lift, from all sources.....1940..average, feet.....			(?)		(?)			
79	1930..average, feet.....					60			
80	1920..average, feet.....				58				
81	from pumped wells.....1940..average, feet.....			(?)		(?)			
82	from surface sources.....1940..average, feet.....					(?)			

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.
³No reservoirs or capacities reported for these storage dams.
⁴Capacities not reported.

CENSUS OF IRRIGATION - COLORADO

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WORKS, 1940, 1930, AND 1920—Continued

COLORADO RIVER—Continued														
Gunnison River									Dolores River					
Total	Direct	Taylor River	Slate River	Tomichi Creek	Smith Fork	North Fork	Uncompahgre River	Salt Creek group	Total	Direct	San Miguel River	Garfield Creek	Little Dolores River	
	(40)	(42)	(41)	(43)	(38)	(39)	(37)	(24)		(36)	(58)	(76)	(81)	
916	409	3	35	85	35	197	152	12	171	111	60	17	27	1
401	238	247	239	564	603	315	851	92	387	152	823	194	166	2
780	316	1	26	192	9	117	119	7	219	178	41	17	30	3
404	7	4		131	4	21	80		107					4
388	14			187	5	19	26		87					5
21	6			2		3	10		7	4	3		3	6
95	22			56	2	7	8		10	7	3		1	7
548	246	1	25	101	4	78	93	3	67	50	17	17	3	8
116	42		1	33	3	29	8		135	117	18		23	9
2,840.3	930.2	7.0	84.4	305.1	156.0	430.0	927.6	10.0	433.1	197.3	235.8	28.0	52.0	10
2,348	111	6		163	97	359	858		753					11
2,858	170	6		284	187	382	805		1,039					12
2,827	928	7	84	305	156	429	918	10	432	197	235	28	52	13
13.3	2.2		0.4	0.1		1.0	9.6		1.1	0.3	0.8			14
12,319	3,911	84	537	2,288	806	1,764	2,949	36	2,588	1,504	1,084	73	87	15
10,176	1,405	12		668	472	1,122	3,706		1,990					16
12,419	1,168	15		1,731	562	1,154	2,402		2,622					17
14.0	5.9		0.2		1.0	1.9	5.0	0.2		2.4	2.0			18
8.3	0.2			0.2		3.8	4.0			1.3				19
18.1	1.0			0.4	5.1	2.8	4.5			1.2				20
3.9	3.0						0.9			0.1	0.1			21
7.6	2.6		0.2		1.0	1.9	1.9	0.1		1.5	1.1			22
2.3	0.1						2.2	0.1		0.8	0.8			23
0.2	0.2													24
204	142	1	1		4	53	3		15	7	8		4	25
155					6	29	3		15					26
118	1			1	9	17	4		19					27
2	2													28
197	140	1	1		4	48	3		15	7	8		4	29
5						5								30
208	142	5	1		3	55	6	1	18	10	8		3	31
92	54		1		1	34	2	1	4	2	2		3	32
89	66				1	19	3		4	3	1			33
27	22	1				2			10	5	5			34
164,091	34,437	106,230	(?)		9,172	13,032	1,180	(?)	41,516	32,102	9,414		135	35
161					8	28	4		13					36
48,019					825	9,189	226		26,146					37
														38
														39
														40
														41
														42
														43
														44
														45
														46
														47
														48
														49
														50
11	10					1		3	6	5	1			51
15	12			1		2			4					52
136	126					(?)		20	128	108	(?)			53
1,421	1,295			6		120			37					54
822	759					8	40		1					55
3	3							3						56
30	30							20						57
5	4					1			5	5				58
100	90					(?)			108	108				59
3	3								1		1			60
6	6								(?)		(?)			61
8	7					1		3	5	4		1		62
18	15			1		2			4					63
19	15					1		1	1					64
6,680	6,450					(?)		1,690	5,900	4,550	(?)			65
47,237	44,337			400		2,500			1,845					66
6,806	5,706					300								67
7	6					1		2	5	4		1		68
4,680	4,450					(?)		(?)	5,900	4,550	(?)			69
661	742					(?)		(?)	1,180	1,138	(?)			70
1	1							1						71
(?)	(?)							(?)						72
														73
														74
														75
														76
														77
52	45					(?)		17	17	13	(?)			78
65	24			25		388			24					79
22	20					14	53		15					80
														81
52	45					(?)		17	17	13	(?)			82

¹Data for less than 3 enterprises shown with permission of the enterprise involved.
²Total capacity of all reservoirs regardless of size.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued								
	Green River							White River (23)	
	Total	Direct (9)	Yampa River						
			Total	Direct (10)	Elk River (7)	Trout Creek (11)	Little Snake River (8)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	588	13	426	285	70	22	49	149
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	208	126	188	189	179	177	197	277
3	Diversion dams.....1940..total number.....	235		114	53	36	16	9	121
4	.....1930..total number.....	478		291	25			26	183
5	.....1920..total number.....	144		101	16			2	43
6	(a) Concrete and masonry.....1940..number.....	16		10	9		1		6
7	(b) Timber.....1940..number.....	53		3	3	2	1		47
8	(c) Earth and rock.....1940..number.....	117		89	36	32	12	9	28
9	(d) Other, mixed, and not reported.....1940..number.....	49		9	5	2	2		40
10	Main canals and laterals.....1940..total length, miles.....	1,159.0	3.1	747.9	528.4	107.5	43.0	69.0	408.0
11	.....1930..total length, miles.....	1,314		941	160			102	359
12	.....1920..total length, miles.....	1,841		1,388	154			144	451
13	(a) Earth.....1940..length, miles.....	1,155	3	746	527	107	43	69	406
14	(b) Lined.....1940..length, miles.....	4.0	0.1	1.9	1.4	0.5			2.0
15	.....1940..capacity, c.f.s. ¹	3,683	35	2,325	1,745	341	86	154	1,322
16	.....1930..capacity, c.f.s. ¹	3,229		2,260	639			320	930
17	.....1920..capacity, c.f.s. ¹	5,333		2,447	498			584	2,883
18	Pipe lines ².....1940..total length, miles.....	3.9		2.0	1.1	0.5		0.4	1.9
19	.....1930..total length, miles.....	0.9		0.4					0.5
20	.....1920..total length, miles.....	0.4		0.2					0.2
21	(a) Concrete.....1940..length, miles.....	0.1		0.1					
22	(b) Metal.....1940..length, miles.....	3.8		1.9	1.0	0.5		0.4	1.9
23	(c) Wood-stave.....1940..length, miles.....								
24	(d) Other.....1940..length, miles.....								
25	Storage dams.....1940..total number.....	48	6	29	23	³ 1	3	2	13
26	.....1930..total number.....	56		40	2			1	14
27	.....1920..total number.....	73		57	4			6	16
28	(a) Concrete and masonry.....1940..number.....								
29	(b) Earth and rock.....1940..number.....	45	6	27	22	1	3	1	12
30	(c) Other, mixed, and not reported.....1940..number.....	3		2	1			1	1
31	Reservoirs.....1940..total number.....	65	5	47	34		10	3	13
32	(a) 1-99 acre-feet capacity.....1940..number.....	31	4	21	11		9	1	6
33	(b) 100-999 acre-feet capacity.....1940..number.....	29		22	19		1	2	7
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	5	1	4	4				
35	.....1940..total capacity, ac.-ft. ⁴	17,691	1,021	15,373	14,441		648	284	1,297
36	.....1930..total capacity, ac.-ft.....	43		32	5				9
37	.....1920..total capacity, ac.-ft.....	15,589		9,826	2,180				5,741
38	Wells, flowing.....1940..number.....	7		1	1				6
39	.....1930..number.....	2							2
40	.....1920..number.....								
41	.....1940..yield, g.p.m.....	673		(⁵)	(⁵)				648
42	.....1930..yield, g.p.m.....	360							360
43	.....1920..yield, g.p.m.....								
44	Wells, pumped.....1940..number.....	6		6	4			2	
45	.....1930..number.....								
46	.....1920..number.....								
47	.....1940..yield, g.p.m.....	838		838	818			(⁵)	
48	.....1930..yield, g.p.m.....								
49	.....1920..yield, g.p.m.....								
50	Pumping plants.....1940..total number.....	28		20	15			5	8
51	.....1930..total number.....	4		3	1			2	1
52	Prime movers.....1940..capacity, hp.....	278		200	153			47	78
53	.....1930..capacity, hp.....	46		42	2			40	4
54	.....1920..capacity, hp.....	58		48	48				10
55	(a) Electric.....1940..number.....	2		2	2				
56	.....1940..capacity, hp.....	(⁵)		(⁵)	(⁵)				
57	(b) Internal-combustion.....1940..number.....	24		16	13			3	8
58	.....1940..capacity, hp.....	270		192	147			45	78
59	(c) Other.....1940..number.....	2		2					
60	.....1940..capacity, hp.....	(⁵)		(⁵)				(⁵)	
61	Pumps.....1940..total number.....	29		20	14			6	9
62	.....1930..number.....	4		3	1			2	1
63	.....1920..number.....	5		4	4				1
64	.....1940..capacity, g.p.m.....	28,878		21,528	16,648			4,880	7,350
65	.....1930..capacity, g.p.m.....	1,470		720	320			400	750
66	.....1920..capacity, g.p.m.....	4,100		3,200	3,200				900
67	(a) Centrifugal.....1940..number.....	24		15	12			3	9
68	.....1940..capacity, g.p.m.....	24,500		17,150	14,540			2,610	7,350
69	.....1940..average capacity, g.p.m.....	1,021		1,143	1,212			870	817
70	(b) Turbine.....1940..number.....								
71	.....1940..capacity, g.p.m.....								
72	.....1940..average capacity, g.p.m.....								
73	(c) Plunger.....1940..number.....	3		3	1			2	
74	.....1940..capacity, g.p.m.....	28		28	(⁵)			(⁵)	
75	.....1940..average capacity, g.p.m.....	9		9	(⁵)			(⁵)	
76	(d) Other.....1940..number.....	2		2	1			1	
77	.....1940..capacity, g.p.m.....	(⁵)		(⁵)	(⁵)			(⁵)	
78	Pumping lift, from all sources.....1940..average, feet.....	14		73	14			11	15
79	.....1930..average, feet.....	20		23	10			30	12
80	.....1920..average, feet.....	14		15	15				10
81	from pumped wells.....1940..average, feet.....	20		20	21			(⁵)	
82	from surface sources.....1940..average, feet.....	12		11	12			8	15

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³No reservoirs or capacities reported for these storage dams. ⁴Total capacity of all reservoirs regardless of size. ⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

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DRAINAGE BASIN TABLE II— ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	COLORADO RIVER—Continued								
	San Juan River								
	Total	Direct	Piedra River	Los Pinos River	Animas River	La Plata River	Mancos River	McElmo Creek	
	(64)	(79)	(63)	(62)	(61)	(60)	(59)		
ENTERPRISES AND IRRIGATION WORKS									
JANUARY 1									
1	Enterprises..... 1940. number.....	487	142	46	65	90	49	47	48
2	Average size of enterprise based on area works were capable of supplying with water..... 1940. acres.....	337	121	101	698	328	372	266	765
3	Diversion dams..... 1940. total number.....	317	63	48	51	43	43	35	34
4	..... 1930. total number.....	315	14	.....	32	129	28	15	.....
5	..... 1920. total number.....	73	.....	.....	5	31	19	11	.....
6	(a) Concrete and masonry..... 1940. number.....	36	.....	1	11	5	9	8	2
7	(b) Timber..... 1940. number.....	33	28	.....	.....	1	1	2	1
8	(c) Earth and rock..... 1940. number.....	176	21	25	37	14	28	25	26
9	(d) Other, mixed, and not reported..... 1940. number.....	72	14	22	3	23	5	.....	5
10	Main canals and laterals..... 1940. total length, miles.....	1,105.6	187.3	38.2	265.7	177.9	126.0	130.0	180.5
11	..... 1930. total length, miles.....	1,181	32	.....	276	283	210	144	.....
12	..... 1920. total length, miles.....	1,042	34	.....	261	259	184	99	.....
13	(a) Earth..... 1940. length, miles.....	1,097	186	38	263	174	126	130	180
14	(b) Lined..... 1940. length, miles.....	8.6	1.3	0.2	2.7	3.9	.....	.....	0.5
15	..... 1940. capacity, c.f.s. ¹	4,453	426	130	1,243	746	518	448	942
16	..... 1930. capacity, c.f.s. ¹	3,258	58	.....	872	721	565	398	.....
17	..... 1920. capacity, c.f.s. ¹	2,775	97	.....	821	771	426	285	.....
18	Pipe lines ² 1940. total length, miles.....	2.3	0.1	.....	0.7	0.8	0.1	.....	0.6
19	..... 1930. total length, miles.....	2.5	0.1	.....	0.2	0.2	.....	2.0	.....
20	..... 1920. total length, miles.....	0.2	0.1	.....	0.1	.....	.....	.....	.....
21	(a) Concrete..... 1940. length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....
22	(b) Metal..... 1940. length, miles.....	1.2	.....	.....	0.7	0.3	0.1	.....	0.1
23	(c) Wood-stave..... 1940. length, miles.....	1.1	0.1	.....	.....	0.5	.....	.....	0.5
24	(d) Other..... 1940. length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Storage dams..... 1940. total number.....	18	6	.....	1	3	3	4	1
26	..... 1930. total number.....	14	.....	.....	3	.....	3	3	.....
27	..... 1920. total number.....	6	1	.....	.....	.....	2	.....	.....
28	(a) Concrete and masonry..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
29	(b) Earth and rock..... 1940. number.....	18	6	.....	1	3	3	4	1
30	(c) Other, mixed, and not reported..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Reservoirs..... 1940. total number.....	20	6	.....	3 ³	3	3	5	2
32	(a) 1-99 acre-feet capacity..... 1940. number.....	7	2	.....	.....	1	2	1	1
33	(b) 100-999 acre-feet capacity..... 1940. number.....	11	4	.....	.....	2	1	4	.....
34	(c) 1,000 and over acre-feet capacity..... 1940. number.....	1	.....	.....	.....	.....	.....	.....	1
35	..... 1940. total capacity, ac.-ft. ⁴	13,759	850	.....	1,170	581	1,836	(⁵)	.....
36	..... 1930. total capacity, ac.-ft. ⁴	10	.....	.....	.....	1	5	.....	.....
37	..... 1920. total capacity, ac.-ft. ⁴	2,585	.....	.....	.....	30	1,684	.....	.....
38	Wells, flowing..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
39	..... 1930. number.....	.....	.....	.....	.....	.....	.....	.....	.....
40	..... 1920. number.....	4	.....	.....	.....	4	.....	.....	.....
41	..... 1940. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
42	..... 1930. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
43	..... 1920. yield, g.p.m.....	100	.....	.....	.....	100	.....	.....	.....
44	Wells, pumped..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
45	..... 1930. number.....	1	.....	.....	.....	.....	1	.....	.....
46	..... 1920. number.....	.....	.....	.....	.....	.....	.....	.....	.....
47	..... 1940. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
48	..... 1930. yield, g.p.m.....	50	.....	.....	.....	.....	50	.....	.....
49	..... 1920. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
50	Pumping plants..... 1940. total number.....	2	1	.....	.....	.....	1	.....	.....
51	..... 1930. total number.....	2	1	.....	.....	.....	1	.....	.....
52	Prime movers..... 1940. capacity, hp.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....
53	..... 1930. capacity, hp.....	14	12	.....	.....	.....	2	.....	.....
54	..... 1920. capacity, hp.....	22	22	.....	.....	.....	.....	.....	.....
55	(a) Electric..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
56	..... 1940. capacity, hp.....	.....	.....	.....	.....	.....	.....	.....	.....
57	(b) Internal-combustion..... 1940. number.....	2	1	.....	.....	.....	1	.....	.....
58	..... 1940. capacity, hp.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....
59	(c) Other..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
60	..... 1940. capacity, hp.....	.....	.....	.....	.....	.....	.....	.....	.....
61	Pumps..... 1940. total number.....	2	1	.....	.....	.....	1	.....	.....
62	..... 1930. number.....	2	1	.....	.....	.....	1	.....	.....
63	..... 1920. number.....	2	2	.....	.....	.....	.....	.....	.....
64	..... 1940. capacity, g.p.m.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....
65	..... 1930. capacity, g.p.m.....	317	300	.....	.....	.....	17	.....	.....
66	..... 1920. capacity, g.p.m.....	1,200	1,200	.....	.....	.....	.....	.....	.....
67	(a) Centrifugal..... 1940. number.....	2	1	.....	.....	.....	1	.....	.....
68	..... 1940. capacity, g.p.m.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....
69	..... 1940. average capacity, g.p.m.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....
70	(b) Turbine..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
71	..... 1940. capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
72	..... 1940. average capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
73	(c) Plunger..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
74	..... 1940. capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
75	..... 1940. average capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
76	(d) Other..... 1940. number.....	.....	.....	.....	.....	.....	.....	.....	.....
77	..... 1940. capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
78	Pumping lift, from all sources..... 1940. average, feet.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....
79	..... 1930. average, feet.....	86	132	.....	.....	.....	40	.....	.....
80	..... 1920. average, feet.....	85	85	.....	.....	.....	.....	.....	.....
81	from pumped wells..... 1940. average, feet.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....
82	from surface sources..... 1940. average, feet.....	(⁵)	(⁵)	.....	.....	.....	(⁵)	.....	.....

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³Capacity not reported. ⁴Total capacity of all reservoirs regardless of size. ⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, (Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL	Adams		Alamosa	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*					
1 All farms.....1940..number.....	51,436	1,729		608	
2 .....1930..number.....	59,956	1,512		531	
3 Irrigated farms.....1940..number.....	29,766	985		440	
4 .....1930..number.....	31,288	1,057		484	
5 Increase or decrease (-), 1930-1940.....percent.....	-4.9	-9.6		-9.1	
Operated by—					
6 (a) Owners and managers.....1940..number.....	18,865	627		290	
7 .....1930..number.....	20,060	699		296	
8 (b) Tenants.....1940..number.....	10,901	328		150	
9 .....1930..number.....	11,228	368		188	
10 Land in all farms.....1940..acres.....	31,627,240	599,635		374,326	
11 Land in irrigated farms.....1940..acres.....	12,522,458	124,911		343,625	
12 Average per farm.....1940..acres.....	421	131		781	
13 (a) Operated by owners and managers.....1940..acres.....	10,181,139	74,532		303,145	
14 Average per farm.....1940..acres.....	540	119		1,045	
15 (b) Operated by tenants.....1940..acres.....	2,941,319	50,379		40,680	
16 Average per farm.....1940..acres.....	215	154		271	
17 Approximate land area.....1940..acres.....	66,538,880	798,080		460,800	
IRRIGATED AND IRRIGABLE AREAS					
18 Area irrigated.....1939..acres.....	3,220,685	68,233		113,941	
19 (a) Cropland harvested.....1939..acres.....	2,796,075	65,235		74,105	
20 (b) Crop failure.....1939..acres.....	73,844	1,946		2,990	
21 (c) Pasture.....1939..acres.....	350,766	1,152		37,446	
22 Area irrigated.....1929..acres.....	3,393,619	66,826		141,489	
23 .....1919..acres.....	3,348,365	66,407		89,805	
24 Increase or decrease (-), 1929-1939.....percent.....	-5.1	2.1		19.5	
25 Irrigable area in enterprises.....1940..acres.....	4,283,250	86,927		184,465	
26 .....1930..acres.....	4,128,251	131,008		182,059	
27 .....1920 ¹ ..acres.....	5,220,588	114,266		186,258	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	1,062,565	18,694		70,524	
29 .....1930..acres.....	1,134,632	64,182		40,580	
30 Area works were capable of supplying with water.....1940..acres.....	3,913,542	85,724		175,947	
31 .....1930..acres.....	4,078,712	112,471		156,249	
32 .....1920 ¹ ..acres.....	3,859,348	68,065		168,625	
33 Increase or decrease (-), 1930-1940.....percent.....	-4.0	-23.8		12.6	
34 Excess, capability of works over area irrigated.....1940..acres.....	692,857	17,491		62,006	
35 .....1930..acres.....	685,093	45,645		14,760	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	25.7	54.6		33.1	
37 .....1929..percent.....	32.7	49.2		68.1	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	82.3	79.6		64.8	
39 .....1929..percent.....	83.2	59.4		90.6	
CAPITAL INVESTED TO JANUARY 1					
40 Total investment in all enterprises.....1940..dollars.....	106,849,343	1,929,030		1,512,466	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	101,848,751	1,877,375		1,397,873	
42 (b) Investment in water rights (reported).....1940..dollars.....	5,000,592	51,655		114,593	
43 Total investment in all enterprises.....1930..dollars.....	87,603,240	2,758,737		586,296	
44 .....1920 ¹ ..dollars.....	88,302,442	2,436,771		416,305	
45 Increase or decrease (-), 1930-1940.....percent.....	22.0	-30.1		158.0	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	27.30	22.50		8.60	
47 .....1930..dollars.....	21.48	24.53		3.75	
48 .....1920 ¹ ..dollars.....	22.90	35.80		2.47	
49 Average investment per acre irrigated.....1939..dollars.....	33.18	28.27		13.27	
50 Estimated final investment in existing enterprises.....1940..dollars.....	109,808,466	1,934,497		1,513,516	
51 .....1930..dollars.....	91,845,804	2,759,587		587,296	
52 .....1920 ¹ ..dollars.....	95,198,423	2,557,121		458,952	
53 Increase or decrease (-), 1930-1940.....percent.....	19.6	-29.9		157.7	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	25.64	22.25		8.20	
55 .....1930..dollars.....	20.28	21.06		3.23	
56 .....1920 ¹ ..dollars.....	18.24	22.38		2.46	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
57 Enterprises reporting maintenance and operation.....1939..number.....	6,454	1,532		19	
58 Area irrigated in these enterprises.....1939..acres.....	3,128,787	608,498	68,024	9,571	112,677
59 Cost of maintenance and operation.....1939..dollars.....	2,035,660	498,440	67,967	20,478	32,125
60 Average cost, per acre irrigated.....1939..dollars.....	0.65	0.82	1.00	2.14	0.28
61 .....1929..dollars.....	0.85	.....	1.63	.....	0.33
62 Total annual charges (reported) ³.....1939..dollars.....	2,278,099	213,062	57,775	360	46,662
63 Average annual charge per acre irrigated.....1939..dollars.....	0.96	0.46	0.92	0.09	0.55
64 Area against which charges were assessed.....1939..acres.....	2,637,673	461,109	66,987	4,000	131,791
65 Average annual charge per acre assessed.....1939..dollars.....	0.86	0.46	0.86	0.09	0.36
66 Total charges collected ³.....1939..dollars.....	2,077,506	206,370	74,442	238	30,855
67 Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	20,861,011	1,959,596	106,159	417	140,587
WATER DELIVERED TO IRRIGATORS					
68 Enterprises reporting water delivered.....1939..number.....	6,315	1,522	145	144	80
69 Area irrigated in these enterprises.....1939..acres.....	3,039,364	588,300	68,157	9,571	111,162
70 Water delivered in these enterprises.....1939..acre-feet.....	7,258,191	500,267	100,417	8,974	134,310
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	0.9	1.5	0.9	1.2
72 Average cost of water per acre irrigated.....1939..dollars.....	0.92	0.94	1.19	2.14	0.62
DRAINAGE OF IRRIGATED LAND					
73 Enterprises reporting land drained or needing drainage.....1939..number.....	241	.....	2	.....	3
74 Irrigable area in these enterprises.....1939..acres.....	637,246	.....	(⁵)	.....	55,647
75 Irrigated area in these enterprises.....1939..acres.....	466,804	.....	(⁵)	.....	38,286
76 Area for which drains have been installed.....1939..acres.....	119,286	.....	(⁵)	.....	22,004
77 Additional area needing drainage.....1939..acres.....	35,792	.....	(⁵)	.....	2,000

*Census of Agriculture.

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

²Data are included only in State total because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — COLORADO

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
Irrigation data omitted from any of the counties listed are included under "All other counties"]

Arapahoe		Archuleta		Baca		Bent		Boulder		Chaffee		Clear Creek		Conejos	
1,079		354		906		667		1,352		295		47		1,049	1
1,225		389		1,750		882		1,473		307		34		1,467	2
342		217		60		477		1,169		245		19		852	3
516		183		34		518		1,201		291		16		1,201	4
-33.7		33.1		76.5		-7.9		-2.7		-15.8		18.8		-28.2	5
261		182		46		204		693		173		12		634	6
362		117		29		244		793		204		.....		875	7
81		55		14		273		476		72		7		228	8
134		46		5		274		408		87		.....		326	9
450,344		284,502		1,068,564		583,132		206,916		107,532		18,523		352,870	10
67,250		229,402		113,696		306,312		155,387		98,041		10,980		332,733	11
197		1,097		1,895		846		133		400		578		386	12
53,522		206,306		98,568		250,636		83,190		79,616		2,998		281,914	13
205		1,286		2,143		1,229		120		480		250		445	14
13,728		21,096		15,088		57,676		72,197		18,425		7,962		50,819	15
169		384		1,076		211		152		256		1,140		223	16
529,280		672,960		1,641,600		981,120		481,920		664,960		252,160		813,440	17
22,745		15,425		3,021		60,608		117,078		28,732		354		148,826	18
20,773		13,381		3,021		60,066		103,043		22,624		241		116,991	19
1,844		164		.....		320		2,176		506		.....		6,348	20
128		1,880		.....		222		11,859		5,602		113		25,487	21
29,526		16,225		2,819		64,338		159,428		26,938		.....		119,049	22
25,674		11,933		2,287		128,712		159,781		29,623		.....		139,504	23
-23.0		-4.9		7.2		-5.8		-26.6		6.7		.....		25.0	24
24,999		19,134		3,469		92,470		130,562		36,583		494		188,432	25
33,043		23,480		3,854		68,451		184,185		33,676		.....		164,223	26
62,128		18,188		12,500		145,866		188,485		38,277		.....		207,519	27
2,254		3,709		448		31,862		13,484		7,851		140		39,606	28
3,517		7,255		1,035		4,113		24,757		6,738		.....		45,174	29
24,979		19,040		3,169		72,990		128,462		34,691		359		182,593	30
30,496		19,371		3,779		65,122		181,896		30,797		.....		151,218	31
26,137		13,289		12,020		133,372		174,736		30,113		.....		152,346	32
-18.1		-1.7		-16.1		12.1		-29.4		12.6		.....		20.7	33
2,234		3,615		148		12,382		11,374		5,969		5		33,767	34
870		3,146		960		784		22,468		3,859		.....		32,169	35
33.8		6.7		2.7		19.7		75.3		29.3		3.2		44.7	36
73.6		16.0		10.6		43.6		104.3		39.6		.....		59.8	37
91.1		81.0		95.3		83.0		91.1		82.8		98.6		81.5	38
96.8		83.8		74.6		98.8		87.6		87.5		.....		78.7	39
845,921		126,357		537,447		1,978,190		1,327,014		222,960		6,285		2,158,130	40
819,223		112,742		537,170		1,978,140		1,314,119		215,160		5,960		1,919,227	41
28,698		18,616		277		3,050		12,895		7,800		325		238,903	42
606,503		157,089		408,375		1,123,422		1,703,851		517,909		.....		1,478,246	43
597,089		108,635		572,553		2,773,601		1,774,922		261,368		.....		1,155,162	44
39.5		-19.6		31.6		76.1		-22.1		-56.9		.....		46.0	45
33.87		6.64		169.60		27.10		10.33		6.43		17.51		11.82	46
19.89		8.11		108.06		17.25		9.37		16.82		.....		9.78	47
22.84		12.69		47.63		20.80		10.16		8.68		.....		7.58	48
37.19		8.19		177.90		32.64		11.33		7.76		17.75		14.50	49
846,246		127,492		543,897		1,978,666		1,338,589		222,960		6,389		2,163,755	50
608,003		166,389		408,375		1,126,222		1,790,211		518,909		.....		1,481,096	51
600,289		170,288		572,553		2,797,201		1,850,662		265,083		.....		1,156,632	52
39.2		-19.5		33.2		75.7		-25.2		-57.0		.....		46.1	53
33.85		6.66		156.79		21.40		10.25		6.09		12.93		11.48	54
18.40		6.75		105.96		16.45		9.72		15.41		.....		9.02	55
9.66		9.36		45.80		19.18		9.82		6.93		.....		5.57	56
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
35	6	160	4	10	30	6	108	18	114	1	14	139	16	57	
22,723	75	15,258	271	2,986	60,443	223	113,672	15,687	28,194	(2)	292	144,168	28,674	58	
33,394	409	8,656	34	3,209	42,006	503	33,750	5,660	5,680	(2)	267	26,060	1,535	59	
1.47	5.45	0.87	0.13	1.07	0.69	2.26	0.30	0.36	0.20	(2)	0.91	0.18	0.05	60	
1.16	.....	0.51	.....	1.15	0.95	.....	0.69	.....	0.45	.....	.....	0.37	.....	61	
45,303	.....	2,676	.....	3,433	69,899	.....	56,854	10,765	2,248	.....	50	35,738	4,910	62	
2.06	.....	0.43	.....	1.25	1.18	.....	0.52	0.49	0.13	0.03	.....	0.28	0.59	63	
26,976	.....	6,570	.....	2,746	65,979	.....	113,820	21,769	18,125	1,600	.....	139,457	8,807	64	
1.68	.....	0.41	.....	1.25	1.06	.....	0.50	0.49	0.12	0.03	.....	0.26	0.56	65	
28,576	.....	2,240	.....	3,830	68,870	.....	56,441	11,116	390	.....	.....	22,221	5,110	66	
14,361	.....	49	.....	1,166	294,696	.....	164,061	38,677	.....	.....	.....	131,264	50,100	67	
34	6	71	3	15	29	7	116	22	83	1	7	139	13	68	
21,412	75	8,207	71	3,009	60,528	228	115,168	11,678	20,951	(2)	175	140,993	9,674	69	
26,535	163	16,840	85	8,339	112,105	261	125,166	6,491	102,851	(2)	445	221,914	6,559	70	
1.2	2.2	2.1	1.2	2.8	1.9	1.1	1.1	0.6	4.9	(2)	2.5	1.6	0.7	71	
2.18	5.45	0.43	0.13	1.37	1.24	2.26	0.52	0.55	0.20	(2)	1.47	0.28	0.56	72	
(2)	1	.....	.....	.....	3	.....	10	.....	8	.....	.....	5	.....	73	
(2)	.....	2,200	.....	.....	8,868	.....	8,360	.....	2,192	.....	.....	10,370	.....	74	
(2)	.....	2,039	.....	.....	8,799	.....	8,020	.....	1,652	.....	.....	8,187	.....	75	
.....	.....	.....	.....	.....	2,200	.....	866	.....	.....	.....	.....	3,680	.....	76	
.....	.....	26	.....	.....	.....	.....	1,040	.....	285	.....	.....	70	.....	77	

²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - COLORADO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Costilla	Crowley	Custer	Delta	Denver
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*						
1	All farms.....1940..number....	523	532	305	1,699	158
2	.....1930..number....	648	626	406	1,744	257
3	Irrigated farms.....1940..number....	478	405	144	1,643	110
4	.....1930..number....	551	452	158	1,678	133
5	Increase or decrease (-), 1930-1940.....percent....	-13.2	-10.4	-8.9	-2.1	-17.3
Operated by—						
6	(a) Owners and managers.....1940..number....	326	141	107	1,120	87
7	.....1930..number....	381	196	112	1,174	92
8	(b) Tenants.....1940..number....	152	264	37	523	23
9	.....1930..number....	170	256	46	504	41
10	Land in all farms.....1940..acres.....	392,532	327,163	243,334	220,765	2,280
11	Land in irrigated farms.....1940..acres.....	364,686	107,411	130,767	206,328	1,037
12	Average per farm.....1940..acres.....	763	265	908	126	9
13	(a) Operated by owners and managers.....1940..acres.....	345,259	68,041	102,504	152,673	672
14	Average per farm.....1940..acres.....	1,059	483	958	136	8
15	(b) Operated by tenants.....1940..acres.....	19,427	39,370	28,263	53,655	365
16	Average per farm.....1940..acres.....	128	149	764	103	16
17	Approximate land area.....1940..acres.....	777,600	513,920	471,680	740,480	37,120
IRRIGATED AND IRRIGABLE AREAS						
18	Area irrigated.....1939..acres.....	47,450	44,213	20,544	113,580	921
19	(a) Cropland harvested.....1939..acres.....	42,126	40,367	16,215	95,287	921
20	(b) Crop failure.....1939..acres.....	201	828	257	1,511	.....
21	(c) Pasture.....1939..acres.....	5,123	3,018	4,072	16,782	.....
22	Area irrigated.....1929..acres.....	48,272	56,271	23,285	107,333	892
23	.....1919..acres.....	36,771	57,789	24,241	93,509	4,000
24	Increase or decrease (-), 1929-1939.....percent....	-1.7	-21.4	-11.8	5.8	3.3
25	Irrigable area in enterprises.....1940..acres.....	108,532	67,666	32,023	153,246	981
26	.....1930..acres.....	112,965	76,248	25,445	141,315	892
27	.....1920 ² ..acres.....	102,960	71,974	39,463	156,624	4,877
28	Excess of irrigable area over the area irrigated.....1940..acres.....	61,082	23,453	11,479	39,666	60
29	.....1930..acres.....	64,693	19,977	2,150	33,982	.....
30	Area works were capable of supplying with water.....1940..acres.....	61,882	60,534	30,724	134,373	981
31	.....1930..acres.....	109,957	69,971	25,262	135,234	892
32	.....1920..acres.....	43,906	58,735	33,548	127,469	4,000
33	Increase or decrease (-), 1930-1940.....percent....	-43.7	-13.5	21.6	-0.6	10.0
34	Excess, capability of works over area irrigated.....1940..acres.....	14,432	16,321	10,180	20,793	60
35	.....1930..acres.....	61,685	13,700	1,967	27,901	.....
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	13.0	41.2	15.7	55.0	88.8
37	.....1929..percent....	15.1	56.7	17.9	61.7	50.7
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	76.7	73.0	66.9	84.5	93.9
39	.....1929..percent....	43.9	80.4	92.2	79.4	100.0
CAPITAL INVESTED TO JANUARY 1						
40	Total investment in all enterprises.....1940..dollars....	2,402,611	4,829,865	55,593	4,703,890	84,701
41	(a) Cost of irrigation works and equipment.....1940..dollars....	2,345,128	4,777,685	52,253	4,652,117	83,866
42	(b) Investment in water rights (reported).....1940..dollars....	57,483	52,180	3,340	51,773	833
43	Total investment in all enterprises.....1930..dollars....	1,687,160	1,994,077	86,292	3,439,560	80,095
44	.....1920..dollars....	1,389,816	2,587,043	75,431	4,168,137	47,386
45	Increase or decrease (-), 1930-1940.....percent....	42.4	142.2	-35.6	36.8	5.8
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	38.83	79.79	1.81	35.01	86.34
47	.....1930..dollars....	15.34	28.50	3.42	25.43	89.79
48	.....1920..dollars....	31.65	44.05	2.25	32.70	11.85
49	Average investment per acre irrigated.....1939..dollars....	50.63	109.24	2.71	41.41	91.97
50	Estimated final investment in existing enterprises.....1940..dollars....	2,403,861	4,841,170	56,813	5,055,312	84,701
51	.....1930..dollars....	1,692,260	2,043,894	87,142	3,719,185	80,095
52	.....1920..dollars....	1,403,066	2,593,506	76,596	4,320,091	47,386
53	Increase or decrease (-), 1930-1940.....percent....	42.1	136.9	-34.8	35.9	5.8
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	22.15	71.55	1.77	32.99	86.34
55	.....1930..dollars....	14.98	26.81	3.42	26.32	89.79
56	.....1920 ³ ..dollars....	13.63	36.03	1.94	27.58	9.72
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
		Primary		Supplemental	Primary	
		Enterprises		Enterprises	Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number....	35	14	3	135	53
58	Area irrigated in these enterprises.....1939..acres.....	47,055	44,202	8,000	18,775	14,953
59	Cost of maintenance and operation.....1939..dollars....	36,100	26,867	3,810	3,245	80,710
60	Average cost, per acre irrigated.....1939..dollars....	0.77	0.61	0.48	0.17	0.73
61	.....1929..dollars....	1.03	0.65	.....	0.27	0.87
62	Total annual charges (reported) ⁴.....1939..dollars....	96,559	166,000	.....	70	99,834
63	Average annual charge per acre irrigated.....1939..dollars....	2.38	4.13	.....	0.10	1.00
64	Area against which charges were assessed.....1939..acres.....	96,894	56,200	.....	836	107,969
65	Average annual charge per acre assessed.....1939..dollars....	1.00	2.95	.....	0.08	0.92
66	Total charges collected ⁴.....1939..dollars....	38,983	164,929	.....	.....	88,537
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	825,551	2,300,376	.....	.....	1,822,590
WATER DELIVERED TO IRRIGATORS						
68	Enterprises reporting water delivered.....1939..number....	43	15	2	133	298
69	Area irrigated in these enterprises.....1939..acres.....	47,450	44,213	(²)	20,275	109,063
70	Water delivered in these enterprises.....1939..acre-feet....	77,003	62,773	(²)	16,922	371,049
71	Average water delivered per acre irrigated.....1939..acre-feet....	1.6	1.4	(²)	0.8	3.4
72	Average cost of water per acre irrigated.....1939..dollars....	2.09	3.83	.....	0.16	0.97
DRAINAGE OF IRRIGATED LAND						
73	Enterprises reporting land drained or needing drainage.....1939..number....	1	2	.....	12	19
74	Irrigable area in these enterprises.....1939..acres.....	(²)	(²)	.....	2,642	33,780
75	Irrigated area in these enterprises.....1939..acres.....	(²)	(²)	.....	1,507	22,615
76	Area for which drains have been installed.....1939..acres.....	(²)	.....	.....	99	4,400
77	Additional area needing drainage.....1939..acres.....	.....	(²)	.....	158	2,502

*Census of Agriculture.

¹Part annexed to San Miguel in 1925.

²Data are included only in State total because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

irrigation data omitted from any of the counties listed are included under "All other counties"]

Dolores ¹		Douglas		Eagle		Elbert		El Paso		Fremont		Garfield		Gilpin	
236		417		329		988		1,310		987		980		51	1
194		438		374		1,241		1,463		1,270		1,015		34	2
17		73		307		8		215		815		871		8	3
16		96		290		7		156		1,015		873		2	4
6.2		-24.0		5.9		28.6		37.8		-19.7		-0.2		300.0	5
16		53		228		8		168		622		651		5	6
13		65		214		5		116		618		626		.....	7
1		20		79		1		47		193		220		3	8
3		31		76		2		40		197		247		.....	9
76,888		365,446		231,881		1,067,187		1,124,896		367,478		344,432		20,315	10
8,802		103,971		217,980		43,730		372,705		259,426		301,694		6,365	11
518		1,424		710		4,859		1,734		318		346		871	12
(²)		75,673		191,617		(²)		341,661		242,647		262,907		6,381	13
(²)		1,428		841		(²)		2,034		390		404		1,276	14
(²)		28,298		26,163		(²)		31,054		16,779		38,787		584	15
(²)		1,415		331		(²)		661		87		176		195	16
657,920		539,520		1,078,400		1,192,960		1,381,120		999,680		1,916,160		95,360	17
579		5,041		39,746		801		13,197		22,000		65,557		150	18
444		4,621		30,800		801		11,856		19,896		56,722		150	19
10		400		1,495		.....		733		784		653		.....	20
125		20		7,451		.....		608		1,220		8,182		.....	21
630		6,474		26,221		2,487		20,693		25,655		69,799		.....	22
1,023		8,696		30,025		1,175		18,143		29,884		73,473		.....	23
-8.1		-22.1		40.8		-67.8		-36.2		-14.2		-6.1		.....	24
2,050		8,922		44,419		1,402		22,675		29,043		83,619		175	25
790		9,978		34,576		6,602		34,046		36,873		99,701		.....	26
23,601		15,069		48,026		6,720		35,450		44,059		117,618		.....	27
1,471		3,881		4,673		601		9,478		7,043		18,062		25	28
160		3,504		6,355		4,115		13,353		11,218		29,902		.....	29
1,185		8,566		43,618		1,342		22,112		28,938		80,430		150	30
710		9,557		31,925		6,282		33,911		31,957		80,472		.....	31
2,361		10,391		31,073		1,790		22,047		35,697		93,814		.....	32
66.9		-10.4		36.6		-78.6		-34.8		-9.4		-0.1		.....	33
606		3,525		3,872		541		8,915		6,938		14,873		.....	34
80		3,083		3,704		3,795		13,218		6,302		10,673		.....	35
6.6		4.8		18.2		1.8		3.5		8.5		21.7		2.2	36
12.4		5.9		20.9		20.0		10.5		13.6		33.4		.....	37
48.9		58.8		91.1		59.7		59.7		76.0		81.5		100.0	38
88.7		67.7		88.4		39.6		61.0		80.3		86.7		.....	39
5,445		295,194		551,222		24,317		593,142		1,711,651		2,025,306		2,850	40
5,235		293,814		497,795		23,782		582,746		1,281,995		1,568,654		2,850	41
210		1,380		53,427		535		10,396		429,656		456,652		.....	42
4,530		392,242		566,620		130,450		411,844		945,663		983,360		.....	43
549,070		207,766		285,282		25,561		901,461		1,761,518		1,134,502		.....	44
20.2		-24.7		-2.7		-81.4		44.0		81.0		106.0		.....	45
4.59		34.46		12.64		18.12		26.82		59.15		25.18		19.00	46
6.38		41.04		17.75		20.77		12.14		29.59		12.22		.....	47
232.56		20.00		9.18		14.28		40.89		49.35		12.09		.....	48
9.40		58.56		13.87		30.36		44.95		77.80		30.89		19.00	49
5,445		295,344		553,472		25,232		602,422		1,713,051		2,076,296		3,850	50
4,530		392,642		607,170		130,450		411,844		958,418		988,835		.....	51
729,020		208,286		307,432		39,961		921,461		1,889,558		1,170,827		.....	52
20.2		-24.8		-8.8		-80.7		46.3		80.1		110.2		.....	53
2.66		33.10		12.46		18.00		26.57		58.98		24.65		22.00	54
5.73		39.35		17.56		19.76		12.10		25.80		9.92		.....	55
30.89		13.80		6.40		5.95		25.99		42.89		9.95		.....	56
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
14		53		251		14		92		173		283		7	
559	(²)	4,666	(²)	38,665	(²)	751		12,001	527	21,845	(²)	60,758	2,403	150	57
734	(²)	8,298	(²)	19,195	(²)	1,434		12,277	373	33,439	(²)	32,597	1,106	400	58
1.31	(²)	1.78	(²)	0.50	(²)	1.91		1.02	0.71	1.53	(²)	0.54	0.46	2.67	59
0.85	.....	2.51	.....	0.77	.....	1.08		1.21	.....	2.90	.....	0.81	.....	.....	60
.....	.....	8,210	.....	2,963	.....	.....		15,203	.....	38,195	875	35,101	700	.....	61
.....	.....	4.00	.....	0.30	.....	.....		2.17	.....	2.64	1.22	0.98	0.47	.....	62
.....	.....	3,550	.....	10,019	.....	.....		7,464	.....	15,112	717	40,172	1,500	.....	63
.....	.....	2.31	.....	0.30	.....	.....		2.04	.....	2.53	1.22	0.87	0.47	.....	64
.....	.....	4,515	.....	120	.....	.....		12,412	.....	29,519	875	19,043	700	.....	65
.....	.....	.....	.....	11,000	.....	.....		266,050	.....	68,599	.....	37,048	.....	.....	66
.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	67
12		53		225		8		86		177		301		4	68
454	(²)	4,956	(²)	34,076	(²)	661		10,029	2,527	18,105	(²)	61,497	1,895	150	69
1,057	(²)	3,952	(²)	260,180	(²)	415		13,790	849	54,611	(²)	281,357	5,390	75	70
2.3	(²)	0.8	(²)	7.6	(²)	0.6		1.4	0.3	3.0	(²)	4.6	2.8	0.5	71
1.52	(²)	2.34	(²)	0.48	(²)	1.89		2.12	0.71	2.05	(²)	0.78	0.42	2.67	72
.....	.....	.....	.....	4	.....	.....		.....	.....	6	.....	.....	.....	.....	73
.....	.....	.....	.....	1,280	.....	(²)		(²)	.....	8,954	.....	(²)	.....	.....	74
.....	.....	.....	.....	694	.....	(²)		(²)	.....	5,714	.....	(²)	.....	.....	75
.....	.....	.....	.....	.....	.....	(²)		(²)	.....	84	.....	.....	.....	.....	76
.....	.....	.....	.....	28	.....	(²)		(²)	.....	733	.....	(²)	.....	.....	77

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

³Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - COLORADO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Grand	Gunnison	Hinsdale	Huerfano	Jackson	
					Primary	Supplemental
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*						
1 All farms.....1940..number.....	253	362	34	696	262	
2 ..1930..number.....	229	370	44	760	203	
3 Irrigated farms.....1940..number.....	231	294	32	280	211	
4 ..1930..number.....	203	299	34	383	176	
5 Increase or decrease (-), 1930-1940.....percent.....	13.8	-1.7	-5.9	-26.9	19.9	
Operated by—						
6 (a) Owners and managers.....1940..number.....	182	260	29	222	193	
7 ..1930..number.....	178	264	30	322	189	
8 (b) Tenants.....1940..number.....	49	34	3	58	18	
9 ..1930..number.....	25	35	4	61	17	
10 Land in all farms.....1940..acres.....	288,510	316,201	18,696	540,908	350,789	
11 Land in irrigated farms.....1940..acres.....	277,893	249,510	18,456	289,579	321,898	
12 Average per farm.....1940..acres.....	1,203	849	577	1,034	1,526	
13 (a) Operated by owners and managers.....1940..acres.....	252,901	235,946	17,876	266,245	299,358	
14 Average per farm.....1940..acres.....	1,390	905	616	1,189	1,551	
15 (b) Operated by tenants.....1940..acres.....	24,992	14,164	580	23,334	22,540	
16 Average per farm.....1940..acres.....	510	417	193	402	1,252	
17 Approximate land area.....1940..acres.....	1,194,880	2,074,680	676,480	1,009,920	1,038,720	
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939..acres.....	38,939	69,042	4,605	18,816	154,279	
19 (a) Cropland harvested.....1939..acres.....	33,702	46,553	3,712	15,901	111,190	
20 (b) Crop failure.....1939..acres.....	192	278	140	1,607	.....
21 (c) Pasture.....1939..acres.....	5,045	22,211	763	1,408	43,089	
22 Area irrigated.....1929..acres.....	28,649	41,474	5,212	30,974	113,840	
23 ..1919..acres.....	39,857	48,260	3,675	29,081	136,942	
24 Increase or decrease (-), 1929-1939.....percent.....	35.9	66.5	-11.6	-39.3	35.5	
25 Irrigable area in enterprises.....1940..acres.....	59,410	77,377	4,966	27,456	181,240	
26 ..1930..acres.....	55,255	49,811	6,608	46,260	162,730	
27 ..1920 ³ ..acres.....	85,504	67,925	4,065	43,274	229,203	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	20,471	8,335	361	8,640	26,961	
29 ..1930..acres.....	26,606	8,337	1,391	15,286	48,890	
30 Area works were capable of supplying with water.....1940..acres.....	51,685	76,150	4,625	25,169	108,475	
31 ..1930..acres.....	42,943	48,080	5,984	44,129	140,475	
32 ..1920..acres.....	43,092	52,467	3,880	32,119	149,325	
33 Increase or decrease (-), 1930-1940.....percent.....	22.1	58.4	-19.4	-43.0	19.9	
34 Excess, capability of works over area irrigated.....1940..acres.....	12,746	7,108	220	6,353	14,196	
35 ..1930..acres.....	13,694	6,606	772	13,155	26,635	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	14.0	27.7	25.0	6.5	47.9	
37 ..1929..percent.....	14.3	22.7	33.3	10.3	37.6	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	75.3	90.7	95.4	74.8	91.6	
39 ..1929..percent.....	67.7	86.3	87.1	70.2	81.0	
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940..dollars.....	549,749	549,996	30,925	270,442	789,860	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	514,283	509,236	25,605	236,792	760,945	
42 (b) Investment in water rights (reported).....1940..dollars.....	35,466	40,760	5,420	33,650	28,915	
43 Total investment in all enterprises.....1930..dollars.....	372,095	358,025	1,269,972	283,324	695,090	
44 ..1920..dollars.....	534,913	462,748	395,572	1,061,777	784,326	
45 Increase or decrease (-), 1930-1940.....percent.....	47.7	53.6	-97.6	-4.5	13.6	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	10.64	7.22	6.41	10.75	4.69	
47 ..1930..dollars.....	8.79	7.45	212.23	6.42	4.95	
48 ..1920..dollars.....	12.41	8.82	102.00	33.06	5.25	
49 Average investment per acre irrigated.....1939..dollars.....	14.12	7.97	6.72	14.37	5.12	
50 Estimated final investment in existing enterprises.....1940..dollars.....	605,549	561,691	31,575	290,942	804,735	
51 ..1930..dollars.....	405,045	364,575	1,319,972	287,824	963,030	
52 ..1920..dollars.....	547,713	472,998	395,572	1,083,232	1,043,826	
53 Increase or decrease (-), 1930-1940.....percent.....	49.5	54.1	-97.6	1.0	-16.4	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	10.19	7.26	6.36	10.59	4.44	
55 ..1930..dollars.....	7.33	7.32	199.90	6.22	5.92	
56 ..1920 ³ ..dollars.....	6.41	6.96	97.36	25.03	4.55	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
57 Enterprises reporting maintenance and operation.....1939..number.....	190	3	278	202	205	1
58 Area irrigated in these enterprises.....1939..acres.....	38,217	655	66,526	4,465	152,343	(*)
59 Cost of maintenance and operation.....1939..dollars.....	25,396	65	25,667	1,761	8,663	(*)
60 Average cost, per acre irrigated.....1939..dollars.....	0.66	0.10	0.39	0.39	0.53	(*)
61 ..1929..dollars.....	0.37	.....	0.45	4.04	0.63	.....
62 Total annual charges (reported) ⁶.....1939..dollars.....	2,393	.....	2,732	.....	2,325	.....
63 Average annual charge per acre irrigated.....1939..dollars.....	0.41	.....	0.18	.....	0.41	.....
64 Area against which charges were assessed.....1939..acres.....	11,170	.....	15,307	.....	5,673	.....
65 Average annual charge per acre assessed.....1939..dollars.....	0.21	.....	0.18	.....	0.41	.....
66 Total charges collected ⁶.....1939..dollars.....	1,020	.....	389	.....	.....	.....
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	169	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939..number.....	195	2	264	28	186	209
69 Area irrigated in these enterprises.....1939..acres.....	38,244	(*)	62,685	4,325	16,066	(*)
70 Water delivered in these enterprises.....1939..acre-feet.....	231,408	(*)	444,757	6,027	22,118	(*)
71 Average water delivered per acre irrigated.....1939..acre-feet.....	6.0	(*)	7.1	1.4	1.4	(*)
72 Average cost of water per acre irrigated.....1939..dollars.....	0.69	(*)	0.38	0.36	0.55	(*)
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939..number.....	8	.....	3	.....	3	1
74 Irrigable area in these enterprises.....1939..acres.....	1,036	.....	1,278	.....	189	(*)
75 Irrigated area in these enterprises.....1939..acres.....	1,030	.....	1,278	.....	189	(*)
76 Area for which drains have been installed.....1939..acres.....	60	.....	5	.....	.....	(*)
77 Additional area needing drainage.....1939..acres.....	152	.....	236	.....	14	(*)

* Census of Agriculture.

¹ Includes statistics for 2 farms reported for San Juan County in 1930 and 4 farms in 1940 to avoid disclosure of individual operations.

² Percent not shown when more than 1,000.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - COLORADO

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Jefferson		Kiowa	Lake	La Plata ¹	Larimer	Las Animas	Lincoln	Logan					
1,783		454	29	1,046	1,625	1,281	834	1,575	1				
1,817		579	44	1,161	1,838	1,756	1,232	1,845	2				
1,254		37	26	777	1,518	482	16	604	3				
1,320		3	27	571	1,499	531	7	617	4				
-5.0		(²)	-3.7	-10.8	1.3	-9.2	128.6	-2.1	5				
833		29	21	510	865	313	13	223	6				
1,052		3	20	565	916	332	5	258	7				
321		8	5	267	653	169	3	381	8				
208		.....	7	306	583	199	2	359	9			
287,316		629,631	16,629	371,522	709,361	1,982,361	1,405,422	1,041,707	10				
126,878		38,630	16,187	266,426	568,104	709,917	100,744	324,030	11				
101		1,044	625	330	374	1,473	6,296	536	12				
98,068		32,666	14,400	199,466	448,475	622,888	98,144	206,713	13				
105		1,123	686	391	518	1,980	6,780	927	14				
28,615		6,064	1,787	56,960	119,629	87,049	12,600	117,317	15				
90		768	387	213	183	515	4,200	308	16				
503,040		1,146,880	243,200	1,080,960	1,676,160	3,068,180	1,659,520	1,169,280	17				
49,655		104	8,506	75,218	149,652	31,760	244	100,175	18				
46,993		63	4,349	62,061	139,588	21,902	119	94,031	19				
1,060		41	5	1,943	7,811	2,343	.....	2,327	20			
1,602		.....	4,152	11,294	2,253	7,515	125	3,817	21			
58,124		270	4,242	94,532	173,078	32,082	185	111,378	22				
70,788		418	6,397	63,765	169,356	40,400	.....	85,079	23			
-14.6		-61.5	100.5	-20.4	-13.5	-1.0	31.9	-10.1	24				
53,421		5,125	9,076	117,510	160,239	50,274	569	115,563	25				
60,607		1,485	4,242	131,706	183,571	54,071	930	127,318	26				
77,937		17,283	10,449	111,462	196,330	50,987	.....	124,415	27			
3,766		5,021	570	42,292	10,587	18,514	325	15,388	28				
2,483		1,215	.....	37,174	10,493	21,979	745	15,940	29			
53,289		5,125	9,076	93,069	156,820	49,704	569	114,788	30				
68,700		1,005	4,242	117,186	180,879	48,163	450	123,616	31				
73,635		2,083	7,088	78,227	188,047	43,857	.....	105,916	32			
-9.2		410.0	114.0	-20.6	-13.3	3.2	26.4	-7.1	33				
3,644		5,021	570	17,851	7,168	17,944	325	14,613	34				
576		736	.....	22,654	7,801	16,061	265	12,238	35			
39.1		0.3	52.5	29.3	26.3	4.5	0.2	30.9	36				
52.4		2.8	28.2	38.6	32.2	5.1	0.2	42.7	37				
93.2		2.0	93.7	80.8	95.4	63.9	42.9	87.3	38				
99.0		26.9	100.0	80.7	95.7	66.6	41.1	90.1	39				
1,585,792		90,755	16,524	1,875,095	6,713,002	1,217,954	14,975	3,528,970	40				
1,534,635		90,455	16,770	1,743,643	6,618,175	1,067,857	14,975	3,504,785	41				
51,137		300	754	131,452	94,627	150,037	.....	24,185	42			
2,500,326		325,800	8,970	1,039,896	7,514,401	2,059,902	2,950	3,072,572	43				
1,231,205		261,500	33,696	938,864	6,236,866	401,720	.....	3,593,889	44			
-36.6		-72.1	84.2	80.3	-10.7	-40.8	407.6	14.9	45				
29.75		17.71	1.82	20.15	42.81	24.50	26.32	30.74	46				
42.59		324.18	2.11	8.87	41.54	42.76	6.56	24.86	47				
16.72		120.74	4.75	12.00	33.17	9.16	.....	33.93	48			
31.94		872.64	1.94	24.93	44.86	36.35	61.37	35.23	49				
1,586,057		90,755	16,524	2,703,140	6,729,136	1,221,096	14,975	3,535,220	50				
2,510,326		335,800	8,970	1,240,216	7,516,971	2,319,602	2,950	3,081,072	51				
1,268,125		337,200	33,696	978,214	6,473,663	455,470	.....	3,596,039	52			
-36.8		-73.0	84.2	118.0	-10.5	-47.4	407.6	14.7	53				
29.69		17.71	1.82	23.00	41.99	24.29	26.32	30.59	54				
41.42		226.13	2.11	9.42	40.95	42.30	3.17	24.20	55				
16.27		19.51	3.22	8.78	32.97	8.93	.....	26.90	56			
Primary	Sup.	Enterprises		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Enterprises	
58	10	20	22	171	12	184	68	171	4	5	58	54	57
48,729	2,573	104	6,731	74,497	1,355	148,895	29,407	30,896	147	205	99,771	30,331	58
42,755	515	763	1,647	45,147	691	92,801	33,231	26,007	290	725	89,988	14,202	59
0.88	0.20	7.34	0.24	0.61	0.51	0.62	1.13	0.64	1.97	3.54	0.90	0.47	60
1.93	15.56	0.22	0.60	1.09	1.22	2.90	0.66	61
41,372	201	32,683	503	175,063	25,484	21,426	60,700	4,655	62
0.88	0.08	0.47	0.69	1.29	1.00	0.94	0.65	0.19	63
49,261	2,510	79,323	1,070	138,450	25,470	23,127	105,293	24,433	64
0.84	0.08	0.41	0.47	1.26	1.00	0.93	0.58	0.19	65
44,625	300	33,210	499	180,763	25,997	15,649	60,000	4,144	66
115,349	44,305	1,137,174	171,525	120,770	33,793	67
49	9	16	23	118	6	186	60	170	4	7	56	53	68
41,835	2,573	104	8,990	64,914	600	148,336	29,358	30,362	147	244	99,762	30,411	59
69,363	1,420	80	31,670	170,589	1,581	193,359	26,905	39,281	82	979	185,008	17,500	70
1.7	0.6	0.8	3.8	2.6	2.6	1.3	0.9	1.3	0.6	4.0	1.9	0.6	71
1.01	0.22	6.72	0.26	0.48	0.34	1.27	1.25	0.91	1.97	3.54	0.67	0.51	72
(⁴)	2	(⁴)	3	26	7	4	73
(⁴)	(⁴)	17,067	15,574	2,565	51,324	74
(⁴)	(⁴)	6,878	14,813	2,184	39,082	75
(⁴)	(⁴)	1	13,442	5,817	76
(⁴)	(⁴)	410	148	43	2,600	77

¹Data are included only in State total because less than 3 enterprises reported in the 1940 Census.
²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
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CENSUS OF IRRIGATION - COLORADO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Mesa	Mineral	Moffat	Montezuma	Montrose
	FARMS, ACREAGE, AND TENURE OF FARM OPERATORS¹				
1 All farms.....1940..number.....	2,652	49	527	1,043	1,426
2 ..1930..number.....	2,665	50	797	978	1,318
3 Irrigated farms.....1940..number.....	2,472	37	188	708	1,364
4 ..1930..number.....	2,413	32	167	626	1,234
5 Increase or decrease (-), 1930-1940.....percent.....	2.4	15.6	12.6	13.1	10.2
Operated by—					
6 (a) Owners and managers.....1940..number.....	1,990	33	154	504	880
7 ..1930..number.....	1,909	29	131	438	770
8 (b) Tenants.....1940..number.....	482	4	34	204	484
9 ..1930..number.....	504	3	36	188	468
10 Land in all farms.....1940..acres.....	422,592	27,348	904,008	261,841	281,129
11 Land in irrigated farms.....1940..acres.....	333,190	23,923	449,558	160,475	267,837
12 Average per farm.....1940..acres.....	137	647	2,391	227	196
13 (a) Operated by owners and managers.....1940..acres.....	295,010	22,813	421,293	119,022	214,693
14 Average per farm.....1940..acres.....	148	691	2,736	236	244
15 (b) Operated by tenants.....1940..acres.....	43,180	1,115	28,265	41,453	53,144
16 Average per farm.....1940..acres.....	90	279	831	203	110
17 Approximate land area.....1940..acres.....	2,120,320	589,440	3,042,560	1,340,800	1,432,960
IRRIGATED AND IRRIGABLE AREAS					
18 Area irrigated.....1939..acres.....	106,385	6,208	19,384	48,453	86,837
19 (a) Cropland harvested.....1939..acres.....	91,635	4,226	15,939	42,017	73,957
20 (b) Crop failure.....1939..acres.....	552	.....	428	840	321
21 (c) Pasture.....1939..acres.....	14,198	1,982	3,017	5,596	12,559
22 Area irrigated.....1929..acres.....	136,488	2,563	17,938	62,146	84,058
23 ..1919..acres.....	102,607	6,865	17,439	44,083	94,757
24 Increase or decrease (-), 1929-1939.....percent.....	-22.1	142.2	8.1	-22.0	3.3
25 Irrigable area in enterprises.....1940..acres.....	155,868	7,245	27,828	83,298	138,196
26 ..1930..acres.....	209,308	5,015	35,631	98,078	114,648
27 ..1920 ² ..acres.....	185,177	14,770	32,327	80,216	173,162
28 Excess of irrigable area over the area irrigated.....1940..acres.....	49,483	1,037	8,444	34,845	51,359
29 ..1930..acres.....	72,820	2,452	17,693	35,932	30,590
30 Area works were capable of supplying with water.....1940..acres.....	140,395	7,160	24,204	55,495	116,360
31 ..1930..acres.....	177,904	3,172	29,821	83,203	105,100
32 ..1920 ² ..acres.....	140,104	9,950	24,224	44,795	123,905
33 Increase or decrease (-), 1930-1940.....percent.....	-21.1	125.7	-18.8	-33.3	10.7
34 Excess, capability of works over area irrigated.....1940..acres.....	34,010	952	4,820	7,042	29,523
35 ..1930..acres.....	41,416	609	11,883	21,057	21,042
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	31.5	25.9	4.3	30.2	32.4
37 ..1929..percent.....	50.5	12.3	9.5	43.5	42.0
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	75.8	86.7	80.1	87.3	74.6
39 ..1929..percent.....	76.7	80.8	60.2	74.7	80.0
CAPITAL INVESTED TO JANUARY 1					
40 Total investment in all enterprises.....1940..dollars.....	5,848,890	22,420	304,545	4,883,337	7,926,549
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	5,799,571	22,355	300,790	4,780,954	7,912,762
42 (b) Investment in water rights (reported).....1940..dollars.....	49,319	65	3,755	102,383	13,787
43 Total investment in all enterprises.....1930..dollars.....	6,620,956	24,250	381,417	4,932,595	6,944,017
44 ..1920 ² ..dollars.....	7,319,055	81,683	366,301	1,846,679	6,788,758
45 Increase or decrease (-), 1930-1940.....percent.....	-11.7	-7.5	-20.2	-1.0	14.1
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	41.66	3.13	12.58	88.00	68.12
47 ..1930..dollars.....	37.22	7.65	12.79	59.28	66.07
48 ..1920 ² ..dollars.....	52.24	8.21	15.12	41.23	54.79
49 Average investment per acre irrigated.....1939..dollars.....	54.98	3.61	15.71	100.79	91.28
50 Estimated final investment in existing enterprises.....1940..dollars.....	6,313,115	22,975	327,335	5,100,762	8,160,528
51 ..1930..dollars.....	7,273,473	32,050	388,497	5,959,445	7,139,617
52 ..1920 ² ..dollars.....	8,155,335	102,243	386,226	2,446,679	7,286,466
53 Increase or decrease (-), 1930-1940.....percent.....	-13.2	-28.3	-15.7	-14.4	14.3
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	40.50	3.17	11.76	61.24	59.05
55 ..1930..dollars.....	34.75	6.39	10.90	60.76	62.27
56 ..1920 ² ..dollars.....	44.04	6.92	11.95	30.50	42.08
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
57 Enterprises reporting maintenance and operation.....1939..number.....	Primary	Sup.		Primary	Sup.
	Enterprises			Enterprises	
58 Area irrigated in these enterprises.....1939..acres.....	254	35	31	119	3
59 Cost of maintenance and operation.....1939..dollars.....	103,678	19,531	3,745	18,391	457
60 Average cost, per acre irrigated.....1939..dollars.....	1.33	2.17	0.28	1.02	1.60
61 ..1929..dollars.....	1.24	.....	1.83	1.70	.....
62 Total annual charges (reported) ⁵ &.....1939..dollars.....	121,685	34,399	25	2,688	700
63 Average annual charge per acre irrigated.....1939..dollars.....	1.48	2.26	0.25	0.49	1.75
64 Area against which charges were assessed.....1939..acres.....	85,247	16,925	100	6,764	400
65 Average annual charge per acre assessed.....1939..dollars.....	1.43	2.03	0.25	0.40	1.75
66 Total charges collected ⁵.....1939..dollars.....	100,477	46,035	.....	3,202	50,191
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	2,763,172	821,515	.....	7,701	85,075
WATER DELIVERED TO IRRIGATORS					
68 Enterprises reporting water delivered.....1939..number.....	245	32	40	129	78
69 Area irrigated in these enterprises.....1939..acres.....	96,280	19,301	6,208	18,146	44,789
70 Water delivered in these enterprises.....1939..acre-feet.....	439,172	51,931	10,979	35,434	115,735
71 Average water delivered per acre irrigated.....1939..acre-feet.....	4.5	2.7	1.8	2.0	2.6
72 Average cost of water per acre irrigated.....1939..dollars.....	1.29	1.90	0.29	1.07	1.44
DRAINAGE OF IRRIGATED LAND					
73 Enterprises reporting land drained or needing drainage.....1939..number.....	14	.....	.....	1	2
74 Irrigable area in these enterprises.....1939..acres.....	53,622	.....	.....	(¹)	(¹)
75 Irrigated area in these enterprises.....1939..acres.....	30,788	.....	.....	(¹)	(¹)
76 Area for which drains have been installed.....1939..acres.....	14,523	.....	.....	.....	.....
77 Additional area needing drainage.....1939..acres.....	909	.....	.....	(¹)	(¹)

¹ Census of Agriculture.

² Data are included only in State total because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

³ The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

CENSUS OF IRRIGATION - COLORADO

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Morgan		Otero		Ouray		Park		Phillips		Pitkin		Prowers		
1,349		1,189		153		306		626		169		1,022		1
1,569		1,298		178		394		766		180		1,382		2
848		1,037		136		148		2		150		713		3
845		1,120		156		125		.....		154		729		4
0.4		-7.4		-12.8		18.4		.....		-2.6		-2.2		5
369		532		106		119		(1)		-128		303		6
388		596		124		104		.....		123		327		7
479		505		30		21		(1)		22		410		8
457		524		32		29		.....		31		402		9
625,903		2,076,398		133,866		563,129		417,696		70,018		499,935		10
245,929		188,742		126,558		444,559		(2)		66,343		270,535		11
290		182		931		3,004		(1)		442		379		12
153,354		126,924		107,632		404,530		(1)		57,984		169,370		13
416		239		1,015		3,399		(1)		453		559		14
92,575		61,818		18,826		40,029		(1)		8,359		101,165		15
193		122		631		1,380		(1)		380		247		16
820,480		810,880		345,600		1,386,240		435,200		623,300		1,040,640		17
110,293		81,298		16,663		41,881		350		17,761		86,831		18
98,658		71,508		13,618		39,255		330		13,153		83,940		19
11,037		5,013		492		254		.....		158		1,355		20
598		4,777		2,553		2,372		20		4,450		1,536		21
105,277		97,981		20,401		44,038		.....		17,501		111,634		22
132,231		120,198		14,016		49,793		.....		12,994		76,322		23
4.8		-7.6		-18.3		-4.9		.....		1.5		-22.2		24
118,219		87,534		27,741		46,727		450		20,013		103,692		25
126,196		119,646		31,430		46,795		.....		25,612		131,195		26
166,570		183,077		24,017		55,449		.....		21,295		99,213		27
7,926		6,236		11,078		4,846		100		2,252		16,861		28
20,919		31,665		11,029		2,757		.....		8,111		19,561		29
117,143		87,356		22,915		45,438		450		19,984		102,002		30
115,333		106,066		23,431		45,570		.....		25,118		126,955		31
153,796		124,879		23,092		52,029		.....		15,172		81,508		32
1.6		-17.6		-2.2		-0.3		.....		-20.4		-19.7		33
6,850		6,058		6,252		3,557		100		2,223		15,171		34
10,056		18,085		3,030		1,532		.....		7,617		15,321		35
44.8		43.1		13.2		9.4		43.8		26.8		32.1		36
48.7		43.3		21.3		12.1		.....		34.8		66.2		37
94.2		93.1		72.7		92.2		77.8		88.9		85.1		38
91.3		82.9		87.1		96.6		.....		69.7		87.9		39
7,205,136		2,700,860		213,145		199,077		10,667		248,679		3,817,541		40
5,668,690		2,676,649		198,240		194,444		10,667		232,495		3,905,751		41
1,536,446		24,211		14,905		4,633		.....		16,184		11,790		42
2,784,109		2,782,085		213,491		211,435		.....		300,660		2,319,500		43
2,600,735		4,157,535		197,689		175,670		.....		208,324		1,160,422		44
158.8		-2.9		-0.2		-5.8		.....		-17.3		64.6		45
61.51		30.92		9.30		4.38		23.70		12.44		37.43		46
24.14		26.23		9.11		4.64		.....		11.97		18.27		47
16.91		33.29		8.56		3.38		.....		13.73		14.24		48
65.33		33.22		12.79		4.75		30.48		14.00		43.97		49
7,213,096		2,707,360		216,100		203,008		10,667		249,179		3,822,941		50
2,904,109		2,786,085		216,016		211,485		.....		309,060		2,319,825		51
2,604,785		4,438,935		197,758		176,080		.....		214,324		1,163,412		52
157.2		-2.9		(4)		-4.0		.....		-19.4		64.8		53
61.01		30.93		7.79		4.34		23.70		12.45		36.87		54
22.22		23.30		6.87		4.52		.....		12.07		17.68		55
15.63		24.25		8.23		3.18		.....		10.06		11.73		56
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
120	122	53	93	107	5	139	2	3		116	2	40	22	57
110,293	83,023	81,287	5,767	16,663	669	41,593	(1)	350		17,379	(1)	86,731	2,088	58
115,087	64,254	65,026	9,812	5,083	253	15,334	(1)	1,251		8,113	(1)	60,373	2,992	59
1.04	0.77	0.80	1.70	0.31	0.38	0.37	(1)	3.57		0.47	(1)	0.70	1.43	60
1.15	.....	0.73	.....	0.46	.....	0.30	.....	.....		0.84	.....	0.80	.....	61
148,418	13,323	77,941	4,902	2,533	.....	.....	.....	278		1,765	.....	92,851	.....	62
1.56	0.20	0.97	2.85	0.29	.....	.....	.....	0.08		0.49	.....	1.08	.....	63
96,224	66,318	84,423	1,720	10,172	.....	.....	.....	3,700		3,570	.....	90,116	.....	64
1.55	0.20	0.92	2.85	0.25	.....	.....	.....	0.08		0.49	.....	1.03	.....	65
152,851	12,711	92,957	.....	1,723	.....	.....	.....	.....		.....	.....	97,806	.....	66
572,382	.....	432,595	.....	.....	.....	.....	.....	.....		.....	.....	168,951	.....	67
114	121	47	94	98	5	147	2	2		109	.....	44	22	68
110,293	83,023	79,298	5,771	14,987	669	41,876	(1)	(1)		17,265	.....	86,791	2,088	69
222,144	79,357	205,044	4,863	63,290	3,289	158,484	(1)	(1)		119,262	.....	133,220	2,847	70
2.0	1.0	2.6	0.8	4.2	4.9	3.8	(1)	(1)		6.9	.....	1.5	1.4	71
1.72	0.78	1.02	2.17	0.39	0.38	0.37	(1)	(1)		0.47	.....	1.09	1.43	72
(1)	2	3	.....	(1)	2	3	.....	(1)	1	.....	.....	8	.....	73
(1)	.....	15,476	.....	(1)	.....	284	.....	(1)	.....	.....	.....	63,231	.....	74
(1)	.....	15,426	.....	(1)	.....	231	.....	(1)	.....	.....	.....	50,428	.....	75
(1)	.....	3,065	.....	(1)	.....	.....	.....	(1)	.....	.....	.....	13,577	.....	76
.....	.....	500	.....	(1)	.....	150	.....	.....	.....	.....	.....	664	.....	77

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁴Less than one-tenth of 1 percent.

⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - COLORADO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Pueblo		Rio Blanco		Rio Grande		Routt	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS²								
1 All farms.....1940..number....	1,193		339		675		829	
2 ..1930..number....	1,473		433		730		928	
3 Irrigated farms.....1940..number....	836		215		619		458	
4 ..1930..number....	935		234		692		453	
5 Increase or decrease (-), 1930-1940.....percent....	-10.6		-8.1		-10.5		1.1	
Operated by—								
6 (a) Owners and managers.....1940..number....	549		177		392		330	
7 ..1930..number....	622		194		419		306	
8 (b) Tenants.....1940..number....	287		38		28		128	
9 ..1930..number....	313		40		273		147	
10 Land in all farms.....1940..acres.....	797,883		468,398		197,941		575,216	
11 Land in irrigated farms.....1940..acres.....	390,433		352,513		184,704		436,214	
12 ..1930..acres.....	467		1,640		298		952	
13 Average per farm.....1940..acres.....	316,250		332,079		127,462		356,991	
14 (a) Operated by owners and managers.....1940..acres.....	576		1,876		325		1,082	
15 (b) Operated by tenants.....1940..acres.....	74,183		20,434		57,242		79,223	
16 Average per farm.....1940..acres.....	258		538		252		619	
17 Approximate land area.....1940..acres.....	1,536,640		2,088,320		586,240		1,491,200	
IRRIGATED AND IRRIGABLE AREAS								
18 Area irrigated.....1939..acres.....	48,828		37,068		176,334		47,524	
19 (a) Cropland harvested.....1939..acres.....	43,923		32,644		159,055		41,272	
20 (b) Crop failure.....1939..acres.....	3,446		381		2,632		594	
21 (c) Pasture.....1939..acres.....	1,459		4,043		14,647		5,658	
22 Area irrigated.....1929..acres.....	69,211		30,526		161,191		58,839	
23 ..1919..acres.....	75,454		28,046		206,258		50,735	
24 Increase or decrease (-), 1929-1939.....percent....	-29.5		21.4		9.4		-19.2	
25 Irrigable area in enterprises.....1940..acres.....	105,245		45,127		225,700		70,040	
26 ..1930..acres.....	123,567		39,416		186,267		87,022	
27 ..1920 ³ ..acres.....	142,594		45,579		293,162		92,148	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	56,417		8,059		49,366		22,516	
29 ..1930..acres.....	54,356		8,890		25,076		28,183	
30 Area works were capable of supplying with water.....1940..acres.....	90,692		42,860		214,774		59,911	
31 ..1930..acres.....	97,122		34,438		172,997		77,571	
32 ..1920..acres.....	88,699		32,742		227,167		61,123	
33 Increase or decrease (-), 1930-1940.....percent....	-6.6		24.5		24.1		-22.8	
34 Excess, capability of works over area irrigated.....1940..acres.....	41,864		5,792		38,440		12,387	
35 ..1930..acres.....	27,911		3,912		11,806		18,732	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	12.5		10.5		95.5		10.9	
37 ..1929..percent....	9.2		14.6		82.4		21.4	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	53.8		86.5		82.1		79.3	
39 ..1929..percent....	71.3		88.6		93.2		75.9	
CAPITAL INVESTED TO JANUARY 1								
40 Total investment in all enterprises.....1940..dollars....	2,365,651		549,585		4,784,002		594,175	
41 (a) Cost of irrigation works and equipment.....1940..dollars....	2,337,901		531,085		4,490,383		553,109	
42 (b) Investment in water rights (reported).....1940..dollars....	27,750		18,500		293,619		41,066	
43 Total investment in all enterprises.....1930..dollars....	2,459,925		488,707		1,357,907		523,065	
44 ..1920..dollars....	3,645,462		356,617		991,136		572,873	
45 Increase or decrease (-), 1930-1940.....percent....	-3.8		12.4		252.3		13.6	
Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....								
46 ..1940..dollars....	26.08		12.82		22.27		9.92	
47 ..1930..dollars....	25.33		14.19		7.85		6.74	
48 ..1920..dollars....	41.10		10.86		4.32		9.37	
49 Average investment per acre irrigated.....1939..dollars....	48.46		14.83		27.13		12.50	
50 Estimated final investment in existing enterprises.....1940..dollars....	2,415,045		557,230		4,820,130		833,120	
51 ..1930..dollars....	2,748,525		515,990		1,358,007		532,240	
52 ..1920..dollars....	3,919,262		372,882		982,914		613,908	
53 Increase or decrease (-), 1930-1940.....percent....	-12.1		8.0		254.9		56.5	
Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....								
54 ..1940..dollars....	22.95		12.35		21.36		11.89	
55 ..1930..dollars....	22.24		13.09		7.29		6.12	
56 ..1920 ³ ..dollars....	27.49		8.18		3.35		6.66	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
57 Enterprises reporting maintenance and operation.....1939..number....	174	93	142	4	190	148	253	6
58 Area irrigated in these enterprises.....1939..acres.....	48,512	4,527	36,153	576	174,378	88,199	38,742	2,429
59 Cost of maintenance and operation.....1939..dollars....	69,598	10,749	20,152	111	55,352	67,938	19,986	248
60 Average cost, per acre irrigated.....1939..dollars....	1.43	2.37	0.56	0.19	0.32	0.77	0.52	0.10
61 ..1929..dollars....	1.41	.....	1.23	.....	0.25	.....	0.33	.....
62 Total annual charges (reported) ⁶.....1939..dollars....	67,554	5,153	4,500	.....	37,105	11,163	9,594	150
63 Average annual charge per acre irrigated.....1939..dollars....	1.88	2.45	0.32	.....	0.24	0.14	0.77	0.08
64 Area against which charges were assessed.....1939..acres.....	45,922	2,105	16,389	.....	160,741	77,300	12,643	2,000
65 Average annual charge per acre assessed.....1939..dollars....	1.47	2.45	0.27	.....	0.23	0.14	0.76	0.08
66 Total charges collected ⁶.....1939..dollars....	70,825	400	778	.....	31,682	8,548	2,000	150
67 Indebtedness to December 31 (reported) ⁷.....1939..dollars....	210,521	.....	750	.....	1,327,327	201,150	80,950	.....
WATER DELIVERED TO IRRIGATORS								
68 Enterprises reporting water delivered.....1939..number....	171	87	141	3	197	139	306	11
69 Area irrigated in these enterprises.....1939..acres.....	48,600	4,491	36,643	576	175,897	87,613	42,761	2,710
70 Water delivered in these enterprises.....1939..acre-feet....	96,000	4,941	142,797	992	286,873	41,074	158,656	2,874
71 Average water delivered per acre irrigated.....1939..acre-feet....	2.0	1.1	3.9	1.7	1.6	0.5	3.7	1.1
72 Average cost of water per acre irrigated.....1939..dollars....	1.55	2.73	0.55	0.19	0.37	0.70	0.45	0.10
DRAINAGE OF IRRIGATED LAND								
73 Enterprises reporting land drained or needing drainage.....1939..number....	7	.....	4	.....	4	.....	3	.....
74 Irrigable area in these enterprises.....1939..acres.....	1,875	.....	2,475	.....	20,433	.....	2,660	.....
75 Irrigated area in these enterprises.....1939..acres.....	949	.....	1,960	.....	14,387	.....	2,520	.....
76 Area for which drains have been installed.....1939..acres.....	.....	.....	2	.....	6,080	.....	.....	.....
77 Additional area needing drainage.....1939..acres.....	130	.....	465	.....	10,000	.....	245	.....

⁶ Census of Agriculture.
⁷ Part of Dolores County annexed in 1925.
⁸ Data between census years not comparable (see headnote).
⁹ Data are included only in State total because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Saguache	San Miguel ¹	Sedgwick	Summit	Teller	Washington	Weld	Yuma	All other counties ²						
505	178	505	59	246	1,439	4,512	1,765	1,644	01					
557	263	560	61	238	1,753	5,457	2,113	2,255	2					
422	104	157	55	37	69	3,298	48	2	3					
416	115	161	52	12	68	3,612	49	6	4					
1.4	-0.6	-2.5	5.8	208.3	1.5	-8.7	-2.0	-66.7	5					
268	80	71	43	26	35	1,314	34	.....	6				
260	85	64	47	12	37	1,443	37	.....	7				
154	24	86	12	11	34	1,984	14	(³)	8					
136	30	97	5	.....	31	2,169	12	.....	9			
465,726	169,458	288,736	42,098	145,509	1,301,288	1,934,146	1,440,494	1,746,738	10					
420,128	72,369	52,560	39,815	43,087	28,914	654,857	51,087	(³)	11					
996	696	335	724	1,165	419	199	1,064	(³)	12					
367,751	66,882	32,736	34,546	36,173	23,191	309,632	49,876	.....	13				
1,372	836	461	803	1,391	663	236	1,202	.....	14				
52,377	5,507	19,824	5,269	6,914	5,723	345,225	10,211	(³)	15					
340	229	231	439	629	168	174	729	(³)	16					
2,012,160	821,120	348,160	393,600	354,560	1,616,000	2,562,560	1,525,120	2,774,400	17					
147,782	24,250	21,741	8,941	905	9,792	418,619	2,726	94	18					
123,431	19,465	21,500	8,140	812	9,309	405,652	2,372	94	19					
257	180	41	60	53	483	5,139	115	.....	20				
24,094	4,605	200	741	40	.....	7,628	239	.....	21			
163,815	18,249	22,375	9,204	550	11,120	443,915	2,725	1,164	22					
137,581	18,634	21,510	9,631	1,464	9,335	362,701	8,254	794	23					
-9.8	32.9	-2.8	-2.9	64.5	-11.9	-5.7	(⁴)	91.9	24					
189,223	82,405	22,200	9,863	1,338	10,150	516,192	4,318	124	25					
184,412	53,945	24,580	11,354	696	11,755	568,407	3,970	1,298	26					
271,932	44,749	24,050	15,222	1,944	10,095	567,392	15,242	2,324	27					
41,441	58,155	459	922	433	358	97,573	1,592	30	28					
20,597	35,696	2,205	2,150	145	635	124,492	1,245	134	29					
187,128	32,574	22,200	9,673	1,811	10,100	487,778	3,982	124	30					
178,052	21,661	23,985	11,354	630	11,705	499,675	3,805	1,273	31					
153,391	22,811	23,050	10,966	1,540	10,095	395,444	10,182	1,394	32					
5.1	50.4	-7.4	-14.8	108.1	-13.7	-2.4	4.7	90.3	33					
39,346	8,324	459	732	406	308	69,159	1,256	30	34					
14,237	3,412	1,610	2,150	80	585	55,760	1,080	109	35					
35.2	33.5	41.4	22.5	2.1	33.9	63.9	5.3	2.3	36					
40.9	19.8	23.8	31.9	4.3	40.4	58.3	7.5	4.2	37					
79.0	74.4	97.9	92.4	69.0	97.0	65.8	68.5	75.8	38					
92.0	84.2	93.3	81.1	87.3	95.0	88.8	71.6	91.4	39					
1,967,656	367,690	655,085	119,259	4,721	379,816	16,483,611	31,570	1,850	40					
1,737,503	364,475	630,085	102,440	4,281	341,015	16,146,294	26,120	1,725	41					
230,153	3,415	25,000	16,819	440	36,801	337,317	5,450	125	42					
587,809	550,484	802,360	84,960	3,965	988,116	12,621,370	43,200	12,350	43					
450,609	676,100	716,215	103,581	12,141	76,966	16,417,224	83,908	89,094	44					
234.7	-33.2	-18.4	40.4	19.1	-61.6	30.6	-26.9	-85.0	45					
10.52	11.29	29.51	12.33	3.60	37.61	33.79	7.93	14.92	46					
3.30	25.41	33.45	7.48	6.29	84.42	25.26	11.35	9.70	47					
2.94	29.64	31.07	9.43	7.88	7.82	41.52	8.24	63.91	48					
13.31	15.17	30.13	13.34	5.22	38.79	39.38	11.58	19.68	49					
1,968,801	479,880	656,185	122,519	6,026	381,716	16,600,836	31,895	1,850	50					
588,409	672,644	802,860	84,960	3,965	992,116	13,144,670	43,500	12,350	51					
531,614	797,700	716,215	103,631	12,141	80,166	18,892,937	89,908	90,994	52					
234.6	-28.7	-18.3	44.2	52.0	-61.5	26.3	-26.7	-85.0	53					
10.40	5.82	29.56	12.42	4.50	37.61	32.16	7.39	14.92	54					
3.19	12.47	32.66	7.48	5.71	84.40	23.13	10.96	9.51	55					
1.95	17.83	29.78	6.81	6.25	7.94	33.30	5.11	39.15	56					
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.					
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises						
175	12	39	10	9	54	39	10	22	366	502	22	(³)	2	57
112,225	33,045	24,250	21,696	673	8,741	903	9,792	9,358	416,581	202,719	2,706	(³)	(³)	58
29,620	6,706	5,364	18,809	1,228	7,719	1,044	4,765	8,663	285,529	186,070	2,540	(³)	(³)	59
0.26	0.20	0.22	0.87	1.82	0.88	1.16	0.49	0.93	0.69	0.92	0.94	(³)	(³)	60
0.22	0.57	0.71	0.27	1.80	1.12	0.97	0.86	0.90	61
21,696	3,997	5,723	13,656	4,111	870	351,661	81,646	906	62
0.34	0.14	0.28	0.66	0.44	0.16	0.89	0.52	0.73	63
68,134	27,800	21,640	20,666	9,450	5,364	409,748	155,729	1,262	64
0.32	0.14	0.27	0.66	0.44	0.16	0.86	0.52	0.72	65
20,315	3,327	5,480	11,749	4,083	992	340,345	71,756	863	66
89,440	67,000	3,825	6,333	1,471,630	279,000	3,280	67
251	13	33	9	6	55	35	9	22	356	504	22	(³)	1	68
127,178	31,713	21,656	20,662	673	8,941	895	6,792	9,358	386,096	206,133	2,706	(³)	(³)	69
157,622	9,517	40,944	28,196	666	61,963	487	10,440	6,505	528,808	172,265	5,135	(³)	(³)	70
1.2	0.3	1.9	1.4	1.0	6.9	0.5	1.5	0.7	1.4	0.8	1.9	(³)	(³)	71
0.32	0.14	0.28	0.65	1.82	0.88	1.08	0.73	0.91	1.10	1.11	0.97	(³)	(³)	72
(³)	1	(³)	2	26	73
(³)	(³)	27,577	74
(³)	(³)	22,757	75
(³)	(³)	2,558	76
(³)	(³)	856	77

¹ Less than one-tenth of 1 percent.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - COLORADO

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920]

ITEM (For definitions and explanations, see text)		STATE TOTAL	Adams	Alamosa	Arapahoe	Archuleta	Baca	Bent
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	388,343,847	13,528,602	4,469,290	10,754,234	1,844,939	4,989,136	5,472,498
2	Land and buildings, irrigated farms.....dollars..	268,377,191	8,660,723	4,118,720	4,929,029	1,516,909	450,612	4,740,407
3	Operated by—							
4	(a) Owners and managers.....dollars..	173,643,424	5,754,707	3,019,500	3,408,402	1,282,142	369,967	2,371,889
5	(b) Tenants.....dollars..	94,733,767	2,906,016	1,099,220	1,520,627	234,767	80,645	2,368,518
6	Average, land and buildings, per farm.....dollars..	9,016.23	9,069.82	9,360.73	14,412.37	6,990.36	7,510.20	9,937.96
	per acre in farms.....dollars..	21.43	69.34	11.98	73.29	6.61	3.96	15.38
7	Buildings, irrigated farms reporting value.....number..	28,812	925	432	332	216	60	467
8	Total reported.....dollars..	59,423,593	2,184,210	950,963	1,466,619	295,786	47,610	1,051,550
9	Average, per irrigated farm reporting.....dollars..	2,062.46	2,361.31	2,201.30	4,417.63	1,369.38	793.50	2,251.71
10	per acre on all irrigated farms.....dollars..	4.75	17.49	2.77	21.81	1.29	0.42	3.41
11	Buildings, nonirrigated farms reporting value.....number..	20,248	720	83	716	133	781	196
12	Total reported.....dollars..	25,423,820	1,016,160	122,638	2,050,970	61,299	422,623	139,165
13	Average, per nonirrigated farm reporting.....dollars..	1,255.62	1,411.93	1,477.57	2,864.48	460.89	541.13	710.03
14	per acre on all nonirrigated farms.....dollars..	1.34	2.14	4.02	5.35	1.11	0.44	0.51
15	Implements and machinery, irrigated farms reporting value.....number..	26,692	833	404	273	210	57	441
16	Total reported.....dollars..	25,650,123	800,062	477,008	274,695	159,682	39,865	461,880
17	Average, per irrigated farm reporting.....dollars..	960.87	960.46	1,180.71	1,006.21	760.39	699.58	1,047.35
18	per acre, on all irrigated farms.....dollars..	2.05	6.41	1.39	4.08	0.70	0.35	1.50
19	Implements and machinery, nonirrigated farms reporting value.....number..	18,137	618	47	555	123	711	146
20	Total reported.....dollars..	13,371,491	559,106	20,286	502,977	31,677	552,721	69,869
21	Average, per acre, on all nonirrigated farms.....dollars..	0.70	1.18	0.67	1.31	0.57	0.58	0.23
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22	Enterprises.....1940...number.....	8,853	313	137	46	177	18	44
23	.....1930...number.....	6,585	150	49	24	124	4	37
24	.....1920...number.....	6,634	59	57	37	97	7	30
25	Average size of enterprise based on irrigable area.....1940...acres.....	484	278	1,346	543	108	193	2,102
26	.....1930...acres.....	688	873	3,716	1,377	189	964	1,850
27	.....1920...acres.....	787	1,937	3,268	1,679	188	1,786	4,862
28	Diversion dams.....1940...number.....	4,792	12	26	9	102	7	10
29	Main canals and laterals.....1940...length, miles.....	19,864.0	277.5	388.1	124.2	201.4	39.0	193.0
30	.....1930...length, miles.....	21,381	304	548	97	201	29	719
31	.....1920...length, miles.....	27,593	366	355	218	185	27	1,110
32	.....1940...capacity, c.f.s. ⁵	139,780	2,739	1,125	135	481	133	3,027
33	.....1930...capacity, c.f.s. ⁵	123,652	2,279	2,492	797	412	213	9,966
34	.....1920...capacity, c.f.s. ⁵	119,558	2,067	2,073	903	369	271	3,679
35	Pipe lines ⁶.....1940...length, miles.....	245.1	4.0	.....	0.6	0.1	0.6	1.3
36	Storage dams.....1940...number.....	1,015	31	2	7	6	7	7
37	Reservoirs.....1940...number.....	1,071	42	2	12	6	9	7
38	.....1930...number.....	765	7	.....	1	3	1	3
39	.....1920...number.....	979	11	2	6	5	4	17
40	.....1940...capacity, acre-feet.....	2,071,522	38,390	(²)	2,559	850	30,104	152,012
41	.....1930...capacity, acre-feet.....	1,924,982	44,245	.....	232	869	35,000	62,756
42	.....1920...capacity, acre-feet.....	2,406,372	68,551	12,527	73,866	665	33,726	339,402
43	Wells, flowing.....1940...number.....	886	.....	136	4	.....	3	.....
44	.....1930...number.....	621	.....	83	.....	.....	.....	.....
45	.....1920...number.....	476	1	119	2	.....	8	.....
46	.....1940...yield, g.p.m.....	54,859	.....	19,565	165	.....	93	.....
47	.....1930...yield, g.p.m.....	39,644	.....	4,150	.....	.....	.....	.....
48	.....1920...yield, g.p.m.....	20,139	40	5,065	130	.....	1,725	.....
49	Wells, pumped.....1940...number.....	2,878	321	80	31	.....	4	31
50	.....1930...number.....	654	132	.....	17	.....	.....	3
51	.....1920...number.....	527	28	.....	3	.....	4	11
52	.....1940...yield, g.p.m.....	1,929,798	146,314	61,120	16,470	.....	8,006	14,768
53	.....1930...yield, g.p.m.....	237,903	48,166	.....	2,949	.....	.....	1,090
54	.....1920...yield, g.p.m.....	210,094	8,217	.....	750	.....	52	8,250
55	Pumping plants.....1940...number.....	2,806	318	56	30	1	4	32
56	.....1930...number.....	516	135	.....	16	1	.....	7
57	.....1920...number.....	406	29	.....	3	2	3	8
58	Prime movers.....1940...capacity, hp.....	49,157	5,202	1,187	566	(²)	81	493
59	.....1930...capacity, hp.....	11,204	1,677	.....	114	12	.....	132
60	.....1920...capacity, hp.....	8,635	168	.....	22	22	.....	197
61	Pumps.....1940...capacity, g.p.m.....	2,263,375	163,540	51,570	17,695	(²)	8,006	18,658
62	.....1930...capacity, g.p.m.....	437,250	49,421	.....	3,253	300	.....	5,740
63	.....1920...capacity, g.p.m.....	299,726	8,217	.....	750	1,200	52	8,350
64	Pumping lift, from all sources.....1940...average, feet.....	32	32	17	45	(²)	68	22
65	.....1930...average, feet.....	25	26	.....	21	132	.....	25
66	.....1920...average, feet.....	23	27	.....	17	85	100	24
67	from pumped wells.....1940...average, feet.....	33	32	18	45	.....	71	23
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁶								
68	Enterprises reporting pay roll.....number.....	786	24	11	9	5	1	6
69	Irrigated area in these enterprises.....acres.....	2,665,030	66,980	84,748	21,446	5,910	(²)	57,823
70	Wages and salaries paid and payable.....dollars..	1,167,624	27,165	14,769	22,968	2,754	(²)	24,017
71	Persons employed during week ending April 29.....number..	3,068	34	34	26	16	(²)	36

*Census of Agriculture.

¹Part annexed to San Miguel County in 1925.

²Data are included only in State total because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

³Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

⁴For 1920 relates to total area in enterprises. Irrigated area for that year was not reported.

CENSUS OF IRRIGATION - COLORADO

COUNTY TABLE II—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Fremont	Garfield	Gilpin	Grand	Gunnison	Hinsdale	Huerfano
FARM VALUES, 1940*							
1 Land and buildings, all farms.....dollars..	3,843,510	6,721,490	239,765	3,089,056	4,436,514	279,750	2,703,802
2 Land and buildings, irrigated farms.....dollars..	3,428,062	6,401,830	84,490	2,943,316	3,760,778	273,790	1,832,992
3 Operated by—							
4 (a) Owners and managers.....dollars..	2,779,857	5,068,324	77,850	2,577,766	3,508,078	254,790	1,615,398
5 (b) Tenants.....dollars..	648,205	1,333,506	6,640	365,550	252,700	19,000	217,594
6 Average, land and buildings, per farm.....dollars..	4,206.21	7,349.98	10,561.25	12,741.63	12,791.76	8,555.94	6,546.40
7 per acre in farms.....dollars..	13.21	21.22	12.13	10.59	15.07	14.83	6.33
8 Buildings, irrigated farms reporting value.....number..	801	858	8	222	291	31	271
9 Total reported.....dollars..	974,640	1,389,603	26,800	686,800	846,955	61,000	234,675
10 Average, per irrigated farm reporting.....dollars..	1,216.78	1,619.58	3,350.00	3,093.69	2,910.50	1,967.74	865.96
11 per acre on all irrigated farms.....dollars..	3.76	4.61	3.85	2.47	3.39	3.31	0.81
12 Buildings, nonirrigated farms reporting value.....number..	164	103	43	22	54	2	394
13 Total reported.....dollars..	120,590	70,620	33,300	20,305	67,990	(²)	144,135
14 Average, per nonirrigated farm reporting.....dollars..	735.30	685.63	774.42	922.95	1,247.96	(²)	365.82
15 per acre on all nonirrigated farms.....dollars..	1.12	1.65	2.49	1.98	1.01	(²)	0.57
16 Implements and machinery, irrigated farms reporting value.....number..	744	738	8	212	267	31	267
17 Total reported.....dollars..	295,433	578,854	3,565	229,230	276,374	24,615	132,682
18 Average, per irrigated farm reporting.....dollars..	397.09	784.36	445.69	1,081.27	1,035.11	794.03	496.94
19 per acre, on all irrigated farms.....dollars..	1.14	1.92	0.51	0.82	1.11	1.33	0.46
20 Implements and machinery, nonirrigated farms reporting value.....number..	130	67	35	15	33	1	323
21 Total reported.....dollars..	52,432	21,025	11,860	5,430	11,720	(²)	79,688
Average, per acre, on all nonirrigated farms.....dollars..	0.49	0.49	0.89	0.53	0.18	(²)	0.32
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940...number.....	187	342	4	201	287	34	213
23 ..1930...number.....	186	291	1	155	227	53	313
24 ..1920...number.....	179	323		166	382	52	267
25 Average size of enterprise based on irrigable area.....1940...acres.....	155	244	44	296	270	146	129
26 ..1930...acres.....	198	343		356	219	125	148
27 ..1920...acres.....	246	364		515	178	78	162
28 Diversion dams.....1940...number.....	74	121	11	147	290	41	129
29 Main canals and laterals.....1940...length, miles.....	263.0	721.4	10.0	391.4	682.2	68.1	303.1
30 ..1930...length, miles.....	245	736		415	409	51	388
31 ..1920...length, miles.....	330	1,242		579	736	104	621
32 ..1940...capacity, c.f.s. ⁴	796	2,499	7	2,399	4,564	203	1,186
33 ..1930...capacity, c.f.s. ⁴	702	1,911		1,673	1,631	385	1,218
34 ..1920...capacity, c.f.s. ⁴	901	2,563		2,037	4,236	519	1,907
35 Pipe lines ⁵.....1940...length, miles.....	66.5	5.3		0.9	2.4		0.1
36 Storage dams.....1940...number.....	16	21	4	18	10	4	25
37 Reservoirs.....1940...number.....	19	21	4	16	11	6	24
38 ..1930...number.....	20	16		21	3	5	12
39 ..1920...number.....	31	26		25	6	2	34
40 ..1940...capacity, acre-feet..	4,318	13,187	75	1,759	107,980	78,876	3,651
41 ..1930...capacity, acre-feet..	7,260	20,572		3,641	77	126,400	1,446
42 ..1920...capacity, acre-feet..	6,972	7,594		3,137	460	43,500	12,027
43 Wells, flowing.....1940...number.....	15						
44 ..1930...number.....	5						
45 ..1920...number.....	3						
46 ..1940...yield, g.p.m.....	1,926						
47 ..1930...yield, g.p.m.....	870						
48 ..1920...yield, g.p.m.....	115						
49 Wells, pumped.....1940...number.....	9			1			4
50 ..1930...number.....	2						
51 ..1920...number.....	9						2
52 ..1940...yield, g.p.m.....	919			(²)			1,813
53 ..1930...yield, g.p.m.....	80						
54 ..1920...yield, g.p.m.....	287						70
55 Pumping plants.....1940...number.....	14	1		2	1		5
56 ..1930...number.....	5	2		1	2		
57 ..1920...number.....	10	2			4		4
58 Prime movers.....1940...capacity, hp.....	131	(²)		(²)	(²)		22
59 ..1930...capacity, hp.....	53	42		1	62		11
60 ..1920...capacity, hp.....	309	10			112		
61 Pumps.....1940...capacity, g.p.m.....	5,369	(²)		(²)			1,843
62 ..1930...capacity, g.p.m.....	4,380	2,000		30	4,000		
63 ..1920...capacity, g.p.m.....	6,962	350			3,800		45
64 Pumping lift, from all sources.....1940...average, feet.....	29	(²)		(²)			25
65 ..1930...average, feet.....	28	32		6	26		
66 ..1920...average, feet.....	38	29			18		52
67 from pumped wells.....1940...average, feet.....	31			(²)			20
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶							
68 Enterprises reporting pay roll.....number.....	15	17		3	7		4
69 Irrigated area in these enterprises.....acres.....	14,650	22,479		4,100	8,697		2,440
70 Wages and salaries paid and payable.....dollars..	21,334	13,512		980	1,544		1,000
71 Persons employed during week ending April 29.....number.....	63	64		1	20		

* Census of Agriculture.

¹ Includes statistics for 2 farms reported for San Juan in 1930 and 4 farms in 1940 to avoid disclosures of individual operations.

² Data are included only in State total because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - COLORADO

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Jackson	Jefferson	Kiowa	Lake	La Plata ¹	Larimer	Las Animas	Lincoln	Logan	Mesa	Mineral	Moffat	Montezuma	Montrose	
4,884,598	16,249,925	2,222,948	207,040	5,025,833	19,867,500	6,122,101	4,708,745	14,078,741	14,006,534	648,780	4,018,916	3,850,283	6,614,604	1
4,639,519	12,620,708	176,650	202,440	4,333,158	18,035,714	3,126,141	285,843	7,441,614	13,239,254	580,210	2,216,378	2,763,099	6,465,143	2
4,246,829	9,435,458	145,110	192,900	3,121,078	10,264,131	2,349,285	270,793	3,061,537	11,193,544	566,310	1,989,118	1,963,171	4,527,773	3
392,590	3,185,250	31,540	9,540	1,212,080	7,771,583	776,856	15,090	4,380,077	2,045,710	13,900	227,260	799,928	1,937,370	4
21,988.24	10,064.36	4,774.32	7,786.15	5,676.78	11,881.23	6,485.77	17,866.19	12,320.55	5,355.69	15,681.35	11,789.24	3,902.68	4,739.84	5
14.41	99.47	4.67	12.51	16.90	31.75	4.40	2.84	22.97	39.15	24.25	4.93	17.22	24.14	6
209	1,221	37	26	761	1,492	456	16	596	2,421	33	179	647	1,314	7
671,500	3,970,833	39,340	56,045	1,135,073	4,261,350	361,545	24,787	1,346,670	3,621,460	207,800	351,182	631,340	1,625,557	8
3,212.92	3,252.12	1,063.24	2,155.58	1,491.55	2,856.13	782.86	1,549.19	2,259.51	1,495.85	6,296.97	1,961.91	975.80	1,237.11	9
2.09	31.30	1.02	3.46	4.43	7.50	0.51	0.25	4.16	10.71	8.68	0.78	3.93	6.07	10
50	502	384	1	256	299	760	731	921	166	9	318	300	58	11
51,825	1,605,196	313,002	(²)	165,470	410,080	354,777	784,500	1,353,582	225,925	35,940	254,178	155,470	46,355	12
1,036.50	3,197.60	815.11	(²)	646.37	1,371.54	466.81	1,073.19	1,469.69	1,360.99	3,948.89	799.30	518.23	799.22	13
1.79	11.43	0.53	(²)	1.44	2.90	0.28	0.60	1.89	2.68	10.39	0.56	1.53	3.49	14
181	1,036	34	24	697	1,464	442	15	586	2,151	21	176	579	1,156	15
300,883	765,679	29,495	31,605	516,492	1,448,606	242,561	14,144	774,485	1,304,087	15,660	176,506	413,175	837,985	16
1,662.34	739.07	867.50	1,318.88	741.02	989.49	548.78	942.93	1,321.65	606.27	745.71	1,002.88	713.60	724.90	17
0.93	6.03	0.76	1.95	2.01	2.55	0.34	0.14	2.39	3.86	0.65	0.39	2.57	3.13	18
22	419	353	1	212	278	621	676	897	129	5	291	281	41	19
6,385	257,476	233,669	(²)	78,374	155,143	183,614	516,727	870,196	57,800	2,040	184,131	325,001	19,225	20
0.22	1.69	0.40	(²)	0.68	1.10	0.14	0.40	1.21	0.68	0.60	0.41	3.21	1.45	21
216	81	20	28	202	275	196	7	117	317	45	134	131	113	22
149	57	5	24	324	228	111	5	39	221	29	101	140	76	23
145	105	6	30	211	171	176	.....	39	213	42	127	102	103	24
839	660	256	324	582	583	256	81	988	492	161	208	636	1,223	25
1,092	1,063	297	177	406	805	487	186	3,265	947	173	353	701	1,509	26
1,581	742	2,880	348	528	1,148	290	.....	3,190	869	352	255	786	1,681	27
325	51	4	13	136	271	169	.....	42	297	3	16	104	67	28
1,208.0	310.1	28.1	62.0	573.6	758.9	388.9	3.0	467.0	862.4	39.0	203.5	408.5	794.3	29
570	269	1	24	769	824	297	20	551	761	37	274	502	841	30
822	381	52	52	704	982	401	.....	511	1,012	82	696	424	813	31
5,868	3,476	8,708	227	2,508	8,675	11,490	4	4,071	4,682	206	777	1,618	2,903	32
3,612	1,779	6	118	2,148	5,318	6,675	7	2,690	3,898	92	721	1,523	3,587	33
5,129	2,093	2,585	298	2,018	6,968	1,618	.....	3,376	4,721	355	888	995	2,437	34
0.5	8.0	.....	2.0	1.6	15.3	4.4	.....	0.2	17.9	1.5	2.1	0.6	3.9	35
11	37	4	1	7	109	17	7	13	80	4	18	8	3	36
12	36	7	1	7	102	11	7	13	88	5	23	10	3	37
15	43	6	2	1	68	6	10	6	58	.....	12	12	14	38
9	25	4	.....	5	69	21	.....	7	60	2	18	9	14	39
7,118	34,478	266,553	(²)	1,751	227,645	20,149	501	112,244	24,342	44,592	3,788	17,238	12,045	40
16,714	35,994	266,202	54,452	30	162,500	47,069	804	107,159	16,584	2,022	16,786	13,144	41
15,159	8,178	32,118	15	181,515	429,105	116,108	19,201	2,311	1,569	17,680	8,335	42
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¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.
³Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — COLORADO

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Morgan	Otero	Ouray	Park	Phillips	Pitkin	Prowers
FARM VALUES, 1940^a							
1 Land and buildings, all farms.....dollars..	11,969,274	8,433,382	1,389,043	3,642,217	6,206,909	1,372,270	6,618,384
2 Land and buildings, irrigated farms.....dollars..	9,795,006	7,035,747	1,395,653	2,926,687	(^b)	1,330,270	5,732,330
Operated by—							
3 (a) Owners and managers.....dollars..	4,424,061	3,538,027	1,112,245	2,436,447	(^b)	1,174,100	2,499,972
4 (b) Tenants.....dollars..	5,370,945	3,497,720	223,408	490,240	(^b)	156,170	3,232,358
5 Average, land and buildings, per farm.....dollars..	11,550.71	6,764.71	9,820.98	19,774.91	(^b)	8,868.47	8,039.73
6 per acre in farms.....dollars..	39.83	37.28	10.55	6.58	(^b)	20.05	21.19
7 Buildings, irrigated farms reporting value.....number..	813	994	134	142	(^b)	144	700
8 Total reported.....dollars..	1,815,860	1,671,580	227,925	679,037	(^b)	208,660	919,941
9 Average, per irrigated farm reporting.....dollars..	2,238.53	1,681.67	1,700.93	4,781.95	(^b)	1,449.17	1,314.20
10 per acre on all irrigated farms.....dollars..	7.38	8.86	1.80	1.53	(^b)	3.15	3.40
11 Buildings, nonirrigated farms reporting value.....number..	471	137	14	152	(^b)	14	273
12 Total reported.....dollars..	417,090	135,610	13,475	263,213	(^b)	12,410	171,852
13 Average, per nonirrigated farm reporting.....dollars..	885.54	989.85	962.50	1,731.66	(^b)	886.43	629.49
14 per acre on all nonirrigated farms.....dollars..	1.10	0.17	1.84	2.22	(^b)	3.38	0.75
15 Implements and machinery, irrigated farms reporting value.....number..	812	927	120	135	(^b)	136	671
16 Total reported.....dollars..	1,066,418	799,431	91,544	191,650	(^b)	128,839	567,161
17 Average, per irrigated farm reporting.....dollars..	1,313.32	862.39	762.87	1,419.63	(^b)	947.35	845.25
18 per acre, on all irrigated farms.....dollars..	4.34	4.24	0.72	0.43	(^b)	1.94	2.10
19 Implements and machinery, nonirrigated farms reporting value.....number..	450	91	10	136	(^b)	8	250
20 Total reported.....dollars..	280,922	50,950	4,700	51,028	(^b)	3,105	140,368
21 Average, per acre, on all nonirrigated farms.....dollars..	0.74	0.06	0.64	0.43	(^b)	0.84	0.61
ENTERPRISES AND IRRIGATION WORKS							
JANUARY 1							
22 Enterprises.....1940.....number.....	245	152	112	151	3	123	67
23 ..1930.....number.....	35	23	152	199	.....	104	39
24 ..1920.....number.....	39	26	96	213	.....	76	29
25 Average size of enterprise based on irrigable area.....1940.....acres.....	483	576	248	309	150	163	1,548
26 ..1930.....acres.....	3,606	5,202	207	235	.....	246	3,364
27 ..1920.....acres.....	4,274	7,041	250	260	.....	280	3,421
28 Diversion dams.....1940.....number.....	14	8	99	265	.....	104	10
29 Main canals and laterals.....1940.....length, miles.....	325.1	295.0	235.2	358.1	.....	248.6	654.2
30 ..1930.....length, miles.....	476	478	255	341	.....	254	919
31 ..1920.....length, miles.....	370	758	213	460	.....	228	489
32 ..1940.....capacity, c.f.s. ⁵	2,183	6,277	771	2,222	.....	2,405	703
33 ..1930.....capacity, c.f.s. ⁵	4,221	4,966	682	2,770	.....	731	4,876
34 ..1920.....capacity, c.f.s. ⁵	3,771	5,537	642	2,705	.....	655	1,573
35 Pipe lines ⁶.....1940.....length, miles.....	0.2	1.0	0.6	0.1	.....	7.8	1.1
36 Storage dams.....1940.....number.....	2	2	1	16	.....	3	4
37 Reservoirs.....1940.....number.....	3	2	4	10	.....	3	8
38 ..1930.....number.....	4	5	2	2	.....	2	2
39 ..1920.....number.....	10	.....	.....	1	.....	3	5
40 ..1940.....capacity, acre-feet.....	44,814	(^b)	440	5,577	.....	872	8,007
41 ..1930.....capacity, acre-feet.....	86,772	35,347	156	26,002	.....	1,011	47,155
42 ..1920.....capacity, acre-feet.....	86,680	36,659	.....	8	.....	19	53,613
43 Wells, flowing.....1940.....number.....	.....	.....	.....	.....	.....	.....	.....
44 ..1930.....number.....	.....	.....	.....	.....	.....	.....	.....
45 ..1920.....number.....	.....	.....	.....	.....	.....	.....	.....
46 ..1940.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
47 ..1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
48 ..1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
49 Wells, pumped.....1940.....number.....	242	146	.....	.....	3	.....	71
50 ..1930.....number.....	1	22	.....	.....	.....	.....	5
51 ..1920.....number.....	23	.....	.....	.....	.....	.....	6
52 ..1940.....yield, g.p.m.....	275,320	61,967	.....	.....	3,700	.....	35,834
53 ..1930.....yield, g.p.m.....	1,750	7,150	.....	.....	.....	.....	1,510
54 ..1920.....yield, g.p.m.....	26,590	11,088	.....	.....	.....	.....	1,205
55 Pumping plants.....1940.....number.....	244	148	.....	.....	3	.....	65
56 ..1930.....number.....	4	12	.....	.....	.....	.....	5
57 ..1920.....number.....	17	11	.....	.....	.....	.....	7
58 Prime movers.....1940.....capacity, hp.....	6,819	1,177	.....	.....	110	.....	527
59 ..1930.....capacity, hp.....	52	188	.....	.....	.....	.....	37
60 ..1920.....capacity, hp.....	344	188	.....	.....	.....	.....	30
61 Pumps.....1940.....capacity, g.p.m.....	281,360	71,187	.....	.....	3,700	.....	47,230
62 ..1930.....capacity, g.p.m.....	4,000	9,400	.....	.....	.....	.....	1,615
63 ..1920.....capacity, g.p.m.....	26,565	10,438	.....	.....	.....	.....	1,470
64 Pumping lift, from all sources.....1940.....average, feet.....	50	22	.....	.....	60	.....	20
65 ..1930.....average, feet.....	30	18	.....	.....	.....	.....	18
66 ..1920.....average, feet.....	22	20	.....	.....	.....	.....	18
67 from pumped wells.....1940.....average, feet.....	50	23	.....	.....	60	.....	19
PAY ROLL AND NUMBER OF EMPLOYEES							
1939⁷							
68 Enterprises reporting pay roll.....number.....	24	10	21	.....	.....	2	8
69 Irrigated area in these enterprises.....acres.....	161,380	81,772	8,158	.....	.....	(^b)	84,238
70 Wages and salaries paid and payable.....dollars..	39,481	40,817	1,405	.....	.....	(^b)	42,296
71 Persons employed during week ending April 29.....number..	62	66	46	.....	.....	(^b)	74

^aCensus of Agriculture.¹Part of Dolores County annexed in 1925.²Data between census years not comparable (see headnote).³Data are included only in State total because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - COLORADO

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939-Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Pueblo	Rio Blanco	Rio Grande	Routt	Saguache	San Miguel ¹	Sedgwick	Summit	Teller	Washington	Weld	Yuma	All other counties ²		
8,712,722 7,084,869	4,044,190 3,292,998	10,048,211 9,811,630	6,810,039 5,184,858	6,333,743 6,171,448	1,069,301 580,165	5,241,634 1,920,070	661,620 629,620	1,174,001 326,621	7,337,381 766,153	50,131,511 41,923,227	13,433,150 470,410	6,974,794 (³)	1 2	
5,037,813 2,047,056 8,474.72 18.15	2,915,833 377,165 15,316.27 9.34	6,960,111 2,851,519 15,850.78 53.12	3,988,628 1,196,230 11,320.65 11.89	5,019,828 1,151,620 14,624.28 14.69	502,765 77,400 5,578.51 8.01	984,080 935,990 12,223.75 36.53	523,120 106,500 11,447.64 15.81	260,781 65,840 8,827.59 7.58	341,503 424,650 11,103.67 26.50	16,519,148 25,404,079 12,711.71 64.02	313,550 156,860 9,800.21 9.21	(³) (³) (³) (³)	3 4 5 6	
820 1,605,095 1,957.43 4.11 346 380,925 1,100.94 0.93	210 652,465 3,106.98 1.85 118 128,375 1,087.92 1.11	596 2,149,085 3,605.85 11.64 33 62,900 1,906.06 4.75	451 920,440 2,040.88 2.11 353 357,230 1,011.98 2.57	394 1,042,976 2,647.15 2.48 51 43,500 852.94 0.95	101 131,035 1,297.38 1.81 65 32,760 504.00 0.34	149 339,695 2,279.83 6.46 328 676,192 2,061.56 2.86	55 174,950 3,180.91 4.39 3 14,000 4,666.67 6.13	37 91,050 2,460.81 2.11 201 267,230 1,329.50 2.61	69 174,150 2,523.91 6.02 1,341 1,333,432 994.36 1.05	3,244 8,296,090 2,537.36 12.67 1,139 1,502,550 1,319.18 1.17	46 76,050 1,653.26 1.49 1,633 2,291,986 1,403.54 1.65	(³) (³) (³) (³) (³) (³) (³) (³)	7 8 9 10 11 12 13 14	
750 707,924 943.90 1.81	200 259,132 1,295.66 0.74	575 1,255,191 2,182.94 6.80	432 455,811 1,055.12 1.04	368 495,998 1,346.19 1.18	89 65,265 733.31 0.90	139 203,450 1,463.67 3.87	51 56,537 1,108.57 1.42	36 35,323 981.19 0.82	62 76,530 1,234.35 2.65	3,097 4,569,868 1,475.58 6.98	48 50,875 1,059.90 1.00	(³) (³) (³) (³)	15 16 17 18	
302 174,465 0.43	86 69,240 0.60	24 15,562 1.18	320 241,904 1.74	40 15,062 0.33	53 40,860 0.42	319 460,195 2.03	3 3,250 1.42	151 71,293 0.70	1,267 842,176 0.66	1,041 933,941 0.73	1,568 1,648,459 1.19	(³) (³) (³)	19 20 21	
303 233 264	157 166 189	353 206 159	395 374 310	282 196 212	40 64 67	21 5 7	57 64 79	41 10 25	32 6 8	908 225 238	24 14 26	3 8 17	22 23 24	
347 530 540 80 492.0 379 896 3,692 3,619 5,316 14.6	287 237 241 133 471.0 400 506 1,428 1,035 2,908 0.9	639 904 1,844 100 420.3 773 721 5,855 2,409 3,947 0.5	209 233 297 146 542.6 700 687 1,702 1,635 1,619 1.1	671 941 1,283 309 397.5 630 863 2,267 3,747 3,757 0.6	2,060 843 668 63 151.4 235 413 937 624 789 1.8	1,057 4,916 3,436 5 77.0 82 94 324 230 459 0.1	173 177 193 44 144.0 99 157 808 200 437 0.2	33 70 78 32 9.0 9 63 56 18 60 0.1	317 1,959 1,262 71 18.0 52 60 213 914 365 0.1	568 2,526 2,384 71 1,337.1 1,606 1,990 7,687 11,639 9,040 41.7	180 284 586 24 53.3 34 103 246 84 599 0.1	41 137 28 1.0 14 31 32 28 33 158 35	25 26 27 28 29 30 31 32 33 34 35	
34 33 27 61 114,066 56,940 109,534 3 3 177 570 188 92 132 68,040 50,966 37,869	18 19 8 24 4,239 1,116 4,028 107 166 172 3,922 8,300 6,666 269 1 253,243 1 24	6 6 2 4 593 54 30,150 166 172 3,922 8,300 6,666 1 (³) 1 24	22 34 30 50 5,117 19,951 5,432 156 27,248 25,964 4,948 1 (³) 1 (³) 24	2 4 4 14 300 336 8,854 365 156 27,248 25,964 4,948 45 1 39,150 450 250	8 8 6 3 9,414 6,046 5,066 596 365 156 27,248 25,964 4,948 1 1 265 250	3 2 1 2 (³) 3 2 17 1 14,380 1 250	4 3 1 2 3,000 3 40 1 2 4 (³) 1,920	4 3 1 3 202,764 32,300 268 34 976 226 4 35,675 80,858 70,311	72 78 88 103 202,764 224,056 310,059 3 976 226 149 655,205 80,858 70,311	5 5 7 4 460 261 30 3 3 2,000 14 1,375	36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54			
190 84 66 2,281 1,146 801 96,073 68,051 49,505 24 25 21 24	8 1 1 78 4 10 7,350 750 900 15 12 10 24	264 2 1 4,725 31 (³) 285,912 450 (³) 24 4 (³) 24	1 (³) 10 47,250 450 (³) 20 20 (³) 20	45 1 1 804 10 3,350 1,365 250 10 12 30 30	4 3 1 23 27 3,350 1,365 250 30 12 30 30	17 1 1 358 8 16,980 250 30 30 30 30	3 1 1 5 106 1,000 1,920 37 37 37 37	28 1 2 645 18 30 44,200 1,000 1,920 35 10 13 35	910 128 133 14,239 1,908 1,846 686,798 97,868 99,953 37 23 22 37	4 105 (³) (³) (³) (³) (³) (³) (³) (³) (³) (³) (³) (³)	2 2 3 58 59 60 61 62 63 64 65 66 67			
14 37,940 32,959 40	6 12,838 1,612 12	33 231,915 21,373 73	5 5,170 7,899 14	6 88,560 7,965 17	4 20,440 3,667 10	3 20,666 10,556 7	3 20,666 10,556 7	7 14,814 2,493 4	86 540,297 137,178 278	(³) (³) (³) (³)	2 2 2 2	68 69 70 71		

⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁶Includes siphons and farm pipe lines reported.
⁷Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - IDAHO

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	52,997,120	53,346,560	53,346,560	53,346,560	53,346,560	53,346,560	53,346,560
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number....	43,663	45,113	41,674	42,106	30,807	17,471	6,603
Land in all farms.....acres.....	10,297,745	9,951,661	9,346,908	8,375,673	5,283,604	3,204,903	1,302,256
Farms irrigated: ¹							
Farms.....number....	29,898	28,350	27,953	25,283	16,439	9,188	4,323
Increase or decrease (-) over preceding census.....percent..	7.0	.....	10.6	53.8	78.9	112.5	.....
Proportion of all farms.....percent..	68.5	62.8	67.1	60.0	53.4	52.6	65.5
Land in farms.....acres....	5,680,584	(³)	4,851,440	(³)	(³)	(³)	(³)
Proportion of all farm land.....percent..	55.2	(³)	51.9	(³)	(³)	(³)	(³)
Area irrigated.....acres....	4,895,048	5,188,200	6,164,321	(⁷)	(⁷)	608,718	217,005
Increase or decrease (-) over preceding census.....percent..	16.0	.....	.....	.....	.....	180.5	.....
Proportion of total land area of State.....percent..	3.6	2.6	3.1	.....	.....	1.1	0.4
Proportion of all farm land.....percent..	18.4	13.9	17.5	.....	.....	19.0	16.7
Value of irrigated farms (land and buildings).....dollars..	236,628,170	(³)	289,343,666	(³)	(³)	(³)	(³)
Average per farm.....dollars..	7,914.52	(³)	10,351.09	(³)	(³)	(³)	(³)
Average per acre.....dollars..	41.66	(³)	59.64	(³)	(³)	(³)	(³)
Value of farm implements and machinery.....dollars..	28,818,258	(³)	27,305,368	(³)	(³)	(³)	(³)
Average per farm.....dollars..	963.89	(³)	976.83	(³)	(³)	(³)	(³)
Average per acre.....dollars..	5.07	(³)	5.63	(³)	(³)	(³)	(³)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number....	3,625	(³)	3,222	3,629	3,092	(³)	(³)
Farms irrigated.....number....	42,343	(³)	(³)	(³)	(³)	(³)	(³)
Area irrigated.....acres....	2,277,857	(³)	2,181,250	2,488,806	1,430,848	(³)	(³)
Area existing works were capable of supplying with water.....acres....	2,593,534	(³)	2,617,021	3,092,810	2,388,956	(³)	(³)
Area irrigable.....acres....	2,870,023	(³)	2,814,048	3,780,048	3,549,573	(³)	(³)
Additional area existing works were capable of supplying with water.....acres....	315,677	(³)	435,771	604,004	958,111	(³)	(³)
Additional irrigable area in enterprises not supplied with water.....acres....	592,166	(³)	632,798	1,291,242	2,118,725	(³)	(³)
Investment in irrigation enterprises.....dollars..	102,585,798	(³)	84,500,354	91,501,009	40,977,688	5,120,399	1,029,000
Increase or decrease (-) over preceding census.....percent..	21.4	(³)	-7.7	123.3	700.3	397.6	.....
Average per acre based on area works were capable of supplying with water.....dollars..	39.55	(³)	32.29	29.59	17.15	(³)	(³)
Increase or decrease (-) over preceding census.....percent..	22.5	(³)	9.1	72.5	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	109,513,311	(³)	101,350,250	97,019,717	58,451,106	(³)	(³)
Average per acre based on irrigable area in enterprises.....dollars..	38.16	(³)	36.02	25.67	16.47	(³)	(³)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	1.11	(³)	1.44	1.17	0.63	(³)	(³)

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³Not available. ⁴Irrigated land from which crops were harvested plus 316,307 acres of irrigated land used only for pasture. ⁵Irrigated land from which crops were harvested. ⁶Acres of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁰The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939		Irrigated pasture 1939	VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹		Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
	Number	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
All farms.....	43,663	10,297,745	2,935,350	1,578,741	316,307	339,194,391	32.94	72,290,733	7.02	42,145,230	4.09
Owners and managers.....	32,510	8,513,794	2,191,656	1,105,344	246,193	254,908,648	29.94	57,227,870	6.72	32,485,365	3.82
Tenants.....	11,153	1,783,951	743,694	473,397	70,114	84,285,743	47.25	15,062,863	8.44	9,659,865	5.41
Irrigated farms, total.....	29,898	5,680,584	1,850,613	1,578,741	316,307	236,628,170	41.66	53,585,575	9.43	28,818,258	5.07
Owners and managers.....	21,773	4,721,461	1,347,853	1,105,344	246,193	173,589,877	36.77	41,693,049	8.83	21,895,922	4.64
Tenants.....	8,125	959,123	502,760	473,397	70,114	63,038,193	65.72	11,892,526	12.40	6,922,336	7.22
Wholly irrigated farms.....	23,917	3,561,121	1,362,963	1,362,963	246,343	188,209,753	52.85	42,594,961	11.96	22,880,893	6.43
Owners and managers.....	16,801	2,792,079	924,117	924,117	185,616	131,220,245	47.00	32,061,203	11.48	16,663,743	5.97
Tenants.....	7,116	769,042	438,846	438,846	60,727	56,989,508	74.10	10,533,758	13.70	6,217,250	8.08
Partly irrigated farms.....	5,981	2,119,463	487,650	215,776	89,964	48,418,417	22.84	10,990,614	5.19	5,937,265	2.80
Owners and managers.....	4,972	1,929,382	423,736	181,227	60,577	42,369,732	21.96	9,631,846	4.99	5,232,179	2.71
Tenants.....	1,009	190,081	63,914	34,551	9,387	6,048,685	31.82	1,358,768	7.15	705,086	3.71
Nonirrigated farms, total.....	13,765	4,617,161	1,084,737	.....	.....	102,566,221	22.21	18,705,158	4.05	13,326,972	2.89

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919, WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-feet	Dollars	Dollars
Total.....	3,625	2,870,023	2,593,534	2,277,857	2,181,250	2,488,806	4.4	2,034,989	2,216,851	1,990,119	4.6	1.25	0.27
Primary sources:													
Streams, gravity.....	2,377	2,059,751	1,883,957	1,628,663	1,848,760	2,274,959	-11.9	1,418,853	1,578,649	1,381,188	4.2	0.89	0.21
Streams, pumped.....	144	337,611	302,667	294,402	103,362	107,181	184.8	284,876	294,278	284,850	3.9	1.67	0.43
Streams, gravity and pumped.....	19	247,849	197,391	174,792	76,894	1,870	127.3	167,537	174,792	167,537	4.7	2.20	0.47
Wells, pumped.....	141	9,792	8,616	5,868	3,546	414	65.5	5,854	5,616	5,611	3.0	2.71	0.91
Wells, flowing.....	84	2,611	2,308	2,113	1,973	1,131	7.1	1,803	949	885	2.0	1.06	0.54
Wells, pumped and flowing.....	5	469	419	414	50	.....	728.0	364	413	363	2.4	4.53	1.87
Lakes, gravity.....	11	5,035	4,905	4,294	2,662	2,492	61.3	4,294	4,294	4,294	1.8	1.63	0.92
Lakes, pumped.....	7	5,729	5,729	4,334	5,144	4,912	-15.7	4,334	4,334	4,334	3.0	5.14	1.73
Springs.....	334	28,172	25,670	20,819	24,233	33,337	-14.1	15,205	17,593	13,116	2.7	0.56	0.21
Springs and streams.....	153	51,346	44,534	37,606	.....	.....	.....	30,237	34,962	28,449	2.1	0.58	0.27
Stored storm water.....	12	1,505	1,476	941	4,916	2,590	-80.9	786	795	640	1.7	0.90	0.51
City water.....	4	49	49	40	94	.....	.....	28	13	3	2.3	10.00	4.29
Sewage.....	5	231	231	160	15	80	966.7	116	90	46	4.2	0.46	0.11
Streams, gravity; wells, pumped...	10	44,808	42,428	40,100	72,959	357	-45.0	40,100	40,022	40,022	4.1	1.74	0.42
Streams, gravity; wells, flowing...	23	3,782	3,755	2,702	1,708	1,927	58.2	2,308	1,861	1,490	3.5	0.55	0.15
Streams, pumped; wells, pumped...	7	458	457	323	.....	.....	.....	323	292	292	3.6	3.80	1.07
Waste water, seepage or drainage...	47	4,989	4,372	3,113	.....	.....	.....	1,801	2,281	1,737	1.7	0.54	0.33
Other mixed.....	54	65,836	64,570	57,173	32,796	54,601	74.3	56,170	55,617	55,262	3.5	1.74	0.50
Other and not reported.....	.....	.....	.....	.....	2,138	2,955	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:²													
Streams, gravity and/or storage...	79	1,049,882	1,049,082	906,393	.....	.....	.....	892,862	886,238	873,971	1.2	0.21	0.18
Streams, pumped.....	20	645	605	552	8,915	.....	-93.8	531	552	531	1.7	1.82	1.06
Wells, pumped.....	58	3,431	3,303	2,517	120	.....	(³)	2,188	2,103	2,059	1.7	2.64	1.57
Wells, flowing.....	31	650	592	540	12	.....	(³)	419	361	242	2.4	0.33	0.14

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ³Percent not shown when more than 1,000.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	102,585,798	100.0	39.55	84,500,954	100.0	32.29	7.26	2,219,486	1.11	2,109,087	1.44	-0.33	2,105,336	1.17
Primary sources:														
Streams, gravity.....	62,433,051	60.8	33.14	69,672,250	82.5	31.94	1.30	1,582,264	0.72	1,792,486	1.17	-0.45	1,920,057	1.02
Streams, pumped.....	8,263,470	8.1	27.30	5,218,180	6.2	45.58	-18.28	293,238	1.92	94,940	4.32	-2.40	99,378	3.43
Streams, gravity and pumped.....	14,225,602	13.8	72.07	5,663,215	6.7	62.78	9.29	174,792	1.92	76,894	2.80	-0.98	1,320	8.30
Wells, pumped.....	132,831	0.1	15.42	87,248	0.1	19.64	-4.22	5,616	2.71	3,467	2.30	0.41	250	5.35
Wells, flowing.....	86,874	0.1	37.64	81,942	0.1	37.78	-0.14	949	1.13	640	2.06	-0.99	271	0.85
Wells, pumped and flowing.....	6,800	(³)	15.23	28,500	(³)	445.31	-429.08	413	4.27	50	16.80	-12.53	.....	.....
Lakes, gravity.....	161,617	0.2	32.95	361,778	0.4	83.82	-50.87	4,294	1.33	2,510	4.75	-3.42	2,162	1.76
Lakes, pumped.....	512,043	0.5	89.38	720,528	0.8	18.64	70.74	4,334	4.36	5,144	8.51	-4.15	3,412	6.72
Springs.....	244,770	0.2	9.54	289,014	0.3	10.69	-1.15	17,593	0.51	20,701	0.94	-0.43	24,989	0.80
Springs and streams.....	367,481	0.4	8.25	.....	.....	.....	.....	34,962	0.46	.....	.....	.....	.....	.....
Stored storm water.....	84,585	0.1	57.31	129,325	0.2	15.42	41.89	795	0.83	4,701	0.58	0.25	2,245	0.89
City water.....	850	(³)	17.35	7,458	(³)	79.34	-61.99	13	11.54	94	1.01	10.53	.....	.....
Sewage.....	855	(³)	3.70	75	(³)	5.00	-1.30	90	0.34	15	4.00	-3.66	80	0.31
Streams, gravity; wells, pumped...	1,018,895	1.0	24.01	1,098,605	1.3	12.20	11.81	40,022	1.73	72,909	1.55	0.18	4	1.00
Streams, gravity; wells, flowing...	72,067	0.1	19.19	20,985	(³)	10.73	8.46	1,861	0.73	1,064	0.36	0.37	1,745	0.47
Streams, pumped; wells, pumped...	6,860	(³)	15.01	.....	.....	.....	.....	292	3.80	.....	.....	.....	.....	.....
Waste water, seepage or drainage...	12,872	(³)	2.94	.....	.....	.....	.....	2,281	0.52	.....	.....	.....	.....	.....
Other mixed.....	1,403,443	1.4	21.74	894,103	1.0	20.22	1.52	55,617	1.63	32,272	1.82	-0.19	46,668	1.99
Other and not reported.....	.....	.....	.....	10,640	(³)	4.40	.....	.....	.....	1,200	0.21	.....	2,855	0.41
Supplemental sources:⁴														
Streams, gravity and/or storage...	13,425,275	13.1	12.80	.....	.....	.....	.....	886,238	0.22	.....	.....	.....	.....	.....
Streams, pumped.....	9,317	(³)	15.40	210,208	0.2	22.71	-7.31	552	1.90	8,377	6.11	-4.21	.....	.....
Wells, pumped.....	89,348	0.1	27.06	5,500	(³)	42.97	-15.92	2,103	2.70	120	8.62	-5.92	.....	.....
Wells, flowing.....	26,892	(³)	45.43	1,400	(³)	13.46	31.97	361	0.27	.....	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION — IDAHO

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930				1940		1930		
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED						AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued					
Total.....	Acres 2,277,857	Acres 910,002	Acres 2,181,250	Acres 2,488,806	Percent 4.4						
Individual and partnership....	324,626	8,890	327,488	513,350	-0.9	Commercial.....	Acres 8,719	Acres	Acres	Acres 7,747	Percent
Cooperative, incorporated.....	1,162,496	43,325	1,198,482	938,421	2.5	Bureau of Reclamation ² *	424,940	973,656	290,248	269,932	46.4
Cooperative, unincorporated....	66,547	975	304,010	355,995	10.0	Office of Indian Affairs ²	64,183	.....	68,960	42,005	-6.9
Irrigation district.....	334,266	14,097	.....	6,503	.....	State.....	.....	.....	125	10	360.0
Commercial.....	8,719	.....	.....	253,759	24.9	City and/or sewage.....	1,100	.....	.....	160	.....
Bureau of Reclamation ²	344,638	842,715	3275,954	3253,759	24.9	Carey Act.....	.....	.....	66,400	523,090	.....
Office of Indian Affairs ²	34,965	.....	34,991	36,775	-0.1						
State.....	600	.....	125	10	380.0	IRRIGABLE AREA⁵					
City and/or sewage.....	1,000	.....	160	160	.....	Total.....	2,870,023	1,054,608	2,814,048	3,780,048	2.0
Carey Act.....	.....	.....	40,200	383,833	.....	Individual and partnership....	408,403	10,848	419,813	850,215	-2.7
						Cooperative, incorporated....	1,309,647	55,032	1,505,652	1,442,477	-7.9
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						Cooperative, unincorporated..	76,629	975	.....	.....	.....
Total.....	2,593,534	1,053,582	2,617,021	3,092,810	-0.9	Irrigation district.....	368,599	14,097	379,510	463,839	-2.9
Individual and partnership....	388,916	10,522	388,943	639,002	(⁴)	Commercial.....	9,119	.....	.....	8,551	.....
Cooperative, incorporated.....	1,270,362	54,332	1,467,327	1,190,422	-8.5	Bureau of Reclamation ² *.....	625,622	973,656	351,348	295,992	78.1
Cooperative, unincorporated....	72,149	975	.....	400,382	8.3	Office of Indian Affairs ²	69,869	.....	91,300	54,240	-23.5
Irrigation district.....	362,665	14,097	335,018	400,382	.....	State.....	1,035	.....	125	10	728.0

¹ Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ² U. S. Dept. of the Interior. ³ Does not include about 650,000 acres to which stored water is supplied under the Warren Act. ⁴ Less than one-tenth of 1 percent. ⁵ For 1920 relates to total area. Irrigable area for that year was not reported. ⁶ For explanation of areas, see text, p. 237.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 3,625	Number 500	Acres 2,870,023	Acres 2,593,534	Dollars 33.72	Dollars 1.02	Dollars 12.85	Dollars 0.23	Number 42,343	Acres 2,277,857	Acres 2,026,435	Acres 12,448	Acres 238,974
Individual and partnership.....	3,143	64	408,403	388,916	6.77	0.51	14.86	1.06	3,874	324,626	247,712	2,308	74,606
Cooperative, incorporated.....	289	276	1,309,647	1,270,362	30.72	0.89	18.66	0.40	19,551	1,162,496	1,082,157	2,228	78,111
Cooperative, unincorporated....	116	85	76,629	72,149	8.34	0.35	12.31	2.10	931	66,547	53,809	119	12,619
Irrigation district.....	51	50	368,599	362,665	36.80	1.41	4.97	0.06	7,905	334,266	297,962	4,217	32,087
Commercial.....	5	5	9,119	8,719	12.46	0.46	.....	.....	96	8,719	8,271	.....	448
U. S. Bureau of Reclamation ²	13	13	625,622	424,840	69.38	1.58	12.62	0.22	8,848	344,638	304,421	3,403	36,814
U. S. Office of Indian Affairs..	6	6	69,869	64,183	33.98	1.44	.....	.....	924	34,965	30,903	173	3,889
State.....	41	.....	1,035	600	100.00	2.25	.....	.....	1	600	600	.....	.....
City and/or sewage.....	41	1	1,100	1,100	18.18	1.60	.....	.....	213	1,000	600	.....	400
Carey Act.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Reported by enterprises in the Census of Irrigation, not by the Census of Agriculture. ² Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³ Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴ Data for less than 3 enterprises shown with permission of the enterprise involved. ⁵ For explanation of areas and investment, see text, p. 237.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment						Investment in water rights		
Total.....	Dollars 102,586,798	Dollars 89,034,966	Dollars 13,550,832	Dollars 100,989,161	Dollars 1,596,637	Dollars 84,500,354	Dollars 81,501,009	Percent 21.4	Dollars 34.33	Dollars 12.86	Dollars 1,033,812	Dollars 6,927,513
Individual and partnership.....	2,922,197	2,761,026	161,171	2,789,319	132,878	3,473,615	5,747,004	-15.9	7.10	15.32	3,071	137,444
Cooperative, incorporated.....	40,861,551	39,841,475	1,020,076	40,035,621	825,930	34,785,668	36,576,664	19.4	31.36	18.77	85,821	376,399
Cooperative, unincorporated....	672,834	660,834	12,000	613,637	59,197	.....	.....	.....	9.16	12.31	755	49,100
Irrigation district.....	13,874,612	13,804,612	70,000	13,417,289	457,313	10,723,493	11,954,046	29.4	38.06	4.97	58,782	205,000
Commercial.....	113,660	113,660	.....	108,660	5,000	.....	.....	.....	13.04	.....	.....	2,000
U. S. Bureau of Reclamation ²	41,868,781	29,581,196	12,287,585	41,763,962	104,819	29,603,539	17,804,839	41.4	69.63	12.62	883,083	5,780,690
U. S. Office of Indian Affairs..	2,192,163	2,192,163	.....	2,180,663	11,500	1,746,397	932,387	25.5	34.15	.....	2,000	366,860
State.....	60,000	60,000	.....	60,000	.....	900	1,000	(²)	100.00	.....	.....	.....
City and/or sewage.....	20,000	20,000	.....	20,000	.....	.....	14,300	.....	18.18	.....	300	.....
Carey Act.....	.....	.....	.....	.....	.....	4,166,744	17,772,590	.....	.....	.....	.....	.....

¹ Only for enterprises serving 5 or more farms. ² Percent not shown when more than 1,000. ³ For explanation of investment, see text, p. 237.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Total arrearages		Average per acre assessed 1939 ⁵	Area assessed 1939	Charges made 1939	Charges collected 1939	
		Irrigable 1940	Works were capable of supplying with water 1940				Enter-prises 1940	Dec. 31 1939					Dec. 31 1938
Total.....	Number 141	Acres 2,488,068	Acres 2,303,454	Dollars 26,418,138	Dollars 18.94	Dollars 18.13	Number 15	Dollars 1,259,945	Dollars 1,263,975	Dollars 8.95	Acres 3,027,179	Dollars 2,646,004	Dollars 2,702,591
Partnership.....	2	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	.....	.....	.....	.....	46,642	13,625	7,540
Cooperative, incorporated.....	81	542,375	523,115	814,264	1.55	1.52	8	32,730	48,645	1.17	1,274,622	1,168,098	1,098,124
Cooperative, unincorporated.....	3	4,240	4,240	16,200	4.22	3.82	.....	.....	.....	.....	48,055	17,068	10,765
Irrigation district.....	38	353,570	352,694	4,379,361	12.71	12.47	6	1,154,625	1,128,025	45.50	374,151	635,849	656,817
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,011	3,563	3,615
Bureau of Reclamation ⁷	11	1,518,014	1,359,232	19,255,295	43.94	42.64	1	72,590	87,305	0.83	1,240,543	487,013	923,127
Office of Indian Affairs ⁸	6	69,969	64,183	1,954,018	56.57	30.43	.....	.....	.....	.....	34,055	318,885	700
Reclamation district.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,100	1,903	1,903
Carey Act.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$3.36. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$2.91. ⁵Based on primary enterprises only, no supplemental enterprises reported arrearage. ⁶Data for 2 "Partnership" enterprises are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁷U. S. Dept. of the Interior. ⁸Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁹Data for less than 3 enterprises shown with permission of enterprise involved. ¹⁰Represents construction costs of irrigation works less cancellations and repayments. ¹¹For explanation of areas and investment, see text, p. 237.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
Total.....	Acres 2,219,486	Dollars 2,256,798	Acres 889,254	Dollars 202,690	Dollars 1.02	Dollars 0.23	Number 404	Dollars 1,316,975	Number 2,275
Individual and partnership.....	293,769	148,456	6,682	7,067	0.51	1.06	33	7,436	43
Cooperative, incorporated.....	1,158,196	1,029,064	25,085	9,939	0.89	0.40	262	532,782	1,283
Cooperative, unincorporated.....	50,102	17,420	675	1,415	0.35	2.10	47	9,664	55
Irrigation district.....	331,853	466,343	14,097	786	1.41	0.06	48	217,247	395
Commercial.....	8,011	3,680	.....	.....	0.46	.....	(²)	(²)	(²)
U. S. Bureau of Reclamation ³	342,673	540,911	842,715	183,483	1.58	0.22	11	507,154	452
U. S. Office of Indian Affairs.....	33,282	47,974	.....	.....	1.44	.....	2	41,882	38
State.....	600	1,350	.....	.....	2.25	.....	.....	.....	.....
City and/or sewage.....	1,000	1,600	.....	.....	1.60	.....	1	810	9
Carey Act.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 1 "Commercial" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³Data for less than 3 enterprises shown with permission of enterprises involved. ⁴For explanation of areas and investment, see text, p. 237.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capac-ity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
Total.....	Number 3,209	Number 280	Sec.-ft. 71,510	Miles 13,489	Miles 113.1	290	Ac.-ft. 3,795,272	Miles 299.9	375	G. p. m. 40,165	309	G. p. m. 225,164	665	Hp. 44,537	675	G. p. m. 2,719,905
Individual and partnership.....	2,660	197	12,103	3,731	34.6	227	72,753	58.1	341	32,390	239	152,564	426	4,401	433	276,678
Cooperative, incorporated.....	290	35	36,448	5,386	20.0	36	749,162	38.8	22	4,400	37	32,770	82	8,395	86	574,346
Cooperative, unincorporated.....	134	3	2,117	420	2.0	5	4,001	4.9	.....	.....	2	1,500	9	571	9	18,450
Irrigation district.....	130	16	9,759	1,515	36.0	15	208,701	155.6	12	3,375	31	38,330	85	10,470	84	451,526
Commercial.....	3	.....	298	26	.....	.....	.....	0.1	.....	.....	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ³	5	8	9,137	2,101	20.4	6	2,560,655	38.7	.....	.....	.....	.....	63	20,700	63	1,398,905
Office of Indian Affairs ³	26	1	1,508	301	0.1	1	200,000	3.7	.....	.....	.....	.....	.....	.....	.....	.....
State.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	1	.....	140	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carey Act.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches.

²Includes flumes.

³U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion ¹	Storage	Diversion	Storage
Total.....	Number 3,209	Number 260	Number 2,305	Number 152	Earth and rock.....	Number 1,964	Number 185	Number	Number 80
Concrete or masonry.....	336	44	205	22	Other and mixed.....	1,587	19	1,836	47
Timber.....	290	.....	227	.....	Not reported.....	32	12	37	3

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	675	100.0	2,719,905	100.0	26	Total, 1940.....	665	100.0	44,537	100.0
Electric motor.....	484	71.7	2,446,149	89.9	28	Centrifugal pump.....	428	64.3	25,168	56.5
Centrifugal.....	372	55.2	2,205,796	81.1	27	Electric.....	328	49.2	23,867	53.6
Turbine.....	84	12.4	171,076	6.3	35	Internal-combustion.....	97	14.6	1,066	2.4
Plunger.....	3	0.4	153	(¹)	49	Other.....	3	0.5	235	0.5
Other.....	25	3.7	69,124	2.5	15	Turbine pump.....	49	7.4	1,069	2.4
Internal-combustion engine.....	152	22.5	86,669	3.2	21	Electric.....	29	4.3	516	1.2
Centrifugal.....	101	14.9	51,793	1.9	18	Internal-combustion.....	19	2.9	505	1.1
Turbine.....	20	3.0	19,355	0.7	34	Other.....	1	0.2	48	0.1
Plunger.....	4	0.6	91	.....	85	Plunger pump.....	11	1.7	23	0.1
Other.....	27	4.0	15,430	0.6	14	Electric.....	2	0.3	4	(¹)
Other kinds of motive power.....	17	2.5	17,162	0.6	44	Internal-combustion.....	5	0.8	13	(¹)
Centrifugal.....	3	0.4	13,026	0.5	59	Other.....	4	0.6	6	(¹)
Turbine.....	1	0.1	400	(¹)	30	Other and mixed types of pumps.....	177	26.6	18,277	41.0
Plunger.....	3	0.4	13	(¹)	108	Electric.....	136	20.4	16,188	36.3
Other.....	10	1.6	3,723	0.1	22	Internal-combustion.....	29	4.4	255	0.6
Mixed kinds of motive power.....	22	3.3	189,925	6.2	28	Other.....	12	1.8	1,834	4.1
Centrifugal.....	6	0.9	2,040	0.1	37	Total, 1930.....	² 393	.....	33,754	.....
Turbine.....	6	0.9	23,925	0.9	38	Increase or decrease (-) 1930-1940.....	272	.....	10,783	.....
Plunger.....	.....	.....	.....	.....	.....
Other.....	10	1.5	143,960	5.2	17					
Total, 1930.....	465	.....	2,113,513	.....	32					
Increase or decrease (-) 1930-1940..	210	.....	606,392	.....	-6					

¹ Less than one-tenth of 1 percent.² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 299.9	Miles 263.4	Percent 13.9	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	63.6	55.9	13.8
1 to 12 inches.....	43.8	36.2	21.0	13 to 24 inches.....	25.8	74.7	-23.2
13 to 24 inches.....	21.9	43.8	19.2	Over 24 inches.....	31.6		
Over 24 inches.....	30.3					Clay and other:	
Metal:				1 to 12 inches.....	17.3	11.0	57.3
1 to 12 inches.....	40.2	29.1	38.1	13 to 24 inches.....	4.0	0.1	(4)
13 to 24 inches.....	9.2	6.0	205.0	Over 24 inches.....	3.1		
Over 24 inches.....	9.1						

¹ Includes siphons and farm pipe lines reported. ² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census. ³ Includes 20 miles wood-pipe lines not segregated by size, and 4.6 miles pipe lines not segregated by material. ⁴ Percent not shown when more than 1,000.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	192	171	206	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	943,910	920,314	¹ 734,405	(a) Enterprises reporting lands drained and/or needing drainage...percent..	32.7	³ 22.0	¹ 11.1
Area irrigated in these enterprises.....acres...	731,717	(²)	(²)	(b) All irrigation enterprises.....percent..	10.5	9.3	3.3
Area for which drains have been installed.....acres...	238,907	202,575	81,187	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	29,042	48,995	94,934	(a) Irrigable area reporting.....percent..	28.4	27.3	¹ 24.0
				(b) Irrigated area reporting.....percent..	36.6	(²)	(²)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ² Not available. ³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	10,727,079	9,389,610	11,142,792	8,921,333	6,684,009	9,571,753	1,805,746	2,705,601	1,571,039
Area irrigated by these enterprises.....acres.....	1,361,924	1,584,254	1,724,581	1,210,841	1,207,868	1,465,482	151,083	376,386	259,099
Average water per acre irrigated.....acre-feet..	7.9	5.9	6.5	7.4	5.5	6.5	12.0	7.2	6.1
Total water delivered to irrigators.....acre-feet..	8,287,957	4,585,715	2,269,233	6,636,832	4,181,543	2,045,769	1,651,125	404,172	223,464
Area irrigated by these enterprises.....acres.....	2,010,917	1,106,507	936,689	1,296,340	1,023,892	841,667	714,577	82,615	95,022
Average water per acre irrigated.....acre-feet..	4.1	4.1	2.4	5.1	4.1	2.4	2.3	4.9	2.4
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	69,004	.....	.....	35,326	.....	.....	33,678	.....	.....
Area irrigated by these enterprises.....acres.....	24,072	.....	.....	10,889	.....	.....	13,183	.....	.....
Average water per acre irrigated.....acre-feet..	2.9	.....	.....	3.2	.....	.....	2.6	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	208,619	.....	.....	182,491	.....	.....	26,128	.....	.....
Area irrigated by these enterprises.....acres.....	80,777	.....	.....	69,770	.....	.....	11,067	.....	.....
Average water per acre irrigated.....acre-feet..	2.6	.....	.....	2.6	.....	.....	2.4	.....	.....
Total water delivered to irrigators.....acre-feet..	1,037,595	.....	.....	909,788	.....	.....	127,807	.....	.....
Area irrigated by these enterprises.....acres.....	893,393	.....	.....	149,612	.....	.....	743,781	.....	.....
Average water per acre irrigated.....acre-feet..	1.2	.....	.....	6.1	.....	.....	0.2	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	4,676	.....	.....	900	.....	.....	3,776	.....	.....
Area irrigated by these enterprises.....acres.....	2,607	.....	.....	400	.....	.....	2,207	.....	.....
Average water per acre irrigated.....acre-feet..	1.8	.....	.....	2.2	.....	.....	1.7	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
Total.....	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	2,277,857	100.0	910,002	2,181,250	100.0	2,488,806	100.0
Appropriation ²	928,861	40.8	27,631	948,647	43.4	1,199,348	48.1
Underground.....	7,526	0.3	1,991	4,989	0.2	1,834	0.1
Appropriation and underground.....	83,113	3.6	142	.....	.....	.....	.....
Adjudicated by court.....	1,217,056	53.5	879,546	1,159,301	53.2	1,104,607	44.4
Other mixed and not reported.....	41,301	1.8	492	68,313	3.1	183,017	7.4

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).

²"Appropriation" includes water rights published in the 1930 and 1920 census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 344,638 acres irrigated in 1939 which were within the Boise-Kuna, Nampa-Meridian, New York, and Wilder Irrigation Districts of the Boise Project in Idaho and the Minidoka and Burley Irrigation Districts of the Minidoka Project. There is also included a small area of the Black Canyon Irrigation District which received water from the Payette Division of the Boise Project. Only that part of the Nampa-Meridian District for which distribution facilities were constructed by the Bureau of Reclamation is included. These districts are indicated as separate enterprises under the Bureau of Reclamation and their areas are not duplicated under any other classification. Areas totalling 842,715 acres classified as irrigated with a supplemental supply from the Boise, Minidoka, and Upper Snake Projects are reported as receiving a primary supply through other enterprises, principally irrigation districts. These latter areas include a part of the Nampa-Meridian District in the Boise Project financed wholly by the water users, land in a number of irrigation districts which purchased storage

rights in American Falls Reservoir of the Minidoka Project, and the Fremont-Madison Irrigation District which is served by the Upper Snake Project.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 are construction costs incurred by the United States for both primary and supplemental irrigation services and certain power facilities for the areas referred to in the foregoing paragraph. These costs include a pro-rata share of the costs of the Payette Division of the Boise Project chargeable to lands for which the Bureau was prepared to supply water in 1940. It also includes about \$1,898,000 invested by irrigation districts in facilities included in the Boise and Minidoka Projects. Drainage works and power facilities which are not considered part of the irrigation system, under Census definitions, and their costs are not included. There are also omitted data relating to the incompleting parts of the Payette Division of the Boise Project and to Anderson Ranch Dam which is also under construction as a part of the Boise Project to provide supplemental water and power.

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	3,437	71	2,542	342	292	119	62	9
2	Irrigated farms, 1939.....number...	42,343	.....	2,542	861	3,264	6,099	16,253	13,324
3	Area irrigated, 1939.....acres....	2,277,857	.....	215,072	68,174	244,082	352,816	769,788	627,925
4	(a) From which crops were harvested.....acres....	2,026,435	.....	157,612	53,466	205,838	319,497	701,423	588,599
5	(b) On which crops failed.....acres....	12,448	.....	1,760	399	1,245	1,450	5,278	2,316
6	(c) Irrigated pasture.....acres....	238,974	.....	55,700	14,309	36,999	31,869	63,087	37,010
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	89,094,966	53,985	2,187,677	461,728	3,335,532	6,271,606	46,084,882	30,639,556
8	(a) Cost of irrigation works and equipment.....dollars..	87,449,139	52,019	2,082,621	445,208	3,201,296	6,205,373	44,890,893	30,571,729
9	(b) Investment in water rights.....dollars..	1,585,827	1,966	105,056	16,530	134,236	66,233	1,193,989	67,827
10	Area works were capable of supplying with water.....acres....	2,583,534	3,439	261,104	83,719	269,415	395,550	893,188	687,119
11	Average investment per acre irrigated.....dollars..	39.09	.....	10.17	6.77	13.62	17.78	57.84	42.93
12	Average investment per acre which the works could supply with water.....dollars..	34.33	15.70	8.38	5.52	12.34	15.86	50.08	39.64
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	2,982	36	2,196	306	258	117	60	9
14	(a) Area irrigated in these enterprises.....acres....	2,219,486	.....	192,770	61,969	218,063	349,951	768,808	627,925
15	(b) Cost of maintenance and operation.....dollars..	2,256,798	3,082	111,272	23,862	131,089	303,206	942,454	741,839
16	(c) Average cost per irrigated acre reporting.....dollars..	1.02	.....	0.58	0.39	0.60	0.87	1.21	1.04
17	Total annual charges ².....dollars..	2,461,470	201	134	254	159,441	363,289	1,103,022	835,129
18	Average charge per irrigated acre reporting.....dollars..	1.25	.....	0.28	0.57	0.73	1.04	1.41	1.33
19	Area against which charges were assessed.....acres....	2,141,909	300	480	445	229,155	373,241	854,799	683,489
20	Average annual charge per acre assessed.....dollars..	1.15	0.67	0.28	0.57	0.70	0.97	1.29	1.22
21	Total charges collected ².....dollars..	2,635,522	.....	112	89	113,291	322,947	1,140,996	1,058,087
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ³.....number...	135	.....	.....	.....	38	53	38	6
23	(a) Area irrigated in these enterprises.....acres....	1,117,475	.....	.....	.....	42,291	192,977	600,899	281,368
24	(b) Indebtedness.....dollars..	23,488,279	.....	.....	.....	505,738	1,175,464	10,198,210	11,608,867
25	(c) Average indebtedness per acre irrigated.....dollars..	21.01	.....	.....	.....	11.90	6.09	16.97	41.26
26	(d) Cost of irrigation works and equipment.....dollars..	52,162,972	.....	.....	.....	1,032,935	3,312,630	31,097,501	16,719,906
27	(e) Investment in water rights.....dollars..	839,242	.....	.....	.....	29,764	39,674	701,987	67,827
28	(f) Total investment.....dollars..	53,002,214	.....	.....	.....	1,062,699	3,352,304	31,799,488	16,787,733
29	(g) Maintenance and operation.....dollars..	1,340,168	.....	.....	.....	58,539	209,202	706,010	366,417
30	(h) Total annual charges ².....dollars..	1,615,481	.....	.....	.....	79,675	263,379	837,158	435,269
31	(i) Total charges collected ².....dollars..	1,855,077	.....	.....	.....	57,603	250,674	889,323	657,477
32	(j) Area against which annual charges were assessed.....acres....	1,238,931	.....	.....	.....	45,615	202,767	663,617	326,932
33	(k) Average indebtedness per acre assessed.....dollars..	18.94	.....	.....	.....	10.94	5.70	15.37	35.51
34	(l) Average charges per acre assessed.....dollars..	1.30	.....	.....	.....	1.75	1.30	1.26	1.33
35	(m) Average charges per acre irrigated.....dollars..	1.45	.....	.....	.....	1.92	1.37	1.39	1.55
36	Enterprises reporting arrearage ³.....number...	15	.....	.....	.....	5	7	2	1
37	(a) Area assessed in these enterprises.....acres....	140,706	.....	.....	.....	13,686	25,433	101,587	.....
38	(b) Total arrearage.....dollars..	1,259,945	.....	.....	.....	336,560	316,045	607,940	.....
39	(c) Average arrearage per acre assessed.....dollars..	8.95	.....	.....	.....	24.59	12.43	5.98	.....
40	(d) Indebtedness.....dollars..	6,804,253	.....	.....	.....	385,550	442,433	5,976,270	.....
TYPE, 1940									
41	Individual and partnership.....number...	2,977	69	2,524	322	61	1	.....	.....
42	Cooperative (incorporated and unincorporated).....number...	386	2	17	19	208	101	38	3
43	Irrigation district.....number...	49	.....	.....	1	16	13	17	2
44	Commercial.....number...	5	.....	.....	.....	4	1	.....	.....
45	U. S. Bureau of Reclamation.....number...	10	.....	.....	.....	.....	2	5	4
46	U. S. Office of Indian Affairs.....number...	6	.....	.....	.....	3	1	1	.....
47	All other.....number...	2	.....	1	.....	.....	.....	1	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....number...	390	1	2	2	199	116	61	9
49	Wages and salaries paid and payable for 1939.....dollars..	1,306,359	.....	179	.....	61,673	279,828	545,348	419,331
50	Persons employed during week ending April 29, 1939.....number...	2,257	.....	2	.....	399	519	798	549
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....number...	2,377	27	1,699	246	251	102	47	5
52	Streams, pumped.....number...	144	22	95	5	13	5	3	1
53	Wells, pumped.....number...	141	7	123	10	1	.....	.....	.....
54	Wells, pumped and flowing; or wells flowing.....number...	89	6	81	2	.....	.....	.....	.....
55	Lakes, gravity or pumped.....number...	18	.....	7	5	1	2	3	.....
56	Streams and springs; or springs.....number...	487	9	401	54	16	7	.....	.....
57	Mixed, streams and wells.....number...	59	.....	40	1	6	2	8	2
58	Other mixed or stored storm water.....number...	122	.....	96	19	4	1	1	1

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	188	13	134	22	7	7	1	4
2	Irrigated farms, 1939.....number...	18,749	.....	134	58	63	402	248	17,844
3	Area irrigated, 1939.....acres....	910,002	.....	6,002	2,708	7,375	43,702	.....	850,215
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	13,550,832	23,302	135,149	24,297	54,929	925,950	.....	12,387,205
5	(a) Cost of irrigation works and equipment.....dollars..	13,540,022	18,252	131,180	23,456	54,929	925,000	.....	12,387,205
6	(b) Investment in water rights.....dollars..	10,810	3,969	841	.....	.....	950	.....	.....
7	Area works were capable of supplying with water.....acres....	1,053,582	2,916	6,888	3,045	7,375	51,202	.....	982,156
8	Average investment per acre irrigated.....dollars..	14.89	.....	22.52	8.97	7.10	21.19	.....	14.57
9	Average investment per acre which the works could supply with water.....dollars..	12.86	7.99	19.62	7.98	7.10	16.08	.....	12.61
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
10	Enterprises reporting maintenance and operation.....number...	151	8	109	17	6	7	.....	4
11	(a) Area irrigated in these enterprises.....acres....	889,254	.....	4,449	2,053	7,075	25,462	.....	850,215
12	(b) Cost of maintenance and operation.....dollars..	202,690	27	6,421	778	2,965	6,015	.....	186,484
13	(c) Average cost per irrigated acre reporting.....dollars..	0.23	.....	1.44	0.38	0.40	0.24	.....	0.22
14	Total annual charges ².....dollars..	184,534	.....	.....	.....	2,750	11,766	.....	170,018
15	Average charge per irrigated acre reporting.....dollars..	0.21	.....	.....	.....	0.39	0.46	.....	0.20
16	Area against which charges were assessed.....acres....	885,270	.....	.....	.....	7,075	27,980	.....	850,215
17	Average annual charge per acre assessed.....dollars..	0.21	.....	.....	.....	0.39	0.42	.....	0.20
18	Total charges collected ².....dollars..	67,069	.....	.....	.....	2,350	12,312	.....	52,407

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying with water in 1940.

²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999
71	2,035	691	462	129	46	3	3,025	207	131	57	17
.....	2,316	1,511	5,168	8,169	20,251	4,928	5,148	3,136	6,148	11,215	16,696
.....	68,724	114,314	307,482	446,373	994,407	346,567	375,265	194,439	308,108	536,865	863,180
.....	54,638	89,186	251,103	388,039	896,912	346,557	288,570	166,252	276,433	483,448	811,732
.....	1,117	539	2,346	976	7,470	.....	2,585	534	1,109	4,461	3,759
.....	12,969	24,589	54,033	57,358	90,025	.....	84,110	27,653	30,566	48,956	47,689
53,985	1,006,343	1,221,905	4,415,647	8,589,807	59,895,456	13,851,823	1,986,042	1,653,438	4,590,202	19,877,641	60,927,643
52,019	967,257	1,170,676	4,243,424	8,158,382	59,005,558	13,851,823	1,879,372	1,582,500	4,418,705	19,229,975	60,338,587
1,966	39,086	51,229	172,223	431,425	889,898	.....	106,670	70,938	171,497	647,666	589,056
3,439	102,204	133,176	346,496	493,311	1,168,351	356,567	441,551	213,347	330,165	613,605	994,566
.....	14.64	10.76	14.33	19.24	58.64	32.04	5.28	8.50	14.28	31.22	70.59
15.70	9.85	9.16	12.72	17.41	50.53	31.32	4.49	7.75	13.37	27.86	61.26
36	1,736	620	418	124	45	3	2,595	190	126	54	17
.....	61,093	103,225	278,776	435,428	994,407	346,567	334,199	183,297	304,110	534,700	863,180
3,082	67,577	49,263	169,078	321,609	1,270,773	375,416	146,924	85,596	187,742	692,240	1,144,296
.....	1.11	0.48	0.61	0.74	1.26	0.87	0.44	0.59	0.79	1.12	1.33
201	2,686	5,772	183,039	404,172	1,465,740	399,890	35,546	99,463	235,223	830,421	1,260,817
.....	6.47	0.84	0.95	0.95	1.45	1.15	0.34	0.59	0.79	1.51	1.46
300	476	7,076	213,667	436,998	1,126,836	356,567	108,090	175,812	310,087	591,516	156,404
0.67	5.85	0.82	0.86	0.92	1.30	1.12	0.33	0.57	0.76	1.40	1.32
.....	2,551	5,670	143,163	391,400	1,692,128	400,610	20,602	80,839	225,937	889,691	1,422,453
.....	.....	4	45	53	33	.....	8	22	57	37	11
.....	.....	593	41,072	220,098	855,712	.....	10,007	34,181	157,012	462,157	454,118
.....	.....	9,826	630,442	2,093,985	20,754,016	.....	5,352	70,458	539,410	4,961,336	17,911,723
.....	.....	12.03	15.35	9.51	24.25	.....	0.53	2.06	3.43	10.74	39.44
.....	.....	34,561	1,342,193	4,695,319	46,090,899	.....	22,315	218,600	2,229,099	14,526,440	35,166,518
.....	.....	15,000	40,654	362,092	421,496	.....	2,264	16,390	78,474	620,066	122,048
.....	.....	49,561	1,382,847	5,057,411	46,512,395	.....	24,579	234,990	2,307,573	15,146,506	35,288,566
.....	.....	3,207	57,334	213,790	1,065,837	.....	2,237	21,360	100,380	572,086	644,105
.....	.....	1,600	86,214	297,233	1,230,434	.....	7,032	40,738	151,262	714,090	702,359
.....	.....	3,120	68,834	313,383	1,469,740	.....	2,972	34,218	151,489	791,097	875,301
.....	.....	374	44,634	227,240	966,683	.....	10,324	34,801	164,352	509,270	520,184
.....	.....	23.73	13.55	9.21	21.47	.....	0.44	1.86	3.16	9.74	34.43
.....	.....	4.28	1.93	1.31	1.27	.....	0.68	1.17	0.82	1.40	1.35
.....	.....	5.16	2.17	1.35	1.44	.....	0.72	1.21	0.97	1.55	1.55
.....	.....	.....	4	9	2	.....	1	4	5	3	2
.....	.....	.....	4,237	136,469	.....	.....	17,270	17,168	106,268	.....	.....
.....	.....	.....	255,920	1,004,025	.....	.....	17,135	114,410	1,128,400	.....	.....
.....	.....	.....	60.40	7.36	.....	.....	0.99	6.66	10.62	.....	.....
.....	.....	.....	387,684	6,416,569	.....	.....	19,250	204,599	6,590,404	.....	.....
69	2,012	647	240	8	1	.....	2,888	71	18	.....	.....
2	22	41	193	104	23	.....	132	129	91	30	6
.....	1	1	20	14	13	.....	3	5	14	24	3
.....	.....	.....	3	1	.....	.....	1	1	3	.....	.....
.....	.....	.....	.....	2	8	.....	.....	.....	.....	3	7
.....	.....	.....	.....	.....	1	.....	1	1	3	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
1	6	20	197	118	45	3	93	116	110	54	17
1,534	.....	6,145	77,935	321,222	687,543	211,980	17,774	43,206	100,206	456,742	688,431
9	.....	22	505	560	879	282	174	244	490	516	833
27	1,267	555	381	112	33	2	2,063	163	100	41	10
22	98	4	11	5	3	1	122	8	7	5	2
7	123	6	5	.....	.....	.....	137	3	1	.....	.....
6	76	7	.....	.....	.....	.....	85	4	.....	.....	.....
.....	4	6	8	.....	.....	.....	11	2	1	4	.....
9	353	82	38	5	.....	.....	464	15	8	.....	.....
.....	33	6	7	5	8	.....	37	4	9	4	5
.....	81	25	12	2	2	.....	106	8	5	3	.....
13	126	27	10	6	3	3	163	15	5	2	3
.....	149	65	54	296	1,841	16,344	220	217	1,695	273	16,344
.....	2,906	3,938	4,246	22,387	33,810	842,715	7,631	16,169	43,287	842,715	842,715
23,302	85,518	48,303	58,075	783,429	264,620	12,287,585	109,936	113,187	1,040,124	12,287,585	12,287,585
18,252	83,930	45,406	57,500	782,729	264,620	12,287,585	107,561	105,527	1,039,349	12,287,585	12,287,585
5,050	1,588	2,897	575	700	.....	.....	2,375	7,660	775	.....	.....
2,916	3,749	4,257	4,307	29,887	34,810	973,656	9,392	18,747	51,787	973,656	973,656
.....	29.43	12.27	12.61	34.99	7.83	14.58	13.42	7.00	24.03	14.58	14.58
7.99	22.81	11.35	12.44	26.21	7.60	12.62	11.27	6.04	20.08	12.62	12.62
8	102	23	7	6	2	3	130	12	5	1	3
.....	2,251	3,194	3,137	37,957	.....	842,715	5,427	16,065	25,047	842,715	842,715
27	3,479	3,195	2,277	10,229	.....	183,483	4,840	5,732	8,635	183,483	183,483
.....	1.55	1.00	0.65	0.27	.....	0.22	0.84	0.36	0.34	0.22	0.22
.....	38	84	1,335	12,494	3,565	167,018	122	3,604	13,790	167,018	167,018
.....	0.51	0.80	0.70	0.56	0.23	0.20	0.68	0.24	0.56	0.20	0.20
.....	75	105	1,900	24,905	15,570	842,715	180	15,130	27,245	842,715	842,715
.....	0.51	0.80	0.70	0.50	0.23	0.20	0.68	0.24	0.51	0.20	0.20
.....	84	2,064	12,090	5,424	47,407	.....	584	3,558	15,520	47,407	47,407

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - IDAHO

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
INDEBTEDNESS AND ARREARAGE, 1939									
19	Enterprises reporting indebtedness ².....number...	6					2	1	3
20	(a) Area irrigated in these enterprises.....acres....	869,482					26,767		842,715
21	(b) Indebtedness.....dollars....	2,929,859					117,050		2,812,809
22	(c) Average indebtedness per acre irrigated.....dollars..	3.37					4.37		3.34
23	(d) Cost of irrigation works and equipment.....dollars..	13,122,585					835,000		12,287,585
24	(e) Investment in water rights.....dollars..	700					700		
25	(f) Total investment.....dollars..	13,123,285					835,700		12,287,585
26	(g) Maintenance and operation.....dollars..	186,972					3,499		193,483
27	(h) Total annual charges ³.....dollars..	176,063					9,045		167,018
28	(i) Total charges collected ³.....dollars..	57,259					9,852		47,407
29	(j) Area against which annual charges were assessed....acres....	853,760					11,045		842,715
30	(k) Average indebtedness per acre assessed.....dollars..	3.36					5.17		3.34
31	(l) Average charges per acre assessed.....dollars..	0.21					0.82		0.20
32	(m) Average charges per acre irrigated.....dollars..	0.21					1.06		0.20
TYPE, 1940									
33	Individual and partnership.....number...	166	11	133	21	1			
34	Cooperative (incorporated and unincorporated).....number..	17	2	1	1	6	5	1	1
35	Irrigation district.....number...	4					2		
36	U. S. Bureau of Reclamation.....number...	3							3
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
37	Enterprises reporting pay roll.....number...	14				5	7	1	4
38	Wages and salaries paid and payable for 1939.....dollars..	10,616				923	6,693		3,000
39	Persons employed during week ending April 29, 1939.....number..	18				5	11		2
SOURCE OF SUPPLEMENTAL WATER SUPPLY 1939									
40	Streams, pumped.....number...	20	1	19					
41	Wells, pumped or flowing.....number...	89	7	77	4	1			
42	Streams, gravity or storage.....number...	79	5	36	18	6	7	1	4

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Upper Snake River														
Ashton.....	Fremont.....	5,100	20.57	+4.99	7.67	+3.72	6.40	+2.15	3.66	-0.93	2.84	+0.05	43.3	+2.0
Driggs.....	Teton.....	6,097	16.54	+1.17	5.11	+1.77	4.73	+1.26	3.86	-1.16	2.84	-0.70	40.2	+1.5
Idaho Falls.....	Bonneville.....	4,742	9.73	-1.29	4.14	+1.50	1.79	-1.20	2.10	-1.26	1.70	-0.33	(²)	(²)
Springfield.....	Bingham.....	4,420	7.95	-1.94	4.13	+1.50	1.50	-0.86	1.05	-2.08	1.27	-0.50	46.9	+1.9
Lower Snake River														
Rupert.....	Minidoka.....	4,204	5.80	-4.45	3.41	+0.45	1.12	-1.79	0.82	-2.05	0.45	-1.06	49.3	+1.9
Oakley.....	Cassia.....	4,191	8.93	-1.54	3.61	+1.28	1.06	-1.38	1.81	-1.94	2.45	+0.45	(²)	(²)
Richfield.....	Lincoln.....	4,306	8.77	-0.51	4.30	+1.40	1.53	-1.28	1.04	-1.62	1.90	+0.99	45.4	+0.4
Twin Falls.....	Twin Falls.....	3,770	7.92	-1.71	3.92	+1.05	0.96	-2.02	1.53	-1.12	1.51	+0.38	50.7	+2.5
Grand View.....	Owyhee.....	2,600	4.89	-2.18	2.46	+0.43	1.15	-0.91	0.44	-1.71	0.84	+0.01	(²)	(²)
Boise.....	Ada.....	2,705	10.62	-2.48	4.76	+0.67	3.33	-1.19	0.85	-2.68	1.68	+0.72	53.1	+2.2
Kirkham.....	Boise.....	3,900	17.86	-4.93	7.64	-0.37	6.23	-2.24	1.93	-2.66	2.06	+0.34	(²)	(²)
Payette.....	Payette.....	2,159	6.92	-3.77	2.82	-0.68	2.32	-1.50	0.49	-1.97	1.29	+0.38	52.5	+2.1
Cambridge.....	Washington.....	2,651	13.36	-4.73	5.07	-1.18	6.20	-0.59	1.37	-2.24	0.72	-0.72	50.4	+2.6
Salmon River														
Challis.....	Custer.....	5,280	5.99	-1.66	1.38	-0.23	0.62	-0.87	1.82	-0.90	2.17	+0.34	46.5	+3.2
Salmon.....	Lemhi.....	4,040	9.98	+1.46	2.50	+0.53	2.45	+0.85	2.92	+0.10	2.11	-0.02	44.6	+0.8
Riggins.....	Idaho.....	1,685	13.20	-2.19	3.37	-0.52	3.61	-0.41	4.54	-0.71	1.68	-0.55	(²)	(²)
Clearwater River														
Pierce.....	Clearwater.....	3,171	39.83	+0.91	13.04	+0.73	17.89	+4.47	6.30	-2.72	2.66	-1.57	44.4	+0.4
Palouse River														
Moscow.....	Latah.....	2,628	16.16	-5.68	5.65	-1.65	7.50	+0.21	1.93	-2.83	1.08	-1.41	49.8	+2.8
Coeur d'Alene River														
Wallace.....	Shoshone.....	2,770	28.99	-14.21	10.93	-4.55	12.14	-2.16	4.32	-4.64	1.60	-2.86	48.2	+2.2
Coeur d'Alene.....	Kootenai.....	2,160	(²)	(²)	(²)	(²)	7.68	-0.36	3.38	-1.70	1.40	-1.22	48.4	+1.2
Priest River														
Sandpoint.....	Bonner.....	2,100	23.15	-9.56	8.75	-3.16	9.24	-0.93	4.08	-2.57	1.08	-2.90	47.1	+2.0
Bear River														
Lifton.....	Bear Lake.....	5,926	8.97	-0.93	2.70	+0.44	1.50	-0.82	3.79	+0.80	0.98	-1.35	43.2	+1.2
Grace.....	Barnock.....	5,400	13.86	-1.01	5.18	+1.98	2.15	-1.56	3.90	-0.15	2.63	-1.28	43.9	+0.7
Malad.....	Oneida.....	4,700	14.04	-1.90	5.16	+1.32	2.53	-1.79	3.25	-1.21	3.10	-0.22	46.9	+1.1
Beaver Creek														
Spencer.....	Clark.....	5,883	17.53	-1.85	5.60	+1.29	4.39	-0.10	3.93	-2.75	3.61	-0.29	39.9	+1.3
Big Lost River														
Mackay.....	Custer.....	5,897	7.11	-1.70	2.57	+0.76	1.42	-0.70	2.04	-0.48	1.08	-1.28	45.2	+2.9

¹Departure from normal.

²Data not available.

CENSUS OF IRRIGATION — IDAHO

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
.....	2	1	3	.....	.....	1	2	3	19
.....	26,767	117,050	842,715	.....	.....	26,767	117,050	842,715	20
.....	4.37	835,000	2,812,809	.....	.....	4.37	835,000	2,812,809	21
.....	700	9,045	12,287,585	.....	.....	700	9,045	12,287,585	22
.....	835,700	9,852	12,287,585	.....	.....	835,700	9,852	12,287,585	23
.....	3,489	11,045	183,483	.....	.....	3,489	11,045	183,483	24
.....	9,045	5.17	167,018	.....	.....	9,045	5.17	167,018	25
.....	9,852	0.82	47,407	.....	.....	9,852	0.82	47,407	26
.....	11,045	1.06	842,715	.....	.....	11,045	1.06	842,715	27
.....	5.17	.....	3.34	.....	.....	5.17	.....	3.34	28
.....	0.82	.....	0.20	.....	.....	0.82	.....	0.20	29
.....	1.06	.....	0.20	.....	.....	1.06	.....	0.20	30
.....	158	7	1	.....	.....	31
11	125	24	6	.....	.....	.....	5	7	3	.....	.....	32
2	1	3	4	5	2	.....	1	3	2	.....	.....	33
.....	1	1	.....	1	1	.....	.....	.....	34
.....	35
.....	36
.....	1	4	6	2	.....	2	6	4	1	.....	37
.....	692	6	6,924	10	3,000	1,600	9	6,016	7	3,000	38
.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	20	.....	.....	.....	.....	40
1	17	2	.....	.....	.....	.....	83	5	1	.....	.....	41
7	74	6	2	.....	.....	.....	60	10	4	.....	.....	42
5	35	19	8	6	3	3	.....	.....	.....	.....	.....	43

³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁴ Data for less than 3 enterprises shown with permission of the enterprises involved.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation.—The average precipitation for the calendar year 1939, for Idaho, as reported by the U. S. Weather Bureau, was 13.73 inches, which is 76 percent of normal and 70 percent of that recorded for 1938. Over the northern division of the State, totals averaged 88 percent of normal, over the southwestern division 64 percent of normal, and over the southeastern 69 percent. There was deficiency in precipitation during all seasons, but autumn was the driest season, with 59 percent of normal precipitation. The wettest month was December, with 2.41 inches, or 118 percent of normal, while the driest was August, with 0.16 inch, or 25 percent of normal. The greatest local annual amount was 49.08 inches at Deception Creek, while the least was 3.23 inches at Gooding.

The average precipitation for the water year (October 1938 through September 1939) at 25 stations listed in State table 18 with complete records, and which are representative of the major drainage basins in Idaho, was 13.55 inches, a departure of -2.47 inches from the average water year normal for these stations.

Temperature.—The mean temperature for the year was 47.0°, which is 1.5° above normal and 0.5° higher than recorded last year. The warmest month was July, with a mean temperature of 68.8°, or 0.7° above normal, while

the coldest month was February, with a mean temperature of 22.6°, or 5.3° below normal. Summer averaged 0.6° cooler than normal, while the other seasons averaged warmer than normal. The highest temperature recorded during the year was 117°, at Lewiston on July 27, and the lowest temperature was 31° below zero, at Alpha and Deception Creek on February 9.

Spring plowing and the seeding of spring grains started in the warmer sections of the southwest during the latter part of February and by the close of March these activities were quite general. Winter wheat and alfalfa came through the winter mostly in good condition and by the close of March were showing good stands. Dry weather during the last half of April was unfavorable, and crop growth continued slow during May and June. The first crop of alfalfa was cut during late May or early June, and harvesting of grains was well under way by the middle of July, and threshing was active during the latter part of the month.

The autumn was favorable for the maturing of late crops and fruits, and the harvest of prunes, peaches, early apples, onions, and seasonable garden truck was active during September. During October the harvest of late potatoes, beets, late apples, and late lettuce made very good progress and was completed during November.

CENSUS OF IRRIGATION - IDAHO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER				
		Total	Snake River		Total	
			Total	Upper Snake River		
				Total		
IRRIGATED FARMS AND AREAS						
1 Irrigated farms.....1939..number.....	42,343	38,005	37,328	10,234		
2 Area irrigated.....1939..acres.....	2,277,857	2,038,177	2,030,929	634,039		
3 (a) Cropland harvested.....1939..acres.....	2,026,435	1,817,359	1,810,546	582,383		
4 (b) Crop failure.....1939..acres.....	12,448	8,533	8,503	1,358		
5 (c) Pasture.....1939..acres.....	238,974	212,285	211,880	50,298		
6 Area irrigated.....1929..acres.....	2,181,250	1,937,872	1,929,886	.....	
7 Area irrigated.....1919..acres.....	2,488,806	2,164,787	2,159,731	.....	
8 Increase or decrease (-), 1929-1939.....percent.....	4.4	5.2	5.2	.....	
9 Irrigable area in enterprises.....1940..acres.....	2,870,023	2,565,096	2,554,495	750,794		
10 Area irrigated.....1930..acres.....	2,814,048	2,459,718	2,446,391	.....	
11 Area irrigated.....1920 ² ..acres.....	3,780,048	3,104,993	3,092,104	.....	
12 Excess of irrigable area over the area irrigated.....1940..acres.....	592,166	526,919	523,566	116,755		
13 Excess of irrigable area over the area irrigated.....1930..acres.....	632,798	521,846	516,505	.....	
14 Excess of irrigable area over the area irrigated.....1920 ² ..acres.....	1,291,242	940,206	932,373	.....	
15 Area works were capable of supplying with water...1940..acres.....	2,593,534	2,309,183	2,299,385	723,022		
16 Area works were capable of supplying with water...1930..acres.....	2,617,021	2,271,846	2,259,240	.....	
17 Area works were capable of supplying with water...1920..acres.....	3,092,810	2,662,833	2,655,248	.....	
18 Increase or decrease (-), 1930-1940.....percent.....	-0.9	1.6	1.8	.....	
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	315,677	271,006	268,456	86,983		
20 Excess of area works were capable of supplying with water over area irrigated.....1930..acres.....	435,771	333,974	329,394	.....	
21 Excess of area works were capable of supplying with water over area irrigated.....1920..acres.....	604,004	498,046	495,517	.....	
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	87.8	86.3	86.3	87.7		
23 Proportion which area irrigated is of area works were capable of supplying with water.....1929..percent.....	83.3	85.3	85.4	.....	
24 Proportion which area irrigated is of area works were capable of supplying with water.....1919..percent.....	80.5	81.3	81.3	.....	
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars.....	102,585,798	97,488,128	96,777,781	20,077,436		
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	100,989,161	96,097,763	95,390,396	19,864,325		
27 (b) Investment in water rights (reported).....1940..dollars.....	1,596,637	1,390,365	1,387,385	213,111		
28 Total investment in irrigation enterprises.....1930..dollars.....	84,500,354	79,649,767	78,773,614	6,415,940		
29 Total investment in irrigation enterprises.....1920..dollars.....	91,501,009	84,344,396	83,740,542	10,359,346		
30 Increase or decrease (-), 1930-1940.....percent.....	21.4	22.4	22.9	212.9		
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	39.55	42.22	42.09	27.77		
32 Average investment based on area works were capable of supplying with water, per acre.....1930..dollars.....	32.29	35.06	34.87	12.69		
33 Average investment based on area works were capable of supplying with water, per acre.....1920..dollars.....	29.59	31.67	31.47	17.31		
34 Average investment per acre irrigated.....1939..dollars.....	45.04	47.83	47.65	31.67		
35 Estimated final investment in existing enterprises.....1940..dollars.....	109,513,311	104,302,195	103,579,513	20,549,296		
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	38.16	40.66	40.55	27.37		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Sup.	Primary	Sup.	Primary	Sup.
37 Enterprises reporting maintenance and operation.....1939..number.....	Enterprises		Enterprises		Enterprises	
38 Area irrigated in these enterprises.....1939..acres.....	2,986	155	2,571	134	2,518	134
39 Cost of maintenance and operation.....1939..dollars.....	2,219,486	889,254	1,990,706	886,352	1,984,063	886,352
40 Average cost, per acre irrigated.....1939..dollars.....	2,256,798	202,690	2,093,332	201,696	2,068,989	201,696
	1.02	0.23	1.05	0.23	1.04	0.23
41 Total annual charges (reported) ⁴.....1939..dollars.....	2,461,470	184,534	2,275,524	184,090	2,248,002	184,090
42 Average annual charge per acre irrigated.....1939..dollars.....	1.25	0.21	1.28	0.21	1.27	0.21
43 Area against which charges were assessed.....1939..acres.....	2,141,909	885,270	1,918,173	883,365	1,912,045	883,365
44 Average annual charge per acre assessed.....1939..dollars.....	1.15	0.21	1.19	0.21	1.18	0.21
45 Total charges collected ⁴.....1939..dollars.....	2,635,522	67,069	2,467,788	66,635	2,439,870	66,635
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	23,488,279	2,929,859	23,050,120	2,929,859	22,702,642	2,929,859
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number.....	2,852	138	2,414	116	2,342	116
48 Area irrigated by these enterprises.....1939..acres.....	2,034,989	896,000	1,812,319	893,106	1,805,333	893,106
49 Water delivered.....1939..acre-feet.....	8,356,961	1,042,271	7,804,257	1,039,676	7,786,117	1,039,676
50 Average water delivered per acre irrigated.....1939..acre-feet.....	4.1	1.2	4.3	1.2	4.3	1.2
51 Average cost of water per acre irrigated.....1939..dollars.....	1.16	0.21	1.19	0.21	1.18	0.21
52 Average cost of water per acre-foot delivered.....1939..dollars.....	0.28	0.18	0.28	0.18	0.27	0.18
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number.....	192	172	167
54 Irrigable area in these enterprises.....1939..acres.....	943,910	917,668	917,597
55 Irrigated area in these enterprises.....1939..acres.....	731,717	706,750	706,719
56 Area for which drains have been installed.....1939..acres.....	238,907	238,582	238,667
57 Additional area needing drainage.....1939..acres.....	29,042	22,798	22,765

¹Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State total.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — IDAHO

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

COLUMBIA RIVER—Continued															
Snake River—Continued															
Upper Snake River—Continued															
Direct (1)	South Fork Snake River						Henry's Fork				Grays Lake (6)				
	Total	Direct (2)	Salt River (3)	Total	Direct (4)	Teton River (5)									
2,468	3,542	3,495	47	2,494	2,038	456					25	1			
187,444	201,967	197,945	4,122	169,395	125,182	44,213					2,845	2			
174,870	189,882	186,331	3,551	153,264	114,521	38,743					2,729	3			
10	42	33	9	249	40	209						4			
12,564	12,043	11,481	562	15,882	10,621	5,261					116	5			
	161,988			174,960								6			
	151,697			206,534								7			
	24.7			-3.2								8			
209,903	229,033	223,274	5,759	194,809	140,886	53,923					4,103	9			
	185,393			211,117								10			
	207,292			325,114								11			
22,459	27,066	25,429	1,637	25,414	15,704	9,710					1,258	12			
	23,405			36,157								13			
	55,695			116,580								14			
209,032	220,206	215,325	4,881	181,477	132,251	49,226					3,828	15			
	181,634			196,373								16			
	192,473			286,514								17			
	21.2			-7.6								18			
21,588	18,239	17,480	759	12,082	7,069	5,013					963	19			
	19,646			21,413								20			
	40,876			77,980								21			
89.7	91.7	91.9	84.4	93.3	94.7	89.8					74.3	22			
	89.2			89.1								23			
	78.8			72.8								24			
6,297,840	6,335,386	6,310,541	24,845	4,602,284	4,377,368	224,916					11,955	25			
6,218,557	6,286,119	6,265,572	20,547	4,564,615	4,346,489	218,126					11,895	26			
79,283	49,267	44,959	4,298	37,669	30,879	6,790					60	27			
	2,068,766			1,925,652								28			
	6,193,701			2,001,841								29			
	206.2			139.0								30			
30.13	28.77	29.31	5.09	25.36	33.10	4.57					3.12	31			
	11.39			9.81								32			
	32.18			6.99								33			
33.60	31.37	31.90	6.03	27.17	34.97	5.09					4.20	34			
6,312,640	6,337,036	6,311,891	25,145	4,626,019	4,399,488	226,531					15,455	35			
30.08	27.67	28.27	4.37	23.75	31.23	4.20					3.77	36			
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.				
Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises				
61	5	143	3	109	3	34		154	11	76	10	78	1	18	
184,704	132,768	197,072	160,165	193,450	160,165	3,622		161,805	99,793	123,875	99,473	37,930	(5)	2,683	
197,162	5,188	82,313	4,378	80,183	4,378	2,130		57,150	9,413	50,748	9,013	6,402	(5)	382	
1.07	0.04	0.42	0.03	0.41	0.03	0.59		0.35	0.09	0.41	0.09	0.17	(5)	0.14	
232,475	4,614	140,012	4,419	140,012	4,419			79,033	8,507	70,104	8,507	8,929			
1.27	0.03	0.76	0.03	0.76	0.03			0.53	0.09	0.59	0.09	0.28			
201,759	132,369	191,240	160,080	191,240	160,080			155,136	99,317	121,828	99,317	33,308			
1.15	0.03	0.73	0.03	0.73	0.03			0.51	0.09	0.58	0.09	0.27			
204,648	4,490	148,383	4,278	148,383	4,278			75,744	9,304	67,525	9,304	8,219			
393,118		304,992	661	304,992	661			163,156	2,760,000	134,261	2,760,000	28,895			
56	4	129	5	92	4	37	1	157	10	76	9	81	(5)	1	16
184,202	129,408	185,537	160,236	181,415	160,236	4,122	(5)	156,915	118,026	115,961	117,706	40,954	(5)	2,581	
893,681	155,787	1,172,594	193,728	1,164,011	193,698	8,583	(5)	775,366	102,510	690,456	102,260	84,910	(5)	1,984	
4.9	1.2	6.3	1.2	6.4	1.2	2.1	(5)	4.9	0.9	6.0	0.9	2.1	(5)	0.8	
1.29	0.03	0.79	0.03	0.79	0.03	0.59		0.52	0.09	0.60	0.09	0.27	(5)	0.13	
0.27	0.03	0.13	0.02	0.12	0.02	0.28		0.11	0.10	0.10	0.10	0.13	(5)	0.17	
8		3		(5)	2	(5)	1	17		7		10			53
63,772		7,780		(5)		(5)		6,831		4,652		2,179			54
46,540		6,677		(5)		(5)		5,325		4,172		1,153			55
8,573				(5)		(5)		1,060		100		980			56
1,395		1,060		(5)		(5)		1,213		913		300			57

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — IDAHO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		COLUMBIA RIVER—Continued								
		Snake River—Continued								
		Upper Snake River—Continued			Lower Snake River					
		Blackfoot River	Portneuf River	Bannock Creek	Total		Direct			
(7)	(8)	(9)			(10)					
IRRIGATED FARMS AND AREAS										
1	Irrigated farms.....1939..number.....	1,009	643	63	27,094		11,039			
2	Area irrigated.....1939..acres.....	45,623	25,372	1,393	1,396,890		632,699			
3	(a) Cropland harvested.....1939..acres.....	38,823	21,512	1,303	1,228,163		609,858			
4	(b) Crop failure.....1939..acres.....	150	907	.....	7,145		1,363		
5	(c) Pasture.....1939..acres.....	6,650	2,953	90	161,582		21,478			
6	Area irrigated.....1929..acres.....	45,157	41,774	.....	.....		.....
7	.....1919..acres.....	53,910	37,996	.....	.....		.....
8	Increase or decrease (-), 1929-1939.....percent.....	1.0	-39.3	.....	.....		.....
9	Irrigable area in enterprises.....1940..acres.....	77,440	30,793	4,713	1,803,701		801,866			
10	.....1930..acres.....	81,163	58,846	.....	.....		.....
11	.....1920 ¹ ..acres.....	77,255	75,923	.....	.....		.....
12	Excess of irrigable area over the area irrigated.....1940..acres.....	31,817	5,421	3,320	406,811		169,167			
13	.....1930..acres.....	36,006	17,072	.....	.....		.....
14	.....1920 ¹ ..acres.....	23,345	37,927	.....	.....		.....
15	Area works were capable of supplying with water...1940..acres.....	76,610	30,056	1,813	1,576,363		696,674			
16	.....1930..acres.....	78,943	48,718	.....	.....		.....
17	.....1920..acres.....	60,225	59,270	.....	.....		.....
18	Increase or decrease (-), 1930-1940.....percent.....	-3.0	-38.3	.....	.....		.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	30,987	4,684	420	179,473		63,975			
20	.....1930..acres.....	33,786	6,944	.....	.....		.....
21	.....1920..acres.....	6,315	21,274	.....	.....		.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	59.6	84.4	76.8	88.6		90.8			
23	.....1929..percent.....	57.2	85.7	.....	.....		.....
24	.....1919..percent.....	89.5	64.1	.....	.....		.....
CAPITAL INVESTED TO JANUARY 1										
25	Total investment in irrigation enterprises.....1940..dollars....	2,230,384	566,835	30,752	76,700,345		39,855,702			
26	(a) Cost of irrigation works and equipment.....1940..dollars....	2,213,268	539,421	30,450	75,526,071		39,817,437			
27	(b) Investment in water rights (reported).....1940..dollars....	17,116	29,414	302	1,174,274		38,265			
28	Total investment in irrigation enterprises.....1930..dollars....	1,792,321	629,201	.....	.....		.....
29	.....1920..dollars....	1,022,276	1,141,528	.....	.....		.....
30	Increase or decrease (-), 1930-1940.....percent.....	24.4	-9.6	.....	.....		.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	29.11	18.93	16.96	48.66		57.21			
32	.....1930..dollars....	22.70	12.92	.....	.....		.....
33	.....1920..dollars....	16.97	19.26	.....	.....		.....
34	Average investment per acre irrigated.....1939..dollars....	48.89	22.42	22.08	54.91		62.99			
35	Estimated final investment in existing enterprises...1940..dollars....	2,537,264	649,930	70,752	83,030,217		40,852,797			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	32.76	21.11	15.01	46.03		50.95			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS										
		Primary		Sup.	Primary		Sup.	Primary		Sup.
		Enterprises		Enterprises	Enterprises		Enterprises	Enterprises		Enterprises
37	Enterprises reporting maintenance and operation...1939..number.....	25	116	4	7	1,994	111	317	12	12
38	Area irrigated in these enterprises.....1939..acres.....	44,877	24,028	195	1,262	1,367,632	493,431	629,013	344,648	344,648
39	Cost of maintenance and operation.....1939..dollars....	52,145	21,553	178	505	1,657,779	182,539	966,124	12,250	12,250
40	Average cost, per acre irrigated.....1939..dollars....	1.16	0.90	0.91	0.40	1.21	0.37	1.54	0.04	0.04
41	Total annual charges (reported) ³ 4.....1939..dollars....	21,892	21,106	196	1,753,288	166,550	1,049,602	9,907	9,907
42	Average annual charge per acre irrigated.....1939..dollars....	0.56	1.07	0.30	1.47	0.34	1.72	0.03	0.03
43	Area against which charges were assessed.....1939..acres.....	40,192	20,722	655	1,302,341	491,599	655,945	343,879	343,879
44	Average annual charge per acre assessed.....1939..dollars....	0.54	1.02	0.30	1.35	0.34	1.60	0.03	0.03
45	Total charges collected ⁵.....1939..dollars....	3,520	18,159	1,989,416	48,563	1,012,293	10,057	10,057
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars....	1,909,634	34,257	23,840	19,873,645	169,198	6,407,664
WATER DELIVERED TO IRRIGATORS, 1939										
47	Enterprises reporting water delivered.....1939..number.....	28	121	4	10	1,825	69	288	11	11
48	Area irrigated by these enterprises.....1939..acres.....	45,423	20,902	195	1,393	1,208,380	485,241	576,634	344,521	344,521
49	Water delivered.....1939..acre-feet..	175,576	44,434	367	4,795	4,717,687	537,284	2,292,626	414,730	414,730
50	Average water delivered per acre irrigated.....1939..acre-feet..	3.9	2.1	1.9	3.4	3.9	1.2	4.0	1.2	1.2
51	Average cost of water per acre irrigated.....1939..dollars....	0.51	1.11	0.91	0.40	1.33	0.35	1.65	0.03	0.03
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.13	0.52	0.49	0.12	0.34	0.29	0.43	0.03	0.03
DRAINAGE OF IRRIGATED LAND										
53	Enterprises reporting land drained or needing drainage.....1939..number.....	(⁶) 2	5	132	16
54	Irrigable area in these enterprises.....1939..acres.....	(⁶)	2,902	839,812	436,122
55	Irrigated area in these enterprises.....1939..acres.....	(⁶)	2,762	642,915	335,140
56	Area for which drains have been installed.....1939..acres.....	(⁶)	20	226,894	55,920
57	Additional area needing drainage.....1939..acres.....	(⁶)	534	16,863	2,542

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - IDAHO

IRRIGABLE AREA, 1940, 1930, 1920, AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER—Continued											
Snake River—Continued											
Lower Snake River—Continued											
Raft Creek (11)	Goose Creek (12)	Salmon Falls Creek (13)	Little and Big Wood Rivers			Bruneau River (16)	Boise River				
			Total	Direct (14)	Camas Creek (15)		Total	Direct (17)			
156	307	281	1,550	1,480	70	138	8,585	8,499	1		
11,938	17,977	23,719	80,354	80,012	9,342	12,536	314,381	309,657	2		
10,557	16,969	22,951	82,321	73,261	9,060	11,175	249,238	245,740	3		
60	88	160	590	590	.....	96	4,006	3,838	4	
1,321	922	908	6,443	6,161	282	1,265	61,139	59,979	5		
8,935	18,126	28,947	103,149	103,149	.....	18,042	318,496	.....	6
23,620	.....	41,330	147,901	147,901	.....	21,301	328,395	.....	7
33.6	-0.8	-17.8	-13.4	-22.4	.....	-30.5	-1.3	.....	8
17,388	20,153	39,306	120,375	109,703	10,672	13,138	428,566	421,817	9		
31,135	24,191	36,977	184,634	184,634	.....	22,836	378,757	.....	10
42,906	.....	87,260	301,662	301,662	.....	35,043	388,313	.....	11
5,450	2,176	15,587	31,021	29,691	1,330	602	114,185	112,160	12		
22,200	6,065	8,130	81,485	81,485	.....	4,794	60,261	.....	13
19,286	.....	45,930	153,761	153,761	.....	13,742	59,918	.....	14
13,583	18,941	39,174	109,889	99,217	10,672	12,842	355,301	348,770	15		
18,115	24,191	36,977	139,451	139,451	.....	21,651	329,322	.....	16
26,436	.....	49,920	233,972	233,972	.....	23,511	368,854	.....	17
-25.2	-21.7	5.9	-21.2	-28.9	.....	-40.7	7.9	.....	18
1,615	964	15,455	20,535	19,205	1,330	306	40,920	39,113	19		
9,180	6,065	8,130	36,302	36,302	.....	3,609	10,826	.....	20
2,816	.....	8,590	86,071	86,071	.....	2,210	40,459	.....	21
88.1	94.9	60.5	81.3	80.6	87.5	97.6	88.5	88.8	22		
49.3	74.9	78.0	74.0	74.0	.....	83.3	96.7	.....	23
89.3	.....	82.8	63.2	63.2	.....	90.6	89.0	.....	24
132,992	1,949,793	2,756,981	6,187,877	6,125,462	62,415	142,184	18,593,172	18,547,735	25		
129,304	1,599,467	2,556,621	6,183,924	6,122,529	61,395	141,113	18,366,927	18,320,937	26		
3,688	250,326	200,160	3,953	2,933	1,020	1,071	227,245	226,798	27		
17,460	1,507,220	2,517,550	10,504,183	10,504,183	.....	522,454	16,135,214	.....	28
100,928	.....	4,152,745	6,411,832	6,411,832	.....	532,745	16,013,734	.....	29
661.7	22.7	9.5	-41.1	-41.7	.....	-72.8	15.2	.....	30
9.81	97.66	70.38	56.31	61.74	5.85	11.07	52.33	53.18	31		
0.96	62.30	68.08	75.33	75.33	.....	24.13	49.00	.....	32
3.82	.....	83.19	27.40	27.40	.....	22.66	43.41	.....	33
11.14	102.90	116.24	69.25	76.56	6.68	11.34	59.14	59.90	34		
272,177	1,850,293	2,760,281	6,495,367	6,427,952	67,415	143,484	21,244,224	21,195,437	35		
15.65	91.81	70.23	53.96	58.59	6.32	10.92	49.57	50.25	36		
			Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
			Enterprises		Enterprises		Enterprises		Enterprises		
39	17	15	60	2	41	2	19	61	242	73	37
10,115	17,240	23,599	80,923	(2)	73,851	(2)	7,072	11,532	310,927	121,229	38
4,976	10,183	20,612	65,385	(2)	63,060	(2)	2,825	8,670	364,692	160,782	39
0.49	0.69	0.67	0.61	(2)	0.85	(2)	0.33	0.75	1.24	1.33	40
2,988	11,368	22,750	90,708	2,500	89,008	2,500	1,700	6,093	362,618	142,718	41
0.42	0.72	1.14	1.21	1.00	1.25	1.00	0.42	1.35	1.20	1.20	42
7,221	16,313	35,000	91,478	4,500	87,478	4,500	4,000	4,900	326,788	118,975	43
0.41	0.70	0.65	0.69	0.56	1.02	0.56	0.42	1.24	1.11	1.20	44
2,897	10,001	21,017	93,877	3,533	91,877	3,533	1,700	3,534	677,114	22,772	45
26	2,042,275	1,050	2,042,275	1,050	9,681,864	112,148	46
36	14	15	59	1	39	1	20	59	225	55	47
7,410	16,765	23,541	59,526	(2)	52,635	(2)	6,891	9,095	293,155	121,372	48
16,364	36,404	52,383	222,304	(2)	215,355	(2)	6,949	9,537	1,186,496	121,388	49
2.2	2.2	2.2	3.7	(2)	4.1	(2)	1.0	1.3	4.0	1.0	50
0.65	0.70	1.04	0.84	(2)	0.91	(2)	0.35	0.57	1.21	1.19	51
0.30	0.32	0.47	0.22	(2)	0.22	(2)	0.34	0.54	1.13	1.19	52
.....	1	4	48	46	53
.....	(2)	1,197	342,687	342,310	54
.....	(2)	1,118	262,429	262,158	55
.....	(2)	147,665	147,665	56
.....	635	7,793	57

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - IDAHO

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER--Continued								
	Snake River--Continued								
	Lower Snake River--Continued								
	Boise River--Continued				Owyhee River				
	North Fork Boise River (16)	South Fork Boise River (19)	Moore Creek (20)	Total	Direct (21)	South Fork Owyhee River			
					Total	Direct	East Fork Owyhee River (23)		
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	7	58	21	81	12	24	4	20
2	Area irrigated.....1939..acres.....	149	3,745	830	12,020	987	5,990	170	5,820
3	(a) Cropland harvested.....1939..acres.....	137	2,563	776	8,701	729	3,855	100	3,795
4	(b) Crop failure.....1939..acres.....		64	4	275		275	70	205
5	(c) Pasture.....1939..acres.....	12	1,098	50	3,044	258	1,820		1,820
6	Area irrigated.....1929..acres.....				8,250				
7	Area irrigated.....1919..acres.....				10,903				
8	Increase or decrease (-), 1929-1939.....percent.....				45.7				
9	Irrigable area in enterprises.....1940..acres.....	248	5,548	953	13,020	1,064	6,307	170	6,137
10	.....1930..acres.....				20,623				
11	.....1920 ¹ ..acres.....				17,241				
12	Excess of irrigable area over the area irrigated.....1940..acres.....	99	1,803	123	1,000	77	317		317
13	.....1930..acres.....				12,373				
14	.....1920 ¹ ..acres.....				6,338				
15	Area works were capable of supplying with water...1940..acres.....	243	5,364	924	12,582	1,049	6,297	170	6,127
16	.....1930..acres.....				8,878				
17	.....1920..acres.....				11,760				
18	Increase or decrease (-), 1930-1940.....percent.....				41.7				
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	94	1,619	94	562	62	307		307
20	.....1930..acres.....				628				
21	.....1920..acres.....				657				
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	61.3	69.8	89.8	95.5	94.1	95.1	100.0	95.0
23	.....1929..percent.....				92.9				
24	.....1919..percent.....				92.7				
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars.....	1,480	31,446	12,511	154,510	12,600	85,800	5,200	80,600
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	1,420	31,145	12,425	151,785	12,600	84,000	5,200	78,800
27	(b) Investment in water rights (reported).....1940..dollars.....	60	301	86	2,725		1,800		1,800
28	Total investment in irrigation enterprises.....1930..dollars.....				98,652				
29	.....1920..dollars.....				64,467				
30	Increase or decrease (-), 1930-1940.....percent.....				56.6				
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	6.09	5.86	13.54	12.28	12.01	13.63	30.59	13.15
32	.....1930..dollars.....				11.11				
33	.....1920..dollars.....				5.48				
34	Average investment per acre irrigated.....1939..dollars.....	9.83	8.40	15.07	12.85	12.77	14.32	30.59	13.85
35	Estimated final investment in existing enterprises.....1940..dollars.....	1,480	31,596	15,711	155,510	12,600	86,800	5,200	81,600
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	5.87	5.70	16.49	11.94	11.84	13.76	30.59	13.30
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary		Sup.					
		Enterprises							
37	Enterprises reporting maintenance and operation.....1939..number.....	6	55	1	17	11	20	4	16
38	Area irrigated in these enterprises.....1939..acres.....	137	3,737	(²)	798	987	5,830	170	5,660
39	Cost of maintenance and operation.....1939..dollars.....	147	3,133	(²)	545	7,700	665	2,710	2,585
40	Average cost, per acre irrigated.....1939..dollars.....	1.07	0.84	(²)	0.68	0.67	0.46	0.74	0.46
41	Total annual charges (reported) ^{3 4}.....1939..dollars.....								
42	Average annual charge per acre irrigated.....1939..dollars.....								
43	Area against which charges were assessed.....1939..acres.....								
44	Average annual charge per acre assessed.....1939..dollars.....								
45	Total charges collected ³.....1939..dollars.....								
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....								
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	5	52	1	20	11	21	4	17
48	Area irrigated by these enterprises.....1939..acres.....	63	3,248	(²)	830	987	5,990	170	5,720
49	Water delivered.....1939..acre-feet.....	186	5,369	(²)	1,639	2,242	8,700	525	8,175
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.2	1.7	(²)	2.0	1.8	2.3	1.5	1.4
51	Average cost of water per acre irrigated.....1939..dollars.....	1.23	0.81	(²)	0.68	0.67	0.46	0.74	0.45
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.55	0.55	(²)	0.35	0.37	0.31	0.24	0.32
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	(²) 1	(²) 1						
54	Irrigable area in these enterprises.....1939..acres.....	(²)	(²)						
55	Irrigated area in these enterprises.....1939..acres.....	(²)	(²)						
56	Area for which drains have been installed.....1939..acres.....	(²)	(²)						
57	Additional area needing drainage.....1939..acres.....	(²)	(²)						

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - IDAHO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER—Continued														
Snake River—Continued														
Lower Snake River—Continued														
Owyhee River—Con.	Payette River					Salmon River								
Jordan Creek (24)	Total	Direct (25)	North Fork Payette River (26)	South Fork Payette River (27)	Weiser River (28)	Total		Upper Salmon River						
								Total						
45	2,511	2,124	345	42	864	1,049	676				1			
5,043	133,704	85,658	45,137	2,909	31,281	112,824	85,975				2			
4,077	101,598	74,870	24,191	2,737	29,746	80,676	65,877				3			
.....	96	86	.....	10	15	366	354				4		
966	32,010	10,902	20,946	162	1,520	31,782	19,744				5			
.....	122,468	.....	.....	.....	33,422	93,818	.....				6
.....	123,072	.....	.....	.....	58,869	115,108	.....				7
.....	9.2	.....	.....	.....	-6.4	20.3	.....				8
5,049	173,018	119,426	50,626	2,966	39,173	131,014	102,488				9			
.....	141,797	.....	.....	.....	42,326	116,341	.....				10
.....	165,142	.....	.....	.....	79,825	224,527	.....				11
606	39,314	33,768	5,489	57	7,892	18,190	16,513				12			
.....	19,329	.....	.....	.....	8,904	22,523	.....				13
.....	42,070	.....	.....	.....	21,056	109,419	.....				14
5,236	149,398	96,837	49,595	2,966	33,268	130,111	101,820				15			
.....	139,495	.....	.....	.....	40,839	110,064	.....				16
.....	117,011	.....	.....	.....	69,718	163,036	.....				17
.....	7.1	.....	.....	.....	-18.7	18.2	.....				18
193	15,694	11,179	4,458	57	1,987	17,287	15,845				19			
.....	17,027	.....	.....	.....	7,517	16,246	.....				20
.....	.....	.....	.....	.....	10,849	47,928	.....				21
96.3	89.5	88.5	91.0	98.1	94.0	86.7	84.4				22			
.....	87.8	.....	.....	.....	81.6	85.2	.....				23
.....	.....	.....	.....	.....	84.4	70.6	.....				24
56,110	4,509,126	4,116,404	368,667	24,055	1,303,656	789,069	578,337				25			
55,185	4,395,332	4,013,131	358,246	23,955	992,088	768,221	566,837				26			
925	113,794	103,273	10,421	100	311,568	20,848	11,400				27			
.....	4,695,747	.....	.....	.....	1,122,691	875,750	.....				28
.....	2,915,780	.....	.....	.....	2,018,450	1,175,362	.....				29
.....	-4.0	.....	.....	.....	16.1	-9.9	.....				30
10.72	30.18	42.51	7.43	8.11	39.19	6.06	5.68				31			
.....	33.66	.....	.....	.....	27.42	7.96	.....				32
.....	24.92	.....	.....	.....	28.95	7.21	.....				33
11.13	33.72	48.06	8.17	8.27	41.68	6.99	6.73				34			
56,110	6,530,686	6,116,429	390,202	24,055	1,503,806	795,809	584,162				35			
9.93	37.75	51.22	7.71	8.11	38.39	6.07	5.70				36			
	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.		
	Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises			
42	312	9	125	5	157	4	30	92	3	723	7	464	3	37
4,948	129,351	8,022	83,556	7,687	42,886	335	2,909	31,024	11,427	108,072	5,537	82,116	957	38
4,325	94,429	3,491	75,039	3,310	18,537	181	863	27,351	1,094	38,743	1,462	28,151	346	39
0.87	0.73	0.44	0.90	0.43	0.43	0.54	0.29	0.88	0.10	0.36	0.26	0.34	0.36	40
.....	120,868	3,000	106,093	3,000	14,705	70	43,870	7,273	7,675	1,152	6,695	75	41
.....	1.15	0.40	1.37	0.40	0.54	0.07	1.77	0.64	0.32	0.24	0.42	0.15	42
.....	106,229	7,500	77,967	7,500	27,262	1,000	29,651	11,945	24,477	4,800	16,597	500	43
.....	1.14	0.40	1.36	0.40	0.54	0.07	1.48	0.61	0.31	0.24	0.40	0.15	44
.....	94,803	5,000	78,244	5,000	16,559	40,728	7,051	2,196	150	2,121	150	45
.....	1,081,712	1,036,512	45,200	151,600	56,000	2,500	46
43	292	8	99	5	164	3	29	66	2	641	8	411	3	47
4,973	103,726	524	68,978	189	31,850	335	2,798	19,462	(e)	83,862	5,727	51,609	957	48
9,916	525,146	946	432,292	269	88,817	677	4,037	59,736	(e)	288,647	13,365	238,111	8,633	49
2.0	5.1	1.8	6.3	1.4	2.8	2.0	1.4	3.1	(e)	3.4	2.3	3.8	9.0	50
0.87	1.08	0.94	1.36	1.66	0.51	0.54	0.28	0.85	(e)	0.34	0.25	0.32	0.28	51
0.44	0.21	0.62	0.22	1.17	0.18	0.27	0.20	0.28	(e)	0.10	0.11	0.08	0.03	52
.....	15	15	(e) 1	45	45	53
.....	34,449	34,449	(e)	9,777	9,777	54
.....	28,742	28,742	(e)	8,506	8,506	55
.....	24,996	24,996	(e)	233	233	56
.....	4,148	4,148	(e)	1,545	1,545	57

³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - IDAHO

DRAINAGE BASIN TABLE I—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		COLUMBIA RIVER—Continued							
		Snake River—Continued							
		Lower Snake River—Continued							
		Salmon River—Continued							
		Upper Salmon River—Continued			Lower Salmon River				
	Direct (29)	Palsinerol River (30)	Lemhi River (31)	Total	Direct (32)				
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	266	82	328	373	186			
2	Area irrigated.....1939..acres.....	26,218	12,488	47,269	26,849	10,594			
3	(a) Cropland harvested.....1939..acres.....	21,518	9,621	34,738	14,789	7,377			
4	(b) Crop failure.....1939..acres.....	147	19	188	12	10			
5	(c) Pasture.....1939..acres.....	4,553	2,848	12,343	12,038	3,207			
6	Area irrigated.....1929..acres.....								
7	.....1919..acres.....							
8	Increase or decrease (-), 1929-1939.....percent.....								
9	Irrigable area in enterprises.....1940..acres.....	36,693	13,213	52,582	28,526	11,452			
10	.....1930..acres.....							
11	.....1920 ¹ ..acres.....							
12	Excess of irrigable area over the area irrigated.....1940..acres.....	10,475	725	5,313	1,677	858			
13	.....1930..acres.....							
14	.....1920 ¹ ..acres.....							
15	Area works were capable of supplying with water...1940..acres.....	36,135	13,103	52,582	28,291	11,277			
16	.....1930..acres.....							
17	.....1920..acres.....							
18	Increase or decrease (-), 1930-1940.....percent.....								
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	9,917	615	5,313	1,442	683			
20	.....1930..acres.....							
21	.....1920..acres.....							
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	72.6	95.3	89.9	94.9	93.9			
23	.....1929..percent.....							
24	.....1919..percent.....							
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	237,433	70,188	270,716	210,732	90,796			
26	(a) Cost of irrigation works and equipment.....1940..dollars....	232,369	69,898	264,670	201,284	90,560			
27	(b) Investment in water rights (reported).....1940..dollars....	5,064	290	6,046	9,448	236			
28	Total investment in irrigation enterprises.....1930..dollars....								
29	.....1920..dollars....							
30	Increase or decrease (-), 1930-1940.....percent.....								
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	6.57	5.36	5.15	7.45	8.05			
32	.....1930..dollars....							
33	.....1920..dollars....							
34	Average investment per acre irrigated.....1939..dollars....	9.06	5.62	5.73	7.85	8.57			
35	Estimated final investment in existing enterprises.....1940..dollars....	239,598	70,188	274,376	211,647	91,411			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	6.53	5.31	5.22	7.42	7.98			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.		
		Enterprises		Enterprises		Enterprises			
37	Enterprises reporting maintenance and operation.....1939..number.....	164	35	1	265	2	259	4	123
38	Area irrigated in these enterprises.....1939..acres.....	24,175	10,887	(2)	47,054	(2)	25,956	4,580	10,141
39	Cost of maintenance and operation.....1939..dollars....	8,958	3,775	(2)	15,418	(2)	10,592	1,116	5,553
40	Average cost, per acre irrigated.....1939..dollars....	0.37	0.35	(2)	0.33	(2)	0.41	0.24	0.55
41	Total annual charges (reported) ³.....1939..dollars....	1,666	2,465		2,564	75	980	1,077	320
42	Average annual charge per acre irrigated.....1939..dollars....	0.24	0.74		0.44	0.15	0.12	0.25	0.10
43	Area against which charges were assessed.....1939..acres.....	7,230	3,520		5,847	500	7,880	4,300	3,200
44	Average annual charge per acre assessed.....1939..dollars....	0.23	0.70		0.44	0.15	0.12	0.25	0.10
45	Total charges collected ³.....1939..dollars....	500	880		741	150	75		
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars....						2,500		2,500
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	120	38	1	253	2	230	5	94
48	Area irrigated by these enterprises.....1939..acres.....	10,565	7,994	(2)	43,050	(2)	22,253	4,770	6,631
49	Water delivered.....1939..acre-feet....	30,826	31,040	(2)	176,245	(2)	50,536	4,732	11,759
50	Average water delivered per acre irrigated.....1939..acre-feet....	2.9	3.9	(2)	4.1	(2)	2.3	1.0	1.8
51	Average cost of water per acre irrigated.....1939..dollars....	0.39	0.42	(2)	0.29	(2)	0.37	0.24	0.49
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.13	0.11	(2)	0.07	(2)	0.16	0.25	0.28
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	4			41				
54	Irrigable area in these enterprises.....1939..acres.....	291			9,486				
55	Irrigated area in these enterprises.....1939..acres.....	261			8,245				
56	Area for which drains have been installed.....1939..acres.....	25			208				
57	Additional area needing drainage.....1939..acres.....	40			1,505				

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - IDAHO

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER—Continued															
Snake River—Continued									Spokane River						
Lower Snake River—Continued									Total	Direct	Coeur d'Alene River				
Salmon River—Continued					Clearwater River										
Lower Salmon River—Continued					Total	Direct	Selway River	South Fork Clearwater River							
North Fork Salmon River (33)	Panther Creek (34)	Middle Fork Salmon River (35)	South Fork Salmon River (36)	Little Salmon River (37)					(38)	(40)	(41)	(45)	(46)		
25	16	13	7	126	533	525	3	5	630	616	14	1			
832	1,003	398	495	13,527	4,457	4,264	63	130	6,270	6,116	154	2			
677	536	351	380	5,478	4,375	4,183	63	129	6,029	5,892	137	3			
2	.....	.....	.....	.....	32	32	.....	.....	20	20	.....	4
153	467	47	115	8,049	50	49	.....	1	221	204	17	5		
.....	.....	.....	.....	.....	4,896	.....	.....	.....	.....	.....	.....	6
.....	.....	.....	.....	.....	4,623	.....	.....	.....	.....	.....	.....	7
.....	.....	.....	.....	.....	-9.0	.....	.....	.....	.....	.....	.....	8
1,027	1,006	568	587	13,886	6,684	6,441	63	180	7,842	7,665	177	9			
.....	.....	.....	.....	.....	5,216	.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	5,777	.....	.....	.....	.....	.....	.....	11
195	3	170	92	359	2,227	2,177	.....	50	1,572	1,549	23	12		
.....	.....	.....	.....	.....	320	.....	.....	.....	.....	.....	.....	13
.....	.....	.....	.....	.....	1,154	.....	.....	.....	.....	.....	.....	14
1,027	1,006	548	567	13,846	4,630	4,432	63	135	7,726	7,549	177	15			
.....	.....	.....	.....	.....	5,154	.....	.....	.....	.....	.....	.....	16
.....	.....	.....	.....	.....	5,545	.....	.....	.....	.....	.....	.....	17
.....	.....	.....	.....	.....	-10.2	.....	.....	.....	.....	.....	.....	18
195	3	150	92	319	173	168	.....	5	1,456	1,433	23	19		
.....	.....	.....	.....	.....	258	.....	.....	.....	.....	.....	.....	20
.....	.....	.....	.....	.....	922	.....	.....	.....	.....	.....	.....	21
81.0	99.7	72.6	84.3	97.7	96.3	96.2	100.0	96.3	81.2	81.0	87.0	22			
.....	.....	.....	.....	.....	95.0	.....	.....	.....	.....	.....	.....	23
.....	.....	.....	.....	.....	83.4	.....	.....	.....	.....	.....	.....	24
16,130	11,405	4,375	3,610	84,416	425,283	424,276	112	895	695,776	692,126	3,650	25			
16,130	11,375	4,350	3,610	75,259	424,682	423,705	112	895	693,486	689,886	3,600	26			
.....	30	25	.....	9,157	691	571	.....	60	2,290	2,240	50	27	
.....	.....	.....	.....	.....	431,309	.....	.....	.....	.....	.....	.....	28
.....	.....	.....	.....	.....	298,755	.....	.....	.....	.....	.....	.....	29
.....	.....	.....	.....	.....	-1.4	.....	.....	.....	.....	.....	.....	30
15.71	11.94	7.98	6.15	6.10	91.85	95.73	1.78	6.63	90.06	91.68	20.62	31			
.....	.....	.....	.....	.....	83.68	.....	.....	.....	.....	.....	.....	32
.....	.....	.....	.....	.....	53.68	.....	.....	.....	.....	.....	.....	33
19.39	11.37	10.99	7.29	6.24	95.42	99.50	1.78	6.88	110.97	113.17	23.70	34			
16,430	11,405	4,375	3,610	84,416	425,783	424,776	112	895	706,351	702,701	3,650	35			
16.00	11.34	7.70	6.15	6.08	63.70	65.95	1.78	4.97	90.07	91.68	20.62	36			
					Primary	Sup.	Primary	Sup.	Primary	Sup.					
					Enterprises		Enterprises		Enterprises						
21	16	9	7	83	4	43	3	37	3	24	14	10	37		
722	1,003	313	495	13,282	4,580	4,071	22	3,898	22	63	110	5,858	5,770	88	38
1,209	584	267	197	2,782	1,116	28,914	262	28,825	262	25	64	23,491	23,288	203	39
1.67	0.58	0.85	0.40	0.21	0.24	7.10	11.91	7.39	11.91	0.40	0.58	4.01	4.04	2.31	40
.....	660	1,077	34,748	34,748	27,522	27,522	41
.....	0.14	0.25	9.71	9.71	4.80	4.80	42
.....	4,680	4,300	4,439	4,439	6,128	6,128	43
.....	0.14	0.25	7.83	7.83	4.49	4.49	44
.....	75	31,256	31,256	27,918	27,918	45
.....	596,005	506,005	506,005	347,478	347,478	46
19	16	11	4	86	5	55	3	49	3	3	3	31	17	14	47
671	1,003	366	295	13,287	4,770	4,134	22	3,979	22	63	92	6,050	5,896	154	48
2,858	2,815	993	905	31,206	4,732	7,166	50	6,642	50	270	274	15,598	14,954	644	49
4.3	2.8	2.7	3.1	2.3	1.0	1.7	2.3	1.7	2.3	4.3	3.0	2.6	2.5	4.2	50
1.87	0.58	0.85	0.56	0.21	0.24	9.00	11.91	9.33	11.91	0.40	0.43	4.76	4.80	2.31	51
0.44	0.21	0.31	0.18	0.09	0.25	5.18	5.24	5.59	5.24	0.09	0.15	1.85	1.89	0.55	52
.....	53
.....	54
.....	55
.....	56
.....	57

³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - IDAHO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER—Continued				GREAT SALT LAKE				
	Clark Fork				Bear River				
	Total	Direct	Priest River	Kootenai River	Total	Direct			
		(50)	(51)	(52)		(54)			
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	39	34	5	8	3,514		2,893	
2	Area irrigated.....1939..acres.....	750	677	73	228	162,146		143,379	
3	(a) Cropland harvested.....1939..acres.....	662	589	73	122	142,557		125,558	
4	(b) Crop failure.....1939..acres.....	10	10			512		505	
5	(c) Pasture.....1939..acres.....	78	78		106	19,077		17,316	
6	Area irrigated.....1929..acres.....					161,904		78,021	
7	.....1919..acres.....					214,106		110,026
8	Increase or decrease (-), 1929-1939.....percent.....					0.5		83.7	
9	Irrigable area in enterprises.....1940..acres.....	1,998	1,837	161	761	193,153		168,603	
10	.....1930..acres.....					183,647		94,258
11	.....1920 ² ..acres.....					321,804		159,929
12	Excess of irrigable area over the area irrigated.....1940..acres.....	1,248	1,160	88	533	31,007		25,224	
13	.....1930..acres.....					22,343		16,227
14	.....1920 ² ..acres.....					107,698		49,893
15	Area works were capable of supplying with water...1940..acres.....	1,346	1,224	122	726	177,838		157,320	
16	.....1930..acres.....					180,716		92,192
17	.....1920..acres.....					247,166		132,860
18	Increase or decrease (-), 1930-1940.....percent.....					-1.6		70.6	
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	596	547	49	498	15,682		13,941	
20	.....1930..acres.....					19,412		14,161
21	.....1920..acres.....					33,060		22,844
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	55.7	55.3	59.8	31.4	91.2		91.1	
23	.....1929..percent.....					89.3		84.6
24	.....1919..percent.....					86.6		82.8
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars.....	9,221	8,096	1,125	5,350	3,833,159		3,618,553	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	8,601	7,566	1,035	5,280	3,656,016		3,468,978	
27	(b) Investment in water rights (reported).....1940..dollars.....	620	530	90	70	177,143		149,575	
28	Total investment in irrigation enterprises.....1930..dollars.....					2,275,519		2,065,516	
29	.....1920..dollars.....					3,328,007		2,088,003
30	Increase or decrease (-), 1930-1940.....percent.....					68.5		391.3	
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	6.85	6.61	9.22	7.37	21.55		23.00	
32	.....1930..dollars.....					12.59		7.99
33	.....1920..dollars.....					13.46		15.71
34	Average investment per acre irrigated.....1939..dollars.....	12.29	11.96	15.41	23.46	23.64		25.24	
35	Estimated final investment in existing enterprises.....1940..dollars.....	10,861	9,596	1,265	5,470	3,907,244		3,688,863	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	5.44	5.22	7.86	7.19	20.23		21.88	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
						Primary	Sup.	Primary	Sup.
						Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	24	19	5	5	252	21	193	16
38	Area irrigated in these enterprises.....1939..acres.....	675	602	73	110	152,304	2,902	139,551	2,710
39	Cost of maintenance and operation.....1939..dollars.....	707	642	65	145	106,029	994	96,650	943
40	Average cost, per acre irrigated.....1939..dollars.....	1.05	1.07	0.89	1.32	0.70	0.34	0.69	0.35
41	Total annual charges (reported) ⁵.....1939..dollars.....					112,497	444	104,570	444
42	Average annual charge per acre irrigated.....1939..dollars.....					0.81	0.23	0.82	0.23
43	Area against which charges were assessed.....1939..acres.....					149,161	1,905	137,606	1,905
44	Average annual charge per acre assessed.....1939..dollars.....					0.75	0.23	0.76	0.23
45	Total charges collected ⁶.....1939..dollars.....					107,215	434	96,857	434
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....					150,159		148,823	
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	33	28	5	8	274	22	180	16
48	Area irrigated by these enterprises.....1939..acres.....	708	635	73	228	146,162	2,894	128,394	2,667
49	Water delivered.....1939..acre-feet.....	1,903	1,717	186	639	276,115	2,595	240,000	2,339
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.7	2.7	2.5	2.8	1.9	0.9	1.9	0.9
51	Average cost of water per acre irrigated.....1939..dollars.....	1.03	1.05	0.89	1.32	0.82	0.33	0.82	0.33
52	Average cost of water per acre-foot delivered..1939..dollars.....	0.38	0.39	0.35	0.47	0.43	0.36	0.44	0.38
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	4	4		1	15		13	
54	Irrigable area in these enterprises.....1939..acres.....	30	30		(*)	23,872		23,252	
55	Irrigated area in these enterprises.....1939..acres.....	16	16		(*)	23,210		22,620	
56	Area for which drains have been installed.....1939..acres.....	15	15		(*)	325		325	
57	Additional area needing drainage.....1939..acres.....	7	7		(*)	5,789		5,419	

¹ In the 1930 and 1920 reports, Camas Creek apparently included the area now designated as Mud Lake Direct (58) (number refers to separate map); therefore, no 1930 or 1920 figures for these basins can be shown separately.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Percent not shown when more than 1,000.

CENSUS OF IRRIGATION — IDAHO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

GREAT SALT LAKE—Continued				INDEPENDENT BASINS								
Bear River—Continued		Mad Lake						Medicine Lodge Creek	Birch Creek	Little Lost River	Big Lost River	Deep Creek
Thomas Creek	Malad River	Total	Direct	Camas Creek ¹								
				Total	Direct	Beaver Creek						
(55)	(57)		(56)	(58)	(59)	(60)	(61)	(62)	(63)	(64)	(65)	
48	473	226	184	42	36	6	27	19	87	399	66	
4,175	14,592	29,694	22,710	7,224	6,222	1,002	3,045	3,698	11,927	26,335	2,595	
3,275	13,724	26,617	21,973	4,644	3,782	852	2,719	2,693	11,277	20,622	2,591	
.....	7	56	46	10	10	.....	35	.....	650	2,662	.....
900	861	3,261	691	2,570	2,420	150	291	1,005	.....	3,051	4
3,168	8,858	20,895	.....	.....	.....	806	3,983	.....	4,994	40,078	6
8,905	16,679	18,982	.....	.....	.....	1,502	5,019	.....	11,582	72,788	7
31.8	64.7	43.3	.....	.....	.....	24.3	-23.6	.....	140.3	-34.3	8
5,175	19,375	42,189	32,658	9,531	8,251	1,280	5,021	4,241	15,717	40,050	4,556	
3,246	10,522	59,836	.....	.....	.....	1,546	5,187	.....	5,684	85,283	.....
8,629	43,404	97,789	.....	.....	.....	2,590	12,445	.....	31,452	204,845	.....
1,000	4,783	12,255	9,948	2,307	2,029	278	1,976	543	3,790	13,715	1,961	
78	1,664	38,941	.....	.....	.....	740	1,204	.....	720	45,205	.....
24	26,725	78,797	.....	.....	.....	1,088	7,426	.....	19,900	132,057	.....
4,275	16,243	40,583	31,447	9,136	7,856	1,280	4,321	4,041	15,717	38,695	3,156	
3,246	10,502	59,721	.....	.....	.....	1,536	5,187	.....	5,684	79,886	.....
8,905	17,128	48,160	.....	.....	.....	1,970	8,390	.....	18,732	105,727	.....
31.7	54.7	-32.0	.....	.....	.....	-16.7	-16.7	.....	176.5	-51.6	.....
100	1,651	10,649	8,737	1,912	1,634	278	1,276	343	3,790	12,360	561	
78	1,644	38,826	.....	.....	.....	730	1,204	.....	720	39,908	.....
.....	449	29,168	.....	.....	.....	468	3,371	.....	7,180	32,939	.....
97.7	89.8	73.8	72.2	79.1	79.2	78.3	70.5	91.5	75.9	68.1	82.2	
97.6	84.3	35.0	.....	.....	.....	52.5	76.8	.....	87.3	50.1	.....
100.0	97.4	39.4	.....	.....	.....	76.2	59.8	.....	61.7	68.8	.....
12,835	201,771	393,946	367,882	26,064	17,139	8,925	17,195	25,750	211,390	593,768	22,462	
12,100	174,938	362,577	364,457	18,120	11,620	6,500	14,275	14,900	211,350	582,618	19,662	
735	26,833	11,369	3,425	7,944	5,519	2,425	2,920	10,850	40	1,150	2,800	
42,830	89,962	555,425	.....	.....	.....	8,500	7,535	.....	16,600	1,833,725	.....
25,389	332,176	585,886	.....	.....	.....	7,259	31,690	.....	474,465	2,709,696	.....
-70.0	124.3	-29.1	.....	.....	.....	5.0	128.2	.....	(²)	-67.6	.....
3.00	12.42	9.71	11.70	2.85	2.18	6.97	3.98	6.37	13.45	15.34	7.12	
13.19	8.57	9.30	.....	.....	.....	5.53	1.45	.....	2.92	22.93	.....
2.85	19.39	12.17	.....	.....	.....	3.68	3.78	.....	25.33	25.63	.....
3.07	13.83	13.16	16.20	3.61	2.75	8.91	5.65	6.96	17.72	22.55	8.66	
12,835	205,546	426,858	399,584	27,274	18,349	8,925	21,495	25,750	211,390	595,667	22,712	
2.48	10.61	10.12	12.24	2.86	2.22	6.97	4.28	6.07	13.45	14.87	4.99	
Primary	Sup.	Primary	Sup.	.....	.....	.....	.....	.....	.....	.....	.....
Enterprises	Enterprises	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	1	57	4	73	35	38	6	27	19	7	25	
(⁴)	(⁴)	11,978	171	29,934	22,710	7,224	6,222	1,002	3,045	3,698	11,873	
(⁴)	(⁴)	9,027	36	37,933	36,267	1,666	1,339	327	1,113	1,203	4,047	
(⁴)	(⁴)	0.75	0.21	1.27	1.60	0.23	0.22	0.33	0.37	0.33	0.34	
280	.....	7,647	.....	28,647	28,647	.....	.....	.....	3,812	38,943	2,047
0.56	.....	0.75	.....	1.66	1.66	.....	.....	.....	0.94	1.80	0.91
1,400	.....	10,155	.....	20,839	20,839	.....	.....	.....	15,040	34,898	3,858
0.20	.....	0.75	.....	1.37	1.37	.....	.....	.....	0.25	1.12	0.53
280	.....	10,078	.....	27,511	27,511	.....	.....	.....	2,048	28,910	2,050
.....	.....	1,636	.....	50,000	50,000	.....	.....	.....	.....	238,000	.....
5	1	89	5	72	34	38	6	27	19	8	25	
4,175	(⁴)	13,593	206	29,819	22,595	7,224	6,222	1,002	3,045	3,698	11,927	
5,525	(⁴)	30,590	226	77,697	63,913	13,784	10,482	3,302	7,221	13,718	33,068	
1.3	(⁴)	2.3	1.1	2.6	2.8	1.9	1.7	3.3	3.7	2.8	5.4	
0.45	(⁴)	0.83	0.21	1.26	1.59	0.23	0.22	0.33	0.37	0.33	0.34	
0.34	(⁴)	0.37	0.19	0.48	0.56	0.12	0.13	0.10	0.15	0.09	0.12	
.....	
.....	.....	(⁴)	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....
.....	.....	(⁴)	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....
.....	.....	(⁴)	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....
.....	.....	(⁴)	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,370	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,143	.....
.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	415	.....

⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - IDAHO

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER						
		Total	Snake River					
			Total	Upper Snake River				
				Total	Direct (1)	Total	Direct (2)	Salt River (3)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1 Enterprises.....1940..number.....	2 3,639	3,119	3,040	635	78	170	132	38
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	713	740	756	1,139	2,680	1,295	1,631	128
3 Diversion dams.....1940..total number.....	3,209	2,750	2,680	465	29	98	76	22
4 1930..total number.....	2,305	1,808	1,794	.....	.....	99	.....	.....
5 1920..total number.....	2,872	2,071	2,055	.....	.....	112	.....	.....
6 (a) Concrete and masonry.....1940..number.....	336	248	237	100	11	37	37	.....
7 (b) Timber.....1940..number.....	230	238	231	35	1	16	8	8
8 (c) Earth and rock.....1940..number.....	1,964	1,727	1,685	219	15	22	15	7
9 (d) Other, mixed, and not reported.....1940..number.....	619	537	537	111	2	23	16	7
10 Main canals and laterals.....1940..total length, miles.....	13,602.1	12,045.0	11,995.8	3,027.7	817.6	775.1	734.1	41.0
11 1930..total length, miles.....	14,344	12,724	12,655	.....	.....	817	.....	.....
12 1920..total length, miles.....	17,298	14,067	14,054	.....	.....	1,051	.....	.....
13 (a) Earth.....1940..length, miles.....	13,489	11,941	11,901	3,018	817	772	731	41
14 (b) Lined.....1940..length, miles.....	113.1	104.0	94.8	9.7	0.6	3.1	3.1	.....
15 1940..capacity, c.f.s. ³	71,510	65,342	64,699	25,624	5,309	8,897	8,683	214
16 1930..capacity, c.f.s. ³	76,763	67,487	67,161	.....	.....	7,031	.....	.....
17 1920..capacity, c.f.s. ³	86,273	74,815	74,625	.....	.....	8,609	.....	.....
18 Pipe lines ⁴.....1940..total length, miles.....	299.9	285.7	213.4	15.6	4.4	0.7	0.1	0.6
19 1930..total length, miles.....	263.4	254.6	192.0	.....	.....	.....	.....	.....
20 1920..total length, miles.....	180.6	173.6	168.4	.....	.....	.....	.....	.....
21 (a) Concrete.....1940..length, miles.....	96.0	94.1	62.5	4.7	2.4	0.6	.....	0.6
22 (b) Metal.....1940..length, miles.....	58.5	50.8	41.3	5.4	1.0	0.1	0.1	.....
23 (c) Wood-stave.....1940..length, miles.....	121.0	116.7	101.7	5.3	1.0	.....	.....	.....
24 (d) Other.....1940..length, miles.....	24.4	24.1	7.9	.....	.....	.....	.....	.....
25 Storage dams.....1940..total number.....	260	212	207	47	7	4	4	.....
26 1930..total number.....	152	121	116	.....	.....	3	.....	.....
27 1920..total number.....	288	191	190	.....	.....	7	.....	.....
28 (a) Concrete and masonry.....1940..number.....	44	38	34	7	2	1	1	.....
29 (b) Earth and rock.....1940..number.....	185	145	144	35	4	2	2	.....
30 (c) Other, mixed, and not reported.....1940..number.....	31	29	29	5	1	1	1	.....
31 Reservoirs.....1940..total number.....	290	239	231	45	6	4	4	.....
32 (a) 1-99 acre-foot capacity.....1940..number.....	164	134	128	27	3	3	3	.....
33 (b) 100-999 acre-foot capacity.....1940..number.....	70	53	51	11	2	1	1	.....
34 (c) 1,000 and over acre-foot capacity.....1940..number.....	56	52	52	7	1	.....	.....	.....
35 1940..total capacity, ac.-ft. ⁵	3,795,272	3,730,064	3,729,158	2,129,009	1,700,602	163	163	.....
36 1930..total capacity, ac.-ft.	155	125	121	.....	.....	1	.....	.....
37 1920..total capacity, ac.-ft.	3,645,373	3,545,738	3,545,232	.....	.....	200	.....	.....
38 Wells, flowing.....1940..number.....	375	251	251	2	2	.....	.....	.....
39 1930..number.....	220	180	180	.....	.....	.....	.....	.....
40 1920..number.....	142	85	85	.....	.....	.....	.....	.....
41 1940..yield, g.p.m.....	40,165	28,529	28,529	(⁶)	(⁶)	.....	.....	.....
42 1930..yield, g.p.m.....	30,108	20,808	20,808	.....	.....	.....	.....	.....
43 1920..yield, g.p.m.....	15,133	7,665	7,665	.....	.....	.....	.....	.....
44 Wells, pumped.....1940..number.....	309	238	236	14	2	2	2	.....
45 1930..number.....	121	104	101	.....	.....	.....	.....	.....
46 1920..number.....	53	53	53	.....	.....	.....	.....	.....
47 1940..yield, g.p.m.....	225,194	120,006	119,965	15,280	(⁶)	(⁶)	(⁶)	.....
48 1930..yield, g.p.m.....	34,601	25,811	25,656	.....	.....	.....	.....	.....
49 1920..yield, g.p.m.....	17,749	17,749	17,749	.....	.....	.....	.....	.....
50 Pumping plants.....1940..total number.....	665	581	567	81	43	3	3	.....
51 1930..total number.....	393	367	360	.....	.....	1	.....	.....
52 Prime movers.....1940..capacity, hp.....	44,537	39,993	38,672	2,903	2,511	21	21	.....
53 1930..capacity, hp.....	33,754	30,143	29,059	.....	.....	5	.....	.....
54 1920..capacity, hp.....	28,364	27,465	27,465	.....	.....	.....	.....	.....
55 (a) Electric.....1940..number.....	495	424	414	54	38	1	1	.....
56 1940..capacity, hp.....	40,575	36,151	34,875	2,584	2,459	(⁶)	(⁶)	.....
57 (b) Internal-combustion.....1940..number.....	150	139	136	24	5	2	2	.....
58 1940..capacity, hp.....	1,839	1,721	1,711	316	52	(⁶)	(⁶)	.....
59 (c) Other.....1940..number.....	20	18	17	3	.....	.....	.....	.....
60 1940..capacity, hp.....	2,123	2,121	2,086	3	.....	.....	.....	.....
61 Pumps.....1940..total number.....	675	590	576	78	40	3	3	.....
62 1930..number.....	465	429	411	.....	.....	1	.....	.....
63 1920..number.....	232	215	215	.....	.....	.....	.....	.....
64 1940..capacity, g.p.m.....	2,719,905	2,338,758	2,293,131	195,948	166,606	3,210	3,210	.....
65 1930..capacity, g.p.m.....	2,113,513	1,822,173	1,765,256	.....	.....	600	.....	.....
66 1920..capacity, g.p.m.....	1,397,681	1,286,516	1,286,516	.....	.....	.....	.....	.....
67 (a) Centrifugal.....1940..number.....	482	420	409	67	38	3	3	.....
68 1940..capacity, g.p.m.....	2,272,655	1,958,386	1,912,890	183,186	164,585	3,210	3,210	.....
69 1940..average capacity, g.p.m.....	4,715	4,663	4,677	2,734	4,331	1,070	1,070	.....
70 (b) Turbine.....1940..number.....	111	95	95	8	.....	.....	.....	.....
71 1940..capacity, g.p.m.....	214,768	170,446	170,446	12,020	(⁶)	.....	.....	.....
72 1940..average capacity, g.p.m.....	1,935	1,794	1,794	1,502	(⁶)	.....	.....	.....
73 (c) Plunger.....1940..number.....	10	7	5	.....	.....	.....	.....	.....
74 1940..capacity, g.p.m.....	257	234	193	.....	.....	.....	.....	.....
75 1940..average capacity, g.p.m.....	26	33	39	.....	.....	.....	.....	.....
76 (d) Other.....1940..number.....	72	68	67	3	.....	.....	.....	.....
77 1940..capacity, g.p.m.....	232,237	209,692	209,632	142	.....	.....	.....	.....
78 Pumping lift, from all sources.....1940..average, feet.....	26	26	25	19	23	8	8	.....
79 1930..average, feet.....	32	32	31	.....	.....	6	.....	.....
80 1920..average, feet.....	29	32	32	.....	.....	.....	.....	.....
81 from pumped wells.....1940..average, feet.....	29	29	27	20	(⁶)	(⁶)	(⁶)	.....
82 from surface sources.....1940..average, feet.....	24	24	23	19	24	15	15	.....

¹ Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State total.
² Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.
³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — IDAHO

253

WORKS, 1940, 1930, AND 1920

COLUMBIA RIVER—Continued															
Snake River—Continued															
Upper Snake River—Continued							Lower Snake River								
Henry's Fork			Grays Lake (6)	Blackfoot River (7)	Portneuf River (8)	Bannock Creek (9)	Total	Direct (10)	Raft River (11)	Goose Creek (12)	Salmon Falls Creek (13)	Little and Big Wood Rivers			
Total	Direct (4)	Teton River (5)										Total	Direct (14)	Camas Creek (15)	
189	99	90	22	29	137	10	2,405	376	50	20	17	82	60	22	1
980	1,336	547	174	2,642	219	181	655	1,853	271	947	2,304	1,340	1,654	485	2
147	81	66	21	30	123	17	2,215	296	37	98	17	87	61	26	3
93	.....	.....	.....	55	136	.....	.....	.....	7	5	20	55	.....	.....	4
226	.....	.....	.....	43	101	.....	.....	.....	101	.....	40	271	.....	.....	5
32	24	8	.....	4	16	.....	137	27	8	2	.....	15	14	1	6
16	14	2	.....	2	.....	.....	196	15	.....	1	.....	13	13	.....	7
72	36	36	17	19	67	7	1,466	211	20	25	13	44	19	25	8
27	7	20	4	5	40	10	416	43	9	60	4	15	15	.....	9
770.6	516.5	254.1	38.1	333.1	252.2	41.0	8,968.1	3,403.7	69.0	98.0	72.0	643.4	608.4	35.0	10
683	.....	.....	.....	463	358	.....	.....	.....	78	125	235	999	.....	.....	11
1,187	.....	.....	.....	354	421	.....	.....	.....	163	.....	352	1,105	.....	.....	12
767	513	254	38	333	250	41	8,883	3,386	69	98	70	643	608	35	13
3.6	3.5	0.1	0.1	0.1	2.2	.....	85.1	17.7	.....	.....	2.0	0.4	0.4	.....	14
8,720	7,717	1,003	73	1,755	801	69	39,075	16,729	285	571	789	2,845	2,703	142	15
10,709	.....	.....	.....	2,232	1,072	.....	.....	.....	379	523	841	2,867	.....	.....	16
12,693	.....	.....	.....	1,214	1,274	.....	.....	.....	642	.....	1,857	6,658	.....	.....	17
1.2	0.7	0.5	.....	3.3	6.0	.....	197.8	45.8	1.1	0.2	3.0	.....	.....	.....	18
1.0	.....	.....	.....	3.9	5.5	.....	.....	.....	.....	.....	.....	20.6	.....	.....	19
0.8	.....	.....	.....	1.1	2.8	.....	.....	.....	.....	.....	.....	7.2	.....	.....	20
0.2	.....	0.2	.....	1.5	.....	.....	57.8	7.2	.....	.....	.....	0.1	.....	.....	21
0.5	0.2	0.3	.....	0.8	3.0	.....	35.9	12.9	0.7	0.2	1.0	.....	.....	.....	22
0.5	0.5	.....	.....	1.0	2.8	.....	96.4	24.9	0.4	.....	.....	.....	.....	.....	23
.....	.....	.....	.....	0.2	.....	.....	7.7	0.8	.....	.....	2.0	.....	.....	.....	24
13	10	3	4	1	17	1	160	26	12	3	3	14	6	8	25
4	.....	.....	.....	2	14	.....	.....	.....	.....	1	1	4	4	.....	26
25	.....	.....	.....	3	7	.....	.....	.....	2	.....	6	24	24	.....	27
1	1	.....	1	.....	2	.....	27	3	7	.....	1	1	1	.....	28
12	9	3	3	.....	13	1	109	19	5	3	2	12	5	7	29
.....	.....	.....	.....	1	2	.....	24	4	.....	.....	.....	1	.....	1	30
13	10	3	4	1	16	1	186	31	13	4	4	15	7	8	31
4	1	3	3	1	13	.....	101	17	12	3	1	2	2	.....	32
5	5	.....	.....	.....	2	1	40	7	.....	.....	.....	3	1	2	33
4	4	.....	1	.....	1	.....	45	7	1	1	2	10	4	6	34
210,747	210,732	15	200,131	(⁶)	17,176	(⁶)	1,600,149	63,627	1,568	75,007	211,601	353,347	314,647	38,700	35
3	.....	.....	.....	3	11	.....	.....	.....	1	.....	1	5	5	.....	36
82,988	.....	.....	450,250	.....	23,845	.....	.....	.....	.....	74,000	182,650	228,900	228,900	.....	37
.....	.....	.....	.....	.....	.....	.....	249	80	1	.....	4	.....	.....	.....	38
20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	.....	.....	.....	.....	.....	.....	23,759	4,784	(⁶)	.....	3	.....	.....	.....	40
2,828	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,900	.....	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42
5	.....	5	.....	.....	5	.....	222	44	28	1	1	8	8	.....	44
23	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1	1	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
5,835	.....	5,835	.....	.....	5,375	.....	104,685	25,415	15,920	(⁶)	(⁶)	5,945	5,945	.....	47
3,886	.....	.....	.....	3	900	.....	.....	.....	.....	.....	.....	900	900	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,500	2,500	.....	49
8	3	5	.....	.....	27	.....	486	199	21	1	1	8	8	.....	50
44	.....	.....	.....	1	4	.....	.....	.....	.....	.....	.....	3	3	.....	51
208	71	137	.....	.....	163	.....	35,769	29,934	618	(⁶)	(⁶)	57	57	.....	52
326	.....	.....	.....	2	18	.....	.....	.....	.....	.....	6	65	65	.....	53
.....	.....	.....	.....	.....	14	.....	360	171	.....	.....	1	32	32	.....	54
(⁶)	(⁶)	.....	.....	.....	70	.....	32,291	29,466	.....	.....	(⁶)	(⁶)	(⁶)	(⁶)	55
6	1	5	.....	.....	11	.....	112	24	20	1	.....	6	6	.....	56
167	(⁶)	137	.....	.....	91	.....	1,395	248	570	(⁶)	.....	49	49	.....	57
1	(⁶)	.....	.....	.....	2	.....	14	4	1	.....	.....	1	1	.....	58
8	3	5	.....	.....	27	(⁶)	2,083	220	(⁶)	.....	(⁶)	(⁶)	(⁶)	(⁶)	59
44	.....	.....	.....	1	4	.....	496	202	27	1	1	8	8	.....	60
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61
12,986	6,661	6,325	.....	.....	1	.....	.....	.....	.....	.....	1	5	5	.....	62
18,695	.....	.....	.....	.....	12,347	.....	2,097,783	1,768,148	15,470	(⁶)	(⁶)	5,995	5,995	.....	63
.....	.....	.....	.....	3	2,236	.....	.....	.....	.....	.....	440	3,000	3,000	.....	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,050	4,050	.....	65
4	2	2	.....	.....	22	.....	342	156	18	1	.....	5	5	.....	66
8,166	(⁶)	(⁶)	.....	.....	7,225	.....	1,729,674	1,644,273	8,500	(⁶)	.....	3,945	3,945	.....	67
2,042	(⁶)	(⁶)	.....	.....	328	.....	5,053	10,540	472	(⁶)	.....	789	789	.....	68
3	.....	3	.....	.....	3	.....	87	31	9	.....	1	.....	.....	.....	69
4,800	.....	4,800	.....	.....	5,000	.....	158,426	86,445	6,970	.....	(⁶)	.....	.....	.....	70
1,600	.....	1,600	.....	.....	1,637	.....	1,821	2,789	774	.....	(⁶)	.....	.....	.....	71
.....	.....	.....	.....	.....	.....	.....	5	2	.....	.....	.....	.....	.....	.....	72
.....	.....	.....	.....	.....	.....	.....	193	(⁶)	.....	.....	.....	.....	.....	.....	73
.....	.....	.....	.....	.....	.....	.....	39	(⁶)	.....	.....	.....	.....	.....	.....	74
(⁶)	(⁶)	.....	.....	.....	2	.....	64	13	.....	.....	.....	3	3	.....	75
.....	.....	.....	.....	.....	(⁶)	.....	209,490	37,355	.....	.....	.....	2,050	2,050	.....	76
25	8	38	.....	.....	15	.....	26	28	38	(⁶)	(⁶)	19	19	.....	77
21	.....	.....	.....	.....	24	.....	.....	.....	.....	.....	.....	22	22	.....	78
.....	.....	.....	.....	80	20	.....	.....	.....	.....	.....	.....	17	17	.....	79
31	3	38	.....	.....	16	.....	28	26	39	(⁶)	(⁶)	19	19	.....	80
10	10	.....	.....	.....	14	.....	24	29	30	.....	(⁶)	19	19	.....	81
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	82

⁴ Includes siphons and farm pipe lines reported.
⁵ Total capacity of all reservoirs regardless of size.
⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — IDAHO

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		COLUMBIA RIVER—Continued							
		Snake River—Continued							
		Lower Snake River—Continued							
		Bruneau River (16)	Boise River					Owyhee River	
Total	Direct		North Fork Boise River (18)	South Fork Boise River (19)	Moore Creek (20)	Total	Direct (21)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	84	374	284	7	62	21	80	11
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	153	950	1,228	35	87	44	157	95
3	Diversion dams.....1940..total number.....	154	206	127	4	48	27	174	17
4	.....1930..total number.....	62	78	.....	.....	.....	.....	51	.....
5	.....1920..total number.....	110	70	.....	.....	.....	.....	71	.....
6	(a) Concrete and masonry.....1940..number.....	4	29	27	.....	2	.....	1	.....
7	(b) Timber.....1940..number.....	10	24	16	.....	8	.....	5	.....
8	(c) Earth and rock.....1940..number.....	89	110	49	4	30	27	168	17
9	(d) Other, mixed, and not reported.....1940..number.....	51	43	35	.....	8	.....	10	.....
10	Main canals and laterals.....1940..total length, miles.....	118.0	1,941.2	1,839.1	1.0	78.0	23.1	133.0	18.0
11	.....1930..total length, miles.....	155	1,926	.....	.....	.....	.....	69	.....
12	.....1920..total length, miles.....	228	922	.....	.....	.....	.....	97	.....
13	(a) Earth.....1940..length, miles.....	118	1,917	1,815	1	78	.....	133	18
14	(b) Lined.....1940..length, miles.....	.....	24.2	24.1	.....	0.1	.....	.....	.....
15	.....1940..capacity, c.f.s. ¹	435	7,507	7,328	7	131	41	344	47
16	.....1930..capacity, c.f.s. ¹	569	13,576	.....	.....	.....	.....	335	.....
17	.....1920..capacity, c.f.s. ¹	771	6,669	.....	.....	.....	.....	428	.....
18	Pipe lines ².....1940..total length, miles.....	.....	37.8	37.1	0.2	0.4	0.1	.....	.....
19	.....1930..total length, miles.....	.....	47.9	.....	.....	.....	.....	.....	.....
20	.....1920..total length, miles.....	0.2	30.5	.....	.....	.....	.....	.....	.....
21	(a) Concrete.....1940..length, miles.....	.....	28.8	28.6	0.2	.....	.....	.....	.....
22	(b) Metal.....1940..length, miles.....	.....	2.2	1.7	.....	0.4	0.1	.....	.....
23	(c) Wood-stave.....1940..length, miles.....	.....	6.8	6.8	.....	.....	.....	.....	.....
24	(d) Other.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Storage dams.....1940..total number.....	4	14	12	1	1	.....	19	3
26	.....1930..total number.....	2	7	.....	.....	.....	.....	9	.....
27	.....1920..total number.....	17	14	.....	.....	.....	.....	7	.....
28	(a) Concrete and masonry.....1940..number.....	.....	2	1	1	.....	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	2	11	10	.....	1	.....	13	1
30	(c) Other, mixed, and not reported.....1940..number.....	2	1	1	.....	.....	.....	6	2
31	Reservoirs.....1940..total number.....	4	27	25	1	1	.....	22	4
32	(a) 1-99 acre-feet capacity.....1940..number.....	2	23	21	1	1	.....	2	.....
33	(b) 100-999 acre-feet capacity.....1940..number.....	2	.....	.....	.....	.....	.....	17	3
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	.....	4	4	.....	.....	.....	3	1
35	.....1940..total capacity, ac.-ft. ³	575	475,771	475,769	(⁴)	(⁴)	.....	17,759	2,400
36	.....1930..total number.....	3	6	.....	.....	.....	.....	9	.....
37	.....1930..total capacity, ac.-ft.....	5,075	466,395	.....	.....	.....	.....	4,698	.....
38	Wells, flowing.....1940..number.....	66	97	97	.....	.....	.....	.....	.....
39	.....1930..number.....	24	6	.....	.....	.....	.....	1	.....
40	.....1920..number.....	38	8	.....	.....	.....	.....	.....	.....
41	.....1940..yield, g.p.m.....	7,440	10,815	10,815	.....	.....	.....	.....	.....
42	.....1930..yield, g.p.m.....	7,378	613	.....	.....	.....	.....	10	.....
43	.....1920..yield, g.p.m.....	1,628	75	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	.....	104	104	.....	.....	.....	.....	.....
45	.....1930..number.....	.....	8	.....	.....	.....	.....	.....	.....
46	.....1920..number.....	1	2	.....	.....	.....	.....	.....	.....
47	.....1940..yield, g.p.m.....	.....	52,715	52,715	.....	.....	.....	.....	.....
48	.....1930..yield, g.p.m.....	.....	7,050	.....	.....	.....	.....	.....	.....
49	.....1920..yield, g.p.m.....	27	900	.....	.....	.....	.....	.....	.....
50	Pumping plants.....1940..total number.....	1	164	163	.....	1	.....	.....	.....
51	.....1930..total number.....	2	30	.....	.....	.....	.....	.....	.....
52	Prime movers.....1940..capacity, hp.....	(⁴)	1,648	1,646	.....	(⁴)	.....	.....	.....
53	.....1930..capacity, hp.....	451	387	.....	.....	.....	.....	.....	.....
54	.....1920..capacity, hp.....	457	324	.....	.....	.....	.....	.....	.....
55	(a) Electric.....1940..number.....	.....	123	123	.....	.....	.....	.....	.....
56	.....1940..capacity, hp.....	.....	1,361	1,361	.....	.....	.....	.....	.....
57	(b) Internal-combustion.....1940..number.....	1	38	37	.....	1	.....	.....	.....
58	.....1940..capacity, hp.....	(⁴)	282	280	.....	(⁴)	.....	.....	.....
59	(c) Other.....1940..number.....	.....	3	3	.....	.....	.....	.....	.....
60	.....1940..capacity, hp.....	.....	5	5	.....	.....	.....	.....	.....
61	Pumps.....1940..total number.....	1	165	164	.....	1	.....	.....	.....
62	.....1930..number.....	3	31	.....	.....	.....	.....	.....	.....
63	.....1920..number.....	7	10	.....	.....	.....	.....	.....	.....
64	.....1940..capacity, g.p.m.....	(⁴)	107,679	107,629	.....	(⁴)	.....	.....	.....
65	.....1930..capacity, g.p.m.....	32,130	21,270	.....	.....	.....	.....	.....	.....
66	.....1920..capacity, g.p.m.....	27,465	9,650	.....	.....	.....	.....	.....	.....
67	(a) Centrifugal.....1940..number.....	.....	93	92	.....	1	.....	.....	.....
68	.....1940..capacity, g.p.m.....	.....	42,118	42,068	.....	(⁴)	.....	.....	.....
69	.....1940..average capacity, g.p.m.....	.....	453	457	.....	(⁴)	.....	.....	.....
70	(b) Turbine.....1940..number.....	.....	40	40	.....	.....	.....	.....	.....
71	.....1940..capacity, g.p.m.....	.....	41,011	41,011	.....	.....	.....	.....	.....
72	.....1940..average capacity, g.p.m.....	.....	1,025	1,025	.....	.....	.....	.....	.....
73	(c) Plunger.....1940..number.....	.....	1	1	.....	.....	.....	.....	.....
74	.....1940..capacity, g.p.m.....	(⁴)	(⁴)	(⁴)	.....	(⁴)	.....	.....	.....
75	.....1940..average capacity, g.p.m.....	(⁴)	(⁴)	(⁴)	.....	(⁴)	.....	.....	.....
76	(d) Other.....1940..number.....	1	31	31	.....	.....	.....	.....	.....
77	.....1940..capacity, g.p.m.....	(⁴)	24,542	24,542	.....	.....	.....	.....	.....
78	Pumping lift, from all sources.....1940..average, feet.....	(⁴)	21	21	.....	(⁴)	.....	.....	.....
79	.....1930..average, feet.....	30	17	.....	.....	.....	.....	.....	.....
80	.....1920..average, feet.....	24	30	.....	.....	.....	.....	.....	.....
81	from pumped wells.....1940..average, feet.....	.....	25	25	.....	.....	.....	.....	.....
82	from surface sources.....1940..average, feet.....	(⁴)	15	15	.....	(⁴)	.....	.....	.....

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

²Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - IDAHO

WORKS, 1940, 1930, AND 1920—Continued

COLUMBIA RIVER—Continued														
Snake River—Continued														
Lower Snake River—Continued														
Owyhee River—Continued				Payette River					Salmon River					
South Fork Owyhee River			Jordan Creek (24)	Total	Direct	North Fork Payette River (26)	South Fork Payette River (27)	Weiser River (28)	Total	Upper Salmon River				
Total	Direct (22)	East Fork Owyhee River (23)								Total	Direct (29)	Pahsimeroi River (30)	Leahli River (31)	
23	4	19	46	353	144	178	31	104	802	510	189	51	270	1
274	42	322	114	423	672	279	96	320	162	200	191	257	185	2
40	5	35	117	233	104	73	58	79	814	540	230	55	255	3
				153				135	548					4
				51				30	363					5
			1	24	13	10	1	13	12	7	3	2	2	6
			5	14	9	4	1	9	96	64	28	1	35	7
40	5	35	101	178	67	57	54	38	570	400	197	46	155	8
			10	17	15	2		19	136	69	2	4	63	9
55.0	7.0	48.0	60.0	747.4	551.0	156.4	40.0	267.0	1,428.8	1,073.8	405.4	95.0	573.4	10
				692				338	1,350					11
				785				478	1,693					12
55	7	48	60	739	544	155	40	259	1,408	1,063	400	95	568	13
				8.4	7.0	1.4		8.0	20.8	10.8	5.4		5.4	14
94	12	82	203	3,591	2,474	1,032	85	1,622	4,247	3,455	1,333	312	1,810	15
				4,757				873	3,594					16
				4,450				1,822	4,747					17
				43.9	42.8	0.9	0.2	6.1	3.2	1.5	0.8		0.7	18
				14.5				7.0	6.1					19
				5.2				15.1	1.9					20
				19.9	19.9				0.1	0.1	0.1			21
				4.3	3.3	0.8	0.2	0.1	1.7	1.2	0.6		0.6	22
				17.2	17.1	0.1		4.0	1.2					23
				2.5	2.5			2.0	0.2	0.2	0.1		0.1	24
12	1	11	4	41	14	26	1	9	13	5	3		2	25
				20				7	9					26
				12				9	12					27
				9	2	6	1	2	2	1			1	28
8	1	7	4	29	12	17		4	7	4	3		1	29
4		4		3		3		3	4					30
14	1	13	4	38	16	20	2	9	13	5	3		2	31
				22	13	6	1	2	11	5	3		2	32
12	1	11	2	7	1	6		3						33
2		2		9	2	6	1	4	2					34
14,821	(*)	14,621	538	296,991	34,658	100,426	(*)	91,375	7,324	108	31		(*)	35
				24				8	10					36
				101,125				73,100	4,304					37
				1		1								38
				(*)		(*)		3						39
				36				16						40
				14	14			1	1	1	1			44
				3										45
				3										46
				2,010	2,010			(*)	(*)	(*)	(*)			47
				645										48
				9,000										49
				51	49	2		3	6	3	3			50
				96		(*)		3	7					51
				2,409	2,401	(*)		302	90	21	21			52
				1,975				264	38					53
				508				620	38					54
				30	30			3	3	2	2			55
				512	512			302	21	(*)	(*)			56
				16	14	2			3	1	1			57
				92	84	(*)			69	(*)	(*)			58
				5	5									59
				1,805	1,805									60
				53	51	2		3	7	4	4			61
				101				4	7					62
				13				5	2					63
				177,946	177,521	(*)		12,780	4,060	3,410	3,410			64
				179,191				14,000	1,965					65
				18,256				31,100	10,875					66
				32	30	2		3	6	3	3			67
				10,538	10,113	(*)		12,780	3,160	2,510	2,510			68
				329	337	(*)		4,260	527	837	837			69
				6	6									70
				23,950	23,950									71
				3,992	3,992									72
				1	1									73
				(*)	(*)									74
				(*)	(*)									75
				14	14				1	1	1			76
				143,438	143,438				(*)	(*)	(*)			77
				30	31	(*)		52	13	14	14			78
				32				35	20					79
				28				76	56					80
				45	45	(*)		(*)	(*)	(*)	(*)			81
				23	24	(*)		79	14	15	15			82

³Total capacity of all reservoirs regardless of size.
⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - IDAHO

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		COLUMBIA RIVER—Continued						
		Snake River—Continued						
		Lower Snake River—Continued						
		Salmon River—Continued						
		Lower Salmon River						
		Total	Direct (32)	North Fork Salmon River (33)	Panther Creek (34)	Middle Fork Salmon River (35)	South Fork Salmon River (36)	Little Salmon River (37)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	292	141	23	16	13	7	92
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	97	80	45	63	42	84	151
3	Diversion dams.....1940..total number.....	274	134	32	27	22	9	50
4	.....1930..total number.....							
5	.....1920..total number.....							
6	(a) Concrete and masonry.....1940..number.....	5						5
7	(b) Timber.....1940..number.....	32	15	2		2	3	10
8	(c) Earth and rock.....1940..number.....	170	108	8	26	20	3	5
9	(d) Other, mixed, and not reported.....1940..number.....	67	11	22	1		3	30
10	Main canals and laterals.....1940..total length, miles.....	355.0	156.3	31.3	18.0	12.0	9.2	128.2
11	.....1930..total length, miles.....							
12	.....1920..total length, miles.....							
13	(a) Earth.....1940..length, miles.....	345	150	29	18	12	9	127
14	(b) Lined.....1940..length, miles.....	10.0	6.3	2.3			0.2	1.2
15	.....1940..capacity, c.f.s. ¹	792	327	37	91	71	19	247
16	.....1930..capacity, c.f.s. ¹							
17	.....1920..capacity, c.f.s. ¹							
18	Pipe lines ².....1940..total length, miles.....	1.7	1.3		0.2			0.2
19	.....1930..total length, miles.....							
20	.....1920..total length, miles.....							
21	(a) Concrete.....1940..length, miles.....							
22	(b) Metal.....1940..length, miles.....	0.5	0.3					0.2
23	(c) Wood-stave.....1940..length, miles.....	1.2	1.0		0.2			
24	(d) Other.....1940..length, miles.....							
25	Storage dams.....1940..total number.....	8	3					5
26	.....1930..total number.....							
27	.....1920..total number.....							
28	(a) Concrete and masonry.....1940..number.....	1						1
29	(b) Earth and rock.....1940..number.....	3	1					2
30	(c) Other, mixed, and not reported.....1940..number.....	4	2					2
31	Reservoirs.....1940..total number.....	8	4					4
32	(a) 1-99 acre-feet capacity.....1940..number.....	6	3					3
33	(b) 100-999 acre-feet capacity.....1940..number.....							
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	2	1					1
35	.....1940..total capacity, ac.-ft. ³	7,216	3,212					4,004
36	.....1930..total number.....							
37	.....1930..total capacity, ac.-ft.....							
38	Wells, flowing.....1940..number.....							
39	.....1930..number.....							
40	.....1920..number.....							
41	.....1940..yield, g.p.m.....							
42	.....1930..yield, g.p.m.....							
43	.....1920..yield, g.p.m.....							
44	Wells, pumped.....1940..number.....							
45	.....1930..number.....							
46	.....1920..number.....							
47	.....1940..yield, g.p.m.....							
48	.....1930..yield, g.p.m.....							
49	.....1920..yield, g.p.m.....							
50	Pumping plants.....1940..total number.....	3	2			1		
51	.....1930..total number.....							
52	Prime movers.....1940..capacity, hp.....	69	(⁴)			(⁴)		
53	.....1930..capacity, hp.....							
54	.....1920..capacity, hp.....							
55	(a) Electric.....1940..number.....	(⁴) 1				(⁴) 1		
56	.....1940..capacity, hp.....	(⁴)				(⁴)		
57	(b) Internal-combustion.....1940..number.....	(⁴) 2	(⁴) 2					
58	.....1940..capacity, hp.....	(⁴)	(⁴)					
59	(c) Other.....1940..number.....							
60	.....1940..capacity, hp.....							
61	Pumps.....1940..total number.....	3	2			1		
62	.....1930..number.....							
63	.....1920..number.....							
64	.....1940..capacity, g.p.m.....	650	(⁴)			(⁴)		
65	.....1930..capacity, g.p.m.....							
66	.....1920..capacity, g.p.m.....							
67	(a) Centrifugal.....1940..number.....	3	2			1		
68	.....1940..capacity, g.p.m.....	650	(⁴)			(⁴)		
69	.....1940..average capacity, g.p.m.....	217	(⁴)			(⁴)		
70	(b) Turbine.....1940..number.....							
71	.....1940..capacity, g.p.m.....							
72	.....1940..average capacity, g.p.m.....							
73	(c) Plunger.....1940..number.....							
74	.....1940..capacity, g.p.m.....							
75	.....1940..average capacity, g.p.m.....							
76	(d) Other.....1940..number.....							
77	.....1940..capacity, g.p.m.....							
78	Pumping lift, from all sources.....1940..average, feet.....	12	(⁴)			(⁴)		
79	.....1930..average, feet.....							
80	.....1920..average, feet.....							
81	from pumped wells.....1940..average, feet.....							
82	from surface sources.....1940..average, feet.....	12	(⁴)			(⁴)		

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - IDAHO

WORKS, 1940, 1930, AND 1920—Continued

COLUMBIA RIVER—Continued											GREAT SALT LAKE				
Snake River—Continued				Spokane River			Clark Fork			Kootenai River	Bear River				
Lower Snake River—Continued				Total	Direct	Coeur d'Alene River	Total	Direct	Priest River		Total	Direct	Thomas Creek	Malad River	
Clearwater River															
Total	Direct	Selway River	South Fork Clearwater River												
(38)	(40)	(41)	(45)	(46)	(50)	(51)	(52)	(54)	(55)	(57)					
63	55	3	5	36	22	14	35	30	5	8	343	235	6	102	1
73	81	21	27	215	343	13	38	41	24	91	518	669	712	159	2
30	24	3	3	29	19	10	37	26	11	4	286	231	5	50	3
13											231	49	14	22	4
2											498	63	25	190	5
2	2			10	10		1	1			56	40	2	14	6
9	6	3		2	2		5	3	2		31	29		2	7
10	10			16	6	10	22	13	9	4	152	119	2	31	8
9	6		3	1	1		9	9			47	43	1	3	9
26.6	21.6	2.0	3.0	39.9	36.7	3.2	5.1	3.1	2.0	4.2	1,038.9	902.9	20.0	116.0	10
27											905	333	31	95	11
24											2,076	484	63	837	12
23	18	2	3	31	28	3	5	3	2	4	1,030	894	20	116	13
3.5	3.6			8.9	8.7	0.2	0.1	0.1		0.2	8.9	8.9			14
110	97	4	9	540	526	14	55	46	9	48	3,646	3,340	85	221	15
194											3,315	1,848	54	152	16
69											5,030	2,121	203	400	17
56.7	56.7			69.1	66.5	2.6	2.0	1.8	0.2	1.2	11.6	9.4		2.2	18
50.9											5.7	1.2			19
35.9											4.6	4.5			20
1.8	1.8			31.5	31.5		0.1	0.1			1.9	1.9			21
12.8	12.8			7.5	5.3	2.2	1.1	1.1		0.9	5.1	3.7		1.4	22
41.9	41.9			14.1	13.7	0.4	0.6	0.4	0.2	0.3	4.3	3.5		0.8	23
0.2	0.2			16.0	16.0		0.2	0.2			0.3	0.3			24
2	2			3	3		2	2			40	31	2	7	25
4											21	3		5	26
2											80	6		58	27
				3	3		1	1			5	3		2	28
2	2						1	1			33	27	2	4	29
											2	1		1	30
6	6			4	3	1	4	3	1		42	30	1	11	31
4	4			2	1	1	4	3	1		22	15		7	32
				2	2						17	12	1	4	33
2	2										3	3			34
5,004	5,004			902	901	(*)	4	3	(*)		27,143	25,268	(*)	1,775	35
3											20		1	3	36
9,000											28,751		40	410	37
											94			94	38
											21			21	39
											57			57	40
											5,035			5,035	41
											750			750	42
											7,468			7,468	43
20	20			2	2						14	7		7	44
19											5			5	45
28															46
1,965	1,965			(*)	(*)						6,828	2,610		4,218	47
2,229											600			600	48
2,750															49
31	31			13	12	1	1	1		1	29	23		6	50
33											9	1		1	51
681	681			1,316	1,315	(*)	(*)	(*)		(*)	2,689	2,523		168	52
791											2,341	1		6	53
394											573	530			54
28	28			10	9	1					26	21		5	55
606	606			1,276	1,275	(*)					2,678	2,513		165	56
3	3			2	2		1	1			3	2		1	57
75	75			(*)	(*)		(*)	(*)		(*)	11	(*)		(*)	58
				1	1										59
				(*)	(*)										60
30	30			13	12	1	1	1		2	29	23		6	61
34											15	1		1	62
36											8	3			63
4,475	4,475			45,567	45,517	(*)	(*)	(*)		(*)	110,236	105,960		4,278	64
15,024											117,500	50		600	65
9,945											14,915	5,180			66
28	28			11	10	1				1	22	19		3	67
4,305	4,305			45,526	45,476	(*)	(*)	(*)		(*)	85,530	82,430		3,100	68
154	154			4,139	4,548	(*)				(*)	3,888	4,338		1,033	69
											3	1		2	70
											2,160	(*)		(*)	71
											720	(*)		(*)	72
				2	2						1			1	73
(*)	(*)			(*)	(*)						(*)			(*)	74
(*)	(*)			(*)	(*)						(*)			(*)	75
(*)	(*)						1	1		1	3	3			76
(*)	(*)						(*)	(*)		(*)	22,530	22,530			77
30	30			76	81	(*)	(*)	(*)		(*)	40	33		56	78
34											33	12		12	79
21											10	9			80
27	27			(*)	(*)		(*)	(*)		(*)	41	22		66	81
37	37						(*)	(*)		(*)	38	42		6	82

*Total capacity of all reservoirs regardless of size.

†Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - IDAHO

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	INDEPENDENT BASINS										
	Total	Direct (58)	Mud Lake			Medicine Lodge Creek (61)	Birch Creek (62)	Little Lost River (63)	Big Lost River (64)	Deep Creek (65)	
			Total	Direct	Beaver Creek (60)						
											Camas Creek ¹
ENTERPRISES AND IRRIGATION WORKS JANUARY 1											
1	Enterprises.....	73	35	38	32	6	30	19	8	33	14
2	Average size of enterprise based on area works were capable of supplying with water.....	556	898	240	246	213	144	213	1,965	1,173	225
3	Diversion dams.....	41	.....	41	34	7	52	20	14	44	2
4	1930..total number.....	46	.....	.....	.....	9	35	.....	27	110	.....
5	1920..total number.....	108	.....	.....	.....	27	62	.....	33	98	.....
6	(a) Concrete and masonry.....	1	.....	1	1	.....	.....	7	13	10	1
7	(b) Timber.....	6	.....	6	5	1	11	1	.....	3	.....
8	(c) Earth and rock.....	24	.....	24	20	4	26	11	1	23	.....
9	(d) Other, mixed, and not reported.....	10	.....	10	8	2	15	1	.....	8	1
10	Main canals and laterals.....	91.1	42.1	49.0	37.0	12.0	45.0	41.0	58.1	243.0	40.0
11	1930..total length, miles.....	165	.....	.....	.....	24	10	.....	48	347	.....
12	1920..total length, miles.....	304	.....	.....	.....	27	105	.....	108	610	.....
13	(a) Earth.....	91	42	49	37	12	45	41	58	243	40
14	(b) Lined.....	0.1	0.1	.....	.....	.....	.....	.....	0.1	.....	.....
15	1940..capacity, c.f.s. ²	510	320	190	161	29	115	113	316	1,367	101
16	1930..capacity, c.f.s. ²	3,003	.....	.....	.....	38	44	.....	145	2,462	.....
17	1920..capacity, c.f.s. ²	3,114	.....	.....	.....	72	266	.....	774	2,237	.....
18	Pipe lines ³	0.1	0.1	.....	.....	.....	.....	.....	.....	2.5	.....
19	1930..total length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....	1.6	.....
20	1920..total length, miles.....	.....	.....	.....	.....	.....	0.4	.....	1.9	0.1	.....
21	(a) Concrete.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	(b) Metal.....	0.1	0.1	.....	.....	.....	.....	.....	.....	2.5	.....
23	(c) Wood-stave.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	(d) Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Storage dams.....	1	1	.....	.....	.....	.....	.....	.....	2	5
26	1930..total number.....	3	.....	.....	.....	1	.....	.....	.....	5	.....
27	1920..total number.....	7	.....	.....	.....	1	1	.....	2	7	.....
28	(a) Concrete and masonry.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
29	(b) Earth and rock.....	1	1	.....	.....	.....	.....	.....	.....	1	5
30	(c) Other, mixed, and not reported.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Reservoirs.....	1	1	.....	.....	.....	.....	.....	.....	2	6
32	(a) 1-99 acre-feet capacity.....	1	1	.....	.....	.....	.....	.....	.....	1	6
33	(b) 100-999 acre-feet capacity.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
35	1940..total capacity, ac.-ft. ⁴	(5)	(5)	.....	.....	.....	.....	.....	.....	(5)	50
36	1930..total number.....	1	.....	.....	.....	.....	.....	.....	.....	14	.....
37	1930..total capacity, ac.-ft.....	6,400	.....	.....	.....	.....	.....	.....	.....	49,013	.....
38	Wells, flowing.....	29	29	.....	.....	.....	.....	.....	.....	.....	1
39	1930..number.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	1920..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	1940..yield, g.p.m.....	6,600	6,600	.....	.....	.....	.....	.....	.....	.....	(5)
42	1930..yield, g.p.m.....	5,400	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....	54	54	.....	.....	.....	.....	.....	.....	.....	3
45	1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
46	1920..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
47	1940..yield, g.p.m.....	98,190	98,190	.....	.....	.....	.....	.....	.....	.....	140
48	1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
49	1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
50	Pumping plants.....	51	51	.....	.....	.....	.....	.....	.....	.....	3
51	1930..total number.....	8	.....	.....	.....	.....	.....	.....	.....	2	.....
52	Prime movers.....	1,843	1,843	.....	.....	.....	.....	.....	.....	.....	7
53	1930..capacity, hp.....	1,150	.....	.....	.....	.....	.....	.....	.....	8	.....
54	1920..capacity, hp.....	326	.....	.....	.....	.....	.....	.....	.....	.....	.....
55	(a) Electric.....	45	45	.....	.....	.....	.....	.....	.....	.....	.....
56	1940..capacity, hp.....	1,746	1,746	.....	.....	.....	.....	.....	.....	.....	.....
57	1940..number.....	6	6	.....	.....	.....	.....	.....	.....	.....	1
58	1940..capacity, hp.....	97	97	.....	.....	.....	.....	.....	.....	.....	(5)
59	(c) Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
60	1940..capacity, hp.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(5)
61	Pumps.....	51	51	.....	.....	.....	.....	.....	.....	.....	3
62	1930..number.....	12	.....	.....	.....	.....	.....	.....	.....	2	.....
63	1920..number.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
64	1940..capacity, g.p.m.....	270,704	270,704	.....	.....	.....	.....	.....	.....	.....	140
65	1930..capacity, g.p.m.....	165,550	.....	.....	.....	.....	.....	.....	.....	.....	.....
66	1920..capacity, g.p.m.....	96,250	.....	.....	.....	.....	.....	.....	.....	100	.....
67	(a) Centrifugal.....	38	38	.....	.....	.....	.....	.....	.....	.....	1
68	1940..capacity, g.p.m.....	228,554	228,554	.....	.....	.....	.....	.....	.....	.....	(5)
69	1940..average capacity, g.p.m.....	6,015	6,015	.....	.....	.....	.....	.....	.....	.....	(5)
70	(b) Turbine.....	13	13	.....	.....	.....	.....	.....	.....	.....	.....
71	1940..capacity, g.p.m.....	42,150	42,150	.....	.....	.....	.....	.....	.....	.....	.....
72	1940..average capacity, g.p.m.....	3,242	3,242	.....	.....	.....	.....	.....	.....	.....	.....
73	(c) Plunger.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
74	1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(5)
75	1940..average capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(5)
76	(d) Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
77	1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
78	Pumping lift, from all sources.....	17	17	.....	.....	.....	.....	.....	.....	.....	117
79	1930..average, feet.....	13	.....	.....	.....	.....	.....	.....	.....	15	.....
80	1920..average, feet.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
81	from pumped wells.....	20	20	.....	.....	.....	.....	.....	.....	.....	117
82	from surface sources.....	11	11	.....	.....	.....	.....	.....	.....	.....	.....

¹ In the 1930 and 1920 reports, Camas Creek apparently included the area now designated as Mud Lake Direct (58) (number refers to separate map); therefore, no 1930 or 1920 figures for these basins can be shown separately. ² Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ³ Includes siphons and farm pipe lines reported. ⁴ Total capacity of all reservoirs regardless of size. ⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - IDAHO

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COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	STATE TOTAL	Ada	Adams	Barnock					
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*									
1 All farms.....	43,663	2,689	410	1,723					
2 1940..number.....	41,674	2,305	462	1,748					
3 Irrigated farms.....	29,898	2,512	289	1,394					
4 1940..number.....	27,853	2,096	270	1,212					
5 1930..number.....	7.0	19.8	7.0	10.1					
6 Increase or decrease (-), 1930-1940.....	21,773	1,781	245	1,093					
7 Operated by—(a) Owners and managers.....	20,486	1,385	238	1,030					
8 1940..number.....	8,125	731	44	241					
9 (b) Tenants.....	7,467	710	32	182					
10 1930..number.....	10,297,745	259,072	218,079	472,115					
11 Land in all farms.....	5,680,584	190,855	184,377	340,936					
12 Land in irrigated farms.....	190	76	638	256					
13 Average per farm.....	4,721,461	140,586	173,275	300,809					
14 (a) Operated by owners and managers.....	217	79	707	275					
15 Average per farm.....	959,123	50,309	11,102	40,127					
16 (b) Operated by tenants.....	118	69	252	167					
17 Average per farm.....	152,997,120	729,600	861,280	1,164,800					
18 Approximate land area.....	IRRIGATED AND IRRIGABLE AREAS								
19 Area irrigated.....	2,277,857	132,416	23,200	81,344					
20 (a) Cropland harvested.....	2,026,435	105,389	13,587	69,325					
21 (b) Crop failure.....	12,448	1,658	6	1,001					
22 (c) Pasture.....	238,974	25,369	9,607	11,018					
23 Area irrigated.....	2,181,250	122,640	20,536	97,726					
24 1919..acres.....	2,488,806	121,493	30,900	137,266					
25 Increase or decrease (-), 1929-1939.....	4.4	8.0	13.0	-16.8					
26 Irrigable area in enterprises.....	2,870,023	152,159	24,532	105,350					
27 1940..acres.....	2,814,048	143,760	25,280	126,840					
28 1930..acres.....	3,780,048	136,790	42,786	227,586					
29 Excess of irrigable area over the area irrigated.....	592,166	19,743	1,332	24,006					
30 1940..acres.....	632,798	21,120	4,744	29,114					
31 Area works were capable of supplying with water.....	2,593,594	148,247	23,721	98,167					
32 1940..acres.....	2,617,021	128,457	24,647	124,832					
33 1930..acres.....	3,032,810	133,766	32,676	165,316					
34 Increase or decrease (-), 1930-1940.....	-0.9	15.4	-3.8	-21.4					
35 Excess, capability of works over area irrigated.....	315,677	15,831	521	16,823					
36 1930..acres.....	435,771	5,817	4,111	27,106					
37 Proportion which area irrigated is of all lands in irrigated farms.....	40.1	69.4	12.6	23.9					
38 1929..percent.....	45.0	83.6	13.2	28.9					
39 Proportion which area irrigated is of area works were capable of supplying with water.....	87.8	89.3	97.8	82.9					
40 1930..percent.....	83.3	95.5	83.3	78.3					
41 1929..percent.....	CAPITAL INVESTED TO JANUARY 1								
42 Total investment in all enterprises.....	102,585,798	6,314,776	304,261	2,040,927					
43 (a) Cost of irrigation works and equipment.....	100,989,161	6,191,022	294,711	1,962,460					
44 (b) Investment in water rights (reported).....	1,596,637	123,754	9,550	78,467					
45 Total investment in all enterprises.....	84,500,354	4,655,786	105,433	1,660,749					
46 1920..dollars.....	91,501,009	5,669,338	394,060	3,106,000					
47 Increase or decrease (-), 1930-1940.....	21.4	35.6	188.6	22.9					
48 Average investment, based on area works were capable of supplying with water, per acre.....	39.55	42.60	12.83	20.79					
49 1940..dollars.....	32.29	36.24	4.28	13.30					
50 1930..dollars.....	29.59	42.38	13.11	16.76					
51 1920..dollars.....	45.04	47.69	13.11	25.09					
52 Average investment per acre irrigated.....	109,513,311	6,356,457	304,861	2,282,242					
53 Estimated final investment in existing enterprises.....	101,350,250	7,069,586	106,033	1,665,249					
54 1930..dollars.....	97,019,717	5,669,338	395,910	3,573,940					
55 1920..dollars.....	8.1	-10.1	187.5	35.9					
56 Increase or decrease (-), 1930-1940.....	38.16	41.78	12.43	21.47					
57 Average investment, based on estimated final investment and irrigable area, per acre.....	36.02	49.18	4.19	13.13					
58 1940..dollars.....	25.67	41.45	9.25	15.70					
59 1930..dollars.....	MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
60 Enterprises reporting maintenance and operation.....	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
61 Area irrigated in these enterprises.....	Enterprises		Enterprises		Enterprises		Enterprises		
62 Cost of maintenance and operation.....	3,037	165	102	60	99	7	172	11	
63 Average cost, per acre irrigated.....	2,219,486	889,254	131,119	20,155	22,842	12,949	79,333	737	
64 1939..dollars.....	2,256,798	202,690	154,469	24,302	7,582	2,025	52,575	377	
65 1929..dollars.....	1.02	0.23	1.18	1.21	0.33	0.16	0.66	0.51	
66 Total annual charges (reported) ^{3 4}	1.44	1.58	0.36	0.78	
67 Average annual charge per acre irrigated.....	2,461,470	184,534	146,407	22,867	6,580	5,029	48,596	
68 Area against which charges were assessed.....	1.25	0.21	1.14	1.20	0.49	0.40	0.68	
69 Average annual charge per acre assessed.....	2,141,909	885,270	137,968	19,099	13,341	12,924	79,744	
70 Total charges collected ⁵	1.15	0.21	1.06	1.20	0.49	0.39	0.61	
71 Indebtedness to December 31 (reported) ⁴	2,635,522	67,069	238,991	945	6,830	3,828	28,937	
72 1939..dollars.....	23,488,279	2,929,859	3,612,590	4,655	29,500	27,440	878,871	
73 1929..dollars.....	WATER DELIVERED TO IRRIGATORS								
74 Enterprises reporting water delivered.....	2,892	147	87	44	81	7	173	10	
75 Area irrigated in these enterprises.....	2,034,989	896,000	120,432	20,329	21,344	12,139	74,648	611	
76 Water delivered in these enterprises.....	8,356,961	1,042,271	475,904	20,992	41,592	20,387	173,685	1,299	
77 Average water delivered per acre irrigated.....	4.1	1.2	4.0	1.0	1.9	1.7	2.3	2.1	
78 Average cost of water per acre irrigated.....	1.16	0.21	1.03	1.21	0.37	0.42	0.66	0.58	
79 1939..dollars.....	DRAINAGE OF IRRIGATED LAND								
80 Enterprises reporting land drained or needing drainage.....	200	26	4	
81 Irrigable area in these enterprises.....	943,910	133,341	2,900	
82 Irrigated area in these enterprises.....	731,717	115,746	2,760	
83 Area for which drains have been installed.....	238,907	58,630	15	
84 Additional area needing drainage.....	29,042	2,050	514	
85 1939..acres.....	* Census of Agriculture. ¹ Includes 37,120 acres in Yellowstone National Park (part of) not shown in detail. ² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.								

CENSUS OF IRRIGATION - IDAHO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Bear Lake		Bingham		Blaine		Boise	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a								
1 All farms.....1940...number.....	711		2,217		318		195	
2	915		2,311		362		214	
3 Irrigated farms.....1940...number.....	377		2,146		275		123	
4	729		2,197		309		134	
5 Increase or decrease (-), 1930-1940.....percent.....	-20.9		-2.3		-11.0		-8.2	
Operated by—								
6 (a) Owners and managers.....1940...number.....	513		1,515		196		101	
7	662		1,565		201		118	
8 (b) Tenants.....1940...number.....	64		631		79		22	
9	67		632		108		16	
10 Land in all farms.....1940...acres.....	259,934		425,278		137,346		71,261	
11 Land in irrigated farms.....1940...acres.....	218,897		284,353		119,475		48,193	
12 Average per farm.....1940...acres.....	379		133		434		332	
13 (a) Operated by owners and managers.....1940...acres.....	206,272		220,188		95,722		40,605	
14 Average per farm.....1940...acres.....	402		145		488		402	
15 (b) Operated by tenants.....1940...acres.....	12,625		64,165		23,753		7,588	
16 Average per farm.....1940...acres.....	197		102		301		345	
17 Approximate land area.....1940...acres.....	632,320		1,326,080		1,695,360		1,224,320	
IRRIGATED AND IRRIGABLE AREAS								
18 Area irrigated.....1939...acres.....	54,143		175,186		26,788		5,763	
19 (a) Cropland harvested.....1939...acres.....	45,385		160,276		23,591		5,499	
20 (b) Crop failure.....1939...acres.....	475		63		580		14	
21 (c) Pasture.....1939...acres.....	8,283		14,847		2,617		250	
22 Area irrigated.....1929...acres.....	54,625		163,914		33,731		6,636	
23	67,202		177,296		52,090		7,508	
24 Increase or decrease (-), 1929-1939.....percent.....	-0.9		6.9		-20.6		-13.2	
25 Irrigable area in enterprises.....1940...acres.....	59,848		223,262		32,057		6,287	
26	57,991		222,570		45,712		9,476	
27	83,890		232,923		97,801		14,239	
28 Excess of irrigable area over the area irrigated.....1940...acres.....	5,705		48,076		5,269		524	
29	3,366		58,056		11,991		2,840	
30 Area works were capable of supplying with water.....1940...acres.....	56,843		221,316		31,900		6,243	
31	55,930		209,120		38,449		9,201	
32	72,893		217,200		77,391		8,569	
33 Increase or decrease (-), 1930-1940.....percent.....	1.6		5.8		-17.0		-32.1	
34 Excess, capability of works over area irrigated.....1940...acres.....	2,700		46,130		5,112		480	
35	1,305		45,206		4,718		2,565	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939...percent.....	24.7		61.6		22.4		12.0	
37	23.2		69.3		26.9		10.4	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	95.3		79.2		84.0		92.3	
39	97.7		78.4		87.7		72.1	
CAPITAL INVESTED TO JANUARY 1								
40 Total investment in all enterprises.....1940...dollars.....	291,165		6,139,576		820,616		47,841	
41 (a) Cost of irrigation works and equipment.....1940...dollars.....	277,103		6,126,345		817,673		47,685	
42 (b) Investment in water rights (reported).....1940...dollars.....	14,062		13,231		2,943		156	
43 Total investment in all enterprises.....1930...dollars.....	293,760		2,672,528		3,870,572		4,885,956	
44	397,393		3,201,889		736,713		148,484	
45 Increase or decrease (-), 1930-1940.....percent.....	-0.9		129.7		-78.8		-99.0	
Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars.....								
46	5.12		27.74		25.72		7.65	
47	5.25		12.78		100.67		531.02	
48	5.45		14.74		9.52		17.33	
49 Average investment per acre irrigated.....1939...dollars.....	5.38		35.05		30.63		8.30	
50 Estimated final investment in existing enterprises.....1940...dollars.....	296,055		6,338,516		821,066		51,041	
51	298,760		2,738,048		3,870,772		4,886,282	
52	430,093		3,694,189		1,120,113		150,513	
53 Increase or decrease (-), 1930-1940.....percent.....	-0.2		131.4		-78.8		-99.0	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars.....	4.98		28.39		25.61		8.12	
55	5.15		12.30		84.08		516.70	
56	5.13		15.69		11.45		10.57	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
Primary Supplemental Primary Supplemental Primary Supplemental								
Enterprises Enterprises Enterprises								
57 Enterprises reporting maintenance and operation.....1939...number.....	59	2	66	5	40	2	96	
58 Area irrigated in these enterprises.....1939...acres.....	48,447	(²)	172,874	155,769	22,556	(²)	5,731	
59 Cost of maintenance and operation.....1939...dollars.....	13,125	(²)	144,799	5,772	6,670	(²)	3,278	
60 Average cost, per acre irrigated.....1939...dollars.....	0.27	(²)	0.84	0.04	0.30	(²)	0.57	
61	0.51		1.11		0.85		0.99	
62 Total annual charges (reported) ³.....1939...dollars.....	14,843		174,658	5,198	5,097	2,500	70	
63 Average annual charge per acre irrigated.....1939...dollars.....	0.34		1.02	0.03	0.26	1.00	0.07	
64 Area against which charges were assessed.....1939...acres.....	46,061		187,954	155,370	22,617	4,500	1,000	
65 Average annual charge per acre assessed.....1939...dollars.....	0.32		0.93	0.03	0.23	0.56	0.07	
66 Total charges collected ⁴.....1939...dollars.....	9,841		174,532	5,074	2,087	3,533		
67 Indebtedness to December 31 (reported) ⁴.....1939...dollars.....	2,067		1,538,107	661	28,031	1,050		
WATER DELIVERED TO IRRIGATORS								
68 Enterprises reporting water delivered.....1939...number.....	59	2	65	4	38	1	97	
69 Area irrigated in these enterprises.....1939...acres.....	46,619	(²)	175,055	152,409	22,992	(²)	5,758	
70 Water delivered in these enterprises.....1939...acre-feet.....	95,943	(²)	887,510	183,393	78,705	(²)	9,112	
71 Average water delivered per acre irrigated.....1939...acre-feet.....	2.1	(²)	5.1	1.2	3.4	(²)	1.6	
72 Average cost of water per acre irrigated.....1939...dollars.....	0.33	(²)	1.03	0.03	0.35	(²)	0.57	
DRAINAGE OF IRRIGATED LAND								
73 Enterprises reporting land drained or needing drainage.....1939...number.....	6		7					
74 Irrigable area in these enterprises.....1939...acres.....	9,787		59,702					
75 Irrigated area in these enterprises.....1939...acres.....	9,782		43,429					
76 Area for which drains have been installed.....1939...acres.....	75		2,953					
77 Additional area needing drainage.....1939...acres.....	4,905		3,090					

^a Census of Agriculture.
¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — IDAHO

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Bonner	Bonneville	Boundary	Blaine	Camas	Canyon	Caribou	Cassia	Clark	Custer	
1,551	1,672	768	204	193	3,631	247	1,296	113	365	1
1,010	1,577	426	235	261	3,279	357	1,407	124	368	2
56	1,426	3	241	73	3,497	102	1,199	82	337	3
54	1,306	6	213	62	3,138	95	1,267	88	331	4
3.7	9.2	-62.5	13.1	17.7	11.4	7.4	-5.4	-6.8	1.8	5
52	921	3	188	59	2,390	92	909	70	278	6
49	811	.....	147	55	2,170	85	913	74	291	7
4	505	.....	53	14	1,107	10	290	12	59	8
5	495	.....	66	7	968	10	354	14	40	9
245,068	427,371	112,566	65,139	164,791	244,777	162,671	287,175	151,516	108,765	10
16,190	235,456	930	60,877	58,749	238,595	84,365	233,576	110,734	103,174	11
289	165	310	253	805	68	827	195	1,350	306	12
15,500	180,523	930	50,483	52,928	157,659	79,565	192,642	104,408	86,418	13
298	196	310	269	897	66	865	212	1,492	311	14
680	54,933	.....	10,394	5,821	80,936	4,800	40,934	6,326	16,756	15
170	109	.....	196	416	73	480	141	527	294	16
1,111,040	1,181,440	816,000	1,433,800	676,480	371,200	752,000	1,628,160	1,120,640	3,157,120	17
1,571	122,287	228	27,562	8,545	180,511	12,407	84,699	11,808	33,635	18
1,453	117,489	122	23,939	8,263	143,800	9,797	78,047	8,897	26,579	19
10	.....	.....	3,202	.....	2,290	9	176	45	118	20
108	4,798	106	421	282	34,431	2,601	6,466	2,866	6,938	21
922	96,569	.....	27,416	7,108	196,449	14,692	79,374	16,292	39,346	22
.....	110,953	.....	39,563	13,272	201,718	23,825	113,537	18,851	80,141	23
70.4	24.1	.....	0.5	20.2	-8.1	-15.6	6.7	-27.5	-14.5	24
2,985	129,977	761	37,771	9,555	277,338	15,586	133,109	16,600	51,534	25
2,095	106,463	.....	54,434	10,366	236,620	16,690	117,665	20,053	69,143	26
.....	135,021	.....	184,958	21,284	294,582	29,102	149,035	45,794	144,041	27
1,414	7,690	533	10,209	1,010	96,827	3,179	48,420	4,792	17,899	28
1,173	7,894	.....	27,018	3,258	40,171	1,998	38,291	3,761	29,797	29
2,457	128,042	726	37,591	9,555	208,189	15,516	89,953	15,305	49,706	30
1,462	105,164	.....	52,768	10,306	202,474	16,240	104,494	20,023	61,673	31
.....	123,043	.....	66,140	14,516	228,032	25,908	129,619	26,467	112,244	32
66.1	21.8	.....	-28.8	-7.3	2.8	-4.5	-13.9	-23.6	-19.4	33
886	5,755	498	10,029	1,010	27,678	3,109	5,264	3,497	16,071	34
540	6,595	.....	25,352	3,198	6,025	1,548	25,120	3,731	22,327	35
9.7	51.9	24.5	45.3	14.5	75.7	14.7	36.3	10.7	32.6	36
8.7	49.7	.....	42.8	19.2	89.7	17.9	37.5	14.2	36.5	37
63.9	95.5	31.4	73.3	89.4	86.7	80.0	94.1	77.2	67.7	38
63.1	93.7	.....	52.0	69.0	97.0	90.5	76.0	81.4	63.8	39
15,901	4,947,094	5,350	565,298	54,670	11,742,448	50,409	5,213,762	66,249	437,536	40
15,136	4,905,171	5,280	565,108	54,660	11,636,949	49,789	4,943,252	44,295	431,182	41
765	41,923	70	190	10	105,499	1,680	270,510	21,954	6,354	42
21,122	1,845,745	.....	1,751,940	107,205	7,031,822	80,350	4,444,572	113,685	404,690	43
.....	3,045,291	.....	3,034,313	117,177	10,223,513	236,538	4,610,590	138,582	778,848	44
-24.7	168.0	.....	-67.7	-49.0	67.0	-37.3	17.3	-41.7	8.1	45
6.47	38.64	7.37	15.04	5.72	56.40	3.25	57.96	4.33	8.80	46
14.45	17.55	.....	33.20	10.40	34.73	4.95	42.53	5.68	6.56	47
.....	24.75	.....	45.88	8.07	44.83	9.13	35.57	5.24	6.94	48
10.12	40.45	23.46	20.51	6.40	65.05	4.06	61.56	5.61	13.01	49
25,341	4,948,244	5,470	565,564	54,670	14,348,644	51,039	5,633,447	71,759	441,234	50
26,072	1,911,745	.....	1,752,140	107,205	10,475,002	82,020	5,055,572	123,685	445,840	51
.....	3,130,091	.....	4,846,413	117,777	10,223,513	238,188	4,618,640	140,318	813,848	52
-2.8	158.8	.....	-67.7	-49.0	37.0	-37.8	11.8	-42.1	-1.0	53
8.49	38.07	7.19	14.97	5.72	51.74	3.27	42.47	4.32	8.56	54
12.44	17.96	.....	32.19	10.34	44.27	4.91	42.97	6.18	6.45	55
.....	23.18	.....	26.22	5.53	43.58	8.18	30.99	3.06	5.65	56
	Primary	Sup.			Primary	Sup.	Primary	Sup.	Primary	Sup.
28	81	2	5	17	14	58	67	6	72	141
1,179	120,959	(5)	110	27,008	6,952	178,419	81,999	11,165	82,129	531
959	105,765	(5)	145	10,380	1,920	248,031	113,642	3,708	151,693	2,292
0.81	0.87	(5)	1.32	0.38	0.30	1.39	1.39	0.33	1.85	4.32
1.51	0.70	.....	0.76	0.34	1.46	.....	.....	0.42	1.95	.....
150	121,630	2,856	27,448	1,700	237,811	97,022	455	139,625	300	.....
0.31	1.07	0.03	1.08	0.42	1.35	1.20	0.57	1.81	3.00	.....
480	115,146	98,451	37,157	4,000	192,420	80,852	800	80,532	100	.....
0.31	1.06	0.03	0.74	0.42	1.24	1.20	0.57	1.73	3.00	.....
.....	108,941	2,715	19,610	1,700	455,123	14,277	100	148,213	362	.....
.....	168,431	.....	142,800	.....	6,369,274	70,312	437	1,890,670	.....	.....
40	63	4	8	17	15	55	11	59	61	5
1,929	111,495	98,522	228	27,207	6,094	168,217	81,968	11,954	78,949	510
3,796	581,693	119,619	639	120,127	3,336	702,770	81,332	22,468	254,347	1,316
2.9	5.2	1.2	2.8	4.4	0.5	4.2	1.0	1.9	3.2	2.6
0.80	1.10	0.03	1.32	1.05	0.32	1.35	1.19	0.34	1.81	4.22
4	(5)	.....	(5)	.....	.....	26	.....	1	(5)	.....
30	(5)	.....	(5)	.....	.....	216,969	.....	(5)	(5)	.....
16	(5)	.....	(5)	.....	.....	150,012	.....	(5)	(5)	.....
15	(5)	.....	(5)	.....	.....	92,695	.....	(5)	(5)	.....
7	(5)	.....	(5)	.....	.....	5,618	.....	(5)	(5)	.....

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - IDAHO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Elmore	Franklin	Fremont	Gem				
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^o									
1	All farms.....1940..number.....	476	996	967	900				
2	.....1930..number.....	333	1,131	1,056	768			
3	Irrigated farms.....1940..number.....	391	850	716	774				
4	.....1930..number.....	216	900	686	649			
5	Increase or decrease (-), 1930-1940.....percent.....	81.0	-5.6	4.4	19.3				
Operated by—									
6	(a) Owners and managers.....1940..number.....	302	777	530	639				
7	.....1930..number.....	172	816	473	496			
8	(b) Tenants.....1940..number.....	89	73	186	135				
9	.....1930..number.....	44	84	213	153			
10	Land in all farms.....1940..acres.....	148,383	199,535	277,201	132,301				
11	Land in irrigated farms.....1940..acres.....	115,361	154,370	177,760	99,232				
12	Average per farm.....1940..acres.....	295	182	248	128				
13	(a) Operated by owners and managers.....1940..acres.....	102,764	144,638	144,162	85,370				
14	Average per farm.....1940..acres.....	340	166	272	134				
15	(b) Operated by tenants.....1940..acres.....	12,617	9,732	33,598	13,862				
16	Average per farm.....1940..acres.....	142	139	181	103				
17	Approximate land area.....1940..acres.....	1,899,520	346,240	1,164,160	355,200				
IRRIGATED AND IRRIGABLE AREAS									
18	Area irrigated.....1939..acres.....	23,473	54,062	86,727	39,879				
19	(a) Cropland harvested.....1939..acres.....	20,089	50,212	78,266	33,018				
20	(b) Crop failure.....1939..acres.....	651	26	40	36				
21	(c) Pasture.....1939..acres.....	2,733	3,824	8,421	6,825				
22	Area irrigated.....1929..acres.....	22,183	52,738	98,273	47,051				
23	.....1919..acres.....	28,844	37,460	130,044	51,007			
24	Increase or decrease (-), 1929-1939.....percent.....	5.8	2.5	-11.7	-15.2				
25	Irrigable area in enterprises.....1940..acres.....	28,314	62,284	101,620	48,644				
26	.....1930..acres.....	30,204	56,225	112,603	53,531			
27	.....1920 ¹ ..acres.....	60,252	54,967	222,235	59,852			
28	Excess of irrigable area over the area irrigated.....1940..acres.....	4,841	8,222	14,893	8,765				
29	.....1930..acres.....	8,021	3,487	14,330	6,480			
30	Area works were capable of supplying with water.....1940..acres.....	27,149	59,642	93,045	42,119				
31	.....1930..acres.....	29,015	56,060	111,103	51,574			
32	.....1920 ¹ ..acres.....	37,641	39,279	191,572	56,836			
33	Increase or decrease (-), 1930-1940.....percent.....	-6.4	6.4	-16.3	-18.3				
34	Excess, capability of works over area irrigated.....1940..acres.....	3,676	5,580	6,318	2,240				
35	.....1930..acres.....	6,832	3,322	12,830	4,523			
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	20.3	35.0	48.8	40.2				
37	.....1929..percent.....	38.8	36.4	76.9	47.0			
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	86.5	90.6	93.2	94.7				
39	.....1929..percent.....	76.5	94.1	88.5	91.2			
CAPITAL INVESTED TO JANUARY 1									
40	Total investment in all enterprises.....1940..dollars.....	2,274,092	2,777,272	2,899,735	2,808,941				
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	2,271,472	2,686,190	2,876,271	2,779,661				
42	(b) Investment in water rights (reported).....1940..dollars.....	2,620	91,082	2,464	29,180				
43	Total investment in all enterprises.....1930..dollars.....	1,692,008	1,453,838	1,566,282	2,990,652				
44	.....1920 ¹ ..dollars.....	1,606,335	822,981	1,712,611	1,482,559			
45	Increase or decrease (-), 1930-1940.....percent.....	34.4	91.0	85.1	-6.1				
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	83.76	46.57	31.16	66.69				
47	.....1930..dollars.....	58.31	25.93	14.10	57.99			
48	.....1920 ¹ ..dollars.....	42.68	20.95	8.94	26.73			
49	Average investment per acre irrigated.....1939..dollars.....	96.88	51.37	33.44	70.43				
50	Estimated final investment in existing enterprises.....1940..dollars.....	2,286,467	2,826,272	2,914,855	3,411,219				
51	.....1930..dollars.....	1,692,008	1,453,838	1,566,282	3,021,167			
52	.....1920 ¹ ..dollars.....	1,876,777	834,781	1,964,211	1,695,559			
53	Increase or decrease (-), 1930-1940.....percent.....	35.1	94.4	79.3	12.9				
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	80.75	45.38	28.68	70.13				
55	.....1930..dollars.....	56.02	25.86	14.43	56.44			
56	.....1920 ¹ ..dollars.....	31.15	15.19	8.84	28.33			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number.....	107	2	66	8	61	10	43	5
58	Area irrigated in these enterprises.....1939..acres.....	21,455	(^o)	53,814	2,118	85,900	58,597	39,710	22,937
59	Cost of maintenance and operation.....1939..dollars.....	41,483	(^o)	72,121	729	32,833	5,757	31,855	24,589
60	Average cost, per acre irrigated.....1939..dollars.....	1.93	(^o)	1.34	0.34	0.38	0.10	0.79	1.07
611929..dollars.....	2.33	1.22	0.65	1.31
62	Total annual charges (reported) ⁴.....1939..dollars.....	50,418	78,323	444	44,227	5,365	51,425	24,325
63	Average annual charge per acre irrigated.....1939..dollars.....	3.81	1.52	0.23	0.55	0.09	1.35	1.07
64	Area against which charges were assessed.....1939..acres.....	15,211	53,006	1,905	83,774	58,441	38,640	22,763
65	Average annual charge per acre assessed.....1939..dollars.....	3.31	1.48	0.23	0.53	0.09	1.33	1.07
66	Total charges collected ⁴.....1939..dollars.....	38,147	76,418	434	44,608	5,630	38,802	10,043
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	65,000	110,960	106,970	1,815,000	953,606	37,181
WATER DELIVERED TO IRRIGATORS									
68	Enterprises reporting water delivered.....1939..number.....	106	2	59	9	62	9	31	5
69	Area irrigated in these enterprises.....1939..acres.....	21,131	(^o)	49,070	2,201	83,006	76,830	34,768	19,200
70	Water delivered in these enterprises.....1939..acre-feet.....	124,952	(^o)	91,708	1,405	462,802	58,228	236,131	19,241
71	Average water delivered per acre irrigated.....1939..acre-feet.....	5.9	(^o)	1.9	0.6	5.6	0.8	6.8	1.0
72	Average cost of water per acre irrigated.....1939..dollars.....	2.70	(^o)	1.58	0.31	0.55	0.09	1.46	1.20
DRAINAGE OF IRRIGATED LAND									
73	Enterprises reporting land drained or needing drainage.....1939..number.....	4	7	7	10
74	Irrigable area in these enterprises.....1939..acres.....	9,497	13,465	4,652	11,094
75	Irrigated area in these enterprises.....1939..acres.....	8,401	12,838	4,172	8,825
76	Area for which drains have been installed.....1939..acres.....	1,000	250	100	6,215
77	Additional area needing drainage.....1939..acres.....	775	514	913	2,833

^o Census of Agriculture.
¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - IDAHO

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939--Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Gooding	Idaho	Jefferson	Jerome	Kootenai	Lephi	Lincoln	Madison	Minidoka	
1,006	1,464	1,297	969	1,733	530	441	1,012	1,048	1
931	1,371	1,090	989	1,348	541	321	1,079	1,025	2
965	128	1,213	933	431	528	415	830	1,018	3
887	96	1,031	961	287	497	297	809	991	4
8.8	33.3	17.7	-2.9	50.2	5.8	39.7	2.6	2.7	5
565	111	906	543	374	435	269	653	708	6
559	85	812	591	261	397	195	612	723	7
400	17	307	390	57	91	146	177	312	8
328	11	219	370	26	100	102	187	268	9
128,427	767,461	209,040	116,050	261,704	163,887	87,460	253,800	86,018	10
125,662	157,674	181,648	112,368	18,954	163,544	83,773	128,500	82,908	11
130	1,232	150	120	44	311	202	155	81	12
78,335	156,052	140,850	65,115	17,412	141,806	57,176	102,807	60,333	13
139	1,406	155	120	47	326	213	157	85	14
47,327	1,622	40,798	47,253	1,542	21,738	26,597	25,693	22,575	15
118	95	133	121	27	239	182	145	72	16
462,080	5,449,600	696,960	379,520	803,840	2,934,400	769,920	302,720	480,000	17
113,303	2,590	106,709	130,560	5,310	73,821	53,241	59,611	55,030	18
106,409	2,254	98,462	130,530	5,116	54,797	49,687	56,854	50,608	19
8	8	79	.....	20	350	10	7	.....	20
8,856	328	7,168	30	174	18,674	3,544	7	.....	21
64,115	1,985	120,151	110,098	6,404	61,278	33,140	55,723	60,000	22
45,408	2,593	149,151	85,000	4,000	66,905	69,620	54,637	55,259	23
76.7	30.5	-11.2	18.6	-17.1	20.5	80.7	7.0	-6.3	24
164,712	2,874	127,855	130,754	6,685	80,750	77,663	65,271	110,312	25
109,566	2,685	169,953	140,973	10,681	70,804	58,990	62,852	60,000	26
91,523	3,843	258,606	110,000	10,214	136,052	125,376	68,257	65,228	27
51,409	284	21,156	194	1,385	6,929	24,422	5,660	58,282	28
45,451	680	49,802	30,875	4,277	9,556	25,850	7,129	.....	29
146,064	2,731	121,492	130,754	6,455	80,615	67,334	63,451	65,070	30
94,715	2,354	169,081	127,088	10,679	68,989	49,740	59,762	60,000	31
83,662	3,103	211,515	110,000	5,495	96,451	121,304	60,784	65,228	32
54.2	16.0	28.1	2.9	-39.6	16.9	35.4	6.2	8.4	33
32,761	141	14,763	194	1,145	6,794	14,083	3,840	10,040	34
30,600	369	48,930	17,000	4,275	7,711	16,600	4,039	.....	35
90.2	1.6	58.7	116.2	28.0	45.1	63.6	46.4	66.4	36
60.6	1.4	90.3	100.7	32.6	39.7	55.3	54.9	89.3	37
77.6	94.8	87.8	99.9	82.3	91.6	79.1	93.9	84.6	38
67.7	84.3	71.1	86.6	60.0	88.8	66.6	93.2	100.0	39
10,194,078	66,504	2,634,484	9,059,767	685,796	467,707	5,305,106	1,911,061	1,919,190	40
10,191,349	66,367	2,567,872	9,059,767	683,701	461,415	5,305,106	1,883,293	1,919,190	41
2,729	137	66,612	.....	2,095	6,292	.....	27,768	.....	42
5,608,893	64,872	1,547,966	8,671,444	831,047	474,158	2,397,462	343,096	2,841,580	43
6,960,473	109,506	6,308,032	11,663,236	561,842	720,647	4,258,895	667,126	3,090,849	44
81.7	2.5	70.2	4.5	-17.5	-1.4	121.3	457.0	-32.5	45
69.79	24.35	21.68	69.29	106.24	5.80	78.79	30.12	29.49	46
59.22	27.56	9.16	88.23	77.82	6.87	48.20	5.74	47.36	47
83.20	35.29	29.82	106.03	102.25	7.47	35.11	10.98	47.39	48
89.97	25.68	24.69	69.39	129.15	6.34	99.64	32.06	34.88	49
10,735,538	67,004	2,666,686	9,059,767	688,571	471,882	5,607,146	1,918,061	1,919,190	50
8,609,693	66,372	1,564,966	11,671,544	831,547	477,458	4,397,462	347,296	2,841,580	51
7,028,095	109,506	6,463,412	11,663,236	811,842	744,797	4,259,215	699,726	3,090,849	52
24.7	1.0	70.4	-22.4	-17.2	-1.2	27.5	452.3	-32.5	53
65.18	23.31	20.86	69.29	102.85	5.84	72.20	29.39	17.40	54
78.58	24.91	9.21	82.79	77.85	6.73	74.54	5.52	47.36	55
76.79	28.49	24.99	106.03	79.48	5.47	33.97	10.25	47.39	56
47	96	84	.....	11	471	3	32	.....	57
112,369	2,522	103,826	130,560	5,269	71,602	957	58,791	40,876	58
114,011	3,799	79,212	154,729	3,158	24,300	346	28,279	3,256	59
1.01	1.51	0.76	1.19	0.03	4.38	0.36	0.48	0.08	60
1.85	2.57	0.70	1.98	0.03	8.85	0.42	1.86	.....	61
179,300	.....	81,128	191,462	3,158	27,372	5,722	83,911	49,902	62
1.65	.....	0.84	1.47	0.03	5.21	0.49	1.64	0.08	63
139,818	.....	102,929	130,440	124,582	5,648	12,037	500	64,861	64
1.28	.....	0.79	1.47	0.03	4.85	0.48	1.29	0.08	65
189,231	.....	78,160	192,501	3,158	27,918	2,248	89,790	40,126	66
3,550,142	.....	125,578	.....	.....	347,478	.....	70,687	945,000	67
35	98	81	.....	12	443	3	30	.....	68
67,452	2,502	103,252	124,582	5,290	61,137	957	49,611	40,876	69
215,318	11,804	623,525	149,500	13,084	233,876	8,633	327,494	44,032	70
3.2	4.7	6.0	1.2	2.5	3.8	9.0	6.6	1.1	71
1.42	1.52	0.90	0.03	5.21	0.31	0.28	1.02	0.08	72
.....	.....	.....	.....	.....	45	.....	.....	.....	73
.....	.....	.....	.....	.....	9,777	.....	7,660	.....	74
.....	.....	.....	.....	.....	8,506	.....	6,636	.....	75
.....	.....	.....	.....	.....	233	.....	40	.....	76
.....	.....	.....	.....	.....	1,845	.....	1,040	.....	77

² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - IDAHO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Nez Perce	Oneida	Owyhee	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*					
1	All farms.....1940...number.....	1,282	644	873	
2	.....1930...number.....	1,309	756	729
3	Irrigated farms.....1940...number.....	391	374	729	
4	.....1930...number.....	332	362	623
5	Increase or decrease (-), 1930-1940.....percent.....	17.8	6.2	17.0	
Operated by—					
6	(a) Owners and managers.....1940...number.....	341	332	570	
7	.....1930...number.....	294	330	478
8	(b) Tenants.....1940...number.....	50	42	159	
9	.....1930...number.....	38	22	145
10	Land in all farms.....1940...acres.....	409,051	301,545	480,460	
11	Land in irrigated farms.....1940...acres.....	58,483	156,655	426,700	
12	Average per farm.....1940...acres.....	150	419	585	
13	(a) Operated by owners and managers.....1940...acres.....	57,558	147,767	400,918	
14	Average per farm.....1940...acres.....	169	445	703	
15	(b) Operated by tenants.....1940...acres.....	925	8,888	25,782	
16	Average per farm.....1940...acres.....	18	212	162	
17	Approximate land area.....1940...acres.....	542,080	762,240	4,894,720	
IRRIGATED AND IRRIGABLE AREAS					
18	Area irrigated.....1939...acres.....	4,346	17,177	62,052	
19	(a) Cropland harvested.....1939...acres.....	4,261	16,305	53,570	
20	(b) Crop failure.....1939...acres.....	32	7	947	
21	(c) Pasture.....1939...acres.....	53	865	7,535	
22	Area irrigated.....1929...acres.....	5,038	13,450	57,608	
23	.....1919...acres.....	5,018	20,314	62,933
24	Increase or decrease (-), 1929-1939.....percent.....	-13.7	27.7	7.7	
25	Irrigable area in enterprises.....1940...acres.....	6,542	23,321	74,750	
26	.....1930...acres.....	5,380	15,314	85,282
27	.....1920 ² ...acres.....	6,135	48,782	119,061
28	Excess of irrigable area over the area irrigated.....1940...acres.....	2,196	6,744	12,698	
29	.....1930...acres.....	342	1,864	27,674
30	Area works were capable of supplying with water.....1940...acres.....	4,522	19,389	72,929	
31	.....1930...acres.....	5,268	15,094	71,275
32	.....1920...acres.....	5,901	21,625	74,494
33	Increase or decrease (-), 1930-1940.....percent.....	-14.2	28.5	2.3	
34	Excess, capability of works over area irrigated.....1940...acres.....	176	2,212	10,877	
35	.....1930...acres.....	230	1,644	13,667
36	Proportion which area irrigated is of all lands in irrigated farms.....1939...percent.....	7.4	11.0	14.5	
37	.....1929...percent.....	6.9	12.3	25.4
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	96.1	88.6	85.1	
39	.....1929...percent.....	85.6	89.1	80.8
CAPITAL INVESTED TO JANUARY 1					
40	Total investment in all enterprises.....1940...dollars.....	424,901	224,093	6,306,426	
41	(a) Cost of irrigation works and equipment.....1940...dollars.....	424,130	194,460	6,300,463	
42	(b) Investment in water rights (reported).....1940...dollars.....	771	29,533	5,963	
43	Total investment in all enterprises.....1930...dollars.....	436,114	107,567	2,907,387	
44	.....1920...dollars.....	313,781	471,910	2,309,967
45	Increase or decrease (-), 1930-1940.....percent.....	-2.6	108.3	116.9	
46	Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars.....	93.96	11.56	86.47	
47	.....1930...dollars.....	82.78	7.13	40.79
48	.....1920...dollars.....	53.17	21.82	31.01
49	Average investment per acre irrigated.....1939...dollars.....	97.77	13.05	101.63	
50	Estimated final investment in existing enterprises.....1940...dollars.....	425,501	228,118	6,447,381	
51	.....1930...dollars.....	439,164	107,567	3,284,187
52	.....1920...dollars.....	717,171	471,910	2,535,156
53	Increase or decrease (-), 1930-1940.....percent.....	-3.1	112.1	96.3	
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars.....	65.04	9.54	86.25	
55	.....1930...dollars.....	81.63	7.02	38.51
56	.....1920 ² ...dollars.....	116.90	9.67	21.29
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939...number.....	37	3	69	4
58	Area irrigated in these enterprises.....1939...acres.....	3,925	22	14,528	171
59	Cost of maintenance and operation.....1939...dollars.....	28,934	262	11,399	36
60	Average cost, per acre irrigated.....1939...dollars.....	7.37	11.91	0.78	0.21
611929...dollars.....	6.50	0.96
62	Total annual charges (reported) ^{4 5}.....1939...dollars.....	34,748	9,694
63	Average annual charge per acre irrigated.....1939...dollars.....	9.71	0.78
64	Area against which charges were assessed.....1939...acres.....	4,439	14,013
65	Average annual charge per acre assessed.....1939...dollars.....	7.83	0.69
66	Total charges collected ⁴.....1939...dollars.....	31,256	12,128
67	Indebtedness to December 31 (reported) ⁶.....1939...dollars.....	506,005	1,636
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
68	Enterprises reporting water delivered.....1939...number.....	52	3	102	5
69	Area irrigated in these enterprises.....1939...acres.....	4,061	22	16,188	206
70	Water delivered in these enterprises.....1939...acre-feet.....	6,916	50	37,638	226
71	Average water delivered per acre irrigated.....1939...acre-feet.....	1.7	2.3	2.3	1.1
72	Average cost of water per acre irrigated.....1939...dollars.....	9.30	11.91	0.86	0.21
DRAINAGE OF IRRIGATED LAND					
73	Enterprises reporting land drained or needing drainage.....1939...number.....
74	Irrigable area in these enterprises.....1939...acres.....	(²)
75	Irrigated area in these enterprises.....1939...acres.....	(²)
76	Area for which drains have been installed.....1939...acres.....
77	Additional area needing drainage.....1939...acres.....	(²)

* Census of Agriculture.
¹ Data between census years not comparable (see headnote).
² Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - IDAHO

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Payette	Power	Shoshone	Teton	Twin Falls	Valley	Washington	All other counties ¹						
922	505	182	492	2,717	361	976	3,497	1					
820	573	173	470	2,785	307	1,064	3,324	2					
817	218	17	359	2,640	258	630	3	3					
773	242	9	296	2,683	164	649	14	4					
5.7	-9.9	88.9	21.3	-1.6	57.3	-2.9	-78.6	5					
589	153	18	273	1,603	206	472	2	6					
593	176	.....	233	1,725	128	513	29	7				
228	65	1	86	1,037	52	158	1	8					
180	66	.....	63	858	36	136	2	9				
106,790	391,691	24,485	153,220	370,033	123,480	433,068	856,721	10					
94,591	82,583	1,892	97,930	316,334	101,182	212,639	59	11					
116	379	111	273	120	392	338	20	12					
76,922	71,273	(²)	83,205	207,259	86,765	182,562	(²)	13					
131	466	(²)	305	129	421	408	(²)	14					
17,669	11,310	(²)	14,725	109,075	14,417	20,077	(²)	15					
77	174	(²)	171	105	277	127	(²)	16					
257,820	908,040	1,668,760	289,760	1,242,880	2,380,160	944,000	3,123,840	17					
40,039	10,405	151	42,044	237,950	45,649	31,645	.....	18				
36,064	9,808	134	36,839	236,406	24,527	29,791	.....	19				
.....	.....	.....	209	218	.....	133	.....	20	
3,985	597	17	4,996	1,326	21,122	1,721	.....	21				
37,536	10,709	.....	39,014	244,832	33,128	26,039	782	22				
52,428	11,264	.....	41,385	261,622	15,591	41,423	1,185	23				
6.7	-2.8	.....	7.8	-2.8	37.8	21.5	.....	24			
64,879	15,974	172	50,974	254,978	51,246	40,118	.....	25				
61,950	16,186	.....	58,145	296,556	37,039	32,831	830	26				
71,455	19,496	.....	62,459	312,121	31,984	59,610	2,806	27				
24,940	5,569	21	8,930	17,028	5,597	8,473	.....	28				
24,414	5,478	.....	19,131	51,724	3,911	6,892	148	29				
48,799	13,054	172	46,277	254,391	50,195	34,408	.....	30				
48,086	14,914	.....	45,991	294,487	36,898	31,754	844	31				
30,653	17,186	.....	57,422	271,443	24,148	52,065	2,221	32				
8.2	-12.5	.....	0.6	-13.6	36.0	8.4	.....	33			
8,760	2,649	21	4,233	16,441	4,546	2,763	.....	34				
7,550	4,206	.....	6,977	49,655	3,770	5,715	62	35				
423	12.6	8.0	42.9	75.2	45.1	14.9	.....	36				
56.0	12.5	.....	50.3	88.0	58.5	13.2	9.4	37				
82.0	79.7	87.8	90.9	93.5	90.9	82.0	.....	38				
83.3	71.8	.....	84.8	83.1	89.8	82.0	92.7	39				
2,080,328	201,530	3,400	188,753	9,525,034	370,867	1,198,954	.....	40				
2,006,235	199,565	3,350	182,291	9,312,095	360,436	887,661	.....	41				
74,093	1,965	50	6,462	212,939	10,431	311,293	.....	42				
1,119,416	7,407,045	.....	86,824	6,286,750	494,395	1,178,049	37,594	43				
1,209,175	270,888	.....	157,976	8,984,389	147,110	1,774,135	47,847	44				
85.8	-97.3	.....	94.9	51.5	-25.0	1.8	.....	45			
42.63	15.44	19.77	4.08	37.44	7.39	34.85	.....	46				
24.83	496.65	.....	2.10	21.35	13.40	37.10	44.54	47				
39.45	15.76	.....	2.75	33.10	6.09	34.08	21.54	48				
51.96	19.37	22.52	4.49	40.03	8.12	37.89	.....	49				
3,477,975	241,530	3,400	190,368	9,531,273	392,402	1,405,045	.....	50				
2,659,871	7,443,445	.....	99,124	6,286,750	584,395	1,183,149	37,594	51				
1,209,375	287,138	.....	163,176	9,166,578	177,160	1,874,135	53,022	52				
30.8	-96.8	.....	92.1	51.6	-32.9	18.8	.....	53			
53.61	15.12	19.77	3.73	37.38	7.66	35.02	.....	54				
42.94	459.87	.....	1.70	21.20	15.78	35.93	40.42	55				
16.92	14.73	.....	2.61	29.37	5.54	31.44	18.90	56				
Primary	Sup.		Primary	Sup.	Primary	Sup.	Primary	Sup.					
Enterprises			Enterprises		Enterprises		Enterprises						
45	1	26	9	75	1	52	2	163	4	133	3	57
38,094	(²)	9,220	85	35,761	(²)	237,370	(²)	43,313	335	31,275	3,111	58
39,748	(²)	6,755	163	5,655	(²)	316,818	(²)	18,611	181	32,080	245	59
1.04	(²)	0.73	1.92	0.16	(²)	1.33	(²)	0.43	0.54	1.03	0.08	60
207	1.18	0.15	2.50	0.61	1.59	1.98	61
48,800	1,504	6,520	7,929	289,844	6,449	14,705	43,621	3,321	62
1.39	0.40	0.86	0.26	1.25	0.03	0.54	1.84	1.09	63
35,088	3,761	9,353	31,308	247,388	219,197	27,262	28,629	3,321	64
1.39	0.40	0.70	0.25	1.17	0.03	0.54	1.52	1.00	65
41,575	2,507	6,176	7,263	285,045	6,537	16,559	37,323	3,223	66
69,280	25,212	200	294,645	45,200	128,226	28,560	67
33	30	13	78	43	3	170	115	3	68
32,418	9,284	151	38,785	(²)	233,379	219,251	32,130	335	17,315	3,111	69
182,693	34,348	635	78,778	(²)	877,023	263,411	89,084	677	55,476	6,384	70
5.9	3.7	4.2	2.0	(²)	3.8	1.2	2.0	2.0	3.2	2.1	71
1.28	0.85	1.92	0.25	(²)	1.19	0.03	0.50	0.54	0.96	1.09	72
8	2	10	9	(²)	73
23,355	(²)	2,179	199,176	(²)	74
19,817	(²)	1,153	199,110	(²)	75
18,781	(²)	980	5,708	(²)	76
1,515	(²)	300	522	(²)	77

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — IDAHO

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Ada	Adams	Barnock	Bear Lake	Bingham	Blaine
FARM VALUES, 1940⁶								
1	Land and buildings, all farms.....dollars..	339,194,391	17,047,467	2,706,209	13,518,532	4,400,763	17,715,128	2,310,637
2	Land and buildings, irrigated farms.....dollars..	236,628,170	16,216,543	2,314,469	11,458,908	3,863,381	16,993,404	2,106,169
Operated by—								
3	(a) Owners and managers.....dollars..	173,589,977	11,136,939	2,098,059	9,627,578	3,518,079	12,140,519	1,680,709
4	(b) Tenants.....dollars..	63,038,193	5,079,604	216,410	1,831,330	345,302	4,852,885	485,460
5	Average, land and buildings, per farm.....dollars..	7,914.52	6,455.63	8,008.54	8,589.89	6,695.63	7,918.64	7,876.98
6	per acre in farms.....dollars..	41.86	84.95	12.55	33.61	17.65	59.76	18.13
7	Buildings, irrigated farms reporting value.....number..	28,943	2,468	286	1,287	515	2,079	270
8	Total reported.....dollars..	53,585,575	4,930,540	485,875	2,479,231	818,355	3,928,962	452,005
9	Average, per irrigated farm reporting.....dollars..	1,851.42	1,997.79	1,698.86	1,926.36	1,589.04	1,889.83	1,674.09
10	per acre on all irrigated farms.....dollars..	9.43	25.83	2.64	7.27	3.74	13.82	3.78
11	Buildings, nonirrigated farms reporting value.....number..	13,009	164	115	351	113	61	41
12	Total reported.....dollars..	18,705,158	260,375	100,775	409,916	124,405	59,175	39,465
13	Average, per nonirrigated farm reporting.....dollars..	1,437.86	1,587.65	876.30	1,167.85	1,100.93	970.08	962.56
14	per acre on all nonirrigated farms.....dollars..	4.05	3.82	2.99	3.12	3.03	0.42	2.21
15	Implements and machinery, irrigated farms reporting value.....number..	26,475	1,963	265	1,203	519	1,947	255
16	Total reported.....dollars..	28,818,258	1,424,167	207,222	1,400,388	390,158	2,435,209	324,293
17	Average, per irrigated farm reporting.....dollars..	1,088.51	725.51	781.97	1,164.08	751.75	1,250.75	1,271.74
18	per acre, on all irrigated farms.....dollars..	5.07	7.46	1.12	4.11	1.78	8.56	2.71
19	Implements and machinery, nonirrigated farms reporting value.....number..	11,466	90	98	315	99	43	26
20	Total reported.....dollars..	13,326,972	46,735	49,685	380,930	82,526	43,770	20,265
21	Average, per acre, on all nonirrigated farms.....dollars..	2.89	0.69	1.47	2.90	2.01	0.31	1.13
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940...number.....	¹ 3,702	197	115	206	73	81	57
23	.....1930...number.....	¹ 3,257	88	132	197	90	63	48
24	.....1920...number.....	3,629	50	121	242	95	68	129
25	Average size of enterprise based on irrigable area.....							
26	.....1940...acres.....	775	772	213	511	820	2,756	562
27	.....1930...acres.....	864	1,634	192	644	644	3,533	952
28	.....1920 ² ...acres.....	1,042	2,736	354	940	883	3,425	758
29	Diversion dams.....1940...number.....	3,209	71	39	180	122	38	58
30	Main canals and laterals.....1940...length, miles.....	13,602.1	735.1	180.3	666.9	300.5	820.3	174.1
31	.....1930...length, miles.....	14,344	769	182	626	298	926	196
32	.....1920...length, miles.....	17,298	298	263	948	400	592	271
33	.....1940...capacity, c.f.s. ³	71,510	5,439	717	1,645	1,391	5,306	1,629
34	.....1930...capacity, c.f.s. ³	76,763	5,138	512	1,981	1,292	6,269	1,207
35	.....1920...capacity, c.f.s. ³	86,273	2,567	1,015	3,038	1,522	5,688	2,716
36	Pipe lines ⁴.....1940...length, miles.....	299.9	2.6	4.0	11.3	0.3	2.8	.....
37	Storage dams.....1940...number.....	260	7	10	20	12	6	6
38	Reservoirs.....1940...number.....	290	22	9	21	11	6	7
39	.....1930...number.....	155	2	3	13	5	4	3
40	.....1920...number.....	249	10	3	17	13	6	1
41	.....1940...capacity, acre-feet.....	3,795,272	12,117	25,787	17,483	1,265	654	314,647
42	.....1930...capacity, acre-feet.....	3,645,373	9,233	3,100	24,675	2,151	451,300	208,500
43	.....1920...capacity, acre-feet.....	3,493,511	150,536	1,205	141,216	5,677	123,610	.....
44	Wells, flowing.....1940...number.....	375	67	.....	.....	.....	1	.....
45	.....1930...number.....	220	7	.....	.....	.....	.....	.....
46	.....1920...number.....	142	7	.....	.....	.....	.....	.....
47	.....1940...yield, g.p.m.....	40,165	7,305	.....	.....	.....	(⁵)	.....
48	.....1930...yield, g.p.m.....	30,108	2,828	.....	.....	.....	.....	.....
49	.....1920...yield, g.p.m.....	15,133	45	.....	.....	.....	.....	.....
50	Wells, pumped.....1940...number.....	309	64	.....	3	.....	1	7
51	.....1930...number.....	121	23	.....	1	.....	2	1
52	.....1920...number.....	53	2	.....	.....	.....	1	.....
53	.....1940...yield, g.p.m.....	225,164	14,792	.....	2,045	.....	(⁵)	5,900
54	.....1930...yield, g.p.m.....	34,601	3,886	.....	900	.....	1,128	900
55	.....1920...yield, g.p.m.....	17,749	900	.....	.....	.....	440	.....
56	Pumping plants.....1940...number.....	665	102	1	25	1	23	7
57	.....1930...number.....	393	46	1	4	.....	7	1
58	.....1920...number.....	143	6	.....	2	.....	2	.....
59	Prime movers.....1940...capacity, hp.....	44,537	2,731	(⁵)	114	(⁵)	733	54
60	.....1930...capacity, hp.....	33,754	1,864	6	25	.....	103	5
61	.....1920...capacity, hp.....	28,364	168	.....	23	.....	10	.....
62	Pumps.....1940...capacity, g.p.m.....	2,719,905	96,340	(⁵)	9,017	(⁵)	68,330	5,950
63	.....1930...capacity, g.p.m.....	2,113,513	202,210	1,000	2,236	.....	9,353	900
64	.....1920...capacity, g.p.m.....	1,397,681	2,250	.....	.....	.....	1,440	.....
65	Pumping lift, from all sources.....1940...average, feet.....	26	24	(⁵)	14	(⁵)	20	19
66	.....1930...average, feet.....	32	24	12	24	.....	28	10
67	.....1920...average, feet.....	29	32	.....	14	.....	18	.....
68	.....1940...average, feet.....	29	25	.....	14	.....	(⁵)	19
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷								
69	Enterprises reporting pay roll.....number.....	456	25	14	25	29	40	9
70	Irrigated area in these enterprises.....acres.....	1,932,890	125,360	13,051	63,982	38,936	168,298	18,547
71	Wages and salaries paid and payable.....dollars..	1,316,975	84,586	4,733	28,581	9,684	82,580	7,021
72	Persons employed during week ending April 29.....number..	2,275	126	11	95	91	204	16

⁶ Census of Agriculture.

¹ Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION - IDAHO

1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

(Irrigation data omitted from any of the counties listed are included under "All other counties")

Boise	Bonner	Bonneville	Boundary	Butte	Camas	Canyon	Caribou	Cassia	Clark	Custer	Elmore	Franklin	Fremont		
894,311 675,146	4,740,111 335,740	18,699,684 15,641,657	3,776,416 22,670	1,776,709 1,725,611	3,215,968 1,082,810	23,079,715 22,579,753	2,013,111 1,151,330	9,203,955 8,723,219	1,189,285 859,005	2,488,727 2,396,937	2,634,694 2,346,854	8,426,488 7,444,177	8,471,468 6,547,277	1 2	
565,346 109,800 5,485.99 14.01	322,240 13,500 5,895.36 20.75	10,571,942 5,069,715 10,968.90 66.43	22,670 7,556.67 24.38	1,384,910 340,701 7,160.21 28.35	966,235 126,575 14,970.00 18.60	15,462,058 7,117,695 6,456.89 94.64	1,059,330 92,000 11,287.55 13.65	6,477,756 2,245,463 7,275.41 37.35	788,645 70,360 10,475.67 7.76	1,995,227 401,710 7,112.57 23.23	1,973,999 372,855 6,002.18 20.34	6,842,150 602,027 8,757.86 48.22	5,018,304 1,528,973 9,144.24 38.83	3 4 5 6	
123 154,450 1,255.69 3.20 69 67,105 972.54 2.91	55 88,850 1,615.45 5.49 1,479 1,437,362 971.85 6.28	1,378 3,356,010 2,435.42 14.25 184 268,125 1,487.20 1.40	3 4,350 1,450.00 4.68 751 838,909 1,117.06 7.51	225 382,975 1,702.11 6.29 19 16,720 880.00 3.92	71 154,230 2,172.25 2.63 108 182,240 1,687.41 1.72	3,438 5,782,451 1,684.81 24.28 122 160,792 1,117.97 26.01	98 226,950 2,315.82 2.69 129 171,425 1,328.87 2.19	1,165 2,021,952 1,735.58 8.66 96 106,855 1,113.07 1.99	80 122,250 1,528.12 1.20 28 191,265 6,830.89 4.68	322 420,707 1,306.54 4.08 24 18,810 783.75 3.36	372 486,377 1,307.47 4.22 83 62,310 750.72 1.89	810 1,818,790 2,245.42 11.78 124 197,595 1,593.51 4.37	645 1,138,585 1,765.25 6.41 194 302,766 1,560.65 3.04	7 8 9 10 11 12 13 14	
120 82,084 684.03 1.70	53 40,902 771.74 2.53	1,331 1,898,616 1,426.46 8.06	3 2,950 963.33 3.17	214 253,039 1,182.43 4.16	69 151,103 2,189.90 2.57	3,073 2,853,783 928.66 11.96	93 136,210 1,464.62 1.61	1,099 1,290,220 1,173.89 5.52	74 80,280 1,084.86 0.72	275 306,903 1,116.01 2.97	344 289,495 841.56 2.51	775 874,136 1,127.82 5.66	651 853,901 1,310.75 4.80	15 16 17 18	
63 27,915 1.21	1,174 405,631 1.77	202 439,825 2.29	669 473,755 4.24	13 7,471 1.75	106 338,842 3.20	85 56,488 9.14	114 165,555 2.11	70 94,337 1.76	18 22,800 0.56	17 9,308 1.66	67 46,875 1.42	119 130,601 2.89	165 279,550 2.81	19 20 21	
101 127 111	43 42	103 80 85	8 5	21 49 76	17 28 58	84 45 29	64 80 61	87 26 157	75 84 100	160 216 284	130 129 138	83 61 77	82 46 108	22 23 24	
62 75 128 151 117.1 167 230 204 267 508 0.6	69 50 52 10.1 5 239 226 1.7	1,262 1,331 1,588 53 546.2 535 611 2,156 1,976 4,553 2.1	95 4 4.2 48 1.2	1,799 1,111 2,432 46 184.0 232 72 523 77 1,509	562 370 367 21 23.0 31 72 110 77 196	3,302 5,258 8,059 33 1,114.0 1,073 532 1,887 8,428 3,619 36.6	244 209 477 57 96.1 75 198 341 190 1,139	1,530 4,526 949 127 504.0 435 796 2,401 2,206 2,039 2.8	221 239 458 102 109.0 199 333 344 469 2,160	322 320 507 185 515.3 472 813 418 901 3,202 2.9	218 234 437 116 308.6 289 391 418 901 1,117 18.4	750 922 714 44 297.8 327 301 1,085 860 859 6.9	1,239 2,448 2,058 68 384.5 409 779 5,513 7,414 9,597 0.7	25 26 27 28 29 30 31 32 33 34 35	
7 10 13 10 112 280,110 27	4 6 3 904 505	2 2 1 6 200 147 .....	..... ..... ..... ..... ..... ..... .....	1 1 1 5 49,013 103,680	7 7 1 6 38,200 18,000 708	3 1 1 5 177,150 177,000 422,257 30 6 1 3,510 613 30 39 8 37,918 7,050	8 7 3 5 200,076 890 163	15 17 3 5 76,575 77,502 442,767 4 11 630 2,700 39 3 22,457 2,500 .....	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	1 15 10 8 18 321,789 33,570 35,109	14 15 10 8 6 23,275 24,720 7,903	12 10 8 3 19 210,507 82,888 8,422	8 8 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	
4 1 24 2 1,155 23 15 (⁶)	1 5 (⁶) 27 (⁶) 3,112 (⁶) 29	17 1 1,738 2 89,375 15 57 150	1 (⁶) (⁶) (⁶) 8 100 15 309 156 64,534 16,205 7,400 18 17 27 22	70 17 3 998 309 156 64,534 16,205 7,400 18 17 27 22	1 1 (⁶) 1 (⁶) 50 (⁶) (⁶)	59 9 1 12,871 9,085 3,300 1,122,500 884,468 330,000 36 33 14 40	1 (⁶)	17 46 22 104 212 2,397 10,893 13,093 13,966 19 19 23 18	20 6 2,495 2,334 568 103,730 116,850 14,915 34 40 10 23 23	2	55 56 57 58 59 60 61 62 63 64 65 66 67
(⁶) (⁶) .....	..... ..... .....	21 113,216 50,648 131	..... ..... .....	5 25,366 5,609 5	(⁶) (⁶)	23 175,728 188,562 223	2 (⁶) (⁶) 80	17 76,254 72,533 80	..... ..... ..... .....	6 11,560 4,713 6	3 13,229 22,075 21	24 47,468 32,252 91	31 81,064 20,894 44	68 69 70 71

⁴ Includes siphons and farm pipe lines reported.
⁵ Data for less than 3 enterprises shown with permission of the enterprise involved.
⁶ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁷ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - IDAHO

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
(Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920)

ITEM (For definitions and explanations, see text)		Gem	Gooding	Idaho	Jefferson	Jerome	Kootenai	Lehi
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	4,871,767	7,224,547	14,306,095	8,610,329	10,377,430	7,204,372	4,121,758
2	Land and buildings, irrigated farms.....dollars..	4,443,347	7,110,162	1,004,281	8,244,934	10,113,130	1,186,180	4,111,158
Operated by—								
3	(a) Owners and managers.....dollars..	3,788,425	4,407,922	966,056	6,287,669	5,906,618	1,063,230	3,542,116
4	(b) Tenants.....dollars..	654,922	2,702,200	38,225	1,957,265	4,206,512	122,950	569,042
5	Average, land and buildings, per farm.....dollars..	5,740.76	7,368.04	7,845.95	6,797.14	10,839.37	2,752.16	7,815.89
6	per acre in farms.....dollars..	44.78	56.58	6.37	45.39	90.00	62.58	25.14
7	Buildings, irrigated farms reporting value.....number...	752	921	127	1,170	908	420	515
8	Total reported.....dollars..	1,140,356	1,478,415	161,523	1,858,517	1,900,981	599,860	832,293
9	Average, per irrigated farm reporting.....dollars..	1,516.43	1,605.23	1,271.85	1,588.48	2,093.59	1,428.24	1,616.10
10	per acre on all irrigated farms.....dollars..	11.49	11.77	1.02	10.23	16.92	31.04	5.09
11	Buildings, nonirrigated farms reporting value.....number...	116	31	1,294	71	35	1,282	4
12	Total reported.....dollars..	119,690	43,425	2,190,198	66,085	49,854	1,673,900	1,225
13	Average, per nonirrigated farm reporting.....dollars..	1,031.81	1,400.81	1,692.58	930.77	1,424.40	1,305.72	306.25
14	per acre on all nonirrigated farms.....dollars..	3.62	15.71	3.59	2.41	13.54	6.90	3.57
15	Implements and machinery, irrigated farms reporting value.....number...	672	870	110	1,084	753	391	482
16	Total reported.....dollars..	558,078	917,214	57,045	1,147,768	1,199,452	145,507	493,501
17	Average, per irrigated farm reporting.....dollars..	830.47	1,054.27	518.59	1,058.83	1,592.90	372.14	1,023.86
18	per acre, on all irrigated farms.....dollars..	5.62	7.30	0.36	6.32	10.67	7.68	3.02
19	Implements and machinery, nonirrigated farms reporting value.....number...	96	29	1,207	51	23	1,142	3
20	Total reported.....dollars..	37,905	16,935	1,572,997	36,100	26,824	684,543	570
21	Average, per acre, on all nonirrigated farms.....dollars..	1.15	6.12	2.58	1.32	7.29	2.82	1.66
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22	Enterprises.....1940...number.....	54	54	103	89	5	16	517
23	.....1930...number.....	79	37	99	50	9	23	457
24	.....1920...number.....	42	79	86	72	1	19	404
25	Average size of enterprise based on irrigable area.....1940...acres.....	901	3,050	28	1,437	26,151	418	156
26	.....1930...acres.....	678	2,961	27	3,399	15,664	464	155
27	.....1920...acres.....	1,425	1,159	45	3,592	110,000	538	337
28	Diversion dams.....1940...number.....	35	36	111	11	2	4	542
29	Main canals and laterals.....1940...length, miles.....	224.8	747.6	111.5	308.2	549.5	31.7	859.9
30	.....1930...length, miles.....	255	449	85	403	246	61	917
31	.....1920...length, miles.....	254	449	103	935	507	37	1,069
32	.....1940...capacity, c.f.s. ⁵	1,749	715	144	7,557	7,212	344	2,792
33	.....1930...capacity, c.f.s. ⁵	1,099	1,693	86	8,152	2,000	89	2,540
34	.....1920...capacity, c.f.s. ⁵	2,109	2,756	151	8,364	2,072	98	2,691
35	Pipe lines ⁶.....1940...length, miles.....	23.1	9.9	1.6	0.1	1.1	67.2	1.3
36	Storage dams.....1940...number.....	5	3	3	3	1	2	5
37	Reservoirs.....1940...number.....	5	3	4	2	1	2	5
38	.....1930...number.....	4	2	3	1	.....	.....	6
39	.....1920...number.....	1	5	5	6	1	1	4
40	.....1940...capacity, acre-feet..	4,543	3,703	15	(²)	(²)	(²)	108
41	.....1930...capacity, acre-feet..	503	3,600	211	4,561	.....	.....	1,570
42	.....1920...capacity, acre-feet..	3	6,405	79	35,874	880,000	600	397
43	Wells, flowing.....1940...number.....	.....	.....	.....	30	.....	.....	.....
44	.....1930...number.....	.....	.....	.....	19	.....	.....	.....
45	.....1920...number.....	1	.....	.....	.....	.....	.....	.....
46	.....1940...yield, g.p.m.....	.....	.....	.....	11,100	.....	.....	.....
47	.....1930...yield, g.p.m.....	.....	.....	.....	8,550	.....	.....	.....
48	.....1920...yield, g.p.m.....	36	.....	.....	.....	.....	.....	.....
49	Wells, pumped.....1940...number.....	.....	.....	.....	57	.....	2	.....
50	.....1930...number.....	1	.....	.....	9	.....	1	.....
51	.....1920...number.....	.....	.....	.....	.....	.....	.....	.....
52	.....1940...yield, g.p.m.....	.....	.....	.....	101,540	.....	(²)	.....
53	.....1930...yield, g.p.m.....	500	.....	.....	5,690	.....	100	.....
54	.....1920...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
55	Pumping plants.....1940...number.....	16	.....	1	56	14	13	3
56	.....1930...number.....	36	.....	2	13	8	11	4
57	.....1920...number.....	.....	3	.....	11	3	6	1
58	Prime movers.....1940...capacity, hp.....	2,147	.....	(²)	1,894	1,945	1,316	85
59	.....1930...capacity, hp.....	996	.....	24	1,227	1,722	1,054	8
60	.....1920...capacity, hp.....	.....	706	.....	626	1,290	992	5
61	Pumps.....1940...capacity, g.p.m.....	164,781	.....	(²)	280,214	98,100	45,567	3,450
62	.....1930...capacity, g.p.m.....	141,746	.....	600	171,840	94,190	33,770	365
63	.....1920...capacity, g.p.m.....	.....	33,794	.....	96,250	62,956	50,041	75
64	Pumping lift, from all sources.....1940...average, feet.....	14	.....	(²)	16	53	76	14
65	.....1930...average, feet.....	31	.....	35	15	30	72	15
66	.....1920...average, feet.....	.....	50	.....	11	50	51	19
67	from pumped wells.....1940...average, feet.....	.....	.....	.....	18	.....	(²)	.....
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁷								
68	Enterprises reporting pay roll.....number.....	16	9	.....	32	2	7	12
69	Irrigated area in these enterprises.....acres.....	37,718	107,291	.....	94,990	(²)	5,255	9,990
70	Wages and salaries paid and payable.....dollars..	19,394	56,443	.....	25,576	(²)	13,821	2,759
71	Persons employed during week ending April 29.....number.....	26	76	.....	122	(²)	24	19

* Census of Agriculture.

¹ Data between census years not comparable (see headnote).

² Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

³ Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION—KANSAS

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	°52,552,320	52,335,360	52,335,360	52,335,360	52,335,360	52,335,360	52,335,360
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	156,327	174,589	166,042	165,286	177,841	173,098	166,617
Land in all farms.....acres.....	48,173,635	48,009,770	46,975,647	45,425,179	43,384,799	41,662,970	30,214,456
Farms irrigated: ¹							
Farms.....number.....	1,578	1,331	683	504	1,006	929	519
Increase or decrease (-) over preceding census.....percent..	² 131.0	.....	35.5	-49.9	8.3	79.0	.....
Proportion of all farms.....percent..	1.0	0.8	0.4	0.3	0.6	0.5	0.3
Land in farms.....acres.....	871,189	(³)	311,174	(³)	(³)	(³)	(³)
Proportion of all farm land.....percent..	1.8	(³)	0.7	(³)	(³)	(³)	(³)
Area irrigated.....acres.....	⁴ 82,872	⁵ 44,835	⁶ 56,939	(⁷)	(⁷)	23,620	20,816
Increase or decrease (-) over preceding census.....percent..	² 45.5	.....	.....	.....	.....	13.5	.....
Proportion of total land area of State.....percent..	0.2	0.1	0.1	.....	.....	(⁸)	(⁸)
Proportion of all farm land.....percent..	0.2	0.1	0.1	.....	.....	0.1	0.1
Value of irrigated farms (land and buildings).....dollars..	22,721,389	(³)	12,294,425	(³)	(³)	(³)	(³)
Average per farm.....dollars..	14,398.85	(³)	18,000.62	(³)	(³)	(³)	(³)
Average per acre.....dollars..	26.08	(³)	39.51	(³)	(³)	(³)	(³)
Value of farm implements and machinery ⁸.....dollars..	1,992,911	(³)	800,644	(³)	(³)	(³)	(³)
Average per farm ⁹.....dollars..	1,262.93	(³)	1,172.25	(³)	(³)	(³)	(³)
Average per acre ⁹.....dollars..	2.29	(³)	2.57	(³)	(³)	(³)	(³)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number.....	1,066	(³)	300	209	716	(³)	(³)
Farms irrigated.....number.....	1,513	(³)	(³)	(³)	(³)	(³)	(³)
Area irrigated.....acres.....	99,980	(³)	71,290	47,312	37,479	(³)	(³)
Area existing works were capable of supplying with water.....acres.....	142,409	(³)	83,583	67,853	139,995	(³)	(³)
Area irrigable.....acres.....	147,226	(³)	95,719	⁹ 102,562	⁹ 161,300	(³)	(³)
Additional area existing works were capable of supplying with water.....acres.....	42,429	(³)	12,293	20,541	102,516	(³)	(³)
Additional irrigable area in enterprises not supplied with water.....acres.....	47,246	(³)	24,429	⁹ 55,250	⁹ 123,821	(³)	(³)
Investment in irrigation enterprises.....dollars..	2,153,886	(³)	1,685,652	2,067,381	1,365,563	529,755	84,729
Increase or decrease (-) over preceding census.....percent..	² 27.8	(³)	-18.5	51.4	157.8	.....	.....
Average per acre based on area works were capable of supplying with water.....dollars..	15.12	(³)	20.17	30.47	9.75	(³)	(³)
Increase or decrease (-) over preceding census.....percent..	² -25.0	(³)	-33.8	212.5	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	2,255,579	(³)	1,723,872	2,195,961	1,365,563	(³)	(³)
Average per acre based on irrigable area in enterprises.....dollars..	15.32	(³)	18.01	⁹ 21.41	⁹ 8.47	(³)	(³)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	2.59	(³)	1.53	3.29	1.59	(³)	(³)

¹ Relates to farms reporting irrigated cropland harvested and or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ² Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³ Not available. ⁴ Irrigated land from which crops were harvested plus 3,227 acres of irrigated land used only for pasture. ⁵ Irrigated land from which crops were harvested. ⁶ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷ Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸ Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁰ The land area shown for 1940 represents recalculations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	Number 156,327	Acres 48,173,635	17,816,498	79,645	3,227	1,421,367,464	29.51	257,831,772	5.35	115,262,666	2.39
Owners and managers.....	86,105	28,883,678	10,028,004	45,206	2,477	863,324,926	29.79	170,844,017	5.89	69,516,450	2.40
Tenants.....	70,222	19,189,957	7,788,494	34,439	750	558,062,538	29.08	86,987,755	4.53	45,746,216	2.38
Irrigated farms, total.....	1,578	871,189	202,911	79,645	3,227	22,721,389	26.08	3,942,540	4.53	1,992,911	2.29
Owners and managers.....	1,031	656,836	138,391	45,202	2,477	16,409,622	24.98	3,122,435	4.75	1,441,795	2.20
Tenants.....	547	214,353	64,520	34,443	750	6,311,767	29.45	820,105	3.83	551,116	2.57
Wholly irrigated farms.....	639	177,112	45,151	45,151	2,007	5,925,660	33.46	1,209,160	6.83	553,711	3.13
Owners and managers.....	352	104,390	21,870	21,870	1,643	3,625,873	34.79	891,505	8.54	391,396	3.17
Tenants.....	287	72,722	23,281	23,281	364	2,299,787	31.62	317,555	4.37	222,315	3.06
Partly irrigated farms.....	939	694,077	157,760	34,494	1,220	16,795,729	34.20	2,733,380	3.94	1,439,200	2.07
Owners and managers.....	679	552,446	116,521	23,332	834	12,789,749	23.14	2,230,830	4.04	1,110,399	2.01
Tenants.....	260	141,631	41,239	11,162	386	4,011,980	28.33	502,550	3.55	328,801	2.32
Nonirrigated farms, total.....	154,749	47,302,446	17,613,587	.....	.....	1,398,666,075	29.57	253,889,232	5.37	113,269,775	2.39

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting —			Cost ¹		
								Quantity	Cost	Quantity and cost	Quantity delivered per acre ¹	Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	1,066	147,226	142,409	99,980	71,290	47,312	40.2	99,008	99,033	92,315	1.7	2.71	1.57
Primary sources:													
Streams, gravity.....	15	57,558	57,558	40,902	53,196	30,807	-23.1	38,747	40,862	38,747	1.2	0.93	0.80
Streams, pumped.....	210	13,540	12,344	8,279	8,279	730	157.4	7,176	8,032	7,079	1.4	3.66	2.57
Streams, gravity and pumped.....	1	(²)	(²)	(²)	(²)	600	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Wells, pumped.....	706	67,162	63,876	44,972	11,648	13,235	286.1	44,136	44,432	43,660	1.6	3.34	2.09
Wells, flowing.....	5	53	53	26	3	3	766.7	26	26	26	1.0	5.77	5.56
Wells, pumped and flowing.....	2	(²)	(²)	(²)	(²)	50	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Lakes, gravity.....													
Lakes, pumped.....	3	78	78	38				38	38	38	0.4	5.26	11.76
Springs.....	1	(²)	(²)	(²)	155			(²)	(²)	(²)	(²)	(²)	(²)
Springs and streams.....													
Stored storm water.....	2	(²)	(²)	(²)	225			(²)	(²)	(²)	(²)	(²)	(²)
City water.....	4	837	837	32	31		3.2	32	29	29	1.4	17.83	13.61
Sewage.....	3	153	153	138				43	138	43	4.5	0.47	0.10
Streams, gravity; wells, pumped...	8	3,183	3,183	2,443	405	1,540	503.2	61	2,413	31	1.3	4.06	3.06
Streams, gravity; wells, flowing...													
Streams, pumped; wells, pumped...	19	3,474	3,419	2,632				2,532	2,565	2,465	2.8	4.71	1.69
Waste water, seepage or drainage...	2	(²)	(²)	(²)				(²)	(²)	(²)	(²)	(²)	(²)
Other mixed.....	7	348	288	146	53	350	175.5	108	146	108	0.6	4.09	6.41
Other and not reported.....					2,358								
Supplemental sources:³													
Streams, gravity and/or storage...	1	(⁴)	(⁴)	(⁴)				(⁴)	(⁴)	(⁴)	(²)	(²)	(²)
Streams, pumped.....													
Wells, pumped.....	77	19,056	18,326	13,429	1,050		1,179.0	13,031	13,391	13,031	2.0	2.19	1.08
Wells, flowing.....													

¹ Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms, the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ² Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ³ Areas included under "Supplemental sources" are parts of areas included under "Primary sources" and therefore are not again added into the totals (see text). ⁴ Data are not shown because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars	
Total.....	2,153,886	100.0	15.12	1,685,652	100.0	20.17	-5.05	99,033	2.59	64,983	1.53	1.06	28,583	3.29
Primary sources:														
Streams, gravity.....	596,206	27.7	10.36	746,401	44.3	12.98	-2.62	40,862	0.80	50,805	0.84	-0.04	17,957	0.92
Streams, pumped.....	167,340	7.8	13.56	176,378	10.5	13.98	-30.42	8,032	3.60	2,613	3.43	0.17	645	7.57
Streams, gravity and pumped.....	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	600	20.00
Wells, pumped.....	1,015,070	47.1	15.89	604,328	35.9	33.44	-17.55	44,432	3.35	10,954	3.69	-0.34	8,481	6.96
Wells, flowing.....	2,250	0.1	42.45	800	(⁴)	266.67	-224.22	26	5.77	3	16.67	-10.90		
Wells, pumped and flowing.....	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)		
Lakes, gravity.....													50	1.00
Lakes, pumped.....	2,375	0.1	30.45					38	5.26					
Springs.....	(³)	(³)	(³)	5,100	0.3	30.36	(³)	(³)	(³)	150	1.33	(³)		
Springs and streams.....														
Stored storm water.....	(³)	(³)	(³)	20,000	1.2	33.33	(³)	(³)	(³)	(³)	(³)	(³)		
City water.....	17,150	0.8	20.49	3,675	0.2	118.55	-98.06	29	17.83					
Sewage.....	1,000	(⁴)	6.54					138	1.41					
Streams, gravity; wells, pumped...	15,622	0.7	4.91	30,010	1.8	37.51	-32.60	2,413	1.00	405	10.12	-9.12	620	1.55
Streams, gravity; wells, flowing...														
Streams, pumped; wells, pumped...	59,003	2.7	17.26					2,565	4.72					
Waste water, seepage or drainage...	(³)	(³)	(³)											
Other mixed.....	17,400	0.8	60.42	1,400	0.1	26.42	34.00	146	4.75	53	4.72	0.03	230	1.83
Other and not reported.....				54,450	3.2	23.09								
Supplemental sources:⁵														
Streams, gravity and/or storage...	(⁶)	(⁶)	(⁶)					(⁶)	(⁶)					
Streams, pumped.....														
Wells, pumped.....	256,095	11.9	13.53	43,110	2.5	37.10	-23.57	13,391	2.21	1,060	2.40	-0.19		
Wells, flowing.....														

¹ Based on irrigated area in enterprises reporting cost of maintenance and operation. ² Based on area works were capable of supplying with water. ³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁴ Less than one-tenth of 1 percent. ⁵ Areas included under "Supplemental sources" are parts of areas included under "Primary sources" and therefore are not again added into the totals (see text). ⁶ Data are not shown because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION—KANSAS

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930	1920			1940		1930	1920	
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED	Acres	Acres	Acres	Acres	Percent	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued	Acres	Acres	Acres	Acres	Percent
Total.....	99,980	13,666	71,290	47,312	40.2	Commercial.....	(²)	(²)	17,000	320	.....
Individual and partnership....	58,255	12,751	16,689	14,546	249.1	Bureau of Reclamation ³	640	.....	780	200	-17.9
Cooperative, incorporated.....	39,328	915	37,871	32,516	3.8	City and/or sewage.....	(²)	.....	.....	.....	.....
Cooperative, unincorporated....	(²)	.....	16,000	150	.....	Other.....	2,363	.....	.....	.....	.....
Commercial.....	(²)	.....	.....	.....	.....	IRRIGABLE AREA ⁴	.....	.....	.....	.....	.....
Bureau of Reclamation ³.....	.....	.....	.....	.....	.....	Total.....	147,226	19,377	95,719	102,562	53.8
State.....	538	.....	730	100	-26.3	Individual and partnership....	88,300	18,110	26,839	36,643	229.0
City and/or sewage.....	(²)	.....	.....	.....	.....	Cooperative, incorporated.....	55,923	1,267	50,600	65,399	10.5
Other.....	1,859	.....	.....	.....	.....	Cooperative, unincorporated....	(²)	.....	17,000	320	.....
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER	.....	.....	.....	.....	.....	Commercial.....	(²)	.....	.....	.....	.....
Total.....	142,409	19,163	83,583	67,853	70.4	Bureau of Reclamation ³.....	.....	.....	1,280	200	-50.0
Individual and partnership....	83,483	17,978	23,812	26,614	250.6	City and/or sewage.....	(²)	.....	.....	.....	.....
Cooperative, incorporated.....	55,923	1,185	41,991	40,719	33.2	Other.....	2,363	.....	.....	.....	.....
Cooperative, unincorporated....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²Data for 1 "Commercial" and 1 "City and/or sewage" enterprises are included with "Other" enterprises in the 1940 Census. ³U. S. Dept. of the Interior. ⁴For 1920 relates to total area. Irrigable area for that year was not reported. *For explanation of areas, see text, p. 273.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940, AND AREA IRRIGATED, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 1,066	Number 9	Acres 147,226	Acres 142,409	Dollars 12.72	Dollars 2.29	Dollars 13.38	Dollars 2.18	Number 1,513	Acres 99,980	Acres 85,139	Acres 11,386	Acres 3,455
Individual and partnership.....	1,044	.....	88,300	83,483	15.02	3.34	13.24	1.98	980	58,255	50,952	4,254	3,049
Cooperative, incorporated.....	13	8	55,923	55,923	9.03	0.84	15.44	4.88	507	39,328	32,441	6,807	80
Cooperative, unincorporated....	2	.....	(⁴)	(⁴)	(⁴)	(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Commercial.....	1	1	(⁴)	(⁴)	(⁴)	(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
U. S. Bureau of Reclamation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State.....	4	.....	640	640	38.29	3.26	.....	.....	4	538	487	25	26
City and/or sewage.....	1	.....	(⁴)	(⁴)	(⁴)	(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Other.....	1	.....	2,363	2,363	11.38	0.56	.....	.....	22	1,859	1,259	300	300

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 1 "Commercial" and 1 "City and/or sewage" enterprises are included with "Other" enterprises in the 1940 Census. *For explanation of areas and investment, see text, p. 273.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works	
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment								Investment in water rights
Total.....	Dollars 2,153,866	Dollars 1,896,991	Dollars 256,895	Dollars 2,067,284	Dollars 86,602	Dollars 1,685,652	Dollars 2,067,381	Percent 27.8	Dollars 13.32	Dollars 13.41	Dollars 2,235	Dollars 101,693
Individual and partnership.....	1,494,396	1,256,301	238,095	1,492,304	2,082	875,951	775,095	70.6	15.05	13.24	.....	100,993
Cooperative, incorporated.....	600,082	581,282	18,800	523,562	76,520	242,001	1,289,737	148.0	10.40	15.86	{ 2,235	700
Cooperative, unincorporated....	(²)	(²)	.....	(²)	(²)	520,000	1,549	.....	(²)	.....	.....	.....
Commercial.....	(²)	(²)	.....	(²)	(²)	.....	.....	.....	.....	.....	.....	.....
U. S. Bureau of Reclamation ³.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State.....	24,508	24,508	.....	24,508	.....	47,700	1,000	-48.6	38.29	.....	.....	.....
City and/or sewage.....	(²)	(²)	.....	(²)	(²)	.....	.....	.....	(²)	.....	.....	.....
Other.....	234,900	234,900	.....	226,900	28,000	.....	.....	.....	14.77	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 1 "Commercial" and 1 "City and/or sewage" enterprises are included with "Other" enterprises in the 1940 Census. *For explanation of investment, see text, p. 273.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE: CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939	Average per acre works were capable of supplying with water 1940	Enter-prises 1940	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrigable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	7	40,423	40,423	43,775	1.10	1.08	1	(³)	(³)	(³)	56,719	43,166	31,346
Partnership.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooperative, incorporated.....	6	40,423	40,423	43,775	1.10	1.08	1	(³)	(³)	(³)	56,719	43,166	31,346
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Commercial.....	1	(³)	(³)	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	(³)
Bureau of Reclamation ⁴.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Only for enterprises serving 5 or more farms. No supplemental enterprises reported indebtedness, arrearage, or charges in this State. ² In payment of principal, interest, and/or other funded obligations. ³ Data are not shown because less than 3 enterprises reported. ⁴ Data for 1 "Commercial" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ⁵ U. S. Dept. of the Interior. ⁶ For explanation of areas and investment, see text, p. 273.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	99,033	227,073	13,628	29,689	2.29	2.18	9	16,235	75
Individual and partnership.....	57,308	191,450	12,713	25,228	3.34	1.98	.....	.....	.....
Cooperative, incorporated.....	39,328	32,839	915	4,461	0.84	4.88	8	16,235	75
Cooperative, unincorporated.....	(²)	(²)	.....	.....	(²)	.....	1	(²)	(²)
Commercial.....	(²)	(²)	.....	.....	(²)	.....	.....	.....	.....
U. S. Bureau of Reclamation ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State.....	538	1,752	.....	.....	3.26	.....	.....	.....	.....
City and/or sewage.....	(³)	(³)	.....	.....	(³)	.....	.....	.....	.....
Other.....	1,859	1,035	.....	.....	0.56	.....	.....	.....	.....

¹ Only for enterprises serving 5 or more farms. ² Data for 1 "Commercial" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³ Data for 1 "Commercial and 1 "City and/or sewage" enterprises are included with "Other enterprises in the 1940 Census. ⁴ For explanation of areas and investment, see text, p. 273.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Storage	Capacity at main heading	Length ¹		Number	Capacity	Length	Number	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capacity	Number	Rated capacity
	Number	Number	Sec.-ft.	Miles	Miles	Number	Ac.-ft.	Miles	G. p. m.	G. p. m.	G. p. m.	Hp.	Hp.	G. p. m.		
Total.....	102	40	3,347	292	0.5	80	32,584	24.1	24	1,453	³ 1,638	563,663	1,222	26,796	1,259	1,231,482
Individual and partnership.....	94	38	1,085	59	0.5	76	7,479	22.7	24	1,453	1,617	846,113	1,203	25,924	1,239	1,208,282
Cooperative, incorporated.....	8	1	2,186	220	.....	1	25,000	.....	.....	.....	9	12,950	9	530	9	12,950
Cooperative, unincorporated.....	.....	.....	4	1	.....	.....	.....	1.2	.....	.....	.....	.....	.....	.....	.....	.....
Commercial.....	.....	.....	60	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ⁴.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State.....	.....	1	11	5	.....	3	105	0.2	.....	.....	9	3,800	6	302	7	9,200
City and/or sewage.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	10	1	250
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	800	3	30	3	800

¹ Includes main and lateral canals but not farm ditches. ² Includes flumes. ³ Includes batteries of wells pumped by one pump. ⁴ U. S. Dept. of the Interior. ⁵ For explanation of areas and investment, see text, p. 273.

BUREAU OF RECLAMATION ACTIVITIES

The United States Bureau of Reclamation constructed the Garden City Project to serve 10,677 acres of irrigable land in Finney and Kearny Counties in 1906-08. Pumped shallow wells near the Arkansas River and the natural flow of that stream served as the sources of water supply. Due to a series of wet years, interest in irrigation dwindled and the project was abandoned as a Federal undertaking in 1910.

With the droughts of the decade from 1930 to 1939 seriously affecting agricultural production in Kansas and other States of the high plains, much of the area of the former

Garden City Project has been irrigated through rehabilitated works. The demand for water conservation and irrigation has extended to other parts of western Kansas. Therefore, the Bureau of Reclamation is at this time engaged in extensive investigations of potential projects in the drainage basins of the Arkansas, Republican, Smoky Hill, and Solomon Rivers.

The Land-Use Committee of the National Resources Board in 1934 estimated that, if adequately conserved, sufficient water could be made available for the irrigation of 1,250,000 acres of land in Kansas:

CENSUS OF IRRIGATION — KANSAS

STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number
Total.....	102	40	27	7
Concrete or masonry.....	16	8	14	2
Timber.....	4	1	3	.....
Earth and rock.....	65	22	.....	3
Other and mixed.....	15	1	19	1
Not reported.....	2	8	1	1

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	1,259	100.0	1,231,482	100.0	35	Total, 1940.....	1,222	100.0	26,796	100.0
Electric motor.....	407	32.3	421,100	34.2	33	Centrifugal pump.....	853	69.8	15,499	57.8
Centrifugal.....	313	24.9	328,300	26.6	24	Electric.....	320	26.2	4,902	18.3
Turbine.....	84	6.7	89,470	7.3	69	Internal-combustion.....	529	43.3	10,512	39.2
Plunger.....	8	0.6	1,230	0.1	32	Other.....	4	0.3	85	0.3
Other.....	2	0.1	2,100	0.2	30	Turbine pump.....	258	21.1	9,060	33.8
Internal-combustion engines.....	785	62.3	770,807	62.6	36	Electric.....	80	6.5	2,941	11.0
Centrifugal.....	577	45.8	557,927	45.3	27	Internal-combustion.....	177	14.5	6,094	22.7
Turbine.....	200	15.9	207,765	16.9	61	Other.....	1	0.1	25	0.1
Plunger.....	4	0.3	265	(¹)	25	Plunger pump.....	26	2.1	87	0.4
Other.....	4	0.3	4,850	0.4	20	Electric.....	8	0.7	50	0.2
Other kinds of motive power.....	21	1.7	7,060	0.6	41	Internal-combustion.....	4	0.3	20	0.1
Centrifugal.....	4	0.3	4,300	0.3	23	Other.....	14	1.1	17	0.1
Turbine.....	1	0.1	1,500	0.1	45	Other and mixed types of pumps.....	85	7.0	2,150	8.0
Plunger.....	15	1.2	360	(¹)	54	Electric.....	20	1.7	275	1.0
Other.....	1	0.1	900	0.1	15	Internal-combustion.....	60	4.9	1,810	6.8
Mixed kinds of motive power.....	46	3.7	32,515	2.6	30	Other.....	5	0.4	65	0.2
Centrifugal.....	37	3.0	26,650	2.2	27	Total, 1930.....	² 281	.....	6,221	.....
Turbine.....	5	0.4	5,450	0.4	44	Increase or decrease (-) 1930-1940.....	941	.....	20,575	.....
Plunger.....	4	0.3	415	(¹)	34					
Other.....	.....	.....	.....	.....	.....
Total, 1930.....	312	.....	393,526	.....	26					
Increase or decrease (-) 1930-1940..	947	.....	837,956	.....	9					

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930	
	Miles	Miles	Percent
Total.....	24.1	16.1	49.7
Concrete:			
1 to 12 inches.....	0.6	.....	.....
13 to 24 inches.....	.....	.....	.....
Over 24 inches.....	0.5	.....	.....
Metal:			
1 to 12 inches.....	20.8	16.1	29.2
13 to 24 inches.....	0.9	.....	.....
Over 24 inches.....	.....	.....	.....
Wood-stave:			
1 to 12 inches.....	.....	.....	.....
13 to 24 inches.....	.....	.....	.....
Over 24 inches.....	.....	.....	.....
Clay and other:			
1 to 12 inches.....	0.5	.....	.....
13 to 24 inches.....	0.2
Over 24 inches.....	0.6

¹ Includes siphons and farm pipe lines reported.

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number...	44	11	5
Area irrigable in these enterprises.....acres....	3,507	651	13,610
Area irrigated in these enterprises.....acres....	2,093	(2)	(2)
Area for which drains have been installed.....acres....	2,552	336	250
Additional area needing drainage.....acres....	240	157	1,320
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	121.9	351.6	16.9
(b) All irrigation enterprises.....percent..	2.6	0.5	0.5
Ratio of area drained plus area needing drainage to —			
(a) Irrigable area reporting.....percent..	79.6	75.7	143.5
(b) Irrigated area reporting.....percent..	133.4	(2)	(2)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ²Not available. ³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED			NOT MEASURED		
	1939	1929 ¹	1919 ²	1939 ²	1929 ¹	1919 ²	1939	1929 ¹	1919 ²
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	51,379		35,139	20,453		18,402	30,926		16,737
Area irrigated by these enterprises.....acres....	36,879		21,210	17,062		20,235	19,817		975
Average water per acre irrigated.....acre-feet..	1.4		1.7	1.2		0.9	1.6		17.2
Total water delivered to irrigators.....acre-feet..	60,055		14,275	37,073		13,718	22,982		557
Area irrigated by these enterprises.....acres....	47,483		20,855	28,079		20,055	19,404		800
Average water per acre irrigated.....acre-feet..	1.3		0.7	1.3		0.7	1.2		0.7
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	73,986						73,986		
Area irrigated by these enterprises.....acres....	45,525						45,525		
Average water per acre irrigated.....acre-feet..	1.6						1.6		
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..									
Area irrigated by these enterprises.....acres....									
Average water per acre irrigated.....acre-feet..									
Total water delivered to irrigators.....acre-feet..	40						40		
Area irrigated by these enterprises.....acres....	237						237		
Average water per acre irrigated.....acre-feet..	0.2						0.2		
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	26,424						26,424		
Area irrigated by these enterprises.....acres....	13,031						13,031		
Average water per acre irrigated.....acre-feet..	2.0						2.0		

¹Not reported. ²Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	99,980	100.0	13,866	71,290	100.0	47,312	100.0
Appropriation ²	15,440	15.4	237	40,540	56.9	30,653	64.8
Riparian.....	2,662	2.7		46	0.1	30	0.1
Appropriation and riparian.....	1,903	1.9					
Underground.....	44,763	44.8	13,429	11,644	16.3	13,480	28.5
Appropriation and underground..	427	0.4					
Riparian and underground.....	248	0.2					
Adjudicated by court.....	28,079	28.1		12,660	17.7	458	0.9
Other mixed and not reported...	6,458	6.5		6,400	9.0	2,691	5.7

¹Irrigated areas shown under "Supplemental enterprises" are parts or irrigated areas in "Primary enterprises" (see text). ²"Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

PRIMARY ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number...	988	33	911	35	3	4	2
2	Irrigated farms, 1939.....number...	1,513	.....	911	77	45	247	233
3	Area irrigated, 1939.....acres....	99,980	.....	53,867	4,997	6,354	34,762	.....
4	(a) From which crops were harvested.....acres....	85,139	.....	45,972	4,528	5,289	28,350	.....
5	(b) On which crops failed.....acres....	11,386	.....	3,907	372	745	6,362	.....
6	(c) Irrigated pasture.....acres....	3,455	.....	2,988	97	320	50	.....
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	1,896,991	25,094	1,189,513	81,102	62,180	539,102	.....
8	(a) Cost of irrigation works and equipment.....dollars..	1,810,889	25,094	1,187,489	81,044	53,160	464,102	.....
9	(b) Investment in water rights.....dollars..	86,102	.....	2,024	58	9,020	75,000	.....
10	Area works were capable of supplying with water.....acres....	142,409	2,343	75,843	6,800	7,317	50,106	.....
11	Average investment per acre irrigated.....dollars..	18.97	.....	22.00	16.23	9.79	15.51	.....
12	Average investment per acre which the works could supply with water.....dollars..	13.32	10.71	15.62	11.93	8.50	10.76	.....
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number...	935	18	873	35	3	6	.....
14	(a) Area irrigated in these enterprises.....acres....	99,039	.....	52,920	4,997	6,354	34,762	.....
15	(b) Cost of maintenance and operation.....dollars..	227,076	176	181,788	11,745	2,675	30,692	.....
16	(c) Average cost per irrigated acre reporting.....dollars..	2.29	.....	3.41	2.35	0.42	0.88	.....
17	Total annual charges ².....dollars..	43,166	.....	.....	.....	4,260	38,906	.....
18	Average charge per irrigated acre reporting.....dollars..	1.05	.....	.....	.....	0.67	1.12	.....
19	Area against which charges were assessed.....acres....	56,719	.....	.....	.....	6,817	49,902	.....
20	Average annual charge per acre assessed.....dollars..	0.76	.....	.....	.....	0.62	0.78	.....
21	Total charges collected ².....dollars..	31,946	.....	.....	.....	4,494	26,952	.....
INDEBTEDNESS AND ARREARAGE, 1939								
22	Enterprises reporting indebtedness ³.....number...	7	.....	.....	.....	2	4	1
23	(a) Area irrigated in these enterprises.....acres....	31,579	.....	.....	.....	(4)	17,700	(4)
24	(b) Indebtedness.....dollars..	43,775	.....	.....	.....	(4)	14,300	(4)
25	(c) Average indebtedness per acre irrigated.....dollars..	1.39	.....	.....	.....	(4)	0.81	(4)
26	(d) Cost of irrigation works and equipment.....dollars..	464,611	.....	.....	.....	(4)	92,201	(4)
27	(e) Investment in water rights.....dollars..	84,000	.....	.....	.....	(4)	.....	(4)
28	(f) Total investment.....dollars..	548,611	.....	.....	.....	(4)	92,201	(4)
29	(g) Maintenance and operation.....dollars..	22,481	.....	.....	.....	(4)	13,306	(4)
30	(h) Total annual charges ².....dollars..	35,766	.....	.....	.....	(4)	18,006	(4)
31	(i) Total charges collected ².....dollars..	15,246	.....	.....	.....	(4)	11,252	(4)
32	(j) Area against which annual charges were assessed.....acres....	39,719	.....	.....	.....	(4)	24,902	(4)
33	(k) Average indebtedness per acre assessed.....dollars..	1.10	.....	.....	.....	(4)	0.57	(4)
34	(l) Average charges per acre assessed.....dollars..	0.90	.....	.....	.....	(4)	0.72	(4)
35	(m) Average charges per acre irrigated.....dollars..	1.13	.....	.....	.....	(4)	1.02	(4)
36	Enterprises reporting arrearage ³.....number...	51	.....	.....	.....	51	.....	.....
TYPE, 1940								
37	Individual and partnership.....number...	972	33	904	35	.....	.....	.....
38	Cooperative (incorporated and unincorporated).....number...	9	.....	1	.....	2	4	2
39	Commercial.....number...	1	.....	.....	.....	1	.....	.....
40	All other.....number...	6	.....	6	.....	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
41	Enterprises reporting pay roll.....number...	9	.....	.....	.....	3	6	.....
42	Wages and salaries paid and payable for 1939.....dollars..	16,235	.....	.....	.....	1,942	14,293	.....
43	Persons employed during week ending April 29, 1939.....number...	75	.....	.....	.....	7	68	.....
SOURCE OF WATER SUPPLY, 1939								
44	Streams, gravity.....number...	15	.....	8	.....	2	3	2
45	Streams, pumped.....number...	210	1	207	2	.....	.....	.....
46	Wells, pumped.....number...	706	30	645	31	.....	.....	.....
47	Wells, pumped and flowing; or wells flowing.....number...	7	.....	7	.....	.....	.....	.....
48	Lakes, gravity or pumped.....number...	3	.....	3	.....	.....	.....	.....
49	Streams and springs; or springs.....number...	1	.....	.....	1	.....	.....	.....
50	Mixed, streams and wells.....number...	28	.....	26	.....	1	1	.....
51	Other mixed or stored storm water.....number...	18	2	15	1	.....	.....	.....
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number..	78	5	55	18	.....	.....	.....
2	Irrigated farms, 1939.....number..	94	.....	55	39	.....	.....	.....
3	Area irrigated, 1939.....acres....	13,686	.....	8,556	5,110	.....	.....	.....
CAPITAL INVESTMENT, 1940								
4	Total capital investment in all enterprises.....dollars..	256,895	9,610	184,485	62,800	.....	.....	.....
5	(a) Cost of irrigation works and equipment.....dollars..	256,395	9,610	184,485	62,300	.....	.....	.....
6	(b) Investment in water rights.....dollars..	500	.....	.....	500	.....	.....	.....
7	Area works were capable of supplying with water.....acres....	19,163	815	11,917	6,431	.....	.....	.....
8	Average investment per acre irrigated.....dollars..	18.90	.....	21.56	12.29	.....	.....	.....
9	Average investment per acre which the works could supply with water.....dollars..	13.41	11.79	15.48	9.77	.....	.....	.....

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Annual charges, reported only by enterprises serving 5 or more farms, may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	
33	778	138	32	4	3	938	42	7	1	1
.....	799	151	103	129	331	943	143	327	100	2
.....	22,453	22,415	16,333	13,717	25,062	47,853	13,474	38,653		3
.....	20,352	19,594	13,326	11,917	19,950	41,414	11,784	31,941		4
.....	1,510	1,783	1,531	1,500	5,062	3,822	1,202	6,362		5
.....	591	1,038	1,476	300	50	2,617	488	350		6
25,094	710,366	379,275	193,505	111,850	476,901	973,084	288,596	635,311		7
25,094	708,755	378,862	193,427	102,850	401,901	971,053	288,525	551,311		8
.....	1,611	413	79	9,000	75,000	2,031	71	84,000		9
2,343	35,575	29,221	20,847	17,423	37,000	69,740	18,132	54,937		10
.....	31.64	16.92	11.85	6.15	19.03	20.33	21.42	16.44		11
10.71	20.00	12.98	9.28	6.42	12.89	14.03	15.92	11.56		12
18	742	136	32	4	3	885	42	8		13
.....	21,796	22,125	16,333	13,717	25,062	46,906	13,474	38,653		14
176	94,175	61,984	39,580	9,575	21,586	153,889	35,925	37,261		15
.....	4.32	2.80	2.42	0.70	0.86	3.28	2.67	0.96		16
.....	.....	.....	2,000	16,066	25,100	.....	8,306	34,860		17
.....	.....	.....	0.86	1.17	1.00	.....	1.96	0.95		18
.....	.....	.....	2,800	16,919	37,000	.....	4,902	51,817		19
.....	.....	.....	0.71	0.95	0.68	.....	1.69	0.67		20
.....	.....	.....	1,552	9,994	19,600	.....	1,552	29,794		21
.....	.....	.....	(*) 1	4	(*) 2	.....	(*) 2	4	(*) 1	22
.....	.....	.....	(*)	13,717	(*)	.....	(*)	19,817	(*)	23
.....	.....	.....	(*)	3,675	(*)	.....	(*)	15,075	(*)	24
.....	.....	.....	(*)	0.27	(*)	.....	(*)	0.76	(*)	25
.....	.....	.....	(*)	102,850	(*)	.....	(*)	127,410	(*)	26
.....	.....	.....	(*)	9,000	(*)	.....	(*)	9,000	(*)	27
.....	.....	.....	(*)	111,850	(*)	.....	(*)	136,410	(*)	28
.....	.....	.....	(*)	9,575	(*)	.....	(*)	12,375	(*)	29
.....	.....	.....	(*)	16,066	(*)	.....	(*)	13,960	(*)	30
.....	.....	.....	(*)	9,994	(*)	.....	(*)	14,194	(*)	31
.....	.....	.....	(*)	16,919	(*)	.....	(*)	26,817	(*)	32
.....	.....	.....	(*)	0.22	(*)	.....	(*)	0.56	(*)	33
.....	.....	.....	(*)	0.95	(*)	.....	(*)	0.52	(*)	34
.....	.....	.....	(*)	1.17	(*)	.....	(*)	0.70	(*)	35
.....	.....	.....	.....	5 1	.....	.....	.....	5 1	.....	36
33	774	135	30	.....	.....	935	35	2	.....	37
.....	1	.....	2	.....	3	.....	4	4	1	38
.....	.....	.....	.....	1	.....	.....	.....	1	.....	39
.....	3	3	.....	.....	.....	3	3	.....	.....	40
.....	.....	.....	6	.....	3	.....	3	6	.....	41
.....	.....	.....	6,416	.....	9,819	.....	2,424	13,811	.....	42
.....	.....	.....	52	.....	23	.....	41	94	.....	43
.....	3	4	1	4	3	8	1	5	1	44
1	191	15	3	.....	.....	204	6	.....	.....	45
30	541	110	25	.....	.....	675	30	1	.....	46
.....	7	.....	.....	.....	.....	7	.....	.....	.....	47
.....	3	.....	.....	.....	.....	3	.....	.....	.....	48
.....	.....	1	.....	.....	.....	1	.....	.....	.....	49
.....	17	8	3	.....	.....	25	2	1	.....	50
2	16	.....	.....	.....	.....	15	3	.....	.....	51
.....
5	21	39	13	.....	.....	62	15	1	.....	1
.....	24	49	21	.....	.....	72	21	1	.....	2
.....	992	6,475	6,199	.....	.....	8,241	5,425	.....	.....	3
9,610	35,085	122,050	90,150	.....	.....	140,945	115,950	.....	.....	4
9,610	35,085	121,550	90,150	.....	.....	140,445	115,950	.....	.....	5
.....	.....	500	.....	.....	.....	500	.....	.....	.....	6
815	2,230	8,729	7,389	.....	.....	12,457	6,706	.....	.....	7
.....	45.06	18.85	14.54	.....	.....	17.10	21.37	.....	.....	8
11.79	15.73	13.98	12.20	.....	.....	11.31	17.29	.....	.....	9

² Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁵ Data are not shown because less than 3 enterprises reported.

CENSUS OF IRRIGATION - KANSAS

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS								
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms			
MAINTENANCE AND OPERATION, AND CHARGES, 1939											
10	Enterprises reporting maintenance and operation.....number...	76	4	54	18						
11	(a) Area irrigated in these enterprises.....acres.....	13,628		8,518	5,110						
12	(b) Cost of maintenance and operation.....dollars.....	29,689	33	21,621	8,035						
13	(c) Average cost per irrigated acre reporting.....dollars.....	2.18		2.54	1.57						
TYPE, 1940											
14	Individual and partnership.....number.....	72	5	51	16						
15	Cooperative (incorporated and unincorporated).....number.....	6		4	2						
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939											
16	Streams, pumped.....number.....										
17	Wells, pumped or flowing.....number.....	77	5	55	17						
18	Streams, gravity or storage.....number.....	1			1						

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean ¹	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Kansas River			Feet	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Degrees F.	Degrees F.
Wray, Colo.....	Yuma.....	3,512	13.02	-5.35	0.28	-1.87	3.18	+1.59	5.81	-2.20	3.75	-2.87	50.9	(²)
Goodland.....	Sherman.....	3,685	16.16	-2.54	0.45	-2.20	4.90	+3.22	6.16	-1.55	4.65	-2.01	55.0	+3.6
McCook, Nebr.....	Red Willow.....	2,506	13.90	-5.74	0.17	-2.32	2.65	+0.77	7.78	-0.12	3.30	-4.07	55.5	+3.4
Hays.....	Ellis.....	2,000	15.19	-8.50	0.33	-2.85	2.51	+0.43	7.36	-2.49	4.99	-3.59	57.0	+3.1
Smith Center.....	Smith.....	1,800	14.93	-7.00	0.60	-2.29	3.36	+1.46	8.53	-0.63	2.44	-5.54	(²)	(²)
Salina.....	Saline.....	1,227	17.51	-9.76	1.67	-2.53	3.75	+0.66	6.05	-4.79	6.04	-3.10	60.0	+4.6
Blue Rapids.....	Marshall.....	1,105	27.48	-1.98	2.82	-1.56	3.02	+0.23	15.76	+3.92	5.88	-4.57	(²)	(²)
Lawrence.....	Douglas.....	1,018	30.92	-5.81	3.25	-2.96	3.23	-1.54	14.99	+2.23	9.45	-3.54	58.8	+3.8
Arkansas River														
Salida, Colo.....	Chaffee.....	7,035	8.08	-4.25	3.37	+0.92	2.11	+0.13	0.79	-2.29	1.81	-3.01	(²)	(²)
Rocky Ford, Colo.....	Otero.....	4,177	8.83	-3.30	0.92	-0.78	3.22	+2.25	2.70	-2.39	1.99	-2.38	53.5	+1.3
Syracuse.....	Hamilton.....	3,227	7.63	-10.04	1.12	-1.16	2.69	+1.02	2.64	-4.06	1.18	-5.84	56.3	(²)
Elkhart.....	Morton.....	3,595	11.42	-6.09	1.88	-1.16	2.63	+0.94	5.17	-0.70	1.74	-5.17	57.6	+1.4
Ness City.....	Ness.....	2,260	13.72	-7.52	0.33	-2.40	3.94	+1.94	6.31	-2.46	3.14	-4.60	(²)	(²)
Ashland.....	Clark.....	1,951	17.01	-7.15	0.77	-3.19	4.14	+1.83	8.54	-0.73	3.56	-5.05	59.6	+2.5
Great Bend.....	Barton.....	1,863	18.64	-5.39	0.26	-3.57	3.73	+1.30	8.28	-0.93	6.37	-2.19	(²)	(²)
Winfield.....	Cowley.....	1,124	21.50	-11.92	2.85	-3.02	4.11	-0.05	11.08	-1.86	3.46	-6.99	60.9	+3.3
Emporia.....	Iyon.....	1,138	22.93	-11.04	2.05	-3.56	4.36	+0.31	9.76	-3.24	6.76	-4.55	58.7	+3.0
Parsons.....	Labette.....	898	31.78	-8.85	3.46	-4.09	5.58	-0.56	18.39	+2.56	4.35	-6.76	61.5	+3.2

¹Departure from normal.

²Data not available.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES,
AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940-Continued

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT			
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999
4	20	39	13	.....	.....	60	16	.....	10
.....	954	6,475	6,199	.....	.....	8,203	5,425	.....	11
33	4,271	14,613	10,772	.....	.....	18,014	11,675	.....	12
.....	4.48	2.26	1.74	.....	.....	2.20	2.15	.....	13
5	19	35	13	.....	.....	57	14	1	14
.....	2	4	.....	.....	.....	5	1	.....	15
.....	.....	.....	.....	.....	.....	.....	.....	.....	16
5	21	38	13	.....	.....	61	15	1	17
.....	.....	1	.....	.....	.....	1	.....	.....	18

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

The year of 1939 was the third mildest and fifth driest year Kansas had experienced in the 53 years State-wide records have been kept. Only two months averaged below normal in temperature and a prolonged drought occurred from the latter part of August until the closing days of December that was the most severe on record for the time of year.

Favorable amounts of moisture, mostly in the form of snow, fell during the first three months. The dry weather the latter part of April and during May was detrimental to the growing wheat. Corn planting and early cultivation of the crop made good progress. The wet weather of June hindered progress of harvest and caused some damage to wheat. Hot, dry winds in July burnt early corn considerably and only the more favorable weather the early part of August produced sufficient development in late corn to produce a crop in eastern Kansas. Corn dried out well during the warm weather in the fall and was cribbed in good condition. Wheat, however, was adversely affected by the extreme dryness and many fields failed to germinate.

The average temperature, 57.8°, was 2.9° above normal and lacked only 0.1° of the average for the year previous and was 0.7° cooler than the warmest year of record, 1934. New high temperature records for the State were established during the months of May, September, October, and December.

The only severely cold weather was on February 7-10 and 19-20, the first two days of March, and the closing week of the year. The highest temperature, 116°, was recorded at Burlington on July 21 and the lowest, 18° below zero, occurred at Oberlin on February 10.

Practically every section of Kansas received less than normal precipitation in 1939. The average for the eastern third was 26.54 inches; the middle third, 20.91 inches; the western third, 12.79 inches; and for the State as a whole, 20.08 inches, which is 6.35 inches below normal and 7.21 inches less than was received in 1938. The greatest annual total was 38.33 inches at Oswego and the least, 8.07 inches at Syracuse.

Run-off from the watershed of the Arkansas River in Colorado during the water year 1939 averaged about 71 percent of normal as indicated by the discharges measured by the United States Geological Survey at Canon City and Trinidad, Colorado. The average discharge of the Arkansas River at Syracuse, Kansas, over a period of 18 years (1921-39) is 314 second-feet from a drainage area of 25,000 square miles. The mean discharge at the Syracuse station for the water year 1939 was 112 second-feet or 35.6 percent of the 18-year average. The maximum mean monthly flow was 296 second-feet during March and the minimum was 1.7 second-feet during August at Syracuse, Kansas.

CENSUS OF IRRIGATION - KANSAS

DRAINAGE BASIN TABLE I.-AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSISSIPPI RIVER					
		Total	Missouri River				Kansas River
			Total	Direct ¹	Kansas River		
					Total	Direct ²	
				(1)	(7)		
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	1,513	1,470	179	3	176	45
2	Area irrigated.....1939..acres.....	99,980	92,712	4,516	44	4,472	737
3	(a) Cropland harvested.....1939..acres.....	85,139	78,176	3,948	44	3,904	637
4	(b) Crop failure.....1939..acres.....	11,386	11,149	236		236	14
5	(c) Pasture.....1939..acres.....	3,455	3,387	332		332	86
6	Area irrigated.....1929..acres.....	71,290	71,290	1,411		1,394	
7	1919..acres.....	47,312	47,312	773		773	
8	Increase or decrease (-), 1929-1939.....percent.....	40.2	30.0	220.1		220.6	
9	Irrigable area in enterprises.....1940..acres.....	147,226	136,650	8,700	262	8,438	1,442
10	1930..acres.....	95,719	95,719	4,358		4,325	
11	1920 ³ ..acres.....	102,562	102,562	3,580		3,580	
12	Excess of irrigable area over the area irrigated..1940..acres.....	47,246	43,938	4,194	218	3,966	705
13	1930..acres.....	24,429	24,429	2,947		2,931	
14	1920 ³ ..acres.....	55,250	55,250	2,807		2,607	
15	Area works were capable of supplying with water...1940..acres.....	142,409	131,993	7,293	67	7,226	1,312
16	1930..acres.....	83,583	83,583	2,406		2,376	
17	1920..acres.....	67,853	67,853	3,396		3,396	
18	Increase or decrease (-), 1930-1940.....percent.....	70.4	57.9	203.1		204.1	
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	42,429	39,281	2,777	23	2,754	575
20	1930..acres.....	12,293	12,293	995		982	
21	1920..acres.....	20,541	20,541	2,623		2,623	
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	70.2	70.2	61.9	65.7	61.9	56.2
23	1929..percent.....	85.3	85.3	58.6		58.7	
24	1919..percent.....	69.7	69.7	22.8		22.8	
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars....	2,153,886	2,053,368	154,280	880	153,400	34,206
26	(a) Cost of irrigation works and equipment.....1940..dollars....	2,067,284	1,966,774	152,871	880	151,991	33,296
27	(b) Investment in water rights (reported).....1940..dollars....	86,602	86,594	1,409		1,409	910
28	Total investment in irrigation enterprises.....1930..dollars....	1,685,652	1,685,652	72,573		72,173	
29	1920..dollars....	2,067,381	2,067,381	50,311		50,311	
30	Increase or decrease (-), 1930-1940.....percent.....	27.8	21.8	112.6		112.6	
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	15.12	15.66	21.15	13.13	21.23	26.07
32	1930..dollars....	20.17	20.17	30.16		30.38	
33	1920..dollars....	30.47	30.47	14.81		14.81	
34	Average investment per acre irrigated.....1939..dollars....	21.54	22.15	34.16	20.00	34.30	46.41
35	Estimated final investment in existing enterprises..1940..dollars....	2,255,579	2,151,151	173,210	880	172,330	42,456
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	15.32	15.74	19.91	3.36	20.42	29.44
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.		
		Enterprises		Enterprises			
37	Enterprises reporting maintenance and operation...1939..number.....	935	76	899	76	3	159
38	Area irrigated in these enterprises.....1939..acres.....	99,033	13,628	91,915	13,628	44	4,094
39	Cost of maintenance and operation.....1939..dollars....	227,076	29,689	208,496	29,689	270	16,952
40	Average cost, per acre irrigated.....1939..dollars....	2.29	2.18	2.27	2.18	6.14	4.14
41	Total annual charges (reported) ⁴ 5.....1939..dollars....	43,166		43,166			
42	Average annual charge per acre irrigated.....1939..dollars....	1.05		1.05			
43	Area against which charges were assessed.....1939..acres.....	56,719		56,719			
44	Average annual charge per acre assessed.....1939..dollars....	0.76		0.76			
45	Total charges collected ⁴.....1939..dollars....	31,346		31,346			
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	43,775		43,775			
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	901	70	866	70	3	166
48	Area irrigated by these enterprises.....1939..acres.....	93,008	13,268	85,740	13,268	44	4,240
49	Water delivered.....1939..acre-feet.....	134,041	26,464	122,849	26,464	77	5,514
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.4	2.0	1.4	2.0	1.8	1.3
51	Average cost of water per acre irrigated.....1939..dollars....	2.40	2.16	2.38	2.16	6.14	4.21
52	Average cost of water per acre-foot delivered..1939..dollars....	1.95	1.08	1.66	1.08	3.23	3.23
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	44		44		16	5
54	Irrigable area in these enterprises.....1939..acres.....	3,507		3,507		616	200
55	Irrigated area in these enterprises.....1939..acres.....	2,093		2,093		389	100
56	Area for which drains have been installed.....1939..acres.....	2,552		2,552		303	102
57	Additional area needing drainage.....1939..acres.....	240		240		168	78

¹Data for 2 enterprises in Osage River Drainage Basin (9) (number refers to separate map) are included with Missouri River "Direct" Drainage Basin (1).
²Data for 2 enterprises in Saline River Drainage Basin (6) (number refers to separate map) are included with Kansas River "Direct" Drainage Basin (7).
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - KANSAS

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IRRIGABLE AREA, 1940, 1930, 1920, AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

MISSISSIPPI RIVER—Continued												White Woman Creek (independent stream)
Missouri River—Continued				Arkansas River								
Kansas River—Continued				Total	Direct	Two Butte and Bear Creeks	Pawnee River	Salt Fork Arkansas River	Cimarron River	Neosho River		
Snaky Hill River (5)	Solomon River (4)	Republican River (3)	Big Blue River (2)								(10)		(13)	(11)	(16)	(14)	(9)	(12)
39	22	58	12	1,291	1,067	3	188	5	22	6	43	1
1,181	905	1,335	314	88,196	73,253	295	12,774	428	1,400	46	7,268	2
1,026	669	1,258	314	74,228	61,209	295	11,272	428	988	36	6,963	3
150	20	52	.....	10,913	9,231	.....	1,290	.....	392	.....	237	4
5	216	25	.....	3,055	2,813	.....	212	.....	20	10	68	5
111	.....	489	.....	69,879	52,988	.....	.....	.....	1,098	.....	.....	6
248	.....	510	.....	46,539	30,130	.....	.....	.....	.....	.....	.....	7
964.0	.....	173.0	.....	26.2	38.2	.....	.....	.....	27.5	.....	.....	8
2,428	1,433	2,644	491	127,950	103,906	1,100	19,043	875	2,161	865	10,576	9
361	.....	2,776	.....	91,361	65,751	.....	.....	.....	1,115	.....	.....	10
1,420	.....	2,090	.....	98,982	38,533	.....	.....	.....	210	.....	.....	11
1,247	528	1,309	177	39,754	30,653	805	6,269	447	761	819	3,308	12
250	.....	2,287	.....	21,482	12,763	.....	.....	.....	17	.....	.....	13
1,172	.....	1,590	.....	52,443	8,403	.....	.....	.....	210	.....	.....	14
2,093	1,308	2,107	406	124,700	102,216	1,100	17,513	845	2,161	865	10,416	15
296	.....	1,080	.....	81,177	57,109	.....	.....	.....	1,115	.....	.....	16
1,236	.....	2,090	.....	64,457	38,533	.....	.....	.....	210	.....	.....	17
607.1	.....	95.1	.....	53.6	79.0	.....	.....	.....	93.8	.....	.....	18
912	403	772	92	36,504	28,963	805	4,739	417	761	819	3,148	19
185	.....	591	.....	11,298	4,121	.....	.....	.....	17	.....	.....	20
988	.....	1,590	.....	17,918	8,403	.....	.....	.....	210	.....	.....	21
56.4	69.2	63.4	77.3	70.7	71.7	26.8	72.9	50.7	64.8	5.3	69.8	22
37.5	.....	45.3	.....	86.1	92.8	.....	.....	.....	98.6	.....	.....	23
20.1	.....	24.4	.....	72.2	78.2	.....	.....	.....	.....	.....	.....	24
38,268	20,377	54,541	6,008	1,899,088	1,577,413	11,175	248,630	10,600	31,745	19,525	100,518	25
36,224	20,344	54,120	6,007	1,813,903	1,492,635	11,175	248,598	10,300	31,700	19,475	100,510	26
44	33	421	1	85,185	84,758	.....	32	300	45	50	8	27
12,210	.....	23,655	.....	1,613,079	748,801	.....	.....	.....	29,250	.....	.....	28
33,753	.....	15,816	.....	2,017,070	1,153,505	.....	.....	.....	15,000	.....	.....	29
213.4	.....	130.6	.....	17.7	110.7	.....	.....	.....	8.5	.....	.....	30
18.28	15.58	25.88	14.80	15.23	15.43	10.16	14.20	12.54	14.69	22.57	9.65	31
41.25	.....	21.90	.....	19.87	13.11	.....	.....	.....	26.23	.....	.....	32
27.31	.....	7.57	.....	31.29	29.93	.....	.....	.....	71.43	.....	.....	33
32.40	22.52	40.85	19.13	21.53	21.53	37.88	19.46	24.77	22.68	424.46	13.83	34
42,468	22,352	59,046	6,008	1,977,941	1,624,471	13,275	272,850	10,600	37,220	19,525	104,428	35
17.49	15.60	22.33	12.24	15.46	15.63	12.07	14.33	12.11	17.22	22.57	9.87	36
35	22	50	12	737	76	525	76	3	178	5	36	37
1,027	905	1,207	314	87,777	13,628	72,999	13,628	295	12,612	428	7,118	38
3,224	3,023	6,575	1,113	191,274	29,689	132,973	29,689	435	52,933	1,125	18,590	39
3.14	3.94	5.45	3.56	2.18	2.18	1.82	2.18	1.47	4.20	2.63	2.61	40
.....	.....	.....	.....	43,166	.....	43,166	.....	.....	.....	.....	.....	41
.....	.....	.....	.....	1.05	.....	1.05	.....	.....	.....	.....	.....	42
.....	.....	.....	.....	56,719	.....	56,719	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	0.76	.....	0.76	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	31,346	.....	31,346	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	43,775	.....	43,775	.....	.....	.....	.....	.....	46
37	21	54	12	697	70	487	70	3	176	5	35	47
1,111	875	1,282	314	81,456	13,268	67,629	13,268	295	11,921	428	7,268	48
1,555	1,385	1,638	223	117,258	26,464	94,987	26,464	171	20,643	502	11,192	49
1.4	1.6	1.3	0.7	1.4	2.0	1.4	2.0	0.6	1.7	0.8	1.5	50
3.18	3.94	5.56	3.56	2.29	2.16	1.93	2.16	1.47	4.29	2.63	2.61	51
2.23	2.11	4.35	5.02	1.59	1.08	1.38	1.08	2.54	2.47	2.24	1.70	52
(6) 2	(6) 1	7	(6) 1	28	.....	9	.....	.....	15	(6) 1	3	53
(6)	(6)	236	(6)	2,691	.....	576	.....	.....	1,837	(6)	.....	54
(6)	(6)	111	(6)	1,704	.....	359	.....	.....	1,004	(6)	.....	55
(6)	(6)	156	(6)	2,249	.....	471	.....	.....	1,437	(6)	.....	56
(6)	.....	80	.....	72	.....	42	.....	.....	5	(6)	.....	57

⁴ Annual charges may include costs of maintenance and operation, and assessments for payment on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁶ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - KANSAS

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals for 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSISSIPPI RIVER					
		Total	Missouri River				
			Total	Direct ¹ (1)	Kansas River		
					Total	Direct ² (7)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940..number.....	3 1,066	1,029	182	3	179	46
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	134	128	40	22	40	29
3	Diversion dams.....1940..total number.....	102	102	14		14	
4	1930..total number.....	27	27	3		3	
5	1920..total number.....	10	10	5		5	
6	(a) Concrete and masonry.....1940..number.....	16	16	2		2	
7	(b) Timber.....1940..number.....	4	4				
8	(c) Earth and rock.....1940..number.....	65	65	12		12	
9	(d) Other, mixed, and not reported.....1940..number.....	17	17				
10	Main canals and laterals.....1940..total length, miles.....	292.5	292.5	8.1		8.1	
11	1930..total length, miles.....	285	285	14		14	
12	1920..total length, miles.....	418	418	19		19	
13	(a) Earth.....1940..length, miles.....	292	292	8		8	
14	(b) Lined.....1940..length, miles.....	0.5	0.5	0.1		0.1	
15	1940..capacity, c. f. s. ⁴	3,347	3,347	151	4	147	9
16	1930..capacity, c. f. s. ⁴	2,079	2,079	56		56	
17	1920..capacity, c. f. s. ⁴	1,667	1,667	50		50	
18	Pipe lines ⁵.....1940..total length, miles.....	24.1	24.1	12.4		12.4	5.7
19	1930..total length, miles.....	16.1	16.1	3.2		3.1	
20	1920..total length, miles.....	2.8	2.8				
21	(a) Concrete.....1940..length, miles.....	1.1	1.1	0.3		0.3	
22	(b) Metal.....1940..length, miles.....	21.7	21.7	11.0		11.0	4.8
23	(c) Wood-stave.....1940..length, miles.....						
24	(d) Other.....1940..length, miles.....	1.3	1.3	1.1		1.1	0.9
25	Storage dams.....1940..total number.....	40	40	7		7	
26	1930..total number.....	7	7				
27	1920..total number.....	13	13	1		1	
28	(a) Concrete and masonry.....1940..number.....	8	8				
29	(b) Earth and rock.....1940..number.....	22	22	3		3	
30	(c) Other, mixed, and not reported.....1940..number.....	10	10	4		4	
31	Reservoirs.....1940..total number.....	80	78	9		9	
32	(a) 1-99 acre-feet capacity.....1940..number.....	69	67	9		9	
33	(b) 100-999 acre-feet capacity.....1940..number.....	9	9				
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	2	2				
35	1940..total capacity, ac.-ft. ⁶	32,584	32,576	188		188	
36	1930..total number.....	19	19	2		2	
37	1930..total capacity, ac.-ft.....	66,293	66,293	1		1	
38	Wells, flowing.....1940..number.....	24	24				
39	1930..number.....	1	1				
40	1920..number.....	6	6				
41	1940..yield, g. p. m.....	1,453	1,453				
42	1930..yield, g. p. m.....	75	75				
43	1920..yield, g. p. m.....	500	500				
44	Wells, pumped.....1940..number.....	1,598	1,597	137		137	44
45	1930..number.....	772	772	36		36	
46	1920..number.....	710	710	32		32	
47	1940..yield, g. p. m.....	863,663	819,558	64,165		64,165	19,680
48	1930..yield, g. p. m.....	323,500	323,500	8,385		8,385	
49	1920..yield, g. p. m.....	266,797	266,797	2,600		2,600	
50	Pumping plants.....1940..total number.....	1,222	1,181	202	3	199	51
51	1930..total number.....	281	281	35		35	
52	1920..total number.....	26,796	25,160	3,291	31	3,260	467
53	Prime movers.....1940..capacity, hp.....	6,221	6,221	568		568	
54	1930..capacity, hp.....	6,946	6,946	393		393	
55	1920..capacity, hp.....	428	413	20		20	15
56	(a) Electric.....1940..number.....	8,168	7,602	135		135	114
57	(b) Internal-combustion.....1940..number.....	770	744	173	3	170	36
58	1940..capacity, hp.....	18,436	17,366	3,056	31	3,025	353
59	(c) Other.....1940..number.....	24	24	9		9	
60	1940..capacity, hp.....	192	192	100		100	
61	Pumps.....1940..total number.....	1,259	1,218	218	3	215	52
62	1930..number.....	312	312	38		38	
63	1920..number.....	288	288	23		23	
64	1940..capacity, g. p. m.....	1,231,482	1,186,577	145,800	2,500	143,300	24,360
65	1930..capacity, g. p. m.....	393,526	393,526	24,491		24,491	
66	1920..capacity, g. p. m.....	297,975	297,975	6,700		6,700	
67	(a) Centrifugal.....1940..number.....	931	931	157	3	154	39
68	1940..capacity, g. p. m.....	917,177	917,177	104,710	2,500	102,210	17,845
69	1940..average capacity, g. p. m.....	985	985	667	833	664	458
70	(b) Turbine.....1940..number.....	290	249	46		46	7
71	1940..capacity, g. p. m.....	304,185	259,280	40,220		40,220	5,850
72	1940..average capacity, g. p. m.....	1,049	1,041	874		874	836
73	(c) Plunger.....1940..number.....	31	31	15		15	6
74	1940..capacity, g. p. m.....	2,270	2,270	870		870	665
75	1940..average capacity, g. p. m.....	73	73	58		58	111
76	(d) Other.....1940..number.....	7	7				
77	1940..capacity, g. p. m.....	7,850	7,850				
78	Pumping lift, from all sources.....1940..average, feet.....	35	34	34	15	34	27
79	1930..average, feet.....	26	26	36		36	
80	1920..average, feet.....	30	30	37		37	
81	from pumped wells.....1940..average, feet.....	38	36	41		41	27
82	from surface sources.....1940..average, feet.....	27	27	25	15	25	24

¹ Data for 2 enterprises in Osage River Drainage Basin (8) (number refers to separate map) are included with Missouri River "Direct" Drainage Basin (1).
² Data for 2 enterprises in Saline River Drainage Basin (6) (number refers to separate map) are included with Kansas River "Direct" Drainage Basin (7).
³ Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.

CENSUS OF IRRIGATION - KANSAS

WORKS, 1940, 1930, AND 1920

MISSISSIPPI RIVER--Continued												White Woman Creek (independent stream)
Missouri River--Continued				Arkansas River								
Kansas River--Continued				Total	Direct	Two Butte and Bear Creeks	Pawnee River	Salt Fork Arkansas River	Cimarron River	Neosho River		
Smoky Hill River (5)	Solomon River (4)	Republican River (3)	Big Blue River (2)								(10)		(13)	(11)	(16)	(14)	(9)	(12)
40	23	58	12	847	623	4	186	5	23	6	37	1
52	57	36	34	147	164	275	94	169	94	144	282	2
4		8	2	88	35		48	2	3			3
1		1		24	5							4
5				5	3							5
		2		14	5		6	1	2			6
				4	2		2					7
4		6	2	53	18		33	1	1			8
				17	10		7					9
2.0	3.1	1.0	2.0	284.4	264.3	1.0	14.0	4.1	1.0			10
2		9		271	186							11
7		12		399	202				6			12
2	3	1	2	284	264	1	14	4	1			13
	0.1			0.4	0.3			0.1				14
38	44	37	19	3,196	2,692	6	399	72	26	1		15
8		38		2,023	1,885							16
15		34		1,617	774				8			17
0.5	2.2	3.8	0.2	11.7	5.4		1.2	0.1		5.0		18
0.3				12.9								19
				2.8								20
		0.3		0.8	0.5		0.3					21
0.5	2.0	3.5	0.2	10.7	4.9		0.7	0.1		5.0		22
												23
	0.2			0.2			0.2					24
	5	2		33	8		23		2			25
				7								26
1				12					1			27
				8	1		6		1			28
	1	2		19	3		16					29
	4			6	4		1		1			30
	6	3		69	37		28		4		2	31
	6	3		58	36		19		3		2	32
				9			8		1			33
				2	1		1					34
	162	26		32,388	25,178		7,101		109		(?)	35
				17	1							36
				66,292	30,000							37
				24			4		20			38
				1								39
				6					6			40
				1,453			1,030		423			41
				75								42
				500					500			43
31	11	51		1,460	1,283	4	159	2	12		41	44
18		8		736	3				1			45
31		1		678	1				5			46
18,675	4,900	20,900		755,393	612,770	3,100	126,173	(?)	10,650		44,105	47
2,800		2,550		315,115	1,230				800			48
2,100		500		264,197					2,800			49
47	26	63	12	979	729	5	221	4	16	4	41	50
3		7		246	4				1			51
964	536	1,177	116	21,869	14,678	223	6,274	85	524	85	1,636	52
110		102		5,683	31				15			53
303		60		6,563	30				156			54
2	1	2		393	370		19	2		2	15	55
(?)	(?)	(?)		7,467	6,999		405	(?)		(?)	566	56
43	24	55	12	571	345	5	202	2	15	2	26	57
886	502	1,168	116	14,310	7,602	223	5,869	(?)	509	(?)	1,070	58
2	1	6		15	14				1			59
(?)	(?)	8		92	77				(?)			60
47	26	76	12	1,000	738	5	233	4	16	4	41	61
3		7		274	4				1			62
21		1		265	1				3			63
40,360	24,775	43,685	10,100	1,040,777	725,907	5,600	282,440	8,200	18,450	180	44,905	64
6,200		5,820		369,035	2,580				800			65
5,350		500		291,275					2,800			66
33	21	49	12	774	590	1	173	2	5	3		67
26,430	19,975	27,860	10,100	812,467	566,237	(?)	211,170	(?)	6,900	160		68
801	951	569	842	1,050	994		1,221	(?)	1,380	53		69
14	7	18		203	129	4	57	2	11		41	70
13,950	4,800	15,620		219,060	134,040	3,100	67,670	(?)	11,550		44,905	71
996	686	868		1,079	1,039	775	1,187	(?)	1,050		1,095	72
		9		16	15							73
		205		1,400	1,380					(?)		74
		23		88	92					(?)		75
				7	4		3					76
				7,850	4,250		3,600					77
34	37	42	21	34	31	93	39	28	54	15	76	78
20		27		25	20				80			79
29		100		29	12				12			80
46	37	54		35	32	109	47	(?)	68		76	81
21	37	23	21	27	28	68	28	10	14	15		82

4 Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
 5 Includes siphons and farm pipe lines reported.
 6 Total capacity of all reservoirs regardless of size.
 7 Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - KANSAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Barber	Barton	Cheyenne	Cloud	Cowley	Crawford
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*								
1	All farms.....1940..number.....	156,327	1,030	1,723	949	1,938	2,489	2,464
2	.....1930..number.....	166,042	1,057	1,693	1,091	2,076	2,894	2,588
3	Irrigated farms.....1940..number.....	1,578	8	41	5	7	5	6
4	.....1930..number.....	683	1	1	8	1	4	1
5	Increase or decrease (-), 1930-1940.....percent.....	131.0			-37.5			
6	Operated by—							
7	(a) Owners and managers.....1940..number.....	1,031	8	28	5	5	5	5
8	.....1930..number.....	391			6			
9	(b) Tenants.....1940..number.....	547		13		2		1
10	.....1930..number.....	292			2			
11	Land in all farms.....1940..acres.....	48,173,635	707,085	569,885	624,376	421,118	614,735	328,368
12	Land in irrigated farms.....1940..acres.....	871,189	17,437	17,498	6,850	684	1,891	297
13	Average per farm.....1940..acres.....	552	2,180	427	1,370	98	378	50
14	(a) Operated by owners and managers.....1940..acres.....	656,836	17,437	12,634	6,850	565	1,891	279
15	Average per farm.....1940..acres.....	637	2,180	451	1,370	113	378	56
16	(b) Operated by tenants.....1940..acres.....	214,353		4,864		(²)		(²)
	Average per farm.....1940..acres.....	392		374		(²)		(²)
17	Approximate land area.....1940..acres.....	52,552,320	733,440	570,860	657,280	455,040	727,040	382,720
IRRIGATED AND IRRIGABLE AREAS								
18	Area irrigated.....1939..acres.....	99,980	155	988	312	26	58	46
19	(a) Cropland harvested.....1939..acres.....	85,139	155	875	268	26	53	36
20	(b) Crop failure.....1939..acres.....	11,386		10	19			
21	(c) Pasture.....1939..acres.....	3,455		103	25		5	10
22	Area irrigated.....1929..acres.....	71,290			389			
23	.....1919..acres.....	47,312			500			
24	Increase or decrease (-), 1929-1939.....percent.....	40.2			-19.8			
25	Irrigable area in enterprises.....1940..acres.....	147,226	315	1,753	517	28	95	865
26	.....1930..acres.....	95,719			2,450			
27	.....1920 ³ ..acres.....	102,562			2,080			
28	Excess of irrigable area over the area irrigated.....1940..acres.....	47,246	160	765	205	2	37	819
29	.....1930..acres.....	24,429			2,061			
30	Area works were capable of supplying with water.....1940..acres.....	142,409	285	1,568	487	28	95	865
31	.....1930..acres.....	83,583			754			
32	.....1920 ³ ..acres.....	67,853			2,080			
33	Increase or decrease (-), 1930-1940.....percent.....	70.4			-35.4			
34	Excess, capability of works over area irrigated.....1940..acres.....	42,429	130	580	175	2	37	819
35	.....1930..acres.....	12,293			365			
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	11.5 ⁴	0.9	5.6	4.6	3.8	3.1	15.5
37	.....1929..percent.....	22.9			7.3			
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	70.2	54.4	63.0	64.1	92.9	61.1	5.3
39	.....1929..percent.....	85.3			51.6			
CAPITAL INVESTED TO JANUARY 1								
40	Total investment in all enterprises.....1940..dollars.....	2,153,886	6,000	23,938	18,060	2,350	2,325	19,525
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	2,067,284	6,000	23,938	18,060	2,350	2,325	19,475
42	(b) Investment in water rights (reported).....1940..dollars.....	86,602						50
43	Total investment in all enterprises.....1930..dollars.....	1,685,652			10,600			
44	.....1920 ⁵ ..dollars.....	2,067,381			11,816			
45	Increase or decrease (-), 1930-1940.....percent.....	27.8			70.4			
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	15.12	21.05	15.27	37.08	83.93	24.47	22.57
47	.....1930..dollars.....	20.17			14.06			
48	.....1920 ⁵ ..dollars.....	30.47			5.68			
49	Average investment per acre irrigated.....1939..dollars.....	21.54	38.71	24.23	57.88	90.38	40.09	424.46
50	Estimated final investment in existing enterprises.....1940..dollars.....	2,255,579	6,000	26,338	18,940	2,350	2,800	19,525
51	.....1930..dollars.....	1,723,872			11,600			
52	.....1920 ⁵ ..dollars.....	2,195,981			11,816			
53	Increase or decrease (-), 1930-1940.....percent.....	30.8			63.3			
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	15.32	19.05	15.02	36.63	83.93	29.47	22.57
55	.....1930..dollars.....	18.01			4.73			
56	.....1920 ⁵ ..dollars.....	21.41			5.68			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Sup.					
		Enterprises						
57	Enterprises reporting maintenance and operation.....1939..number.....	936	76	3	27	7	4	5
58	Area irrigated in these enterprises.....1939..acres.....	99,033	13,628	155	988	312	26	43
59	Cost of maintenance and operation.....1939..dollars.....	227,076	29,689	375	3,722	1,131	320	585
60	Average cost, per acre irrigated.....1939..dollars.....	2.29	2.18	2.42	3.77	3.62	12.31	13.07
61	.....1929..dollars.....	1.53				2.57		
62	Total annual charges (reported) ⁴.....1939..dollars.....	43,166						
63	Average annual charge per acre irrigated.....1939..dollars.....	1.05						
64	Area against which charges were assessed.....1939..acres.....	56,719						
65	Average annual charge per acre assessed.....1939..dollars.....	0.76						
66	Total charges collected ⁴.....1939..dollars.....	31,346						
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	43,775						
WATER DELIVERED TO IRRIGATORS								
68	Enterprises reporting water delivered.....1939..number.....	902	70	3	26	7	4	4
69	Area irrigated in these enterprises.....1939..acres.....	93,008	13,208	155	988	312	26	46
70	Water delivered in these enterprises.....1939..acre-feet.....	134,041	26,464	225	2,028	272	47	66
71	Average water delivered per acre irrigated.....1939..acre-feet.....	1.4	2.0	1.5	2.1	0.9	1.8	1.1
72	Average cost of water per acre irrigated.....1939..dollars.....	2.40	2.16	2.42	3.76	3.62	12.31	13.07
DRAINAGE OF IRRIGATED LAND								
73	Enterprises reporting land drained or needing drainage.....1939..number.....	44						
74	Irrigable area in these enterprises.....1939..acres.....	3,507						
75	Irrigated area in these enterprises.....1939..acres.....	2,093						
76	Area for which drains have been installed.....1939..acres.....	2,552						
77	Additional area needing drainage.....1939..acres.....	240						

⁶ Census of Agriculture.
¹ The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.
² Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — KANSAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Decatur	Douglas	Edwards	Ellis	Finney	Ford	Gray	Hamilton	Hodgeman	Johnson	Kearny	Marshall	
1,174	1,854	827	1,235	879	1,485	866	379	759	2,082	471	2,686	1
1,340	1,852	823	1,314	971	1,398	828	440	732	2,376	462	2,852	2
31	11	31	10	307	157	22	59	80	3	112	4	3
5	2	4	1	273	23	2	56	6		113		4
				12.5			5.4			-0.9		5
19	9	24	10	139	116	14	33	54	3	51	2	6
				108			41			57		7
12	2	7		168	39	8	26	26		61	2	8
				165			15			56		9
562,148	277,921	1405,496	656,777	662,658	1,711,855	546,714	413,687	528,612	263,204	397,005	551,709	10
12,531	1,786	28,961	4,214	114,394	47,553	16,803	29,067	70,365	103	64,892	682	11
404	162	934	421	373	303	855	493	860	34	579	170	12
8,053	1,730	24,771	4,214	73,745	33,778	14,478	18,604	52,500	103	46,827	(2)	13
424	192	1,032	421	531	286	1,024	564	972	34	918	(2)	14
4,468	(2)	4,190		40,649	13,775	4,325	10,463	17,885		18,065	(2)	15
372	(2)	599		242	353	541	402	688		296	(2)	16
576,360	299,520	392,960	576,000	833,280	693,120	556,160	634,880	550,400	304,640	545,920	583,040	17
633	155	924	50	32,644	4,034	3,729	6,431	5,100	48	17,266	76	18
628	125	864	45	29,628	3,607	1,868	4,886	4,285	48	12,492	76	19
7		36		2,358	371	553	1,207	686		4,716		20
	30	24	5	658		1,308	328	119		56		21
				34,876			3,621			21,375		22
				15,221			3,463			21,976		23
				-6.4			66.3			-19.2		24
917	251	1,398	117	42,715	5,415	5,640	8,360	7,230	89	27,402	80	25
				44,047			5,218			27,599		26
				19,209			6,266			37,697		27
284	96	474	67	10,071	1,381	1,911	1,929	2,130	41	10,136	4	28
				9,171			1,397			6,224		29
832	251	1,377	117	42,536	5,032	5,610	8,287	6,382	89	27,242	50	30
				36,378			4,045			27,574		31
				18,655			6,266			29,367		32
				16.9			104.9			-1.2		33
199	96	453	67	9,892	998	1,881	1,856	1,282	41	9,976	4	34
				1,502			224			6,199		35
5.1	8.7	3.2	1.2	28.5	6.5	19.8	22.1	7.2	46.6	26.6	11.1	36
				44.2			16.7			25.7		37
76.1	61.8	67.1	42.7	76.7	80.2	66.5	77.6	79.9	53.9	63.4	95.0	38
				95.9			94.5			77.5		39
20,585	9,800	23,216	1,700	849,492	86,824	41,950	69,955	96,315	1,310	290,886	1,210	40
20,575	9,800	23,216	1,700	773,490	86,822	41,950	61,365	96,289	1,310	290,886	1,210	41
10				76,002	2		8,590	26				42
				930,467			33,800			216,896		43
				237,064			38,065			296,700		44
				-8.7			107.0			34.1		45
24.74	39.04	16.86	14.53	19.97	17.25	7.48	8.44	15.09	14.72	10.68	15.12	46
				25.58			8.36			7.87		47
				12.71			6.07			10.10		48
32.52	63.23	25.13	34.00	26.02	21.52	11.25	10.88	18.89	27.29	16.85	15.92	49
22,285	12,800	23,336	3,200	865,999	89,900	41,950	70,900	114,235	1,310	297,166	1,210	50
				930,467			33,800			218,616		51
				237,064			38,065			296,700		52
				-6.9			109.8			35.9		53
24.30	51.00	16.69	27.35	20.27	16.00	7.44	8.48	15.80	14.72	10.84	15.12	54
				21.12			6.48			7.92		55
				12.34			6.07			7.83		56
				Primary	Sup.		Primary	Sup.		Primary	Sup.	
				Enterprises			Enterprises			Enterprises		
25	9	33	6	169	25	109	27	28	4	83	3	57
629	115	910	50	32,640	4,419	4,009	3,729	6,431	376	4,958	48	58
3,943	650	3,903	485	52,811	12,963	13,287	7,523	5,154	196	25,729	105	59
6.27	5.65	4.29	9.70	1.62	2.93	3.31	2.02	0.80	0.52	5.19	2.19	60
				1.28				0.84				61
				22,552		1,500		7,534				62
				1.18		1.88		1.44				63
				25,017		800		5,902		25,000		64
				0.90		1.88		1.28		0.46		65
				15,746		1,052		1,228		13,320		66
				28,725		600		1,350		13,100		67
23	9	31	6	152	23	95	26	26	3	84	2	68
580	115	829	50	31,674	4,059	2,949	3,514	2,894	376	5,100	(2)	69
862	88	1,261	41	43,946	7,263	5,647	4,824	4,824	85	7,847	(2)	70
1.5	0.8	1.5	0.8	1.4	1.8	1.9	1.0	1.6	0.3	1.5	(2)	71
6.57	5.65	3.92	9.70	1.78	2.95	3.37	2.13	1.08	0.52	5.16	(2)	72
(2)	(2)	5								(2)		73
(2)	(2)	371								(2)		74
(2)	(2)	273								(2)		75
(2)	(2)	371								(2)		76
												77

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁴ Annual charges may include costs of maintenance and operation, and assessments or payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — KANSAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data were not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Meade	Ness	Norton	Osborne	Pawnee	Phillips	Rawlins
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*								
1	All farms.....1940..number.....	750	1,059	1,437	1,468	1,102	1,657	1,154
2	.....1930..number.....	933	1,108	1,705	1,652	1,182	1,979	1,176
3	Irrigated farms.....1940..number.....	16	48	15	4	77	3	12
4	.....1930..number.....	2	3	5	3	27	1	2
5	Increase or decrease (-), 1930-1940.....percent.....					185.2		
Operated by—								
6	(a) Owners and managers.....1940..number.....	12	39	12	3	47	1	11
7	.....1930..number.....					19		
8	(b) Tenants.....1940..number.....	4	9	3	1	3	2	1
9	.....1930..number.....					8		
10	Land in all farms.....1940..acres.....	561,694	659,851	547,308	546,576	2,482,710	555,237	2,692,131
11	Land in irrigated farms.....1940..acres.....	14,253	41,568	10,395	1,453	38,908	950	2,853
12	Average per farm.....1940..acres.....	891	866	693	363	504	317	238
13	(a) Operated by owners and managers.....1940..acres.....	9,333	34,453	9,932	1,358	22,672	(3)	2,648
14	Average per farm.....1940..acres.....	778	883	828	453	482	(3)	241
15	(b) Operated by tenants.....1940..acres.....	4,920	7,115	463	(5)	16,136	(3)	(3)
16	Average per farm.....1940..acres.....	1,230	791	154	(5)	538	(3)	(3)
17	Approximate land area.....1940..acres.....	624,640	691,840	563,200	574,720	479,360	579,840	689,920
IRRIGATED AND IRRIGABLE AREAS								
18	Area irrigated.....1939..acres.....	962	2,023	420	125	5,205	73	89
19	(a) Cropland harvested.....1939..acres.....	942	1,828	226	125	4,636	73	89
20	(b) Crop failure.....1939..acres.....		168			493		
21	(c) Pasture.....1939..acres.....	20	27	194		76		
22	Area irrigated.....1929..acres.....					3,191		
23	.....1919..acres.....					1,117		
24	Increase or decrease (-), 1929-1939.....percent.....					63.1		
25	Irrigable area in enterprises.....1940..acres.....	1,201	3,689	599	200	7,695	141	212
26	.....1930..acres.....					5,109		
27	.....1920 ⁴ ..acres.....					2,630		
28	Excess of irrigable area over the area irrigated.....1940..acres.....	239	1,666	179	75	2,490	68	123
29	.....1930..acres.....					1,918		
30	Area works were capable of supplying with water.....1940..acres.....	1,201	3,138	556	190	7,398	141	145
31	.....1930..acres.....					4,502		
32	.....1920 ⁴ ..acres.....					2,366		
33	Increase or decrease (-), 1930-1940.....percent.....					64.3		
34	Excess, capability of works over area irrigated.....1940..acres.....	239	1,115	136	65	2,193	68	56
35	.....1930..acres.....					1,311		
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	6.7	4.9	4.0	8.6	13.4	7.7	3.1
37	.....1929..percent.....					26.1		
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	80.1	64.5	75.5	65.8	70.4	51.8	61.4
39	.....1929..percent.....					70.9		
CAPITAL INVESTED TO JANUARY 1								
40	Total investment in all enterprises.....1940..dollars.....	23,245	26,330	8,469	4,660	112,238	1,400	2,680
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	23,200	26,325	8,465	4,650	112,234	1,400	2,675
42	(b) Investment in water rights (reported).....1940..dollars.....	45	5	4	10	4		5
43	Total investment in all enterprises.....1930..dollars.....					136,400		
44	.....1920 ⁴ ..dollars.....					32,450		
45	Increase or decrease (-), 1930-1940.....percent.....					-17.7		
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	19.35	9.03	15.23	24.53	15.17	9.93	18.48
47	.....1930..dollars.....					30.30		
48	.....1920 ⁴ ..dollars.....					13.72		
49	Average investment per acre irrigated.....1939..dollars.....	24.16	14.00	20.16	37.28	21.56	19.18	30.11
50	Estimated final investment in existing enterprises.....1940..dollars.....	25,820	31,650	10,519	4,810	114,708	2,400	2,905
51	.....1930..dollars.....					146,400		
52	.....1920 ⁴ ..dollars.....					35,750		
53	Increase or decrease (-), 1930-1940.....percent.....					-21.6		
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	21.50	8.58	17.56	24.05	14.91	17.02	13.23
55	.....1930..dollars.....					28.66		
56	.....1920 ⁴ ..dollars.....					13.59		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57	Enterprises reporting maintenance and operation.....1939..number.....	18	43	9	3	69	4	5
58	Area irrigated in these enterprises.....1939..acres.....	962	2,003	420	125	5,199	73	85
59	Cost of maintenance and operation.....1939..dollars.....	1,866	6,179	1,527	475	19,481	265	535
60	Average cost, per acre irrigated.....1939..dollars.....	1.94	3.08	3.64	3.80	3.75	3.63	6.29
61	.....1929..dollars.....					3.60		
62	Total annual charges (reported) ⁵.....1939..dollars.....							
63	Average annual charge per acre irrigated.....1939..dollars.....							
64	Area against which charges were assessed.....1939..acres.....							
65	Average annual charge per acre assessed.....1939..dollars.....							
66	Total charges collected ⁶.....1939..dollars.....							
67	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....							
WATER DELIVERED TO IRRIGATORS								
68	Enterprises reporting water delivered.....1939..number.....	17	43	9	2	68	4	6
69	Area irrigated in these enterprises.....1939..acres.....	699	1,985	420	(3)	4,935	73	89
70	Water delivered in these enterprises.....1939..acre-feet.....	687	2,663	894	(3)	10,256	85	112
71	Average water delivered per acre irrigated.....1939..acre-feet.....	1.0	1.3	2.1	(3)	2.1	1.2	1.3
72	Average cost of water per acre irrigated.....1939..dollars.....	2.66	3.02	3.64	(3)	3.86	3.63	6.29
DRAINAGE OF IRRIGATED LAND								
73	Enterprises reporting land drained or needing drainage.....1939..number.....	3	6			11	3	
74	Irrigable area in these enterprises.....1939..acres.....	318	645			1,242	129	
75	Irrigated area in these enterprises.....1939..acres.....	318	234			761	61	
76	Area for which drains have been installed.....1939..acres.....	318	242			1,230	79	
77	Additional area needing drainage.....1939..acres.....		45				50	

* Census of Agriculture.
¹ Data between census years not comparable (see headnote).
² The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

CENSUS OF IRRIGATION — KANSAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Rush	Saline	Scott	Shawnee	Sheridan	Stafford	Stanton	Trego	Wallace	Washington	Wichita	All other counties ¹	
1,128	1,667	528	2,200	929	1,312	223	884	328	2,630	395	110,192	1
1,174	1,839	479	2,173	1,049	1,359	315	980	410	2,793	373	116,626	2
49	8	94	24	8	13	4	5	7	10	9	273	3
2	2	16	1	2	3	.....	.....	19	2	1	91	4
.....	.....	487.5	.....	.....	.....	.....	.....	.....	.....	.....	43.7	5
34	6	54	22	5	9	4	4	6	8	7	215	6
.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	154	7
15	2	40	2	3	4	.....	.....	1	1	2	58	8
.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	36	9
455,062	414,137	434,451	308,553	549,554	486,706	332,616	541,394	468,016	546,181	408,215	30,045,390	10
21,034	1,011	78,387	2,352	5,681	6,300	4,946	2,500	10,330	4,403	9,733	176,294	11
429	126	834	98	710	485	1,236	500	1,476	440	1,081	645	12
15,763	596	51,826	2,336	3,441	4,877	4,946	1,860	6,880	4,107	9,253	151,237	13
464	99	960	106	688	542	1,236	465	1,147	513	1,322	703	14
5,271	(³)	26,561	(³)	2,240	1,423	.....	(³)	(³)	(³)	(³)	24,967	15
351	(³)	664	(³)	747	356	.....	(³)	(³)	(³)	(³)	430	16
463,360	460,800	462,720	348,800	571,520	508,160	432,640	576,640	583,040	570,240	463,360	32,835,840	17
1,529	175	13,389	433	70	110	319	93	365	257	448	1,220	18
1,465	175	12,620	363	60	90	319	93	260	257	428	1,117	19
31	.....	476	14	.....	20	.....	.....	105	.....	15	91	20
33	.....	293	56	10	.....	.....	.....	.....	.....	5	12	21
.....	.....	3,432	.....	.....	.....	.....	.....	.....	.....	.....	4,206	22
.....	.....	3,047	.....	.....	.....	.....	.....	.....	.....	.....	1,988	23
.....	.....	290.1	.....	.....	.....	.....	.....	.....	.....	.....	-71.0	24
2,032	221	19,661	777	196	156	1,180	200	630	480	1,400	3,369	25
.....	.....	5,160	.....	.....	.....	.....	.....	.....	.....	.....	6,136	26
.....	.....	30,163	.....	.....	.....	.....	.....	.....	.....	.....	4,317	27
503	46	6,272	344	126	46	861	107	265	223	952	2,149	28
.....	.....	1,728	.....	.....	.....	.....	.....	.....	.....	.....	1,930	29
2,032	221	19,328	772	154	156	1,180	185	550	345	1,095	2,459	30
.....	.....	5,087	.....	.....	.....	.....	.....	.....	.....	.....	5,243	31
.....	.....	5,045	.....	.....	.....	.....	.....	.....	.....	.....	4,074	32
.....	.....	279.9	.....	.....	.....	.....	.....	.....	.....	.....	-53.1	33
503	46	5,939	339	84	46	861	92	185	88	647	1,239	34
.....	.....	1,655	.....	.....	.....	.....	.....	.....	.....	.....	1,037	35
7.3	17.3	17.1	18.4	1.2	1.7	6.4	3.7	3.5	5.8	4.6	0.7	36
.....	.....	14.7	.....	.....	.....	.....	.....	.....	.....	.....	4.9	37
75.2	79.2	69.3	56.1	45.5	70.5	27.0	50.3	66.4	74.5	40.9	49.6	38
.....	.....	67.5	.....	.....	.....	.....	.....	.....	.....	.....	80.2	39
46,615	3,800	236,224	17,656	4,230	1,400	12,175	5,531	16,620	5,198	16,915	41,059	40
46,563	3,800	236,110	17,656	4,230	1,400	12,175	5,489	16,620	5,197	16,915	39,419	41
52	.....	114	.....	.....	.....	.....	12	.....	1	.....	1,640	42
.....	.....	124,600	.....	.....	.....	.....	.....	.....	.....	.....	232,889	43
.....	.....	299,500	.....	.....	.....	.....	.....	.....	.....	.....	1,151,786	44
.....	.....	89.6	.....	.....	.....	.....	.....	.....	.....	.....	-82.4	45
22.94	17.19	12.22	22.87	27.47	8.97	10.32	29.90	30.22	15.07	15.45	16.70	46
.....	.....	24.49	.....	.....	.....	.....	.....	.....	.....	.....	44.42	47
.....	.....	59.37	.....	.....	.....	.....	.....	.....	.....	.....	282.72	48
30.49	21.71	17.64	40.78	60.43	12.73	38.17	59.47	45.53	20.23	37.76	33.65	49
49,305	3,800	253,859	20,006	4,755	1,400	12,775	5,531	16,920	5,198	20,665	48,409	50
.....	.....	124,600	.....	.....	.....	.....	.....	.....	.....	.....	258,389	51
.....	.....	416,000	.....	.....	.....	.....	.....	.....	.....	.....	1,160,586	52
.....	.....	103.7	.....	.....	.....	.....	.....	.....	.....	.....	-81.3	53
24.26	17.19	12.91	25.75	24.26	8.97	10.83	27.66	26.86	10.83	14.76	14.37	54
.....	.....	24.15	.....	.....	.....	.....	.....	.....	.....	.....	42.11	55
.....	.....	13.79	.....	.....	.....	.....	.....	.....	.....	.....	268.84	56
50	6	68	23	3	3	4	4	7	8	11	34	57
1,529	161	13,194	427	56	110	319	93	325	217	348	1,084	58
10,027	297	39,979	1,889	201	165	550	388	1,013	360	1,341	3,854	59
6.56	1.84	3.03	4.42	3.59	1.50	1.72	4.17	3.12	1.66	3.85	3.56	60
.....	.....	3.92	.....	.....	.....	.....	.....	.....	.....	.....	8.13	61
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	62
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
49	7	66	24	5	2	4	4	7	9	11	39	68
1,472	175	13,248	433	70	(³)	319	93	325	257	418	1,210	69
3,143	174	23,317	535	76	(³)	231	142	709	190	531	1,282	70
2.1	1.0	1.8	1.2	1.1	(³)	0.7	1.5	2.2	0.7	1.3	1.0	71
6.61	1.84	3.02	4.42	3.59	(³)	1.72	4.17	3.12	1.66	4.06	3.56	72
(³)	(³)	.....	(³)	.....	.....	.....	.....	(³)	.....	.....	6	73
(³)	(³)	.....	(³)	.....	.....	.....	.....	(³)	.....	.....	369	74
(³)	(³)	.....	(³)	.....	.....	.....	.....	(³)	.....	.....	101	75
(³)	(³)	.....	(³)	.....	.....	.....	.....	(³)	.....	.....	129	76
(³)	(³)	.....	(³)	.....	.....	.....	.....	(³)	.....	.....	108	77

³ Data are included only in State totals because less than 3 farms or 3 enterprises reported in the 1940 Census.

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - KANSAS

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Barber	Barton	Cheyenne	Cloud	Cowley	Crawford
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	1,421,387,464	16,064,982	29,364,910	10,335,709	15,993,189	21,353,378	8,341,548
2	Land and buildings, irrigated farms.....dollars..	22,721,389	307,500	1,076,900	112,700	60,600	95,643	82,540
Operated by—								
3	(a) Owners and managers.....dollars..	16,409,622	307,500	745,800	112,700	55,600	95,643	79,040
4	(b) Tenants.....dollars..	6,311,767	.....	331,100	.....	(¹)	.....	(¹)
5	Average, land and buildings, per farm.....dollars..	14,398.85	38,437.50	26,265.85	22,540.00	8,657.14	19,128.60	13,756.67
6	per acre in farms.....dollars..	26.08	17.63	61.54	16.45	86.60	50.58	277.91
7	Buildings, irrigated farms reporting value.....number..	1,497	8	40	4	7	5	6
8	Total reported.....dollars..	3,942,540	33,350	156,750	19,700	16,850	16,182	55,600
9	Average, per irrigated farm reporting.....dollars..	2,633.63	4,168.75	3,918.75	4,925.00	2,407.14	3,236.40	9,266.67
10	per acre on all irrigated farms.....dollars..	4.53	1.91	8.96	2.88	24.63	8.56	187.21
11	Buildings, nonirrigated farms reporting value.....number..	144,152	968	1,532	894	1,766	2,453	2,389
12	Total reported.....dollars..	253,889,232	1,893,060	3,944,380	1,532,655	2,748,631	4,189,144	2,374,920
13	Average, per nonirrigated farm reporting.....dollars..	1,761.26	1,955.64	2,574.66	1,733.77	1,558.42	1,707.76	994.11
14	per acre on all nonirrigated farms.....dollars..	5.37	2.74	7.22	2.48	6.54	6.84	7.24
15	Implements and machinery, irrigated farms reporting value.....number..	1,464	8	40	5	4	4	6
16	Total reported.....dollars..	1,992,911	22,300	78,128	8,850	8,800	15,491	13,400
17	Average, per irrigated farm reporting.....dollars..	1,361.28	2,787.50	1,953.20	1,770.00	2,200.00	3,872.75	2,233.33
18	per acre, on all irrigated farms.....dollars..	2.29	1.28	4.46	1.29	12.87	8.19	45.12
19	Implements and machinery, nonirrigated farms reporting value.....number..	136,732	885	1,552	875	1,734	2,277	2,026
20	Total reported.....dollars..	113,269,775	1,216,383	1,862,354	1,046,287	1,445,119	1,651,325	889,678
21	Average, per acre, on all nonirrigated farms.....dollars..	2.39	1.76	3.41	1.69	3.44	2.69	2.71
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22	Enterprises.....1940.....number.....	² 1,067	3	27	7	4	4	6
23	.....1930.....number.....	² 302	1	2	5	2	1	1
24	.....1920.....number.....	209	.....	.....	3	.....	.....	.....
25	Average size of enterprise based on							
26	irrigable area.....1940.....acres.....	138	105	65	74	7	24	144
27	.....1930.....acres.....	317	.....	.....	490	.....	.....	.....
28	.....1920 ³.....acres.....	491	.....	.....	693	.....	.....	.....
29	Diversion dams.....1940.....number.....	102	.....	.....	.....	.....	.....	.....
30	Main canals and laterals.....1940.....length, miles.....	292.5	.....	.....	.....	.....	.....	.....
31	.....1930.....length, miles.....	285	.....	.....	9	.....	.....	.....
32	.....1920.....length, miles.....	418	.....	.....	12	.....	.....	.....
33	.....1940.....capacity, c.f.s. ⁴	3,347	10	22	.....	3	1	1
34	.....1930.....capacity, c.f.s. ⁴	2,079	.....	.....	36	.....	.....	.....
35	.....1920.....capacity, c.f.s. ⁴	1,667	.....	.....	34	.....	.....	.....
36	Pipe lines ⁵.....1940.....length, miles.....	24.1	0.1	0.5	0.4	.....	0.8	5.0
37	Storage dams.....1940.....number.....	40	.....	.....	1	.....	2	.....
38	Reservoirs.....1940.....number.....	80	.....	.....	1	.....	2	.....
39	.....1930.....number.....	19	.....	.....	.....	.....	.....	.....
40	.....1920.....number.....	36	.....	.....	.....	.....	.....	.....
41	.....1940.....capacity, acre-feet..	32,584	.....	.....	(⁴)	.....	(⁴)	.....
42	.....1930.....capacity, acre-feet..	66,293	.....	.....	.....	.....	.....	.....
43	.....1920.....capacity, acre-feet..	391	.....	.....	.....	.....	.....	.....
44	Wells, flowing.....1940.....number.....	24	.....	.....	.....	.....	.....	.....
45	.....1930.....number.....	1	.....	.....	.....	.....	.....	.....
46	.....1920.....number.....	6	.....	.....	.....	.....	.....	.....
47	.....1940.....yield, g.p.m.....	1,453	.....	.....	.....	.....	.....	.....
48	.....1930.....yield, g.p.m.....	75	.....	.....	.....	.....	.....	.....
49	.....1920.....yield, g.p.m.....	500	.....	.....	.....	.....	.....	.....
50	Wells, pumped.....1940.....number.....	1,638	2	21	21	4	3	.....
51	.....1930.....number.....	772	.....	.....	8	.....	.....	.....
52	.....1920.....number.....	710	.....	.....	.....	.....	.....	.....
53	.....1940.....yield, g.p.m.....	863,663	(⁴)	20,375	6,010	500	1,600	.....
54	.....1930.....yield, g.p.m.....	323,500	.....	.....	2,550	.....	.....	.....
55	.....1920.....yield, g.p.m.....	266,797	.....	.....	.....	.....	.....	.....
55	Pumping plants.....1940.....number.....	1,222	3	30	7	5	4	4
56	.....1930.....number.....	281	.....	.....	3	.....	.....	.....
57	.....1920.....number.....	198	.....	.....	.....	.....	.....	.....
58	Prime movers.....1940.....capacity, hp.....	26,796	77	658	287	68	88	85
59	.....1930.....capacity, hp.....	6,221	.....	.....	45	.....	.....	.....
60	.....1920.....capacity, hp.....	6,346	.....	.....	.....	.....	.....	.....
61	Pumps.....1940.....capacity, g.p.m.....	1,231,462	7,200	31,625	6,460	2,605	1,822	180
62	.....1930.....capacity, g.p.m.....	393,526	.....	.....	2,850	.....	.....	.....
63	.....1920.....capacity, g.p.m.....	297,975	.....	.....	.....	.....	.....	.....
64	Pumping lift, from all sources.....1940.....average, feet.....	35	34	34	77	32	42	15
65	.....1930.....average, feet.....	26	.....	.....	35	.....	.....	.....
66	.....1920.....average, feet.....	30	.....	.....	.....	.....	.....	.....
67	from pumped wells.....1940.....average, feet.....	38	(⁴)	38	77	38	31	.....
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁶								
68	Enterprises reporting pay roll.....number.....	10	.....	.....	.....	.....	.....	.....
69	Irrigated area in these enterprises.....acres.....	41,116	.....	.....	.....	.....	.....	.....
70	Wages and salaries paid and payable.....dollars..	16,235	.....	.....	.....	.....	.....	.....
71	Persons employed during week ending April 29.....number..	75	.....	.....	.....	.....	.....	.....

* Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms or 3 enterprises reported in the 1940 Census.² Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table I.³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - KANSAS

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1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Decatur	Douglas	Edwards	Ellis	Finney	Ford	Gray	Hamilton	Hodgeman	Johnson	Kearny	Marshall	
8,722,637	13,215,518	13,440,157	13,203,402	9,274,848	18,674,356	10,994,738	2,823,249	8,010,450	19,744,326	4,324,775	23,543,418	1
247,280	155,950	818,665	150,460	3,354,690	1,591,848	384,905	372,105	1,412,230	24,040	1,339,870	45,500	2
170,780	146,950	692,895	150,460	1,842,170	1,177,283	298,040	230,670	1,047,060	24,040	809,170	(¹)	3
76,500	(¹)	125,770	.....	1,512,520	414,565	86,685	141,435	365,170	.....	530,700	(¹)	4
7,976.77	14,177.27	26,408.55	15,046.00	10,927.33	10,139.16	17,495.68	6,306.86	17,662.88	8,013.33	11,963.12	11,375.00	5
19.73	87.32	28.27	35.70	29.33	33.48	20.47	12.80	20.06	233.40	20.65	66.72	6
28	11	30	10	297	151	21	47	77	3	98	3	7
57,650	35,650	112,150	50,300	561,460	387,150	45,450	61,450	204,175	10,400	191,425	6,600	8
2,056.93	3,240.91	3,738.33	5,030.00	1,890.44	2,563.91	2,164.29	1,307.45	2,651.62	3,466.67	1,953.32	2,200.00	9
4.60	19.86	3.87	11.94	4.91	8.14	2.42	2.11	2.90	100.97	2.95	9.68	10
1,037	1,765	681	1,093	449	1,092	874	247	516	2,028	268	2,590	11
1,440,300	3,588,836	1,402,017	1,476,794	574,795	2,438,180	1,060,955	248,115	966,775	5,031,578	352,990	5,257,800	12
1,388.91	2,010.55	2,058.76	1,351.14	1,280.17	2,232.77	1,574.12	1,004.51	1,873.59	2,481.05	1,317.13	2,030.04	13
2.62	13.00	3.72	2.67	1.05	3.67	2.01	0.65	2.11	19.12	1.06	9.54	14
26	11	30	10	281	146	21	50	74	3	104	4	15
24,095	14,960	60,405	13,200	299,225	123,870	24,995	35,030	99,335	1,300	166,105	2,740	16
926.73	1,360.00	2,013.50	1,320.00	1,064.86	848.42	1,190.24	700.60	1,342.36	433.33	1,597.16	685.00	17
1.92	6.38	2.09	3.13	2.62	2.60	1.33	1.21	1.41	12.62	2.56	4.02	18
1,012	1,696	699	1,116	468	1,101	686	246	532	1,922	315	2,431	19
826,048	1,164,592	824,201	981,486	500,194	1,231,494	670,098	342,313	476,863	1,172,328	344,095	1,868,524	20
1.50	4.22	2.19	1.78	0.91	1.85	1.27	0.89	1.04	4.46	1.04	3.39	21
27	10	34	6	195	119	29	33	88	3	71	3	22
3	1	4	1	90	7	5	9	6	.....	28	.....	23
.....	.....	.....	.....	85	.....	.....	9	.....	.....	31	.....	24
34	25	41	20	219	46	194	253	82	30	386	27	25
.....	.....	.....	.....	499	.....	.....	580	.....	.....	986	.....	26
4	.....	.....	.....	226	.....	.....	696	.....	.....	1,222	.....	27
1.0	.....	.....	.....	15	6	3	2	22	.....	3	.....	28
.....	.....	.....	.....	84.0	7.0	6.0	29.0	1.0	.....	125.0	.....	29
.....	.....	.....	.....	118	.....	.....	21	.....	.....	53	.....	30
20	1	1	6	91	.....	.....	34	.....	.....	98	.....	31
.....	.....	.....	.....	432	160	129	230	86	2	1,608	4	32
.....	.....	.....	.....	1,258	.....	.....	53	.....	.....	600	.....	33
.....	.....	.....	.....	666	.....	.....	1	.....	.....	742	.....	34
2.9	1.6	.....	.....	0.9	0.1	.....	.....	1.0	0.2	0.1	.....	35
.....	.....	.....	.....	7	.....	.....	.....	12	.....	3	.....	36
.....	.....	.....	.....	22	1	2	3	14	.....	8	.....	37
.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	13	.....	.....	2	.....	.....	1	.....	39
.....	.....	.....	.....	6,385	(¹)	(¹)	9	555	.....	25,056	.....	40
.....	.....	.....	.....	65,009	.....	.....	40	.....	.....	.....	.....	41
.....	.....	.....	.....	237	.....	.....	41	.....	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	1,030	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
15	8	43	.....	617	144	34	59	78	3	251	.....	49
.....	.....	.....	.....	404	.....	.....	19	.....	.....	173	.....	50
.....	.....	.....	.....	368	.....	.....	11	.....	.....	165	.....	51
9,550	3,180	35,550	.....	227,310	76,535	24,890	36,840	59,613	1,600	99,675	.....	52
.....	.....	.....	.....	141,860	.....	.....	8,430	.....	.....	92,960	.....	53
.....	.....	.....	.....	102,611	.....	.....	8,500	.....	.....	98,515	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
27	10	41	7	236	133	30	34	101	3	76	3	56
.....	.....	.....	.....	93	.....	.....	6	.....	.....	31	.....	57
.....	.....	.....	.....	81	.....	.....	6	.....	.....	30	.....	58
572	159	741	105	4,680	1,951	654	400	3,240	12	1,763	30	59
.....	.....	.....	.....	1,799	.....	.....	111	.....	.....	1,123	.....	60
.....	.....	.....	.....	1,483	.....	.....	126	.....	.....	2,085	.....	61
19,830	5,030	36,350	3,680	259,115	96,285	28,130	38,640	118,660	1,600	103,475	2,400	62
.....	.....	.....	.....	141,010	.....	.....	8,430	.....	.....	92,960	.....	63
.....	.....	.....	.....	107,311	.....	.....	9,200	.....	.....	97,615	.....	64
40	20	22	26	29	26	36	20	45	14	35	25	65
.....	.....	.....	.....	19	.....	.....	16	.....	.....	27	.....	66
.....	.....	.....	.....	26	.....	.....	20	.....	.....	32	.....	67
54	23	22	.....	29	27	37	20	53	14	36	.....	68
.....	.....	.....	.....	3	1	.....	3	.....	.....	3	.....	69
.....	.....	.....	.....	19,079	(¹)	.....	5,237	.....	.....	16,000	.....	70
.....	.....	.....	.....	7,519	(¹)	.....	1,505	.....	.....	6,052	.....	71
.....	.....	.....	.....	20	(¹)	.....	40	.....	.....	14	.....	71

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.
³Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - KANSAS

COUNTY TABLE II—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Meade	Ness	Norton	Osborne	Pawnee	Phillips	Rawlins
FARM VALUES, 1940^a								
1	Land and buildings, all farms.....dollars..	10,629,488	11,285,684	9,179,873	11,684,324	19,550,472	9,891,596	13,407,388
2	Land and buildings, irrigated farms.....dollars..	335,400	716,135	177,900	53,110	1,880,694	23,200	73,837
Operated by—								
3	(a) Owners and managers.....dollars..	251,000	594,335	164,400	48,110	1,011,734	(^b)	69,837
4	(b) Tenants.....dollars..	84,400	121,800	13,500	(^c)	868,960	(^c)	(^c)
5	Average, land and buildings, per farm.....dollars..	20,962.50	14,919.48	11,860.00	13,277.50	24,424.60	7,733.33	6,153.08
6	per acre in farms.....dollars..	23.53	17.23	17.11	36.55	48.46	24.42	25.88
7	Buildings, irrigated farms reporting value.....number..	15	48	14	3	72	2	11
8	Total reported.....dollars..	37,200	119,330	41,300	3,160	283,914	(^b)	22,250
9	Average, per irrigated farm reporting.....dollars..	2,480.00	2,487.29	2,950.00	1,053.33	3,943.25	(^b)	2,022.73
10	per acre on all irrigated farms.....dollars..	2.61	2.87	3.97	2.17	7.32	(^b)	7.80
11	Buildings, nonirrigated farms reporting value.....number..	655	903	1,285	1,336	938	1,509	852
12	Total reported.....dollars..	1,298,736	1,457,471	1,803,304	1,883,065	2,263,070	1,886,165	2,101,010
13	Average, per nonirrigated farm reporting.....dollars..	1,982.89	1,614.03	1,392.51	1,409.48	2,412.65	1,249.94	2,206.94
14	per acre on all nonirrigated farms.....dollars..	2.37	2.36	3.36	3.45	5.10	3.40	3.05
15	Implements and machinery, irrigated farms reporting value.....number..	16	45	15	4	73	3	11
16	Total reported.....dollars..	31,465	60,385	15,870	4,550	162,513	3,600	5,480
17	Average, per irrigated farm reporting.....dollars..	1,966.56	1,341.89	1,058.00	1,137.50	2,226.27	1,200.00	498.18
18	per acre, on all irrigated farms.....dollars..	2.21	1.45	1.53	3.13	4.19	3.79	1.92
19	Implements and machinery, nonirrigated farms reporting value.....number..	675	903	1,201	1,332	931	1,451	1,031
20	Total reported.....dollars..	859,191	847,380	811,107	1,189,489	1,333,025	909,492	1,477,563
21	Average, per acre, on all nonirrigated farms.....dollars..	1.57	1.37	1.51	2.18	3.00	1.64	2.14
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940.....number.....	18	15	9	3	71	4	6
23	.....1930.....number.....	1	2	2	1	30	2	2
24	.....1920.....number.....					16		
25	Average size of enterprise based on irrigable area.....1940.....acres.....	67	82	67	67	108	35	35
26	.....1930.....acres.....					170		
27	.....1920 ^b.....acres.....					164		
28	Diversion dams.....1940.....number.....	3	8			6	3	1
29	Main canals and laterals.....1940.....length, miles.....	1.0	3.0		0.1	11.0		
30	.....1930.....length, miles.....					55		
31	.....1920.....length, miles.....					70		
32	.....1940.....capacity, c. f. s. ⁴	26	91	22	6	166	5	1
33	.....1930.....capacity, c. f. s. ⁴					89		
34	.....1920.....capacity, c. f. s. ⁴					118		
35	Pipe lines ⁵.....1940.....length, miles.....			0.6	1.4	0.2	0.3	
36	Storage dams.....1940.....number.....	2	2	5		4		
37	Reservoirs.....1940.....number.....	4	3	6		5		
38	.....1930.....number.....					4		
39	.....1920.....number.....					3		
40	.....1940.....capacity, acre-feet.....	109	16	162		216		
41	.....1930.....capacity, acre-feet.....					1,242		
42	.....1920.....capacity, acre-feet.....					101		
43	Wells, flowing.....1940.....number.....	20						
44	.....1930.....number.....							
45	.....1920.....number.....							
46	.....1940.....yield, g. p. m.....	423						
47	.....1930.....yield, g. p. m.....							
48	.....1920.....yield, g. p. m.....							
49	Wells, pumped.....1940.....number.....	7	35	4		75	2	4
50	.....1930.....number.....					34		
51	.....1920.....number.....					7		
52	.....1940.....yield, g. p. m.....	6,400	30,650	1,650		53,310	(^b)	1,790
53	.....1930.....yield, g. p. m.....					23,110		
54	.....1920.....yield, g. p. m.....					4,590		
55	Pumping plants.....1940.....number.....	11	52	12	3	87	4	8
56	.....1930.....number.....					36		
57	.....1920.....number.....					17		
58	Prime movers.....1940.....capacity, hp.....	274	1,076	258	80	2,179	14	52
59	.....1930.....capacity, hp.....					768		
60	.....1920.....capacity, hp.....					397		
61	Pumps.....1940.....capacity, g. p. m.....	14,400	56,530	11,475	3,850	104,210	1,000	3,990
62	.....1930.....capacity, g. p. m.....					47,500		
63	.....1920.....capacity, g. p. m.....					21,390		
64	Pumping lift, from all sources.....1940.....average, feet.....	33	34	35	37	31	29	36
65	.....1930.....average, feet.....					28		
66	.....1920.....average, feet.....					27		
67	from pumped wells.....1940.....average, feet.....	44	38	22		34	(^b)	54
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶								
68	Enterprises reporting pay roll.....number.....							
69	Irrigated area in these enterprises.....acres.....							
70	Wages and salaries paid and payable.....dollars.....							
71	Persons employed during week ending April 29.....number.....							

^aCensus of Agriculture.

¹Data between census years not comparable (see headnote).

²Data are included only in State totals because less than 3 farms or 3 enterprises reported in the 1940 Census.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - KANSAS

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"]

Rush	Saline	Scott	Shawnee	Sheridan	Stafford	Stanton	Trego	Wallace	Washington	Wichita	All other counties:	
14,865,386	19,496,654	5,658,791	18,370,132	8,029,836	22,443,919	2,732,182	8,897,293	2,632,089	20,765,055	3,737,293	960,704,401	1
820,850	107,000	1,491,837	615,200	75,060	299,840	53,200	49,600	59,900	206,420	92,780	3,955,900	2
806,550	78,000	963,235	611,600	50,760	228,540	53,200	37,600	46,100	186,420	87,630	3,298,770	3
214,400	29,000	528,602	3,600	24,300	73,300	.....	12,000	13,800	20,000	5,150	657,130	4
16,754.08	13,375.00	15,870.61	25,633.33	9,382.50	23,064.62	13,300.00	9,920.00	8,557.14	20,642.00	10,308.89	14,490.48	5
39.03	105.84	19.03	261.56	13.21	47.59	10.76	19.84	5.80	4.88	9.53	22.45	6
46	8	90	22	7	13	4	4	7	10	9	266	7
104,715	(²)	186,160	(²)	12,025	60,200	12,200	(²)	(²)	(²)	(²)	784,064	8
2,276.41	2,875.00	2,088.44	6,918.18	1,717.86	4,630.77	3,050.00	2,000.00	1,600.00	3,857.50	1,632.78	2,947.61	9
4.98	22.75	2.37	64.71	2.12	9.56	2.47	3.20	1.08	8.76	1.51	4.45	10
941	1,502	314	2,104	810	1,184	167	818	285	2,514	300	103,173	11
1,692,428	3,135,460	454,015	4,816,324	1,383,126	2,580,595	197,395	1,193,930	304,425	4,879,285	459,067	179,576,436	12
1,798.54	2,087.52	1,445.91	2,289.13	1,707.56	2,179.56	1,182.01	1,459.57	1,068.16	1,940.85	1,530.22	1,740.56	13
3.90	7.59	1.28	15.73	2.54	5.37	0.80	2.22	0.67	9.01	1.15	6.01	14
47	7	94	20	7	11	4	5	7	10	9	249	15
70,285	9,400	178,694	15,660	8,550	27,540	7,200	3,150	6,570	16,208	12,730	340,827	16
1,495.43	1,342.86	1,901.00	783.00	1,221.43	2,503.64	1,800.00	630.00	808.57	1,620.80	1,414.44	1,368.78	17
3.94	9.30	2.28	6.66	1.51	4.37	1.46	1.26	0.64	3.68	1.31	1.93	18
887	1,445	352	1,777	810	1,199	191	837	289	2,400	298	97,050	19
1,067,392	1,383,864	467,830	1,048,583	891,872	1,857,671	378,195	690,450	244,812	1,824,124	435,366	77,008,997	20
2.53	3.35	1.31	3.42	1.64	3.87	1.15	1.28	0.53	3.37	1.09	2.58	21
50	7	70	25	6	3	4	5	8	9	13	42	22
1	2	8	1	2	3	.....	.....	2	3	1	73	23
.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	53	24
41	32	281	31	33	52	295	40	79	53	108	80	25
.....	.....	645	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
.....	.....	2,514	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
18	.....	1	.....	.....	.....	.....	.....	1	2	2	2	28
6.3	.....	5.0	.....	.....	.....	1.0	.....	2.0	2.0	.....	6.1	29
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
.....	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	102	31
147	9	5	1	.....	.....	6	2	13	13	4	112	32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41	33
0.3	0.2	2	2.9	.....	.....	.....	.....	.....	.....	.....	104	34
.....	.....	.....	.....	.....	.....	.....	.....	.....	0.2	0.1	3.6	35
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36
1	.....	4	.....	.....	.....	.....	.....	.....	.....	1	3	37
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	9	38
.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	10	39
(²)	.....	15	.....	.....	.....	.....	.....	.....	.....	(²)	25	40
.....	.....	(²)	.....	.....	.....	.....	.....	.....	.....	.....	7	41
.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	3	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(²)	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500	48
24	1	87	29	8	3	4	3	16	1	11	21	49
.....	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	116	50
.....	.....	54	.....	.....	.....	.....	.....	.....	.....	.....	105	51
20,150	(²)	87,410	12,160	3,850	2,860	3,400	1,700	7,725	(²)	8,150	14,890	52
.....	.....	20,850	.....	.....	.....	.....	.....	.....	.....	.....	33,740	53
.....	.....	32,050	.....	.....	.....	.....	.....	.....	.....	.....	20,531	54
63	7	91	30	6	3	5	6	10	9	15	46	55
.....	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	94	56
.....	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	51	57
1,553	35	3,374	192	76	70	193	112	195	94	489	910	58
.....	.....	930	.....	.....	.....	.....	.....	.....	.....	.....	1,445	59
.....	.....	1,930	.....	.....	.....	.....	.....	.....	.....	.....	915	60
74,400	3,300	91,160	12,680	3,850	2,860	5,900	4,000	10,150	8,350	15,000	39,240	61
.....	.....	20,550	.....	.....	.....	.....	.....	.....	.....	.....	80,226	62
.....	.....	32,350	.....	.....	.....	.....	.....	.....	.....	.....	30,109	63
38	20	67	28	36	27	81	51	25	21	63	37	64
.....	.....	64	.....	.....	.....	.....	.....	.....	.....	.....	28	65
.....	.....	67	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
48	(²)	70	29	36	27	91	65	24	(²)	78	47	67
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	68
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	69
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71

⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁵Includes siphons and farm pipe lines reported.

⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - LOUISIANA

STATE TABLE 1.-IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF-						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	¹ 28,913,280	29,061,760	29,061,760	29,061,760	29,061,760	29,061,790	29,061,760
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number....	150,007	170,216	161,445	135,463	120,546	115,969	69,294
Land in all farms.....acres.....	9,996,108	10,444,288	9,355,437	10,019,822	10,439,481	11,059,127	9,544,219
Farms irrigated: ¹							
Farms.....number....	7,037	6,585	5,588	6,471	2,690	4,531	(²)
Increase or decrease (-) over preceding census.....percent..	³ 25.9	.....	-13.6	140.6	-40.6	.....	.....
Proportion of all farms.....percent..	4.7	3.9	3.5	4.8	2.2	3.9	.....
Land in farms.....acres.....	1,066,655	(²)	892,604	(²)	(²)	(²)	(²)
Proportion of all farm land.....percent..	10.7	(²)	9.5	(²)	(²)	(²)	(²)
Area irrigated.....acres.....	⁴ 413,969	⁵ 361,943	⁶ 400,375	(⁷)	(⁷)	201,685	84,377
Increase or decrease (-) over preceding census.....percent..	³ 3.4	.....	.....	.....	.....	139.0	.....
Proportion of total land area of State.....percent..	1.4	1.2	1.4	.....	.....	0.7	0.3
Proportion of all farm land.....percent..	4.1	3.5	4.3	.....	.....	1.8	0.9
Value of irrigated farms (land and buildings).....dollars..	45,182,979	(²)	45,496,283	(²)	(²)	(²)	(²)
Average per farm.....dollars..	6,420.77	(²)	8,141.78	(²)	(²)	(²)	(²)
Average per acre.....dollars..	42.36	(²)	50.97	(²)	(²)	(²)	(²)
Value of farm implements and machinery ⁸.....dollars..	7,291,697	(²)	5,179,941	(²)	(²)	(²)	(²)
Average per farm ⁸.....dollars..	1,036.19	(²)	926.98	(²)	(²)	(²)	(²)
Average per acre ⁸.....dollars..	6.84	(²)	5.80	(²)	(²)	(²)	(²)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number....	2,563	(²)	2,352	1,373	1,237	(²)	(²)
Farms irrigated.....number....	7,305	(²)	(²)	(²)	(²)	(²)	(²)
Area irrigated.....acres.....	447,095	(²)	450,901	454,882	380,200	(²)	(²)
Area existing works were capable of supplying with water.....acres.....	759,915	(²)	795,165	728,742	553,220	(²)	(²)
Area irrigable.....acres.....	793,674	(²)	850,401	⁹ 851,211	⁹ 581,965	(²)	(²)
Additional area existing works were capable of supplying with water.....acres.....	312,820	(²)	344,264	273,860	173,020	(²)	(²)
Additional irrigable area in enterprises not supplied with water.....acres.....	346,579	(²)	399,500	⁹ 396,329	⁹ 201,765	(²)	(²)
Investment in irrigation enterprises.....dollars..	11,565,513	(²)	15,744,743	14,063,181	6,859,166	2,529,319	(²)
Increase or decrease (-) over preceding census.....percent..	⁵ -26.5	(²)	12.0	105.0	171.2	.....	.....
Average per acre based on area works were capable of supplying with water.....dollars..	15.22	(²)	19.80	19.30	12.40	(²)	(²)
Increase or decrease (-) over preceding census.....percent..	³ -23.1	(²)	2.6	55.6	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	11,659,725	(²)	15,771,003	14,264,178	6,914,163	(²)	(²)
Average per acre based on irrigable area in enterprises.....dollars..	14.69	(²)	18.55	⁹ 16.76	⁹ 11.88	(²)	(²)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	3.65	(²)	4.00	7.01	(²)	(²)	(²)

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Not available. ³Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁴Irrigated land from which crops were harvested plus 2,110 acres of irrigated land used only for pasture. ⁵Irrigated land from which crops were harvested. ⁶Acres of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁰The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.-CENSUS OF AGRICULTURE-NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	Number	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Owners and managers.....	150,007	9,996,108	4,051,670	411,859	2,110	353,873,506	35.40	91,393,625	9.14	35,804,852	3.58
Tenants.....	60,840	6,362,988	2,015,993	217,405	1,287	218,599,656	34.35	62,611,589	9.84	24,658,655	3.88
	89,167	3,633,120	2,035,677	194,454	823	135,273,850	37.23	28,782,036	7.92	11,146,187	3.07
Irrigated farms, total.....	7,037	1,066,655	494,290	411,859	2,110	45,182,979	42.36	8,019,180	7.52	7,291,697	6.84
Owners and managers.....	3,807	642,822	268,274	217,405	1,287	28,353,724	44.11	5,670,053	8.82	4,607,569	7.17
Tenants.....	3,230	423,833	226,016	194,454	823	16,829,255	39.71	2,349,127	5.54	2,684,128	6.33
Wholly irrigated farms.....	1,964	399,977	185,402	185,402	837	16,515,252	41.29	2,401,036	6.00	2,752,883	6.88
Owners and managers.....	958	208,442	82,080	82,080	156	9,342,292	44.61	1,801,297	7.65	1,468,098	7.01
Tenants.....	1,006	190,535	103,322	103,322	681	7,172,960	37.65	799,739	4.20	1,284,785	6.74
Partly irrigated farms.....	5,073	666,678	308,888	226,457	1,273	28,667,727	43.00	5,618,114	8.43	4,538,814	6.81
Owners and managers.....	2,849	433,360	186,194	135,325	1,131	19,011,432	43.87	4,068,756	9.39	3,139,471	7.24
Tenants.....	2,224	233,298	122,694	91,132	142	9,656,295	41.39	1,549,358	6.04	1,399,343	6.00
Nonirrigated farms, total.....	142,970	8,929,453	3,557,380	.....	.....	308,690,527	34.57	83,374,445	9.34	28,513,155	3.19

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Cost ¹		
								Quantity	Cost	Quantity and cost	Quantity delivered per acre ¹	Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	2,566	793,674	759,915	447,095	450,901	454,852	-0.8	367,081	437,631	358,899	2.4	4.28	1.77
Primary sources:													
Streams, gravity.....	35	981	981	494	1,611	10,226	-69.3	357	422	333	1.9	0.31	0.18
Streams, pumped.....	466	439,654	420,321	247,190	257,390	248,306	-4.0	180,870	244,956	178,973	2.8	5.17	1.86
Streams, gravity and pumped.....	8	2,665	2,665	1,830		12,620		1,655	1,830	1,655	3.9	2.64	0.68
Wells, pumped.....	1,138	228,674	220,316	135,192	172,695	154,304	-21.7	127,252	132,080	124,879	2.2	3.70	1.65
Wells, flowing.....	334	1,927	1,923	1,372	2,896	196	-52.6	1,355	360	365	0.8	1.88	2.44
Wells, pumped and flowing.....	39	393	393	214	196	1,075	9.2	214	190	190	1.3	5.94	4.68
Lakes, gravity.....	32	2,163	2,163	1,096	515	3,225	112.8	594	947	445	1.5	1.80	1.24
Lakes, pumped.....	50	13,480	12,190	6,528	1,459	6,966	347.4	6,328	6,358	6,258	2.4	4.55	1.93
Springs.....													
Springs and streams.....													
Stored storm water.....	73	1,629	1,629	1,376	2,271	84	-39.4	1,327	1,342	1,319	1.8	2.59	1.41
City water.....	16												
Sewage.....	1	494	448	441				427	439	425	0.9	0.48	0.52
Streams, gravity; wells, pumped...	6	4,396	4,396	3,775		10,045		2,561	1,475	261	1.3	5.17	3.93
Streams, gravity; wells, flowing...													
Streams, pumped; wells, pumped...	20	18,249	14,894	9,202				7,463	9,202	7,463	1.4	2.74	2.02
Waste water, seepage or drainage...	312	66,561	65,988	31,640				30,337	31,265	30,592	1.4	1.46	1.01
Other mixed.....	20	12,408	11,608	6,745	11,695	7,835	-42.3	5,741	6,745	5,741	1.9	7.21	3.78
Other and not reported.....					173								
Supplemental sources:²													
Streams, gravity and/or storage...													
Streams, pumped.....	1												
Wells, pumped.....	15	4,792	4,342	2,579	260		891.9	2,579	2,434	2,434	0.8	1.51	1.84
Wells, flowing.....													

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals, (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	11,565,513	100.0	15.22	15,744,743	100.0	19.80	-4.58	436,981	3.65	431,337	4.09	-0.43	431,413	7.01
Primary sources:														
Streams, gravity.....	4,223	(³)	4.30	17,288	0.1	7.80	-3.50	422	0.73	1,596	2.42	-1.69	9,937	3.69
Streams, pumped.....	6,297,829	54.5	14.98	8,631,806	56.1	17.04	-2.06	244,256	4.05	248,802	3.66	0.39	242,282	7.76
Streams, gravity and pumped.....	26,950	0.2	10.11					1,830	2.70				12,550	6.06
Wells, pumped.....	4,159,334	36.0	18.88	6,013,183	38.2	25.05	-6.17	132,080	3.48	163,313	4.45	-0.97	140,659	5.95
Wells, flowing.....	128,300	1.1	66.72	249,656	1.6	71.43	-4.71	9,380	1.93	1,559	2.71	-0.78	189	2.25
Wells, pumped and flowing.....	21,169	0.2	53.87	17,326	0.1	78.75	-24.88	190	5.94	173	3.90	2.04	1,075	4.19
Lakes, gravity.....	3,510	(³)	1.62	2,225	(³)	2.32	-0.70	947	1.04	515	0.59	0.45	2,480	3.21
Lakes, pumped.....	125,515	1.1	10.30	46,750	0.3	25.15	-14.85	6,358	4.49	1,432	2.97	1.52	6,716	9.17
Springs.....														
Springs and streams.....														
Stored storm water.....	14,940	0.1	9.11	17,779	0.1	6.09	3.02	1,342	2.55	2,252	0.80	1.75	10	5.00
City water.....														
Sewage.....	1,143	(³)	2.55					439	0.47					
Streams, gravity; wells, pumped...	39,850	0.3	9.07					1,475	4.31				9,115	10.69
Streams, gravity; wells, flowing...														
Streams, pumped; wells, pumped...	240,464	2.1	16.15					9,302	2.62					
Waste water, seepage or drainage...	233,150	2.0	3.35					31,265	1.48					
Other mixed.....	252,535	2.2	21.76	533,225	3.4	21.25	0.51	6,745	3.39	11,695	9.55	-6.16	6,400	3.67
Other and not reported.....				2,705	(³)	15.64								
Supplemental sources:⁴														
Streams, gravity and/or storage...														
Streams, pumped.....														
Wells, pumped.....	16,701	0.1	3.85	12,800	0.1	7.76	-3.91	2,434	1.51	200	3.50	-1.99		
Wells, flowing.....														

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals, (see text).

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930	1920	
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED					
Total.....	Acres 447,095	Acres 2,579	Acres 450,901	Acres 454,882	Percent -0.8
Individual and partnership.....	248,664	2,579	226,259	259,673	9.9
Cooperative, incorporated.....	36,939			10,635	
Cooperative, unincorporated.....	1,701				
Commercial.....	159,764		224,625	164,574	-28.9
State.....	27		17		58.8
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER					
Total.....	759,915	4,342	795,165	728,742	-4.4
Individual and partnership.....	419,739	4,342	334,045	375,917	25.7
Cooperative, incorporated.....	41,930			20,325	
Cooperative, unincorporated.....	5,330				
Commercial.....	292,805		461,060	332,500	-36.5
State.....	111		60		85.0
IRRIGABLE AREA ²					
Total.....	793,674	4,792	850,401	851,211	-6.7
Individual and partnership.....	432,818	4,792	374,306	468,126	15.6
Cooperative, incorporated.....	43,930			20,685	
Cooperative, unincorporated.....	5,510				
Commercial.....	311,305		476,035	362,400	-34.6
State.....	111		60		85.0

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).
²For 1920 relates to total area. Irrigable area for that year was not reported.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total ✓	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		
					Works and equipment per acre ²	Maintenance and operation per acre ²	Works and equipment per acre ²	Maintenance and operation per acre ²			From which crops were harvested	On which crops failed	Irrigated pasture
	Number	Number	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Number	Acres	Acres	Acres	Acres
Total.....	2,566	109	793,674	759,915	15.20	3.64	3.85	1.51	7,305	447,095	442,317	1,078	3,700
Individual and partnership.....	2,517	75	432,818	419,739	13.78	2.84	3.85	1.51	3,673	248,664	243,926	1,038	3,700
Cooperative, incorporated.....	8	6	43,930	41,930	17.20	3.78			398	36,939	36,939		
Cooperative, unincorporated.....	12	1	5,510	5,330	8.43	4.64			29	1,701	1,661	40	
Commercial.....	28	27	311,305	292,805	17.07	4.79			3,204	159,764	159,764		
State.....	4 ¹		111	111	23.42	24.52			1	27	27		

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for less than 3 enterprises shown with permission of the enterprises involved.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940					1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises		
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment	Investment in water rights ²							
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Dollars
Total.....	11,565,513	11,548,812	16,701	11,565,513		15,744,743	14,063,181	-26.5	15.20	3.85	117,704	94,212
Individual and partnership.....	5,799,128	5,782,427	16,701	5,799,128		6,984,092	7,943,252	-17.0	13.78	3.85	23,838	48,212
Cooperative, incorporated.....	721,172	721,172		721,172					17.20		4,770	3,000
Cooperative, unincorporated.....	44,925	44,925		44,925			161,658		8.43			
Commercial.....	4,997,688	4,997,688		4,997,688		8,757,151	5,958,271	-42.9	17.07		89,096	43,000
State.....	2,600	2,600		2,600		3,500		-25.7	23.42			

¹Only for enterprises serving 5 or more farms.

²Water rights have no legal status in Louisiana.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter- prises 1940	Area		Total indebt- ness 1940	Average per acre assessed 1939	Average per acre works capable of supplying with water	Enter- prises 1940	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri- gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
Total.....	Number 36	Acres 232,305	Acres 226,905	Dollars 2,748,768	Dollars 18.87	Dollars 12.11	Number 11	Dollars 1,137,646	Dollars 1,078,511	Dollars 18.85	Acres 245,975	Dollars 1,259,711	Dollars 542,853
Partnership.....	17	14,960	13,560	78,000	6.45	5.75	2	7,333	5,746	0.51	44,137	188,564	41,070
Cooperative, incorporated.....	4	32,000	30,000	245,484	9.61	8.18	1						
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	320	2,240	3,215
Commercial.....	15	185,345	183,345	2,425,284	22.46	13.23	8	1,130,313	1,072,765	24.55	164,964	902,035	366,689
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. No supplemental enterprises reported indebtedness in this State.

²In payment of principal, interest, and/or other funded obligations.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939;
BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
Total.....	Acres 436,931	Dollars 1,589,007	Acres 2,434	Dollars 3,683	Dollars 3.64	Dollars 1.51	Number 91	Dollars 502,320	Number 802
Individual and partnership.....	238,636	676,728	2,434	3,683	2.84	1.51	58	69,655	196
Cooperative, incorporated.....	36,939	139,565	.....	.....	3.78	.....	7	58,720	82
Cooperative, unincorporated.....	1,565	7,266	.....	.....	4.64	.....		
Commercial.....	159,764	764,786	.....	.....	4.79	.....	26	373,945	524
State.....	27	662	.....	.....	24.52	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms.

STATE TABLE 10—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver- sion	Stor- age	Capac- ity at main head- ing	Length ¹		Num- ber	Capacity	Length	Num- ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac- ity	Number	Rated capac- ity
Total.....	Number 105	Number 114	Sec.-ft. 10,335	Miles 2,397	Miles 24.0	75	Ac.-ft. 34,199	Miles 63.6	502	C. p. m. 12,695	1,504	C. p. m. 1,526,613	2,326	Rp. 65,574	2,403	C. p. m. 6,453,487
Individual and partnership....	104	³ 112	4,215	1,075	21.6	73	26,449	51.6	501	12,675	1,489	1,489,007	2,216	61,671	2,298	3,314,381
Cooperative, incorporated.....	1	.....	1,121	236	0.2	.....	.....	0.5	.....	.....	1	1,000	20	3,977	18	604,000
Cooperative, unincorporated....	.....	.....	259	5	.....	.....	.....	.....	1	20	7	14,806	11	558	11	45,506
Commercial.....	.....	2	4,740	1,081	2.2	2	7,750	11.5	.....	.....	6	20,000	78	19,308	75	2,487,800
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1,800	1	60	1	1,800

¹Includes main and lateral canals but not farm ditches.

²Includes flumes.

³A number of storage dams were reported without corresponding reservoirs or their capacities.

STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number
Total.....	105	114	36	61
Concrete or masonry.....	3	1	1	.....
Timber.....	15	19	.....	.....
Earth and rock.....	45	91	.....	69
Other and mixed.....	2	2	¹ 34	10
Not reported.....	42	1	1	2

¹Principally temporary dams, replaced annually.

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STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps		Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers		Rated capacity of movers	Proportion of total capacity
	Number	Percent					Number	Percent		
Total, 1940.....	2,403	100.0	6,453,487	100.0	32	Total, 1940.....	2,326	100.0	65,574	100.0
Electric motor.....	284	11.8	688,807	10.7	39	Centrifugal pump.....	1,575	67.7	44,628	52.2
Centrifugal.....	202	8.4	480,405	7.4	37	Electric.....	209	9.0	6,635	7.8
Turbine.....	57	2.4	170,840	2.6	58	Internal-combustion.....	1,330	57.2	29,041	33.9
Plunger.....	20	0.8	212	(¹)	10	Other.....	36	1.5	8,952	10.5
Other.....	5	0.2	37,350	0.6	37	Turbine pump.....	529	22.8	31,113	36.3
Internal-combustion engine.....	1,994	83.0	3,848,963	59.6	31	Electric.....	57	2.5	3,787	4.4
Centrifugal.....	1,389	57.8	2,671,569	41.4	26	Internal-combustion.....	469	20.2	27,146	31.7
Turbine.....	479	19.9	912,316	14.1	47	Other.....	3	0.1	180	0.2
Plunger.....	42	1.7	856	(¹)	15	Plunger pump.....	63	2.7	103	0.1
Other.....	84	3.5	264,222	4.1	25	Electric.....	21	0.9	22	(¹)
Other kinds of motive power.....	37	1.5	467,440	7.2	21	Internal-combustion.....	42	1.8	81	0.1
Centrifugal.....	26	1.1	452,640	7.0	21	Other.....				
Turbine.....	3	0.1	6,700	0.1	38	Other and mixed types of pumps.....	159	6.8	9,730	11.4
Plunger.....						Electric.....	14	0.6	1,647	1.9
Other.....	8	0.3	8,100	0.1	9	Internal-combustion.....	135	5.8	6,578	7.7
Mixed kinds of motive power.....	88	3.7	1,448,277	22.5	30	Other.....	10	0.4	1,505	1.8
Centrifugal.....	71	3.0	1,108,305	17.2	29	Total, 1930.....	² 1,790		86,413	
Turbine.....	7	0.3	12,500	0.2	61	Increase or decrease (-) 1930-1940.....	536		-839	
Plunger.....	2	0.1	12	(¹)	10					
Other.....	8	0.3	327,460	5.1	22					
Total, 1930.....	2,000		5,914,799		37					
Increase or decrease (-) 1930-1940..	403		538,688		-5					

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²	
Total.....	Miles 63.6	Miles 15.1	Percent 321.2
Concrete:			
1 to 12 inches.....	6.1		
13 to 24 inches.....	6.7		
Over 24 inches.....	2.6		
Metal:			
1 to 12 inches.....	20.5	10.3	99.0
13 to 24 inches.....	19.8		
Over 24 inches.....	0.4	4.3	369.8
Wood-stave:			
1 to 12 inches.....	5.5	0.3	(³)
13 to 24 inches.....	0.1		
Over 24 inches.....	0.3	0.2	100.0
Clay and other:			
1 to 12 inches.....	1.1		
13 to 24 inches.....	0.5		
Over 24 inches.....			

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

³ Percent not shown when more than 1,000.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number.....	633	577	406
Area irrigable in these enterprises.....acres.....	214,408	226,510	¹ 283,476
Area irrigated in these enterprises.....acres.....	101,321	(²)	(²)
Area for which drains have been installed.....acres.....	174,848	169,577	167,138
Additional area needing drainage.....acres.....	12,379	18,832	21,202
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	172.6	³ 74.9	¹ 59.0
(b) All irrigation enterprises.....percent..	39.1	37.6	36.7
Ratio of area drained plus area needing drainage to—			
(a) Irrigable area reporting.....percent..	87.3	83.2	¹ 65.4
(b) Irrigated area reporting.....percent..	194.8	(²)	(²)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ² Not available. ³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919 ¹	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	714,760	471,354	198,942	.....	.....	7,022	714,760	471,354	191,920
Area irrigated by these enterprises.....acres.....	208,397	166,224	65,424	.....	.....	780	208,397	166,224	64,644
Average water per acre irrigated.....acre-feet..	3.4	2.8	3.0	.....	.....	9.0	3.4	2.8	3.0
Total water delivered to irrigators.....acre-feet..	541,298	33,180	16,497	.....	.....	.....	541,298	33,180	16,497
Area irrigated by these enterprises.....acres.....	201,425	21,219	7,994	.....	.....	.....	201,425	21,219	7,994
Average water per acre irrigated.....acre-feet..	2.7	1.6	2.1	.....	.....	.....	2.7	1.6	2.1
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	342,722	.....	.....	.....	.....	.....	342,722	.....	.....
Area irrigated by these enterprises.....acres.....	165,656	.....	.....	.....	.....	.....	165,656	.....	.....
Average water per acre irrigated.....acre-feet..	2.1	.....	.....	.....	.....	.....	2.1	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Area irrigated by these enterprises.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average water per acre irrigated.....acre-feet..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total water delivered to irrigators.....acre-feet..	243	.....	.....	.....	.....	.....	243	.....	.....
Area irrigated by these enterprises.....acres.....	150	.....	.....	.....	.....	.....	150	.....	.....
Average water per acre irrigated.....acre-feet..	1.6	.....	.....	.....	.....	.....	1.6	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	1,873	.....	.....	.....	.....	.....	1,873	.....	.....
Area irrigated by these enterprises.....acres.....	2,429	.....	.....	.....	.....	.....	2,429	.....	.....
Average water per acre irrigated.....acre-feet..	0.8	.....	.....	.....	.....	.....	0.8	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	Parish	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ²	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Mississippi River		Feet	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Degrees F.	Degrees F.
Tallulah.....	Madison.....	91	47.27	-2.17	8.23	-4.55	18.35	+2.72	9.51	-1.98	11.18	+1.54	65.8	+0.9
Natchez, Miss.....	Adams Co. (Miss.)..	206	56.88	+1.92	10.75	-2.66	20.52	+4.60	11.99	-1.51	13.62	+1.49	67.4	+0.8
Baton Rouge.....	East Baton Rouge..	50	48.96	-10.33	6.99	-5.64	10.47	-4.81	17.03	+2.56	14.47	-2.44	68.8	+0.8
New Orleans.....	Orleans.....	9	49.81	-7.65	7.65	-3.58	7.64	-5.67	22.15	+6.43	12.37	-4.83	70.8	+1.5
Quachita River														
Monroe.....	Quachita.....	82	43.00	-9.79	6.91	-6.51	20.68	+5.42	8.79	-4.26	6.62	-4.44	(?)	(?)
Winnsboro.....	Franklin.....	57	55.02	+6.99	7.76	-4.94	24.63	+10.16	12.72	+0.68	9.91	+1.09	(?)	(?)
Red River														
Minden.....	Webster.....	194	39.60	-9.98	11.15	-1.14	19.55	+6.42	5.45	-7.69	3.44	-7.57	(?)	(?)
Shreveport.....	Caddo.....	197	37.86	-5.51	9.34	-1.29	16.60	+5.27	6.75	-5.60	5.17	-3.89	68.3	+2.5
Dodson.....	Winn.....	235	55.13	+6.19	7.53	-4.05	22.85	+8.21	12.44	+0.27	12.31	+1.76	(?)	(?)
Natchitoches.....	Natchitoches.....	120	55.58	+7.31	9.14	-3.79	25.12	+11.14	11.96	+0.08	9.36	-0.12	66.9	+0.6
Alexandria.....	Rapides.....	77	49.02	-7.86	9.89	-4.68	16.29	+0.50	12.66	-1.53	10.18	-2.15	67.9	+0.9
Calcasieu River														
De Ridder.....	Beauregard.....	208	45.13	-8.21	10.62	-3.62	14.58	-0.04	10.76	-3.09	9.17	-1.46	(?)	(?)
Lake Charles.....	Calcasieu.....	22	33.47	-24.15	7.68	-6.66	8.18	-4.62	5.34	-8.79	12.27	-4.08	(?)	(?)
Mermentau River														
Ville Platte.....	Evangeline.....	46	43.33	-14.54	8.81	-7.43	11.26	-4.33	10.32	-2.92	12.94	+0.14	(?)	(?)
Vermilion River														
Abbeville.....	Vermilion.....	12	53.92	-4.60	9.14	-4.62	7.22	-4.91	13.20	-1.57	24.36	+6.50	(?)	(?)
Bayou Terrebonne														
Houma.....	Terrebonne.....	13	49.91	-10.77	8.57	-4.90	5.54	-6.08	16.65	+3.02	19.05	-2.31	69.6	+0.8
Pearl River														
Franklinton.....	Washington.....	155	49.40	-11.49	9.02	-4.04	11.74	-5.30	15.32	+1.01	13.32	-3.16	(?)	(?)

¹Departure from normal.

²Not available.

Precipitation.—The average precipitation in Louisiana for 1939, 51.51 inches, was 3.94 inches below the normal, as reported by the U. S. Weather Bureau. The greatest annual total was 72.29 inches at Urania; the least 31.66 inches at Lake Charles. The greatest local monthly total was 17.94 inches at Winnfield; the least was 0.16 of an inch at Lake Arthur (near). The greatest amount in 24 hours, 11.13 inches, occurred at Winnfield January 4-5. The average number of days with .01 or more was 98.

Temperature.—The mean temperature in Louisiana in 1939, 68.4°, was 1.0 above the normal. The highest mean, for 32 stations having a complete year's record, was 71.8° at Burrwood and the lowest was 65.8° at Tallulah. The highest monthly mean was 86.3° at Minden in July; and the lowest was 49.3° at Plain Dealing in January. The highest temperature recorded was 108° at Plain Dealing on July 15; the lowest was 20° at Pollock, on February 22, and at Monroe and Tallulah, on November 5. The greatest annual range was 86° at Plain Dealing; the least, 55° at Port Eads.

Winter crops made satisfactory progress during January and some plowing was done in the south; but farm work

was hindered in the north by wet soil. Frequent rains retarded farm work during February, especially in the north. Good progress was made in March planting corn, potatoes, and truck. Carlot shipment of strawberries began on the 11th. Crops were retarded by cold during the first part of April, and cold and lack of moisture the latter part. Cotton germinated slowly and much replanting was necessary. The progress of crops was unsatisfactory during the first half of May, either because of dryness or cool nights, but warmer weather and adequate moisture during the latter half provided needed stimulation. Frequent showers to locally excessive rains during the first week of June seriously interfered with cultivation of crops. Crops made good progress during July, except cotton and corn which were damaged by too much rain during the last 10 days in some portions of the southeast and extreme south. Cotton picking and rice and sweet-potato harvesting made rapid progress during the last week of August. Conditions were mostly favorable for the progress and harvesting of crops during September!

CENSUS OF IRRIGATION - LOUISIANA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number...	2,550	45	2,012	385	77	18	13
2	Irrigated farms, 1939.....number...	7,305	.....	2,012	995	664	989	2,645
3	Area irrigated, 1939.....acres.....	447,095	.....	130,661	74,221	46,731	69,658	125,824
4	(a) From which crops were harvested.....acres.....	442,317	.....	126,834	74,001	46,327	69,331	125,824
5	(b) On which crops failed.....acres.....	1,078	.....	277	70	404	327	.....
6	(c) Irrigated pasture.....acres.....	3,700	.....	3,550	150	.....	.....	.....
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	11,548,812	58,241	2,929,884	1,689,645	1,185,742	1,781,147	3,904,153
8	Cost of irrigation works and equipment.....dollars..	11,548,812	58,241	2,929,884	1,689,645	1,185,742	1,781,147	3,904,153
9	Area works were capable of supplying with water.....acres.....	759,915	.....	236,681	119,668	68,467	117,311	212,795
10	Average investment per acre irrigated.....dollars.....	25.83	.....	22.42	22.77	25.37	25.57	31.03
11	Average investment per acre which the works could supply with water.....dollars..	15.20	11.67	12.38	14.12	17.32	15.18	18.35
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
12	Enterprises reporting maintenance and operation.....number..	2,164	41	1,645	374	74	17	13
13	(a) Area irrigated in these enterprises.....acres.....	436,931	.....	125,166	73,162	43,821	68,958	125,824
14	(b) Cost of maintenance and operation.....dollars..	1,589,007	60	369,653	208,463	144,786	270,896	575,147
15	(c) Average cost per irrigated acre reporting.....dollars..	3.64	.....	3.11	2.85	3.30	3.93	4.57
16	Total annual charges ².....dollars.....	1,259,711	.....	.....	.....	183,473	338,774	737,464
17	Average charge per irrigated acre reporting.....dollars..	5.27	.....	.....	.....	4.22	4.86	5.86
18	Area against which charges were assessed.....acres.....	245,975	.....	.....	.....	43,493	76,658	125,824
19	Average annual charge per acre assessed.....dollars..	5.12	.....	.....	.....	4.22	4.42	5.86
20	Total charges collected ².....dollars.....	542,853	.....	.....	.....	40,925	124,768	377,160
INDEBTEDNESS AND ARREARAGE, 1939								
21	Enterprises reporting indebtedness ³.....number..	36	.....	.....	.....	17	12	7
22	(a) Area irrigated in these enterprises.....acres.....	145,657	.....	.....	.....	9,821	45,409	90,427
23	(b) Indebtedness.....dollars.....	2,748,768	.....	.....	.....	80,400	876,299	1,792,069
24	(c) Average indebtedness per acre irrigated.....dollars..	18.87	.....	.....	.....	8.19	19.30	19.82
25	(d) Cost of irrigation works and equipment.....dollars..	4,374,198	.....	.....	.....	170,625	1,351,450	2,852,123
26	(e) Total investment.....dollars.....	4,374,198	.....	.....	.....	170,625	1,351,450	2,852,123
27	(f) Maintenance and operation.....dollars.....	615,426	.....	.....	.....	25,460	185,640	404,326
28	(g) Total annual charges ².....dollars.....	810,912	.....	.....	.....	40,746	247,430	522,736
29	(h) Total charges collected ².....dollars.....	259,597	.....	.....	.....	7,675	28,360	223,562
30	(i) Area against which annual charges were assessed.....acres.....	145,657	.....	.....	.....	9,821	45,409	90,427
31	(j) Average indebtedness per acre assessed.....dollars..	18.87	.....	.....	.....	8.19	19.30	19.82
32	(k) Average charges per acre assessed.....dollars.....	5.57	.....	.....	.....	4.15	5.45	5.78
33	(l) Average charges per acre irrigated.....dollars.....	5.57	.....	.....	.....	4.15	5.45	5.78
34	Enterprises reporting arrearage ³.....number..	11	.....	.....	.....	3	5	3
35	(a) Area assessed in these enterprises.....acres.....	60,361	.....	.....	.....	2,950	18,900	38,511
36	(b) Total arrearage.....dollars.....	1,137,646	.....	.....	.....	14,240	373,103	750,303
37	(c) Average arrearage per acre assessed.....dollars..	18.85	.....	.....	.....	4.83	19.74	19.48
38	(d) Indebtedness.....dollars.....	2,083,086	.....	.....	.....	37,500	576,434	1,467,152
TYPE, 1940								
39	Individual and partnership.....number.....	2,501	45	2,001	381	71	3	.....
40	Cooperative (incorporated and unincorporated).....number..	20	.....	9	4	2	3	2
41	Commercial.....number.....	28	.....	1	.....	4	12	11
42	All other.....number.....	1	.....	1	.....	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
43	Enterprises reporting pay roll.....number.....	91	.....	.....	.....	61	17	13
44	Wages and salaries paid and payable for 1939.....dollars..	502,320	.....	.....	.....	74,419	136,902	290,999
45	Persons employed during week ending April 29, 1939.....number..	802	.....	.....	.....	205	217	380
SOURCE OF WATER SUPPLY, 1939								
46	Streams, gravity.....number.....	35	1	17	17	.....	.....	.....
47	Streams, pumped.....number.....	466	14	346	63	15	15	13
48	Wells, pumped.....number.....	1,138	22	814	253	48	1	.....
49	Wells, pumped and flowing; or wells flowing.....number..	373	7	363	3	.....	.....	.....
50	Lakes, gravity or pumped.....number.....	82	1	73	7	.....	1	.....
51	Mixed, streams and wells.....number.....	34	.....	18	8	.....	.....	.....
52	Other mixed or stored storm water.....number.....	122	.....	381	34	6	1	.....
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)								
		TOTAL	No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number.....	16	1	12	3	.....	.....	.....
2	Irrigated farms, 1939.....number.....	20	.....	12	8	.....	.....	.....
3	Area irrigated, 1939.....acres.....	2,579	.....	1,285	1,294	.....	.....	.....
CAPITAL INVESTMENT, 1940								
4	Total capital investment in all enterprises.....dollars..	16,701	.....	11,228	5,473	.....	.....	.....
5	Cost of irrigation works and equipment.....dollars..	16,701	.....	11,228	5,473	.....	.....	.....
6	Area works were capable of supplying with water.....acres.....	4,342	.....	2,742	1,600	.....	.....	.....
7	Average investment per acre irrigated.....dollars.....	6.48	.....	7.96	4.23	.....	.....	.....
8	Average investment per acre which the works could supply with water.....dollars..	3.85	.....	4.09	3.42	.....	.....	.....
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
9	Enterprises reporting maintenance and operation.....number..	12	.....	9	3	.....	.....	.....
10	(a) Area irrigated in these enterprises.....acres.....	2,434	.....	1,140	1,294	.....	.....	.....
11	(b) Cost of maintenance and operation.....dollars..	3,683	.....	1,533	2,150	.....	.....	.....
12	(c) Average cost per irrigated acre reporting.....dollars..	1.51	.....	1.34	1.66	.....	.....	.....
TYPE, 1940								
13	Individual and partnership.....number.....	16	1	12	3	.....	.....	.....
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939								
14	Streams, pumped.....number.....	1	.....	1	.....	.....	.....	.....
15	Wells, pumped or flowing.....number.....	15	1	11	3	.....	.....	.....

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

² Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION - LOUISIANA

CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	
45	1,663	562	246	27	7	2,089	378	64	19	1
.....	1,847	969	932	1,794	1,763	.....	857	1,007	2,879	2
.....	28,672	100,504	113,971	109,545	94,403	118,920	95,879	76,236	154,060	3
.....	28,051	98,987	111,658	109,218	94,403	115,205	94,963	78,089	154,060	4
.....	136	111	504	327	.....	632	299	147	.....	5
.....	465	1,406	1,809	.....	.....	3,083	617	.....	.....	6
58,241	882,066	2,533,151	2,280,160	2,939,181	2,856,013	1,398,595	3,070,838	2,082,195	4,997,184	7
58,241	882,066	2,533,151	2,280,160	2,939,181	2,856,013	1,398,595	3,070,838	2,082,195	4,997,184	8
1,990	66,024	179,344	158,848	208,989	141,720	199,301	160,884	134,435	265,295	9
.....	30.76	25.20	20.01	26.83	30.25	11.76	32.03	26.61	32.44	10
.....	11.67	13.36	14.12	14.06	20.15	7.02	19.09	15.49	18.84	11
41	1,304	545	241	26	7	1,719	364	82	19	12
.....	25,979	97,591	111,713	107,245	94,403	113,825	93,410	75,636	154,060	13
60	95,765	304,568	304,773	471,931	411,920	285,249	292,636	304,561	706,261	14
.....	3.69	3.12	2.73	4.40	4.36	2.51	3.13	4.03	4.58	15
.....	.....	19,071	164,979	568,262	507,399	27,427	53,695	282,728	895,851	16
.....	.....	4.77	4.41	5.03	5.99	3.84	4.19	4.35	5.82	17
.....	.....	3,996	37,408	119,927	84,644	7,138	12,624	71,953	154,060	18
.....	.....	4.77	4.41	4.74	5.99	3.84	4.19	3.93	5.82	19
.....	.....	3,876	33,259	294,602	211,116	1,279	22,055	117,259	402,250	20
.....	.....	8	10	13	5	5	9	9	13	21
.....	.....	1,852	8,610	58,806	76,389	1,554	4,147	19,161	120,795	22
.....	.....	28,700	149,833	801,284	1,768,951	17,500	24,500	239,763	2,467,005	23
.....	.....	15.50	17.40	13.63	23.16	11.26	5.91	12.51	20.42	24
.....	.....	48,275	174,070	1,884,435	2,267,418	18,200	79,575	421,269	3,855,154	25
.....	.....	48,275	174,070	1,884,435	2,267,418	18,200	79,575	421,269	3,855,154	26
.....	.....	7,159	25,572	252,673	330,022	8,503	7,771	55,712	543,440	27
.....	.....	11,235	36,766	317,755	445,156	11,309	18,788	102,532	678,283	28
.....	.....	525	3,360	106,801	148,911	.....	3,885	7,150	248,562	29
.....	.....	1,852	8,610	58,806	76,389	1,554	4,147	19,161	120,795	30
.....	.....	15.50	17.40	13.63	23.16	11.26	5.91	12.51	20.42	31
.....	.....	6.07	4.27	5.40	5.83	7.28	4.53	5.35	5.62	32
.....	.....	6.07	4.27	5.40	5.83	7.28	4.53	5.35	5.62	33
.....	.....	1	2	5	3	1	.....	3	7	34
.....	.....	2,891	.....	18,959	38,511	(*)	.....	4,741	55,620	35
.....	.....	68,441	.....	318,902	750,303	(*)	.....	69,441	1,068,205	36
.....	.....	23.67	.....	16.82	19.48	(*)	.....	14.65	19.21	37
.....	.....	135,033	.....	480,901	1,467,152	(*)	.....	143,033	1,940,053	38
45	1,657	554	239	6	.....	2,075	376	50	.....	39
.....	5	7	3	3	.....	11	2	4	3	40
.....	.....	1	4	18	2	2	.....	10	16	41
.....	1	.....	.....	.....	.....	1	.....	.....	.....	42
.....	.....	16	45	24	6	11	28	33	19	43
.....	.....	3,933	77,935	234,791	185,661	6,205	10,661	128,219	357,235	44
.....	.....	33	188	326	255	21	74	228	479	45
1	34	.....	.....	.....	.....	35	.....	.....	.....	46
14	247	116	61	21	7	400	29	19	18	47
22	621	347	147	1	.....	772	333	33	.....	48
7	366	.....	.....	.....	.....	373	.....	.....	.....	49
1	72	7	1	1	.....	81	.....	.....	1	50
.....	9	10	13	2	.....	18	11	5	.....	51
.....	314	82	24	2	.....	410	5	7	.....	52
ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	
1	7	5	3	.....	.....	16	.....	.....	.....	1
.....	.....	6	7	.....	.....	20	.....	.....	.....	2
.....	385	700	1,494	.....	.....	2,579	.....	.....	.....	3
5,000	.....	5,901	5,800	.....	.....	16,701	.....	.....	.....	4
5,000	.....	5,901	5,800	.....	.....	16,701	.....	.....	.....	5
1,545	.....	1,047	1,750	.....	.....	4,342	.....	.....	.....	6
.....	10.39	8.43	3.88	.....	.....	6.48	.....	.....	.....	7
.....	3.24	5.64	3.31	.....	.....	3.85	.....	.....	.....	8
.....	4	5	3	.....	.....	12	.....	.....	.....	9
.....	240	700	1,494	.....	.....	2,434	.....	.....	.....	10
.....	625	1,668	1,390	.....	.....	3,683	.....	.....	.....	11
.....	2.60	2.38	0.93	.....	.....	1.51	.....	.....	.....	12
1	7	5	3	.....	.....	16	.....	.....	.....	13
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
1	7	1	3	.....	.....	1	.....	.....	.....	15

³ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁴ Data for 1 enterprise from the "Less than \$5,000" group are included with the "\$15,000 to \$99,999" group.

CENSUS OF IRRIGATION — LOUISIANA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals for 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	GULF OF MEXICO (Gulf of Mexico drains entire State; therefore, Gulf of Mexico total for Louisiana is identical with State total)					
		Mississippi River			Sabine River	Calcasieu River	
		Total	Direct	Red River ²		Total	Direct ³
			(1)	(2)	(11)		(12)
IRRIGATED FARMS AND AREAS							
1 Irrigated farms.....1939..number.....	7,305	166	155	11	142	716	490
2 Area irrigated.....1939..acres.....	447,095	10,600	9,538	1,062	17,629	78,901	53,655
3 (a) Cropland harvested.....1939..acres.....	442,317	10,269	9,217	1,052	17,619	78,650	53,479
4 (b) Crop failure.....1939..acres.....	1,078	264	254	10	.....	.....	.....
5 (c) Pasture.....1939..acres.....	3,700	67	67	.....	10	251	176
6 Area irrigated.....1929..acres.....	450,901	10,463	8,972	.....	18,335	62,866	.....
7 1919..acres.....	454,882	20,269	17,416	.....	13,035	54,318	.....
8 Increase or decrease (-), 1929-1939.....percent.....	-0.8	1.3	6.3	.....	-3.9	25.5	.....
9 Irrigable area in enterprises.....1940..acres.....	793,674	17,037	15,518	1,519	23,400	147,716	103,507
10 1930..acres.....	850,401	18,970	17,342	.....	23,806	113,630	.....
11 1920 ⁴ ..acres.....	851,211	29,428	24,070	.....	20,850	169,193	.....
12 Excess of irrigable area over the area irrigated..1940..acres.....	346,579	6,437	5,980	457	5,771	68,815	49,652
13 1930..acres.....	399,500	8,507	8,370	.....	5,471	50,984	.....
14 1920 ⁴ ..acres.....	396,329	9,159	6,654	.....	7,815	114,875	.....
15 Area works were capable of supplying with water...1940..acres.....	759,915	15,711	14,192	1,519	23,400	135,511	93,007
16 1930..acres.....	795,165	13,216	11,668	.....	23,606	101,920	.....
17 1920..acres.....	728,742	27,228	23,755	.....	20,850	137,178	.....
18 Increase or decrease (-), 1930-1940.....percent.....	-4.4	18.9	21.6	.....	-0.9	33.0	.....
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	312,820	5,111	4,654	457	5,771	56,610	39,352
20 1930..acres.....	344,264	2,753	2,696	.....	5,271	39,054	.....
21 1920..acres.....	273,860	6,959	6,339	.....	7,815	82,860	.....
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	58.8	67.5	67.2	69.9	75.3	58.2	57.7
23 1929..percent.....	56.7	79.2	76.9	.....	77.7	61.7	.....
24 1919..percent.....	62.4	74.4	73.3	.....	62.5	39.6	.....
CAPITAL INVESTED TO JANUARY 1							
25 Total investment in irrigation enterprises.....1940..dollars.....	11,565,513	168,119	156,731	11,388	528,420	1,531,317	888,708
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	11,565,513	168,119	156,731	11,388	528,420	1,531,317	888,708
27 (b) Investment in water rights (reported).....1940..dollars.....	.....	.....	.....	.....	.....	.....	.....
28 Total investment in irrigation enterprises.....1930..dollars.....	15,744,743	302,098	284,998	.....	587,683	3,901,748	.....
29 1920..dollars.....	14,063,181	331,071	302,385	.....	328,000	1,816,380	.....
30 Increase or decrease (-), 1930-1940.....percent.....	-26.5	-44.3	-45.0	.....	-10.1	-60.8	.....
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	15.22	10.70	11.04	7.50	22.58	11.30	9.56
32 1930..dollars.....	19.80	22.86	24.43	.....	24.90	38.28	.....
33 1920..dollars.....	19.30	12.16	12.73	.....	15.73	13.24	.....
34 Average investment per acre irrigated.....1939..dollars.....	25.87	15.86	16.43	10.72	29.97	19.41	16.56
35 Estimated final investment in existing enterprises..1940..dollars.....	11,659,725	168,169	156,781	11,388	528,420	1,589,466	944,208
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	14.69	9.87	10.10	7.50	22.58	10.76	9.12
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
	Primary	Sup.					
	Enterprises						
37 Enterprises reporting maintenance and operation...1939..number.....	2,171	12	90	84	6	8	68
38 Area irrigated in these enterprises.....1939..acres.....	436,931	2,434	9,876	8,858	1,018	17,629	53,466
39 Cost of maintenance and operation.....1939..dollars.....	1,589,007	3,683	26,538	24,367	2,171	74,059	176,743
40 Average cost, per acre irrigated.....1939..dollars.....	3.64	1.51	2.69	2.75	2.13	4.20	3.30
41 Total annual charges (reported) ⁵.....1939..dollars.....	1,259,711	.....	1,247	1,247	.....	71,431	152,889
42 Average annual charge per acre irrigated.....1939..dollars.....	5.27	.....	1.42	1.42	.....	4.35	3.96
43 Area against which charges were assessed.....1939..acres.....	245,975	.....	876	876	.....	16,421	46,602
44 Average annual charge per acre assessed.....1939..dollars.....	5.12	.....	1.42	1.42	.....	4.35	3.35
45 Total charges collected ⁶.....1939..dollars.....	542,853	.....	.....	.....	.....	86,835	154,526
46 Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	2,748,768	.....	.....	.....	.....	91,330	74,949
WATER DELIVERED TO IRRIGATORS, 1939							
47 Enterprises reporting water delivered.....1939..number.....	2,409	15	81	76	5	7	64
48 Area irrigated by these enterprises.....1939..acres.....	267,081	2,579	10,130	9,322	808	1,208	25,081
49 Water delivered.....1939..acre-feet.....	884,020	2,116	43,661	41,825	1,836	1,404	55,404
50 Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	0.8	4.3	4.5	2.3	1.2	2.2
51 Average cost of water per acre irrigated.....1939..dollars.....	4.27	1.51	2.75	2.78	2.38	2.05	3.44
52 Average cost of water per acre-foot delivered..1939..dollars.....	1.77	1.84	0.64	0.62	1.05	1.76	1.56
DRAINAGE OF IRRIGATED LAND							
53 Enterprises reporting land drained or needing drainage.....1939..number.....	633	.....	15	13	2	.....	7
54 Irrigable area in these enterprises.....1939..acres.....	214,408	.....	2,963	2,733	(5)	.....	23,110
55 Irrigated area in these enterprises.....1939..acres.....	101,321	.....	2,480	2,230	(5)	.....	6,243
56 Area for which drains have been installed.....1939..acres.....	174,848	.....	2,444	2,194	(5)	.....	19,420
57 Additional area needing drainage.....1939..acres.....	12,379	.....	505	505	.....	3,160	2,180

¹Data for 2 enterprises in Bayou Lafourche Drainage Basin (23) (number refers to separate map) are included with Gulf of Mexico Drainage Basin total.
²Data for 1 enterprise in Ouachita River "Direct" Drainage Basin (4) (number refers to separate map) and 1 enterprise in Bayou Bartholomew Drainage Basin (7) are included with Red River Drainage Basin (2).
³Data for 2 enterprises in West Fork Calcasieu River Drainage Basin (15) (number refers to separate map) are included with Calcasieu River "Direct" Drainage Basin (12).

CENSUS OF IRRIGATION - LOUISIANA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

GULF OF MEXICO—Continued															
Calcasieu River—Con.		Mermentau River						Atchafalaya River							
Boudick Creek (13)	Bayou Serpent (14)	Total	Direct (16)	Nezigue Bayou (17)	Bayou Queue de Tortue (18)	Vermilion River (19)	Total	Direct (20)	Bayou Teche Total						
5	221	3,836	618	2,465	753	1,386	92	20	72	1					
754	24,492	262,921	74,764	133,300	54,857	57,619	14,752	2,865	11,887	2					
754	24,417	261,211	74,289	132,790	54,132	55,966	13,968	2,865	11,103	3					
.....	.....	398	210	178	10	347	49	.....	49	4			
.....	75	1,312	265	332	715	1,306	735	.....	735	5				
.....	.....	256,599	.....	.....	.....	82,785	13,360	.....	.....	6
.....	.....	268,840	.....	.....	.....	74,034	23,342	.....	.....	7
.....	.....	2.5	.....	.....	.....	-30.4	10.4	.....	.....	8
1.066	43,143	473,285	144,300	226,306	102,679	98,788	26,052	4,005	22,047	9					
.....	.....	407,376	.....	.....	.....	256,073	20,512	.....	.....	10
.....	.....	458,463	.....	.....	.....	138,066	31,920	.....	.....	11
312	16,651	210,364	69,536	93,006	47,822	41,169	11,300	1,140	10,160	12					
.....	.....	150,777	.....	.....	.....	173,288	7,152	.....	.....	13
.....	.....	169,623	.....	.....	.....	64,032	8,578	.....	.....	14
1.066	41,438	455,495	132,053	221,812	101,630	97,894	24,646	4,005	20,641	15					
.....	.....	378,853	.....	.....	.....	249,618	19,467	.....	.....	16
.....	.....	382,755	.....	.....	.....	126,649	30,885	.....	.....	17
.....	.....	20.2	.....	.....	.....	-60.8	26.6	.....	.....	18
312	16,946	192,574	57,289	88,512	46,773	40,275	9,894	1,140	8,754	19					
.....	.....	122,254	.....	.....	.....	166,833	6,107	.....	.....	20
.....	.....	113,915	.....	.....	.....	52,615	7,543	.....	.....	21
70.7	59.1	57.7	56.6	60.1	54.0	58.9	59.9	71.5	57.6	22					
.....	.....	67.7	.....	.....	.....	33.2	68.6	.....	.....	23
.....	.....	70.2	.....	.....	.....	58.5	75.6	.....	.....	24
21,540	621,069	7,508,490	2,095,544	4,124,705	1,288,241	1,351,379	198,520	22,900	175,620	25					
21,540	621,069	7,508,490	2,095,544	4,124,705	1,288,241	1,351,379	198,520	22,900	175,620	26					
.....	.....	7,564,660	.....	.....	.....	2,680,508	304,183	.....	.....	27
.....	.....	7,713,797	.....	.....	.....	3,355,327	407,956	.....	.....	28
.....	.....	-0.7	.....	.....	.....	-49.6	.....	.....	.....	29
20.21	14.99	16.48	15.87	18.60	12.68	13.80	8.05	5.72	8.51	31					
.....	.....	19.97	.....	.....	.....	10.74	15.63	.....	.....	32
.....	.....	20.15	.....	.....	.....	26.49	13.21	.....	.....	33
28.57	25.36	28.56	28.03	30.94	23.48	23.45	13.46	7.99	14.77	34					
21,540	623,718	7,535,268	2,099,100	4,146,902	1,289,266	1,351,499	206,195	22,900	183,295	35					
20.21	14.46	15.92	14.55	18.32	12.56	13.68	7.91	5.72	8.31	36					
		Primary Sup.	Primary Sup.	Primary Sup.	Primary Sup.	Primary Sup.	Primary Sup.	Primary Sup.							
		Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises							
5	73	1,022	7	198	3	623	1	201	3	208	5	78	14	64	37
754	24,252	258,326	2,034	73,215	400	131,261	(5)	53,830	1,090	54,723	400	14,302	2,865	11,437	38
2,220	99,493	930,426	2,963	291,318	1,568	501,845	(5)	137,263	515	227,878	700	34,374	3,485	30,889	39
2.94	4.10	3.60	1.47	3.98	3.92	3.82	(5)	2.55	0.47	4.16	1.75	2.40	1.22	2.70	40
.....	45,752	743,541	154,867	429,089	159,585	243,231	1,620	1,620	41
.....	4.34	5.58	4.75	5.85	5.84	6.24	6.00	6.00	42
.....	10,547	133,269	32,620	73,319	27,330	38,990	270	270	43
.....	4.34	5.58	4.75	5.85	5.84	6.24	6.00	6.00	44
.....	301,492	62,455	187,887	51,150	45
.....	130,523	1,489,772	154,528	543,142	792,102	962,194	46
5	76	1,108	10	199	6	607	1	202	3	208	5	73	13	60	47
754	23,642	232,213	2,179	64,860	545	114,051	(5)	53,302	1,090	55,440	400	14,043	2,740	11,303	48
879	67,894	559,538	1,830	191,899	742	248,474	(5)	119,165	1,048	124,490	286	25,812	5,345	20,467	49
1.2	2.9	2.4	0.8	3.0	1.4	2.2	(5)	2.2	1.0	2.2	0.7	1.8	2.0	1.8	50
2.94	4.04	4.38	1.47	4.14	3.92	4.65	(5)	4.07	0.47	5.12	1.75	2.38	1.20	2.68	51
2.53	1.41	1.82	1.75	1.40	2.88	2.13	(5)	1.82	0.49	2.28	2.45	1.28	0.61	1.48	52
.....	11	244	53	124	67	147	24	6	18	53
.....	4,448	150,564	52,460	69,923	28,181	22,324	9,723	1,110	8,613	54
.....	2,560	70,351	25,606	31,123	13,622	13,185	5,496	790	4,706	55
.....	1,058	129,817	44,681	59,447	25,689	15,445	5,575	998	4,577	56
.....	980	5,360	4,395	445	520	1,116	2,160	2,160	57

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁶ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁷ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - LOUISIANA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	GULF OF MEXICO—Continued						
	Atchafalaya River—Continued		Lake Pontchartrain				
	Bayou Teche—Continued		Total ¹	Amite River	Natalbany River	Tangipahoa River	
	Direct (21)	Bayou Boeuf (22)					(24)	(25)	(26)
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number....	58	14	965	5	787	172
2	Area irrigated.....1939..acres.....	10,367	1,520	4,392	33	3,704	652
3	(a) Cropland harvested.....1939..acres.....	9,592	1,511	4,353	33	3,665	652
4	(b) Crop failure.....1939..acres.....	40	9	20	.....	20	.....
5	(c) Pasture.....1939..acres.....	735	.....	19	.....	19	.....
6	Area irrigated.....1929..acres.....	.....	.....	5,074	.....	3,548	1,526
7	.....1919..acres.....	.....	.....	.....	.....	.....	.....
8	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	-13.4	.....	4.4	-37.3
9	Irrigable area in enterprises.....1940..acres.....	18,256	3,791	6,971	39	5,782	1,142
10	.....1930..acres.....	.....	.....	7,864	.....	6,053	1,811
11	.....1920 ² ..acres.....	.....	.....	.....	.....	.....	.....
12	Excess of irrigable area over the area irrigated.....1940..acres.....	7,889	2,271	2,579	6	2,078	490
13	.....1930..acres.....	.....	.....	2,790	.....	2,505	285
14	.....1920 ² ..acres.....	.....	.....	.....	.....	.....	.....
15	Area works were capable of supplying with water...1940..acres.....	17,650	2,991	6,833	39	5,644	1,142
16	.....1930..acres.....	.....	.....	6,640	.....	4,903	1,737
17	.....1920..acres.....	.....	.....	.....	.....	.....	.....
18	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	2.9	.....	15.1	-34.3
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	7,283	1,471	2,441	6	1,940	490
20	.....1930..acres.....	.....	.....	1,566	.....	1,355	211
21	.....1920..acres.....	.....	.....	.....	.....	.....	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	58.7	50.8	64.3	84.6	65.6	57.1
23	.....1929..percent.....	.....	.....	76.4	.....	72.4	87.9
24	.....1919..percent.....	.....	.....	.....	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars....	151,770	23,850	277,118	960	236,688	38,670
26	(a) Cost of irrigation works and equipment.....1940..dollars....	151,770	23,850	277,118	960	236,688	38,670
27	(b) Investment in water rights (reported).....1940..dollars....	.....	.....	.....	.....	.....	.....
28	Total investment in irrigation enterprises.....1930..dollars....	.....	.....	384,298	.....	287,221	97,077
29	.....1920..dollars....	.....	.....	.....	.....	.....	.....
30	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	-27.9	.....	-17.6	-60.2
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	8.60	7.97	40.56	24.62	41.94	33.86
32	.....1930..dollars....	.....	.....	57.88	.....	58.58	55.89
33	.....1920..dollars....	.....	.....	.....	.....	.....	.....
34	Average investment per acre irrigated.....1939..dollars....	14.64	15.69	63.10	29.09	63.90	59.31
35	Estimated final investment in existing enterprises.....1940..dollars....	153,445	29,850	278,568	960	238,128	38,670
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	8.41	7.87	39.96	24.62	41.18	33.86
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
37	Enterprises reporting maintenance and operation...1939..number....	52	12	617	3	502	111
38	Area irrigated in these enterprises.....1939..acres.....	10,267	1,170	3,302	24	2,777	498
39	Cost of maintenance and operation.....1939..dollars....	25,129	5,760	14,951	84	11,542	3,300
40	Average cost, per acre irrigated.....1939..dollars....	2.45	4.92	4.53	3.50	4.16	6.63
41	Total annual charges (reported) ³.....1939..dollars....	1,620	.....	.....	.....	.....	.....
42	Average annual charge per acre irrigated.....1939..dollars....	6.00	.....	.....	.....	.....	.....
43	Area against which charges were assessed.....1939..acres.....	270	.....	.....	.....	.....	.....
44	Average annual charge per acre assessed.....1939..dollars....	6.00	.....	.....	.....	.....	.....
45	Total charges collected ³.....1939..dollars....	.....	.....	.....	.....	.....	.....
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars....	.....	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number....	48	12	885	5	726	153
48	Area irrigated by these enterprises.....1939..acres.....	9,857	1,446	4,289	33	3,616	637
49	Water delivered.....1939..acre-feet....	16,659	3,808	4,021	39	3,469	512
50	Average water delivered per acre irrigated.....1939..acre-feet....	1.7	2.6	0.9	1.2	1.0	0.8
51	Average cost of water per acre irrigated.....1939..dollars....	2.45	4.71	4.56	3.50	4.18	6.75
52	Average cost of water per acre-foot delivered.....1939..dollars....	1.45	1.79	4.87	3.00	4.35	8.40
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number....	16	2	184	.....	172	12
54	Irrigable area in these enterprises.....1939..acres.....	7,538	(⁵)	1,231	.....	1,146	85
55	Irrigated area in these enterprises.....1939..acres.....	4,616	(⁵)	987	.....	915	72
56	Area for which drains have been installed.....1939..acres.....	4,577	.....	1,070	.....	985	85
57	Additional area needing drainage.....1939..acres.....	1,085	(⁵)	78	.....	78	.....

¹Data for 1 enterprise in Chefuncte River Drainage Basin (27) (number refers to separate map) are included with Lake Pontchartrain Drainage Basin total.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms and items 41 to 46, inclusive, relate to those enterprises only.

⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — LOUISIANA

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DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	STATE TOTAL ¹	GULF OF MEXICO <small>(Gulf of Mexico drains entire State; therefore, Gulf of Mexico total for Louisiana is identical with State total)</small>						
		Mississippi River			Sabine River	Calcasieu River		
		Total	Direct	Red River ²		Total	Direct ³	
			(1)	(2)	(11)		(12)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises..... 1940..number.....	2,573	98	90	8	8	158	72
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	295	160	158	190	2,925	858	1,292
3	Diversion dams.....1940..total number.....	105	16	16			2	2
4	.....1930..total number.....	36	1	1			2	
5	.....1920..total number.....	419	379	340			4	
6	(a) Concrete and masonry.....1940..number.....	3						
7	(b) Timber.....1940..number.....	15	8	8				
8	(c) Earth and rock.....1940..number.....	45	8	8			2	2
9	(d) Other, mixed, and not reported.....1940..number.....	42						
10	Main canals and laterals.....1940..total length, miles.....	2,421.0	68.1	66.1	2.0	77.4	439.6	293.5
11	.....1930..total length, miles.....	2,226	16	16		83	362	
12	.....1920..total length, miles.....	3,243	387	356		65	327	
13	(a) Earth.....1940..length, miles.....	2,397	68	66	2	77	431	285
14	(b) Lined.....1940..length, miles.....	24.0	0.1	0.1		0.4	8.6	8.5
15	.....1940..capacity, c. f. s. ⁵	10,335	467	455	12	382	2,133	1,901
16	.....1930..capacity, c. f. s. ⁵	11,386	719	719		1,522	578	
17	.....1920..capacity, c. f. s. ⁵	11,889	1,576	869		111	1,700	
18	Pipe lines ⁶.....1940..total length, miles.....	69.6	11.9	11.7	0.2		3.0	2.4
19	.....1930..total length, miles.....	15.1	13.4	13.2				
20	.....1920..total length, miles.....	50.1	7.0	6.2			0.4	
21	(a) Concrete.....1940..length, miles.....	15.4	1.0	0.9	0.1		2.0	2.0
22	(b) Metal.....1940..length, miles.....	40.7	10.9	10.8	0.1		0.8	0.2
23	(c) Wood-stave.....1940..length, miles.....	5.9					0.1	0.1
24	(d) Other.....1940..length, miles.....	1.6					0.1	0.1
25	Storage dams.....1940..total number.....	114	21	20	1		2	1
26	.....1930..total number.....	81	9	6		1	1	
27	.....1920..total number.....	63				2	4	
28	(a) Concrete and masonry.....1940..number.....	1						
29	(b) Earth and rock.....1940..number.....	91	16	15	1		2	1
30	(c) Other, mixed, and not reported.....1940..number.....	22	5	5				
31	Reservoirs.....1940..total number.....	75	25	24	1		3	2
32	(a) 1-99 acre-feet capacity.....1940..number.....	50	16	16			2	1
33	(b) 100-999 acre-feet capacity.....1940..number.....	16	3	2	1		1	1
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	9	6	6				
35	.....1940..total capacity, ac.-ft. ⁷	34,189	19,088	18,968	(⁸)		701	(⁸)
36	.....1930..total number.....	85	11	9		1	4	
37	.....1930..total capacity, ac.-ft....	13,909	156	104		20	448	
38	Wells, flowing.....1940..number.....	502						
39	.....1930..number.....	807	1					
40	.....1920..number.....	9					5	
41	.....1940..yield, g. p. m.....	12,695						
42	.....1930..yield, g. p. m.....	31,961	48					
43	.....1920..yield, g. p. m.....	6,255					5,800	
44	Wells, pumped.....1940..number.....	1,504	1		1		99	19
45	.....1930..number.....	1,389	8	6		7	74	
46	.....1920..number.....	812				2	92	
47	.....1940..yield, g. p. m.....	1,526,613	(⁸)	(⁸)	(⁸)		223,700	43,300
48	.....1930..yield, g. p. m.....	1,958,811	4,012	1,362		16,800	271,650	
49	.....1920..yield, g. p. m.....	1,607,637				27,500	243,400	
50	Pumping plants.....1940..total number.....	2,326	60	50	10	10	181	86
51	.....1930..total number.....	1,790	70	64		13	104	
52	Prime movers.....1940..capacity, hp.....	85,574	1,761	1,665	196	1,330	12,147	6,138
53	.....1930..capacity, hp.....	86,413	1,224	1,038		1,852	10,332	
54	.....1920..capacity, hp.....	85,628	3,131	2,846		1,050	13,933	
55	(a) Electric.....1940..number.....	301	11	11		3	51	9
56	.....1940..capacity, hp.....	12,091	341	341		1,200	3,757	967
57	(b) Internal-combustion.....1940..number.....	1,976	48	38	10	7	118	67
58	.....1940..capacity, hp.....	62,846	1,418	1,222	196	130	6,409	3,325
59	(c) Other.....1940..number.....	49	1	1			12	10
60	.....1940..capacity, hp.....	10,637	(⁸)	(⁸)			1,981	1,946
61	Pumps.....1940..total number.....	2,403	63	53	10	10	179	84
62	.....1930..number.....	2,000	70	64		13	115	
63	.....1920..number.....	1,941	79	74		6	161	
64	.....1940..capacity, g. p. m.....	6,453,487	179,028	168,858	10,170	162,500	1,098,200	727,450
65	.....1930..capacity, g. p. m.....	5,914,799	94,270	82,630		175,100	947,050	
66	.....1920..capacity, g. p. m.....	4,968,686	124,800	102,500		54,500	937,294	
67	(a) Centrifugal.....1940..number.....	1,688	62	53	9	4	110	58
68	.....1940..capacity, g. p. m.....	4,712,919	176,528	168,858	7,670	152,000	767,550	625,250
69	.....1940..average capacity, g. p. m.....	2,792	2,847	3,858	852	38,000	6,976	10,780
70	(b) Turbine.....1940..number.....	546	1		1	6	62	24
71	.....1940..capacity, g. p. m.....	1,102,356	(⁸)	(⁸)	(⁸)	10,500	135,100	53,200
72	.....1940..average capacity, g. p. m.....	2,019	(⁸)	(⁸)	(⁸)	1,750	2,179	2,217
73	(c) Plunger.....1940..number.....	64					1	
74	.....1940..capacity, g. p. m.....	1,080					(⁸)	
75	.....1940..average capacity, g. p. m.....	17					(⁸)	
76	(d) Other.....1940..number.....	105					6	2
77	.....1940..capacity, g. p. m.....	637,132					195,500	(⁸)
78	Pumping lift, from all sources.....1940..average, feet.....	32	15	13	29	16	34	20
79	.....1930..average, feet.....	37	16	15		42	40	
80	.....1920..average, feet.....	32		12		41	30	
81	from pumped wells.....1940..average, feet.....	45	(⁸)	(⁸)	(⁸)	(⁸)	47	36
82	from surface sources.....1940..average, feet.....	13	14	13	24	12	15	15

¹Data for 3 enterprises in Bayou Lafourche Drainage Basin (23) (number refers to separate map) are included with Gulf of Mexico Drainage Basin total. ²Data for 1 enterprise in Ouachita River "Direct" Drainage Basin (4) (number refers to separate map) and 1 enterprise in Bayou Bartholomew Drainage Basin (7) are included with Red River Drainage Basin (2). ³Data for 2 enterprises in West Fork Calcasieu River Drainage Basin (15) (number refers to separate map) are included with Calcasieu River "Direct" Drainage Basin (12). ⁴Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1. ⁵Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁶Includes siphons and farm pipe lines reported. ⁷Total capacity of all reservoirs regardless of size. ⁸Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - LOUISIANA

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	GULF OF MEXICO—Continued						
	Calcasieu River—Continued		Mermentau River				
	Burdick Creek (13)	Bayou Serpent (14)	Total	Direct (16)	Nezigue Bayou (17)	Bayou Queue de Tortue (18)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940..number.....	5	81	1,079	219	650	210
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	213	512	422	603	341	484
3	Diversion dams.....1940..total number.....			71	6	63	2
4	.....1930..total number.....			26			
5	.....1920..total number.....			14			
6	(a) Concrete and masonry.....1940..number.....			2	1		1
7	(b) Timber.....1940..number.....			6		6	
8	(c) Earth and rock.....1940..number.....			21	4	16	1
9	(d) Other, mixed, and not reported.....1940..number.....			42	1	41	
10	Main canals and laterals.....1940..total length, miles.....	2.0	144.1	1,429.1	351.4	777.2	300.5
11	.....1930..total length, miles.....			1,322			
12	.....1920..total length, miles.....			1,431			
13	(a) Earth.....1940..length, miles.....	2	144	1,422	351	772	299
14	(b) Lined.....1940..length, miles.....		0.1	7.1	0.4	5.2	1.5
15	.....1940..capacity, c.f.s. ²	5	227	5,239	1,436	2,525	1,278
16	.....1930..capacity, c.f.s. ²			2,282			
17	.....1920..capacity, c.f.s. ²			6,067			
18	Pipe lines ³.....1940..total length, miles.....	0.5	0.1	19.5	1.7	15.8	2.0
19	.....1930..total length, miles.....			0.2			
20	.....1920..total length, miles.....			0.1			
21	(a) Concrete.....1940..length, miles.....			11.4	1.7	9.7	
22	(b) Metal.....1940..length, miles.....	0.5	0.1	1.6		1.6	
23	(c) Wood-stave.....1940..length, miles.....			5.3		3.3	2.0
24	(d) Other.....1940..length, miles.....			1.2		1.2	
25	Storage dams.....1940..total number.....	1		89	4	84	1
26	.....1930..total number.....			65			
27	.....1920..total number.....			47			
28	(a) Concrete and masonry.....1940..number.....			1		1	
29	(b) Earth and rock.....1940..number.....	1		73	4	69	
30	(c) Other, mixed, and not reported.....1940..number.....			15		14	1
31	Reservoirs.....1940..total number.....	1		43	4	38	1
32	(a) 1-99 acre-feet capacity.....1940..number.....	1		29	1	27	1
33	(b) 100-999 acre-feet capacity.....1940..number.....			12	1	11	
34	(c) 1,000 and over acre-feet capacity.....1940..number.....			2	2		
35	.....1940..total capacity, ac.-ft. ⁴	(⁵)		11,488	8,260	3,188	(⁵)
36	.....1930..total number.....			63			
37	.....1930..total capacity, ac.-ft.....			13,018			
38	Wells, flowing.....1940..number.....						
39	.....1930..number.....						
40	.....1920..number.....						
41	.....1940..yield, g.p.m.....						
42	.....1930..yield, g.p.m.....						
43	.....1920..yield, g.p.m.....						
44	Wells, pumped.....1940..number.....	3	77	543	153	298	92
45	.....1930..number.....			575			
46	.....1920..number.....			594			
47	.....1940..yield, g.p.m.....	6,500	173,900	1,175,242	401,105	620,757	153,380
48	.....1930..yield, g.p.m.....			1,397,670			
49	.....1920..yield, g.p.m.....			1,209,750			
50	Pumping plants.....1940..total number.....	5	90	1,065	252	603	230
51	.....1930..total number.....			733			
52	Prime movers.....1940..capacity, hp.....	290	5,719	58,663	14,831	35,855	8,177
53	.....1930..capacity, hp.....			59,119			
54	.....1920..capacity, hp.....			56,300			
55	(a) Electric.....1940..number.....		42	97	66	28	3
56	.....1940..capacity, hp.....		2,790	6,046	4,046	1,860	140
57	(b) Internal-combustion.....1940..number.....	4	47	967	185	557	225
58	.....1940..capacity, hp.....	230	2,854	47,326	10,485	29,944	7,497
59	(c) Other.....1940..number.....	(⁵) 1	(⁵) 1	21	1	18	2
60	.....1940..capacity, hp.....	(⁵)	(⁵)	5,491	(⁵)	4,651	(⁵)
61	Pumps.....1940..total number.....	5	90	1,095	252	609	234
62	.....1930..number.....			768			
63	.....1920..number.....			1,293			
64	.....1940..capacity, g.p.m.....	8,050	362,700	3,885,296	1,143,475	1,956,731	785,090
65	.....1930..capacity, g.p.m.....			2,908,458			
66	.....1920..capacity, g.p.m.....			2,927,213			
67	(a) Centrifugal.....1940..number.....	(⁵) 1	51	621	151	301	169
68	.....1940..capacity, g.p.m.....	(⁵)	140,800	2,542,666	737,380	1,118,826	666,460
69	.....1940..average capacity, g.p.m.....	(⁵)	2,761	4,094	4,883	3,717	4,062
70	(b) Turbine.....1940..number.....	3	35	442	92	286	64
71	.....1940..capacity, g.p.m.....	6,500	75,400	906,565	252,290	558,645	97,630
72	.....1940..average capacity, g.p.m.....	2,167	2,154	2,056	2,742	1,953	1,525
73	(c) Plunger.....1940..number.....	1		2	1	1	
74	.....1940..capacity, g.p.m.....	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
75	.....1940..average capacity, g.p.m.....	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
76	(d) Other.....1940..number.....		4	30	8	21	1
77	.....1940..capacity, g.p.m.....		146,500	433,950	153,750	279,200	(⁵)
78	Pumping lift, from all sources.....1940..average, feet.....	41	45	34	34	39	20
79	.....1930..average, feet.....			44			
80	.....1920..average, feet.....			35			
81	from pumped wells.....1940..average, feet.....	53	49	55	48	63	41
82	from surface sources.....1940..average, feet.....	22	11	14	13	17	9

¹Data for 1 enterprise in Chefuncte River Drainage Basin (27) (number refers to separate map) are included with Lake Pontchartrain Drainage Basin total.
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
³Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — LOUISIANA

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WORKS, 1940, 1930, AND 1920—Continued

GULF OF MEXICO—Continued										
Vermilion River (19)	Atchafalaya River					Lake Pontchartrain				1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82
	Total	Direct	Bayou Teche			Total ¹	Amite River	Natalbany River	Tangipahoa River	
			Total	Direct	Bayou Boeuf					
(20)	(21)	(22)	(24)	(25)	(26)					
224	81	14	67	53	14	923	6	760	156	1
437	304	286	308	333	214	7	6	7	7	2
5	11	3	8	8						3
4	3									4
	17									5
	1		1	1						6
1										7
4	10	3	7	7						8
										9
334.0	66.3	12.0	54.3	49.3	5.0	3.0		3.0		10
363	78									11
869	151									12
330	64	12	52	47	5	3		3		13
4.0	2.3		2.3	2.3						14
1,676	457	149	308	249	59	3		3		15
6,126	94									16
1,699	728									17
1.0	1.0	0.2	0.8	0.6	0.2	27.2		23.6	3.5	18
	1.4									19
	42.2									20
	0.4		0.4	0.3	0.1	0.6		0.6		21
1.0	0.1		0.1	0.1	0.1	26.3		22.7	3.5	22
	0.5	0.2	0.3	0.3				0.3		23
						0.3				24
2										25
	4					1			1	26
	1									27
										28
2										29
										30
1						1		1		31
						1		1		32
										33
(5)						(5)		(5)		34
	5					1		1		35
	207					60		60		36
										37
						502	5	442	54	38
						806		578	228	39
2	1									40
						12,695	226	11,944	375	41
						31,913		23,929	7,984	42
425										43
										44
54	16		16	12	4	790	1	669	120	45
55	10					660		486	174	46
82	42									47
51,633	26,200		26,200	23,400	2,800	44,338	(5)	34,688	9,610	48
176,550	60,700					29,629		21,549	8,080	49
67,007										50
240	96	15	61	61	20	652	1	535	116	51
164	74					627		470	157	52
7,022	2,741	362	2,379	2,112	267	1,670	(5)	1,379	290	53
8,682	3,235					1,773		1,368	405	54
7,052	4,070									55
(5)	12					126		78	47	56
1	51.0		51.0	46.0	5.0	212	(5)	133	76	57
233	83	15	68	53	15	518		449	69	58
3,906	2,181	362	1,819	1,602	217	1,436		1,224	212	59
6	1		1	1		8		8		60
3,091	(5)		(5)	(5)		22		22		61
251	96					705	1	588	116	62
179	79	15	83	61	22	771		531	240	63
222	171									64
823,593	257,770	63,700	194,070	167,600	26,470	43,750	(5)	34,625	8,685	65
1,442,590	247,490					29,341		21,416	8,125	66
694,044	230,675									67
232	87	15	72	53	19	570		479	91	68
801,843	234,270	63,700	170,570	144,300	26,270	34,712		27,838	6,674	69
3,456	2,693	4,247	2,369	2,723	1,383	61		58	76	70
17	11			8	3	7		6		71
19,150	23,500		23,500	23,300	200	3,041		2,991	(5)	72
1,126	2,136		2,136	2,912	67	434		498	(5)	73
						61	1	54	6	74
						915	(5)	399	476	75
						15	(5)	7	79	76
						67		49	18	77
(5)						5,082		3,597	1,485	78
11	19	11	20	22	16	39	(5)	40	34	79
21	20					37		43	19	80
29	19									81
22	51		51	51	50	39	(5)	40	34	82
8	14	11	15	16	13	23		23		

¹Total capacity of all reservoirs regardless of size.

⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - LOUISIANA

PARISH TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Parishes for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL	Acadia					Allen					Ascension					Avoyelles				
		Primary		Supplemental			Primary		Supplemental			Primary		Supplemental			Primary		Supplemental		
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*																					
1 All farms.....1940..number.....	150,007	3,937					1,302					1,411					5,242				
2 ..1930..number.....	161,445	3,828					1,068					1,335					5,975				
3 Irrigated farms.....1940..number.....	7,037	1,306					177					11					6				
4 ..1930..number.....	5,588	1,210					91					14					3				
5 Increase or decrease (-), 1930-1940.....percent.....	25.9	7.9					94.5					-21.4					100.0				
Operated by—																					
(a) Owners and managers.....1940..number.....																					
6	3,807	730					108					7					5				
7 ..1930..number.....	3,049	653					47					11					.....			
(b) Tenants.....1940..number.....																					
8	3,230	576					69					4					1				
9 ..1930..number.....	2,539	557					44					3					3				
10 Land in all farms.....1940..acres.....	9,906,108	298,881					102,523					74,623					172,859				
11 Land in irrigated farms.....1940..acres.....	1,065,655	229,116					31,495					9,975					2,043				
12 Average per farm.....1940..acres.....	152	175					178					907					340				
13 (a) Operated by owners and managers.....1940..acres.....	642,822	148,364					21,884					8,167					(5)				
14 Average per farm.....1940..acres.....	169	303					203					1,167					(5)				
15 (b) Operated by tenants.....1940..acres.....	423,833	80,754					9,601					1,808					(5)				
16 Average per farm.....1940..acres.....	131	140					139					452					(5)				
17 Approximate land area.....1940..acres.....	28,913,280	123,380					496,000					192,000					528,610				
IRRIGATED AND IRRIGABLE AREAS																					
18 Area irrigated.....1939..acres.....	447,095	106,377					15,122					2,804					830				
19 (a) Cropland harvested.....1939..acres.....	442,317	106,048					16,090					2,732					830				
20 (b) Crop failure.....1939..acres.....	1,078	135					32					.....					.....
21 (c) Pasture.....1939..acres.....	3,700	194					.....					.....					.....
22 Area irrigated.....1929..acres.....	450,901	133,539					11,568					3,721					830				
23 ..1919..acres.....	454,832	134,710					15,805					2,080					.....			
24 Increase or decrease (-), 1929-1939.....percent.....	-0.8	-20.3					39.4					-24.6					-3.5				
25 Irrigable area in enterprises.....1940..acres.....	793,674	196,398					36,747					3,445					1,750				
26 ..1930..acres.....	850,401	197,391					18,282					4,266					860				
27 ..1920 ³ ..acres.....	851,211	208,739					30,705					2,635					.....			
28 Excess of irrigable area over the area irrigated.....1940..acres.....	346,579	90,321					20,625					641					920				
29 ..1930..acres.....	399,500	64,152					6,714					545					.....			
30 Area works were capable of supplying with water.....1940..acres.....	759,915	194,255					32,192					3,245					1,750				
31 ..1930..acres.....	795,165	192,791					17,187					4,230					735				
32 ..1920..acres.....	728,742	186,218					28,590					2,635					.....			
33 Increase or decrease (-), 1930-1940.....percent.....	-4.4	0.8					87.3					-23.3					138.1				
34 Excess, capability of works over area irrigated.....1940..acres.....	312,820	87,878					16,070					441					920				
35 ..1930..acres.....	344,204	59,252					5,619					.....					.....
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	41.9	46.4					51.2					28.1					40.6				
37 ..1929..percent.....	50.5	59.9					55.4					47.1					.....			
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	58.8	54.8					50.1					86.4					47.4				
39 ..1929..percent.....	56.7	69.3					67.3					88.0					.....			
CAPITAL INVESTED TO JANUARY 1																					
40 Total investment in all enterprises.....1940..dollars.....	11,565,513	3,662,073					292,290					39,300					10,350				
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	11,565,513	3,662,073					292,290					39,300					10,350				
42 (b) Investment in water rights (reported) ⁴.....1940..dollars.....	.....	.....					.....					.....					.....
43 Total investment in all enterprises.....1930..dollars.....	15,744,743	4,167,252					240,900					29,650					7,685				
44 ..1920..dollars.....	14,063,181	3,732,648					309,450					44,100					.....			
45 Increase or decrease (-), 1930-1940.....percent.....	-26.5	-12.1					21.3					32.5					34.7				
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	15.22	18.85					9.08					12.11					5.91				
47 ..1930..dollars.....	19.80	21.62					14.02					7.01					10.46				
48 ..1920..dollars.....	19.30	20.04					10.82					16.74					.....			
49 Average investment per acre irrigated.....1939..dollars.....	25.87	34.43					18.13					14.02					12.47				
50 Estimated final investment in existing enterprises.....1940..dollars.....	11,659,725	3,678,183					318,290					39,300					10,350				
51 ..1930..dollars.....	15,771,003	4,168,302					250,900					41,650					8,485				
52 ..1920..dollars.....	14,264,178	3,795,013					310,950					44,100					.....			
53 Increase or decrease (-), 1930-1940.....percent.....	-26.1	-11.8					26.9					-5.6					22.0				
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	14.69	18.70					8.66					11.41					5.91				
55 ..1930..dollars.....	18.55	21.08					13.72					9.76					9.87				
56 ..1920 ³ ..dollars.....	16.76	18.18					10.13					16.74					.....			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS																					
		Primary			Supplemental			Primary			Supplemental			Primary			Supplemental				
		Enterprises						Enterprises						Enterprises							
57 Enterprises reporting maintenance and operation.....1939..number.....	2,181	12			321			1			37			8			4				
58 Area irrigated in these enterprises.....1939..acres.....	436,931	2,434			104,992			(5)			16,122			2,804			830				
59 Cost of maintenance and operation.....1939..dollars.....	1,589,007	3,683			412,017			(5)			53,037			10,370			1,850				
60 Average cost, per acre irrigated.....1939..dollars.....	3.64	1.51			3.92			(5)			3.29			3.70			2.23				
61 ..1929..dollars.....	4.09	.....			4.25			.....			6.71			2.87			6.28				
62 Total annual charges (reported) ⁶.....1939..dollars.....	1,259,711	.....			343,564			.....			20,856			.....			.....
63 Average annual charge per acre irrigated.....1939..dollars.....	5.27	.....			5.78			.....			2.03			.....			.....
64 Area against which charges were assessed.....1939..acres.....	245,975	.....			59,459			.....			17,279			.....			.....
65 Average annual charge per acre assessed.....1939..dollars.....	5.12	.....			5.78			.....			1.21			.....			.....
66 Total charges collected ⁶.....1939..dollars.....	542,853	.....			230,977			.....			39,000			.....			.....
67 Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	2,748,768	.....			503,442			.....			17,500			.....			.....
WATER DELIVERED TO IRRIGATORS																					
68 Enterprises reporting water delivered.....1939..number.....	2,419	15			307			(5)			35			9			4				
69 Area irrigated in these enterprises.....1939..acres.....	367,081	2,579			91,988			(5)			7,883			2,804			830				
70 Water delivered in these enterprises.....1939..acre-feet.....	884,020	2,116			209,595			(5)			14,548			13,773			1,950				
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	0.8			2.3			(5)			1.8			4.9			2.4				
72 Average cost of water per acre irrigated.....1939..dollars.....	4.27	1.51			4.64			(5)			3.08			3.70			2.23				
DRAINAGE OF IRRIGATED LAND																					
73 Enterprises reporting land drained or needing drainage.....1939..number.....	634	.....			50			.....			7			1			.....			
74 Irrigable area in these enterprises.....1939..acres.....	214,408	.....			83,947			.....			2,465			(5)			.....			
75 Irrigated area in these enterprises.....1939..acres.....	101,321	.....			35,533			.....			1,210			(5)			.....			
76 Area for which drains have been installed.....1939..acres.....	174,848	.....			75,245			.....			526			(5)			.....			
77 Additional area needing drainage.....1939..acres.....	12,979	.....			270			.....			355			.....			.....

*Census of Agriculture.

¹Percent not shown when more than 1,000.

²Data are included only in State totals because less than 3 farms reported in the 1940 Census.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - LOUISIANA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
 Irrigation data omitted from any of the parishes listed are included under "All other parishes"

Calcasieu	Cameron	Evangeline	Iberia	Iberville	Jefferson Davis	Lafayette	Livingston	Orleans	Plaquemines	Rapides	St. James		
1,770	842	4,578	1,314	741	1,665	3,441	2,162	199	602	3,368	434	1	
1,565	814	4,610	1,297	621	1,664	3,359	2,193	198	449	4,305	337	2	
509	91	704	18	15	768	47	296	26	72	7	44	3	
266	34	205	11	3	661	82	1	1	9	4	38	4	
91.4	167.6	243.4	63.6	400.0	16.2	-42.7	(1)	(1)	700.0	75.0	15.8	5	
160	18	334	10	3	391	28	240	21	48	3	26	6	
123	8	85	6	2	381	43	.....	.....	7	.....	26	7
349	73	370	8	12	377	19	56	5	24	4	18	8	
143	26	120	5	1	280	39	.....	.....	2	.....	12	9
181,659	71,746	183,402	110,444	93,621	270,617	136,791	83,217	12,031	45,829	225,346	57,619	10	
121,994	21,288	60,700	10,824	3,035	222,125	5,211	10,042	470	4,004	3,719	13,741	11	
240	234	88	601	202	289	111	34	16	56	531	312	12	
43,310	3,768	38,281	9,530	1,977	126,294	2,921	8,830	363	2,030	3,129	11,329	13	
271	209	115	953	659	323	104	37	17	42	1,043	436	14	
78,684	17,520	22,419	1,294	1,058	95,831	2,290	1,212	107	1,968	590	2,412	15	
225	240	61	162	88	254	121	22	21	82	148	134	16	
708,560	924,160	430,080	376,320	391,040	421,120	181,120	425,600	127,360	629,700	850,560	159,360	17	
64,825	11,852	17,086	3,988	1,308	99,160	2,727	823	264	548	432	3,681	18	
64,639	11,852	17,075	3,788	1,251	98,478	2,652	810	197	483	432	3,621	19	
.....	.....	11	.....	57	210	.....	14	.....	55	.....	60	20
186	.....	.....	200	.....	478	.....	2	.....	67	.....	.....	21
33,601	3,665	13,672	2,740	865	100,386	1,061	.....	.....	1,001	.....	2,714	22
47,056	725	12,058	11,801	2,275	99,534	4,485	.....	.....	4,813	.....	5,221	23
1.9	223.4	25.0	45.5	51.2	-1.2	157.0	.....	.....	-45.3	.....	35.6	24
35,404	33,045	23,216	6,699	1,420	182,208	5,179	1,215	317	1,123	1,562	8,280	25	
114,330	6,380	20,310	2,865	915	167,975	1,976	.....	.....	7,302	.....	3,500	26
147,115	4,310	18,812	12,035	2,540	191,889	5,725	.....	.....	9,473	.....	6,103	27
30,639	21,193	6,130	2,711	112	83,042	2,452	389	53	575	1,130	4,599	28	
50,729	2,715	6,638	125	50	67,589	5,129	.....	.....	6,301	.....	786	29
88,014	28,245	22,800	6,695	1,420	172,271	5,129	1,210	271	1,123	762	7,200	30	
105,245	6,380	20,175	2,830	915	145,732	1,926	.....	.....	2,858	.....	2,700	31
121,612	4,230	17,502	11,505	2,475	139,730	5,625	.....	.....	7,338	.....	6,103	32
-16.4	342.7	13.0	136.6	55.2	18.2	166.3	.....	.....	-60.7	.....	166.7	33
23,189	16,393	5,714	2,707	112	73,105	2,402	384	7	575	330	3,519	34	
41,644	2,715	6,503	90	50	45,346	865	.....	.....	1,857	.....	.....	35
53.1	55.7	28.1	36.8	43.1	44.6	52.3	8.2	55.2	13.7	11.6	26.8	36	
76.1	27.1	71.5	35.7	32.8	44.9	13.8	.....	.....	27.1	.....	22.9	37
73.7	42.0	74.9	59.6	92.1	57.6	53.2	68.3	97.4	48.8	56.7	51.1	38	
60.4	57.4	67.8	96.8	94.5	68.9	55.1	.....	.....	35.0	.....	.....	39
1,366,917	170,074	354,076	56,600	10,600	2,763,046	120,830	58,039	673	5,693	7,950	90,465	40	
1,366,917	170,074	354,076	56,600	10,600	2,763,046	120,830	58,039	673	5,693	7,950	90,465	41	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42
4,166,885	17,000	422,793	33,200	6,650	2,753,284	28,100	.....	.....	28,148	.....	28,000	43
1,667,236	59,570	487,977	201,626	25,200	2,868,348	144,000	.....	.....	66,628	.....	52,132	44
-67.2	900.0	-16.3	70.5	59.4	0.4	330.0	.....	.....	-79.8	.....	223.1	45
15.53	6.02	15.53	8.45	7.46	16.04	23.56	47.97	2.48	5.07	10.43	12.56	46	
39.59	2.66	20.96	11.73	7.27	18.89	14.59	.....	.....	9.85	.....	10.37	47
13.71	14.08	27.88	17.53	10.18	20.53	25.60	.....	.....	9.08	.....	8.54	48
21.09	14.35	20.72	14.19	8.10	27.86	44.31	70.27	2.55	10.39	18.40	24.58	49	
1,392,917	175,074	357,266	56,900	10,650	2,770,863	121,330	58,069	673	5,693	13,950	90,465	50	
4,167,385	17,000	422,853	33,200	6,650	2,753,584	28,100	.....	.....	28,148	.....	28,000	51
1,669,836	59,570	521,652	201,626	25,200	2,902,520	144,000	.....	.....	66,763	.....	52,132	52
-66.6	929.8	-15.5	71.4	60.2	0.6	331.8	.....	.....	-79.8	.....	223.1	53
14.59	5.30	15.39	8.49	7.50	15.21	23.43	47.79	2.12	5.07	8.93	10.93	54	
36.45	2.66	20.82	11.59	7.27	16.39	14.22	.....	.....	3.85	.....	8.00	55
11.35	13.82	27.73	16.75	9.92	15.13	25.15	.....	.....	7.05	.....	8.54	56
86	11	262	17	5	.....	24	77	14	33	6	23	57
64,841	11,407	16,334	3,988	1,308	97,748	400	2,694	264	476	432	3,681	58	
228,369	51,362	48,096	9,264	2,372	392,562	1,568	17,026	2,849	178	3,625	9,764	59	
3.54	4.50	2.94	2.32	1.81	4.02	3.92	6.32	6.70	0.67	1.01	2.35	60	
4.49	3.76	3.49	6.03	1.67	4.29	.....	4.71	.....	9.82	.....	4.96	61
211,256	27,172	58,626	.....	582	231,732	.....	4,550	.....	.....	.....	665	62
4.45	3.90	8.05	.....	1.19	5.14	.....	6.58	.....	.....	.....	1.71	63
47,505	6,970	7,280	.....	488	45,064	.....	692	.....	.....	.....	388	64
4.45	3.90	8.05	.....	1.19	5.14	.....	6.58	.....	.....	.....	1.71	65
195,211	.....	.....	.....	.....	69,605	.....	.....	.....	.....	.....	.....	66
186,084	12,832	20,200	.....	.....	252,406	.....	.....	.....	.....	.....	.....	67
86	9	259	16	5	276	6	26	156	12	33	4	15	68
30,194	10,128	16,104	3,813	1,308	83,494	545	2,727	826	250	496	358	3,531	69
65,600	37,899	27,729	6,293	5,230	231,431	742	8,544	1,092	235	775	1,269	18,746	70
2.2	3.7	1.7	1.6	4.0	2.8	1.4	3.1	1.3	0.9	1.6	3.5	5.3	71
3.27	4.72	5.42	2.28	1.81	4.23	3.92	6.54	6.70	0.70	1.00	8.45	2.72	72
6	3	66	4	2	62	5	7	73
22,710	7,735	2,349	2,338	(5)	49,273	37	223	(5)	(5)	(5)	74
7,178	1,450	1,732	(5)	(5)	25,481	35	124	(5)	(5)	(5)	75
20,200	5,900	2,076	1,620	(5)	38,339	37	184	(5)	(5)	76
2,100	700	400	4,575	5	(5)	(5)	(5)	77

*Water rights have no legal status in Louisiana.
 *Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
 *Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
 *Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - LOUISIANA

PARISH TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

[Parishes for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the parishes listed are included under "All other parishes"]

ITEM (For definitions and explanation, see text)		St. Landry	St. Martin	St. Mary	Tangipahoa	Vermilion	All other parishes ¹
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1930..number.....	7,983	2,440	387	1,521	3,392	98,370
2	.....1930..number.....	7,494	2,094	520	4,326	3,951	109,442
3	Irrigated farms.....1940..number.....	222	11	14	865	1,750	41
4	.....1930..number.....	173	30	13	1,176	1,532	31
5	Increase or decrease (-), 1930-1940.....percent.....	28.3	46.7	7.7	-26.4	14.2	11.9
6	Operated by—(a) Owners and managers.....1940..number.....	110	16	5	563	953	26
7	.....1930..number.....	89	13	8	890	719	28
8	(b) Tenants.....1940..number.....	112	28	9	301	797	18
9	.....1930..number.....	84	17	5	376	813	9
10	Land in all farms.....1940..acres.....	285,790	128,523	113,318	192,747	316,201	6,837,351
11	Land in irrigated farms.....1940..acres.....	31,748	5,624	16,797	20,701	222,277	18,724
12	Average per farm.....1940..acres.....	143	151	1,200	24	127	126
13	(a) Operated by owners and managers.....1940..acres.....	23,408	1,164	15,169	16,326	137,168	14,218
14	Average per farm.....1940..acres.....	213	260	3,034	29	144	517
15	(b) Operated by tenants.....1940..acres.....	8,340	2,460	1,628	4,375	81,809	4,596
16	Average per farm.....1940..acres.....	74	88	181	15	106	250
17	Approximate land area.....1940..acres.....	595,200	472,320	387,200	513,920	783,360	18,997,920
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres.....	8,002	3,010	2,875	3,211	95,148	2,013
19	(a) Cropland harvested.....1939..acres.....	7,458	2,970	2,975	3,188	92,845	2,003
20	(b) Crop failure.....1939..acres.....	9	40	.....	6	397	10
21	(c) Pasture.....1939..acres.....	535	.....	.....	17	1,946	.....
22	Area irrigated.....1929..acres.....	14,391	741	3,944	5,072	81,098	3,262
23	.....1919..acres.....	10,258	6,267	3,040	.....	87,830	6,024
24	Increase or decrease (-), 1929-1939.....percent.....	-44.4	306.2	-27.1	-36.7	13.1	-38.3
25	Irrigable area in enterprises.....1940..acres.....	11,593	5,998	3,835	5,296	165,662	2,922
26	.....1930..acres.....	20,992	2,890	5,985	7,862	261,307	4,713
27	.....1920 ² ..acres.....	23,611	10,575	4,340	.....	190,576	11,968
28	Excess of irrigable area over the area irrigated.....1940..acres.....	3,591	2,988	960	2,088	70,514	909
29	.....1930..acres.....	6,601	2,149	2,041	2,790	177,209	1,451
30	Area works were capable of supplying with water.....1940..acres.....	11,391	5,979	3,435	5,163	164,443	2,922
31	.....1930..acres.....	20,504	2,850	5,538	6,638	251,892	1,039
32	.....1920..acres.....	21,022	10,475	4,340	.....	147,468	11,871
33	Increase or decrease (-), 1930-1940.....percent.....	-44.4	109.8	-38.0	-23.2	-34.7	-27.7
34	Excess, capability of works over area irrigated.....1940..acres.....	3,399	2,969	560	1,952	69,295	909
35	.....1930..acres.....	6,113	2,109	1,594	1,565	167,794	917
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	25.2	45.4	17.1	15.5	42.8	10.9
37	.....1929..percent.....	61.2	21.9	18.4	18.3	46.4	33.3
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	70.2	50.3	83.7	62.2	57.9	98.9
39	.....1929..percent.....	70.2	26.0	71.2	76.4	33.4	80.8
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars.....	161,473	51,140	16,010	217,479	2,091,047	19,388
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	161,473	51,140	16,010	217,479	2,091,047	19,388
42	(b) Investment in water rights (reported).....1940..dollars.....	.....	.....	.....	.....	.....	.....
43	Total investment in all enterprises.....1930..dollars.....	545,152	90,793	57,200	394,278	2,689,308	78,465
44	.....1920 ² ..dollars.....	530,222	119,310	55,650	.....	3,477,876	221,208
45	Increase or decrease (-), 1930-1940.....percent.....	-70.4	-15.9	-72.0	-43.4	-22.2	-75.3
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	14.19	8.55	4.66	42.12	12.72	6.64
47	.....1930..dollars.....	28.59	21.33	10.33	57.89	10.98	.....
48	.....1920..dollars.....	25.22	11.39	12.82	.....	23.58	.....
49	Average investment per acre irrigated.....1939..dollars.....	20.18	16.99	5.57	67.73	21.98	9.93
50	Estimated final investment in existing enterprises.....1940..dollars.....	153,083	51,190	16,010	219,888	2,091,192	19,388
51	.....1930..dollars.....	546,402	90,793	57,200	394,578	2,689,308	78,465
52	.....1920 ² ..dollars.....	548,022	120,810	55,650	.....	3,479,026	267,208
53	Increase or decrease (-), 1930-1940.....percent.....	-70.2	-15.8	-72.0	-43.1	-22.2	-75.3
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	14.07	8.53	4.17	41.33	12.62	6.61
55	.....1930..dollars.....	26.03	21.04	9.56	48.92	10.29	.....
56	.....1920 ² ..dollars.....	23.21	11.42	12.82	.....	21.67	.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57	Enterprises reporting maintenance and operation.....1939..number.....	55	20	13	537	314	8
58	Area irrigated in these enterprises.....1939..acres.....	7,259	2,742	2,875	2,522	92,126	1,361
59	Cost of maintenance and operation.....1939..dollars.....	23,341	8,501	2,208	11,203	295,627	1,900
60	Average cost, per acre irrigated.....1939..dollars.....	3.22	3.10	0.77	4.44	3.21	0.82
61	.....1929..dollars.....	3.91	6.15	3.49	5.57	2.99	.....
62	Total annual charges (reported) ³.....1939..dollars.....	10,768	.....	.....	.....	349,938	.....
63	Average annual charge per acre irrigated.....1939..dollars.....	5.28	.....	.....	.....	5.95	.....
64	Area against which charges were assessed.....1939..acres.....	2,036	.....	.....	.....	58,812	.....
65	Average annual charge per acre assessed.....1939..dollars.....	5.28	.....	.....	.....	5.95	.....
66	Total charges collected ³.....1939..dollars.....	3,215	.....	.....	.....	4,845	.....
67	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	2,600	.....	.....	.....	1,753,704	.....
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number.....	53	20	13	726	344	8
69	Area irrigated in these enterprises.....1939..acres.....	7,206	2,885	2,875	3,108	92,514	1,490
70	Water delivered in these enterprises.....1939..acre-feet.....	10,855	7,334	3,824	2,205	208,996	1,334
71	Average water delivered per acre irrigated.....1939..acre-feet.....	1.5	2.5	1.3	0.7	2.3	0.9
72	Average cost of water per acre irrigated.....1939..dollars.....	3.83	3.17	0.77	4.48	4.45	0.82
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number.....	26	6	6	179	195	5
74	Irrigable area in these enterprises.....1939..acres.....	4,167	2,300	1,160	1,194	30,470	780
75	Irrigated area in these enterprises.....1939..acres.....	2,752	846	860	952	18,796	759
76	Area for which drains have been installed.....1939..acres.....	3,397	802	500	1,033	21,940	771
77	Additional area needing drainage.....1939..acres.....	85	.....	600	78	1,836	.....

* Census of Agriculture. ¹ Data between census years not comparable (see headnote). ² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - LOUISIANA

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PARISH TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

[Parishes for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the parishes listed are included under "All other parishes"]

ITEM (For definitions and explanations, see text)	STATE TOTAL	Acadia	Allen	Ascension	Avoyelles	Calcasieu
FARM VALUES, 1940^a						
1 Land and buildings, all farms.....dollars..	353,873,506	16,134,128	2,202,615	3,281,671	9,149,218	6,484,163
2 Land and buildings, irrigated farms.....dollars..	45,182,979	11,646,772	813,370	359,640	116,350	3,365,136
Operated by—						
3 (a) Owners and managers.....dollars..	28,353,724	7,647,047	594,245	298,060	(¹)	1,299,036
4 (b) Tenants.....dollars..	16,829,255	3,989,725	219,125	61,580	(¹)	2,066,100
5 Average, land and buildings, per farm.....dollars..	6,420.77	8,917.90	4,595.31	32,694.55	19,391.67	6,611.27
6 per acre in farms.....dollars..	42.36	50.80	25.83	36.05	56.95	27.58
7 Buildings, irrigated farms reporting value.....number...	6,779	1,246	174	9	6	480
8 Total reported.....dollars..	8,019,180	1,891,242	147,560	88,800	33,000	585,378
9 Average, per irrigated farm reporting.....dollars..	1,182.94	1,517.85	848.05	9,866.67	5,500.00	1,240.37
10 per acre on all irrigated farms.....dollars..	7.52	8.25	4.69	8.90	16.15	4.88
11 Buildings, nonirrigated farms reporting value.....number...	138,349	2,530	1,113	1,349	5,083	1,242
12 Total reported.....dollars..	83,374,445	1,238,917	557,072	942,686	2,287,469	1,163,769
13 Average, per nonirrigated farm reporting.....dollars..	602.64	489.69	500.51	698.80	450.02	937.01
14 per acre on all nonirrigated farms.....dollars..	9.34	17.76	7.84	14.58	13.29	19.51
15 Implements and machinery, irrigated farms reporting value.....number...	6,220	1,172	163	10	6	452
16 Total reported.....dollars..	7,291,697	1,680,573	186,287	95,830	31,000	824,809
17 Average, per irrigated farm reporting.....dollars..	1,172.30	1,433.94	1,216.48	9,583.00	5,166.67	1,824.80
18 per acre, on all irrigated farms.....dollars..	6.84	7.33	6.30	9.61	15.17	6.76
19 Implements and machinery, nonirrigated farms reporting value.....number...	116,411	2,257	991	1,296	4,427	1,026
20 Total reported.....dollars..	28,513,155	427,664	100,734	304,056	818,166	241,741
21 Average, per acre, on all nonirrigated farms.....dollars..	3.19	6.13	1.42	4.70	4.79	4.05
ENTERPRISES AND IRRIGATION WORKS JANUARY 1						
22 Enterprises.....1940.....number.....	2,583	328	37	8	4	91
23 ..1930.....number.....	2,355	348	25	10	4	42
24 ..1920.....number.....	1,373	328	32	6	.....	56
25 Average size of enterprise based on irrigable area.....1940.....acres.....	307	600	930	431	438	1,049
26 ..1930.....acres.....	361	568	731	427	215	2,722
27 ..1920 ^b.....acres.....	620	637	960	439	.....	2,627
28 Diversion dams.....1940.....number.....	105	3	8	.....	.....	2
29 Main canals and laterals.....1940.....length, miles.....	2,421.0	667.2	86.0	4.0	2.0	327.8
30 ..1930.....length, miles.....	2,226	703	43	6	1	394
31 ..1920.....length, miles.....	3,243	818	77	8	.....	305
32 ..1940.....capacity, c.f.s. ^c	10,335	1,966	350	73	17	1,687
33 ..1930.....capacity, c.f.s. ^c	11,366	2,830	135	72	1	1,985
34 ..1920.....capacity, c.f.s. ^c	11,889	1,934	36	16	.....	1,580
35 Pipe lines ^d.....1940.....length, miles.....	63.6	16.4	0.1	0.5	0.1	2.3
36 Storage dams.....1940.....number.....	114	4	.....	8	.....	2
37 Reservoirs.....1940.....number.....	75	4	.....	5	.....	2
38 ..1930.....number.....	85	6	2	3	.....	5
39 ..1920.....number.....	74	11	.....	.....	.....	3
40 ..1940.....capacity, acre-feet.....	34,199	160	.....	2,255	.....	(^e)
41 ..1930.....capacity, acre-feet.....	13,909	881	80	9	.....	6,448
42 ..1920.....capacity, acre-feet.....	7,632	2,170	.....	.....	.....	460
43 Wells, flowing.....1940.....number.....	502	.....	.....	.....	.....	.....
44 ..1930.....number.....	807	.....	.....	.....	.....	.....
45 ..1920.....number.....	9	.....	.....	.....	.....	5
46 ..1940.....yield, g.p.m.....	12,695	.....	.....	.....	.....	.....
47 ..1930.....yield, g.p.m.....	31,961	.....	.....	.....	.....	.....
48 ..1920.....yield, g.p.m.....	6,255	.....	.....	.....	.....	5,800
49 Wells, pumped.....1940.....number.....	1,504	235	26	.....	1	22
50 ..1930.....number.....	1,389	308	23	1	1	16
51 ..1920.....number.....	812	280	32	.....	.....	28
52 ..1940.....yield, g.p.m.....	1,526,613	475,965	60,400	.....	(^e)	50,600
53 ..1930.....yield, g.p.m.....	1,958,811	637,055	49,500	1,000	2,500	88,450
54 ..1920.....yield, g.p.m.....	1,607,637	426,300	89,700	.....	.....	106,800
55 Pumping plants.....1940.....number.....	2,326	379	40	10	7	100
56 ..1930.....number.....	1,790	379	27	8	4	54
57 ..1920.....number.....	1,250	347	45	7	.....	57
58 Prime movers.....1940.....capacity, hp.....	85,574	29,088	3,117	410	151	5,916
59 ..1930.....capacity, hp.....	86,413	31,793	1,962	300	57	7,559
60 ..1920.....capacity, hp.....	85,628	27,279	5,580	375	.....	7,947
61 Pumps.....1940.....capacity, g.p.m.....	6,453,487	1,648,465	114,620	46,000	10,000	723,550
62 ..1930.....capacity, g.p.m.....	5,914,799	1,323,978	96,700	33,600	3,050	916,562
63 ..1920.....capacity, g.p.m.....	4,968,686	1,509,335	161,100	9,500	.....	745,200
64 Pumping lift, from all sources.....1940.....average, feet.....	32	47	41	16	23	18
65 ..1930.....average, feet.....	37	47	49	14	22	22
66 ..1920.....average, feet.....	32	37	36	15	.....	21
67 from pumped wells.....1940.....average, feet.....	45	69	54	.....	(^e)	35
PAY ROLL AND NUMBER OF EMPLOYEES 1939^f						
68 Enterprises reporting pay roll.....number.....	107	42	4	.....	.....	8
69 Irrigated area in these enterprises.....acres.....	230,726	58,642	9,040	.....	.....	47,060
70 Wages and salaries paid and payable.....dollars..	502,320	170,537	12,416	.....	.....	33,467
71 Persons employed during week ending April 29.....number.....	802	279	21	.....	.....	104

^a Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms reported in the 1940 Census.

² Includes interparish projects counted as independent enterprises for each parish into which they extend. For actual number of enterprises see State table 1.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁵ Includes siphons and farm pipe lines reported.

⁶ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁷ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - LOUISIANA

PARISH TABLE II—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
 [Parishes for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Cameron	Evangeline	Iberia	Iberville	Jefferson Davis	Lafayette
FARM VALUES, 1940*						
1 Land and buildings, all farms.....dollars..	1,474,345	7,084,174	6,417,047	4,074,194	10,811,857	9,668,839
2 Land and buildings, irrigated farms.....dollars..	323,020	2,241,195	401,870	115,680	8,936,288	374,760
Operated by—						
3 (a) Owners and managers.....dollars..	75,500	1,429,880	342,920	71,350	5,104,322	219,740
4 (b) Tenants.....dollars..	247,520	811,315	58,950	44,330	3,833,966	155,020
5 Average, land and buildings, per farm.....dollars..	3,549.67	3,183.52	22,326.11	7,712.00	11,638.40	7,973.62
6 per acre in farms.....dollars..	15.17	36.92	37.13	38.12	40.24	71.92
7 Buildings, irrigated farms reporting value.....number..	79	692	14	5	729	47
8 Total reported.....dollars..	41,810	455,685	81,300	34,100	1,328,284	68,100
9 Average, per irrigated farm reporting.....dollars..	529.24	658.50	5,807.14	6,820.00	1,822.06	1,448.94
10 per acre on all irrigated farms.....dollars..	1.96	7.51	7.51	11.24	5.98	10.07
11 Buildings, nonirrigated farms reporting value.....number..	701	3,787	1,247	675	845	3,327
12 Total reported.....dollars..	297,392	1,523,415	1,718,045	909,447	474,836	1,986,144
13 Average, per nonirrigated farm reporting.....dollars..	424.24	402.28	1,377.74	1,347.33	561.94	599.98
14 per acre on all nonirrigated farms.....dollars..	5.89	12.42	17.25	10.04	9.79	15.17
15 Implements and machinery, irrigated farms reporting value.....number..	83	638	18	5	695	46
16 Total reported.....dollars..	165,115	387,018	109,325	28,110	1,239,419	36,845
17 Average, per irrigated farm reporting.....dollars..	1,989.34	606.61	6,073.61	5,622.00	1,783.34	800.98
18 per acre, on all irrigated farms.....dollars..	7.76	6.38	10.10	9.26	5.58	7.07
19 Implements and machinery, nonirrigated farms reporting value.....number..	524	3,114	909	678	694	2,696
20 Total reported.....dollars..	94,247	401,225	750,404	392,632	159,374	573,277
21 Average, per acre, on all nonirrigated farms.....dollars..	1.87	3.27	7.53	4.33	3.29	1.36
ENTERPRISES AND IRRIGATION WORKS						
JANUARY 1						
22 Enterprises.....1940...number.....	15	278	17	5	299	26
23 ..1930...number.....	4	96	5	3	244	4
24 ..1920...number.....	5	83	43	7	269	14
25 Average size of enterprise based on						
26 irrigable area.....1940...acres.....	2,203	84	394	284	609	199
27 ..1930...acres.....	1,595	212	573	305	688	494
28 ..1920 ² ...acres.....	862	227	280	363	713	409
29 Diversion dams.....1940...number.....	1	52	5	2	5	1
30 Main canals and laterals.....1940...length, miles.....	77.0	56.6	13.7	15.1	461.6	11.1
31 ..1930...length, miles.....	10	178	15	.....	390	6
32 ..1920...length, miles.....	10	56	67	.....	413	24
33 ..1940...capacity, c.f.s. ³	793	479	93	74	1,416	13
34 ..1930...capacity, c.f.s. ³	86	1,091	384	.....	1,800	18
35 ..1920...capacity, c.f.s. ³	8	127	381	9	1,850	53
36 Pipe lines ⁴.....1940...length, miles.....	.....	1.3	0.1	0.4	1.9	.....
37 Storage dams.....1940...number.....	1	81	.....	3	2	.....
38 Reservoirs.....1940...number.....	2	35	.....	2	2	.....
39 ..1930...number.....	.....	34	.....	.....	.....	.....
40 ..1920...number.....	.....	10	1	2	4	.....
41 ..1940...capacity, acre-feet..	(⁵)	3,068	.....	(⁵)	(⁵)	.....
42 ..1930...capacity, acre-feet..	.....	5,006	.....	.....	.....	.....
43 ..1920...capacity, acre-feet..	.....	255	2,041	43	55	.....
44 Wells, flowing.....1940...number.....	.....	.....	.....	.....	.....	.....
45 ..1930...number.....	.....	.....	.....	.....	.....	.....
46 ..1920...number.....	.....	.....	1	.....	.....	.....
47 ..1940...yield, g.p.m.....	.....	.....	.....	.....	.....	.....
48 ..1930...yield, g.p.m.....	.....	.....	.....	.....	.....	.....
49 ..1920...yield, g.p.m.....	.....	.....	.....	.....	.....	.....
50 Wells, pumped.....1940...number.....	1	39	4	.....	245	26
51 ..1930...number.....	.....	42	.....	.....	232	3
52 ..1920...number.....	.....	26	35	.....	259	15
53 ..1940...yield, g.p.m.....	(⁵)	73,142	4,500	.....	611,405	34,000
54 ..1930...yield, g.p.m.....	.....	98,650	.....	.....	691,965	6,100
55 ..1920...yield, g.p.m.....	2,600	59,150	40,560	.....	631,700	28,900
56 Pumping plants.....1940...number.....	20	180	24	5	344	28
57 ..1930...number.....	3	68	6	2	270	5
58 ..1920...number.....	5	57	46	9	282	14
59 Prime movers.....1940...capacity, hp.....	1,461	4,189	764	173	22,439	1,088
60 ..1930...capacity, hp.....	1,150	4,235	455	100	22,260	290
61 ..1920...capacity, hp.....	187	2,451	1,826	495	21,565	880
62 Pumps.....1940...capacity, g.p.m.....	286,355	206,796	66,200	13,840	1,523,870	36,500
63 ..1930...capacity, g.p.m.....	39,800	136,720	28,100	7,500	1,381,248	6,500
64 ..1920...capacity, g.p.m.....	93,094	71,070	99,275	25,900	1,099,050	28,900
65 Pumping lift, from all sources.....1940...average, feet.....	11	24	17	12	41	50
66 ..1930...average, feet.....	9	31	22	18	45	40
67 ..1920...average, feet.....	17	34	19	13	38	36
from pumped wells.....1940...average, feet.....	(⁵)	62	46	.....	49	54
PAY ROLL AND NUMBER OF EMPLOYEES						
1939⁶						
68 Enterprises reporting pay roll.....number.....	4	14	.....	.....	15	2
69 Irrigated area in these enterprises.....acres.....	6,970	6,492	.....	.....	44,016	(⁵)
70 Wages and salaries paid and payable.....dollars..	18,276	6,634	.....	.....	77,455	(⁵)
71 Persons employed during week ending April 29.....number..	33	31	.....	.....	105	(⁵)

* Census of Agriculture.
¹ Data between census years not comparable (see headnote).
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — LOUISIANA

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued
 irrigation data omitted from any of the parishes listed are included under "All other parishes"]

Livingston	Orleans	Plaquemines	Rapides	St. James	St. Landry	St. Martin	St. Mary	Tangipahoa	Vermilion	All other parishes ¹	
2,876,817	1,947,990	2,532,777	11,056,102	2,638,661	14,841,919	5,844,294	3,928,530	6,387,917	14,658,793	210,377,425	1
507,481	520,250	153,785	206,232	474,190	1,371,787	302,995	222,033	1,586,450	10,207,494	934,201	2
443,076	485,500	98,535	180,932	335,990	1,000,920	185,345	176,733	1,213,100	6,295,778	747,715	3
64,405	34,750	55,250	25,300	138,200	370,867	117,650	45,300	373,350	3,911,716	186,486	4
1,714.46	20,009.62	2,135.90	29,461.71	10,777.05	6,179.22	6,886.25	15,859.50	1,831.93	5,832.85	21,231.84	5
50.54	1,106.91	38.41	55.45	34.51	43.21	45.74	13.22	76.64	45.92	49.89	6
294	23	69	6	34	219	35	14	854	1,708	42	7
202,871	168,200	49,160	47,750	111,460	305,019	42,405	79,700	594,815	1,375,341	277,200	8
690.04	7,313.04	712.46	7,958.33	3,276.24	1,392.78	1,211.57	5,692.86	696.50	805.23	6,600.00	9
20.20	357.87	12.28	12.84	8.11	9.61	6.40	4.74	28.73	6.19	14.80	10
1,828	168	512	3,244	333	7,535	2,259	354	3,570	1,604	95,043	11
824,794	263,207	772,684	2,900,809	524,174	3,322,151	1,299,463	993,746	1,975,433	849,694	56,539,068	12
451.20	1,565.71	1,509.15	894.21	1,574.10	440.90	575.24	2,807.19	553.34	529.73	594.88	13
11.27	22.77	18.47	13.09	11.95	13.03	10.66	10.30	11.48	9.05	8.29	14
279	24	68	7	42	208	39	11	766	1,453	35	15
71,427	19,285	12,422	37,773	100,360	269,963	61,700	53,020	173,785	1,591,720	103,911	16
256.01	803.54	182.68	5,396.14	2,389.52	1,297.90	1,582.05	4,820.00	226.87	1,095.47	2,968.89	17
7.11	41.03	3.10	10.16	7.30	8.50	9.31	3.16	8.40	7.16	5.58	18
1,554	127	328	2,490	359	6,873	2,098	246	3,051	1,371	79,302	19
212,711	90,016	157,826	1,022,276	333,287	1,340,662	497,874	603,228	503,827	405,867	19,082,061	20
2.91	7.79	3.77	4.61	7.60	5.26	4.08	6.25	2.93	4.32	2.80	21
158	14	37	6	24	60	22	13	762	365	14	22
1	1	86	2	9	104	7	11	1,163	154	32	23
.....	.....	157	.....	21	116	32	13	.....	165	26	24
8	23	30	260	345	193	273	295	7	454	209	25
.....	.....	85	.....	389	202	413	544	7	1,697	.....	26
.....	.....	60	.....	291	204	330	334	.....	973	460	27
.....	.....	.....	.....	14	1	7	2	.....	2	.....	28
.....	.....	14.0	2.0	30.0	25.2	27.4	6.0	.....	585.8	8.5	29
.....	.....	2	.....	8	82	10	11	.....	365	2	30
.....	.....	309	.....	60	92	48	16	.....	917	23	31
.....	2	50	22	228	235	59	155	3	2,567	53	32
.....	.....	2	.....	20	418	26	57	.....	2,286	65	33
.....	.....	726	.....	101	2,309	232	28	.....	1,767	732	34
6.9	3.1	2.4	0.2	5.3	0.4	0.3	.....	20.2	1.0	0.7	35
.....	.....	.....	.....	9	.....	.....	.....	.....	2	2	36
.....	.....	.....	.....	17	.....	.....	.....	.....	1	4	37
.....	.....	2	.....	2	26	.....	.....	.....	1	4	38
.....	.....	.....	.....	.....	38	.....	.....	.....	.....	5	39
.....	.....	.....	.....	16,625	.....	.....	.....	(⁶)	(⁶)	160	40
.....	.....	65	.....	28	1,278	.....	.....	60	.....	54	41
.....	.....	.....	.....	.....	2,608	.....	.....	.....	.....	.....	42
179	.....	.....	.....	.....	.....	.....	.....	322	.....	1	43
.....	.....	.....	.....	.....	.....	.....	.....	806	.....	1	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	45
5,478	.....	.....	.....	.....	.....	.....	.....	7,067	.....	(⁶)	46
.....	.....	.....	.....	.....	.....	.....	.....	31,913	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	425	30	48
167	.....	.....	3	.....	18	2	.....	621	93	1	49
.....	.....	5	.....	.....	39	.....	.....	660	58	1	50
.....	.....	.....	.....	.....	28	4	.....	.....	104	.....	51
4,530	.....	.....	800	.....	37,050	(⁶)	.....	36,968	124,213	(⁶)	52
.....	.....	.....	.....	.....	136,100	.....	.....	29,629	217,350	200	53
.....	.....	312	.....	.....	51,600	15,000	.....	155,307	.....	.....	54
101	.....	9	10	23	60	23	13	549	386	15	55
.....	.....	38	.....	9	86	7	13	627	165	19	56
.....	.....	14	.....	21	97	32	15	.....	185	27	57
216	.....	81	123	751	2,239	500	359	1,333	10,879	297	58
.....	.....	145	.....	455	4,728	345	605	1,773	8,787	414	59
.....	.....	169	.....	990	4,320	1,236	470	.....	8,664	1,254	60
3,720	.....	5,518	8,400	90,000	141,170	42,050	70,550	37,190	1,352,583	26,110	61
.....	.....	5,320	.....	26,400	201,350	24,090	81,800	29,541	1,483,400	89,140	62
.....	.....	3,300	.....	44,800	124,200	96,100	12,900	.....	809,502	41,460	63
23	.....	12	18	12	31	17	8	41	11	23	64
.....	.....	17	.....	11	30	21	14	38	24	17	65
.....	.....	5	.....	13	56	20	15	.....	19	.....	66
23	.....	.....	20	.....	68	(⁶)	.....	41	23	(⁶)	67
.....	.....	.....	.....	1	6	.....	.....	.....	11	.....	68
.....	.....	.....	.....	(⁶)	1,728	.....	.....	.....	55,848	.....	69
.....	.....	.....	.....	(⁶)	2,151	.....	.....	.....	120,833	.....	70
.....	.....	.....	.....	(⁶)	11	.....	.....	.....	209	.....	71

¹ Includes siphons and farm pipe lines reported.
² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
³ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — MONTANA

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State ¹.....acres....	^o 93,642,240	93,523,840	93,523,840	² 93,523,840	93,568,640	93,568,640	93,568,640
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number..	41,823	50,564	47,495	57,677	26,214	13,370	5,603
Land in all farms.....acres....	46,451,594	47,511,868	44,659,152	35,070,656	13,545,603	11,844,454	1,964,107
Farms irrigated: ³							
Farms.....number..	15,087	13,864	11,925	10,807	8,970	8,043	3,706
Increase or decrease (-) over preceding census.....percent..	⁴ 26.5	.....	10.3	20.5	11.5	117.0	.....
Proportion of all farms.....percent..	36.1	27.4	25.1	18.7	34.2	60.2	66.1
Land in farms.....acres....	16,022,060	(⁵)	12,032,619	(⁵)	(⁵)	(⁵)	(⁵)
Proportion of all farm land.....percent..	34.5	(⁵)	26.9	(⁵)	(⁵)	(⁵)	(⁵)
Area irrigated.....acres....	⁶ 1,587,602	⁷ 1,272,054	⁸ 1,343,035	(⁹)	(⁹)	951,154	360,562
Increase or decrease (-) over preceding census.....percent..	⁴ 18.2	.....	.....	.....	.....	171.3	.....
Proportion of total land area of State.....percent..	1.7	1.4	1.4	.....	.....	1.0	0.4
Proportion of all farm land.....percent..	3.4	2.7	3.0	.....	.....	8.0	17.8
Value of irrigated farms (land and buildings).....dollars..	163,836,136	(⁵)	100,057,936	(⁵)	(⁵)	(⁵)	(⁵)
Average per farm.....dollars..	10,859.42	(⁵)	15,937.78	(⁵)	(⁵)	(⁵)	(⁵)
Average per acre.....dollars..	10.23	(⁵)	15.80	(⁵)	(⁵)	(⁵)	(⁵)
Value of farm implements and machinery ¹⁰.....dollars..	16,967,155	(⁵)	14,966,479	(⁵)	(⁵)	(⁵)	(⁵)
Average per farm ¹⁰.....dollars..	1,124.62	(⁵)	1,255.30	(⁵)	(⁵)	(⁵)	(⁵)
Average per acre ¹⁰.....dollars..	1.06	(⁵)	1.24	(⁵)	(⁵)	(⁵)	(⁵)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number..	5,555	(⁵)	4,461	6,035	5,534	(⁵)	(⁵)
Farms irrigated.....number..	17,094	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)
Area irrigated.....acres....	1,711,409	(⁵)	1,594,912	1,681,729	1,679,084	(⁵)	(⁵)
Area existing works were capable of supplying with water.....acres....	2,344,390	(⁵)	2,276,000	2,753,498	2,205,155	(⁵)	(⁵)
Area irrigable.....acres....	2,588,214	(⁵)	2,622,423	¹¹ 4,329,148	¹¹ 3,515,602	(⁵)	(⁵)
Additional area existing works were capable of supplying with water.....acres....	632,981	(⁵)	681,088	1,071,769	526,071	(⁵)	(⁵)
Additional irrigable area in enterprises not supplied with water.....acres....	876,805	(⁵)	1,027,511	¹¹ 2,647,419	¹¹ 1,836,518	(⁵)	(⁵)
Investment in irrigation enterprises.....dollars..	67,952,505	(⁵)	50,319,204	52,143,363	22,970,958	4,683,073	1,623,195
Increase or decrease (-) over preceding census.....percent..	⁴ 33.9	(⁵)	-3.5	127.0	390.5	188.5	.....
Average per acre based on area works were capable of supplying with water.....dollars..	28.73	(⁵)	22.11	18.94	10.42	(⁵)	(⁵)
Increase or decrease (-) over preceding census.....percent..	⁴ 29.9	(⁵)	16.7	81.8	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	75,174,645	(⁵)	58,489,575	70,079,028	32,382,077	(⁵)	(⁵)
Average per acre based on irrigable area in enterprises.....dollars..	29.04	(⁵)	22.30	¹¹ 16.19	¹¹ 9.21	(⁵)	(⁵)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	0.73	(⁵)	0.87	1.26	0.89	(⁵)	(⁵)

¹Includes 153,600 acres in Yellowstone National Park. ²A decrease of 44,800 acres was due to the building of several reservoirs for irrigation projects. ³Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ⁴Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁵Not available. ⁶Irrigated land from which crops were harvested plus 228,476 acres of irrigated land used only for pasture. ⁷Irrigated land from which crops were harvested. ⁸Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁹Data were secured from crops irrigated but the returns were considered relatively incomplete. ¹⁰Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹¹For 1920 and 1910 relates to total area in enterprise. Irrigable areas for those years were not reported. ¹²The land area shown for 1940 represents re-determinations by the Bureau of the Census, and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	41,823	46,451,594	5,748,069	1,369,126	228,476	350,178,461	7.54	66,610,875	1.43	43,193,602	0.93
Owners and managers.....	30,181	38,591,217	4,410,260	1,021,441	183,638	278,677,767	7.22	53,752,421	1.39	33,237,340	0.86
Tenants.....	11,642	7,860,377	1,337,809	337,685	44,838	71,500,694	9.10	12,858,454	1.64	9,956,262	1.27
Irrigated farms, total.....	15,087	16,022,060	1,783,766	1,369,126	228,476	163,836,136	10.23	33,750,271	2.11	16,967,155	1.06
Owners and managers.....	10,858	14,015,361	1,367,514	1,021,441	183,638	129,225,314	9.22	27,308,944	1.95	12,735,851	0.91
Tenants.....	4,229	2,006,699	416,252	337,685	44,838	34,610,822	17.25	6,441,327	3.21	4,231,304	2.11
Wholly irrigated farms.....	10,048	7,814,138	991,404	991,404	169,724	95,193,995	12.18	21,694,423	2.78	10,121,619	1.30
Owners and managers.....	7,121	6,814,241	742,986	742,986	136,725	74,319,287	10.91	17,258,151	2.53	7,291,729	1.07
Tenants.....	2,927	999,897	248,418	248,418	32,999	20,874,708	20.88	4,436,272	4.44	2,829,890	2.83
Partly irrigated farms.....	5,039	8,207,922	792,362	367,722	58,752	68,642,141	8.36	12,055,848	1.47	6,845,536	0.83
Owners and managers.....	3,737	7,201,120	624,628	278,455	46,913	54,906,027	7.62	10,050,793	1.40	5,444,122	0.76
Tenants.....	1,302	1,006,802	167,734	89,267	11,839	13,736,114	13.64	2,005,055	1.99	1,401,414	1.39
Nonirrigated farms, total.....	26,736	30,429,534	3,964,303	.....	.....	186,342,325	6.12	32,860,604	1.08	26,226,447	0.86

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-feet	Dollars	Dollars
Total.....	5,555	2,588,214	2,344,390	1,711,409	1,594,912	1,681,729	7.3	1,524,390	1,656,110	1,483,338	2.2	0.91	0.41
Primary sources:													
Streams, gravity.....	4,427	2,154,007	1,983,640	1,475,894	1,392,161	1,515,212	6.0	1,294,767	1,424,963	1,256,743	2.1	0.71	0.33
Streams, pumped.....	381	73,854	58,205	35,925	38,620	15,743	-7.0	35,517	34,886	34,614	2.1	2.86	1.37
Streams, gravity and pumped.....	48	283,649	228,320	145,679	56,970	19,872	155.7	144,228	145,667	144,216	1.8	1.43	0.80
Wells, pumped.....	62	1,040	980	844	243	139	247.3	844	777	777	1.7	4.64	2.70
Wells, flowing.....	24	779	753	698	821	212	-15.0	93	33	33	6.4	0.67	0.10
Wells, pumped and flowing.....													
Lakes, gravity.....	19	19,971	19,932	6,480	4,905	16,653	32.1	6,398	6,462	6,382	4.7	1.37	0.29
Lakes, pumped.....	28	500	308	244	5,528	79	-95.6	244	225	225	1.7	4.34	2.49
Springs.....	272	13,099	11,789	10,215	10,947	14,945	-6.7	9,723	9,477	8,996	2.1	0.63	0.30
Springs and streams.....	96	21,005	20,403	17,371				16,467	16,586	16,133	1.8	0.32	0.18
Stored storm water.....	46	3,830	3,620	2,531	4,628	3,280	-47.6	2,516	2,182	2,157	0.8	1.02	1.29
City water.....	1	(2)	(2)	(2)	335	15	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Sewage.....	1	(2)	(2)	(2)	5	245	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Streams, gravity; wells, pumped...	19	1,653	1,636	1,496	2,694	155	-44.5	1,396	1,248	1,248	1.5	0.75	0.48
Streams, gravity; wells, flowing..	1	(2)	(2)	(2)		6,068		(2)	(2)	(2)	(2)	(2)	(2)
Streams, pumped; wells, pumped...	2	(2)	(2)	(2)				(2)	(2)	(2)	(2)	(2)	(2)
Waste water, seepage or drainage..	25	1,485	1,482	1,448				1,123	1,363	1,068	2.1	0.51	0.25
Other mixed.....	49	13,191	13,171	12,467	76,732	89,070	-85.8	10,957	12,124	10,619	2.0	1.06	0.53
Other and not reported.....					123	41							
Supplemental sources:²													
Streams, gravity and/or storage...	44	270,824	233,824	168,502				120,164	145,930	123,149	1.3	0.70	0.56
Streams, pumped.....	8	367	367	304				304	299	299	1.3	2.03	1.57
Wells, pumped.....	1	(2)	(2)	(2)				(2)	(2)	(2)	(2)	(2)	(2)
Wells, flowing.....	1	(2)	(2)	(2)									

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ³Areas shown under "Supplemental sources" are a part of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	67,352,505	100.0	28.73	50,319,204	100.0	22.11	6.62	1,650,373	0.73	1,476,854	0.87	-0.14	1,369,651	1.26
Primary sources:														
Streams, gravity.....	43,431,164	64.5	21.89	41,292,784	82.1	20.91	0.98	1,419,225	0.58	1,280,361	0.77	-0.19	1,249,390	1.18
Streams, pumped.....	1,957,853	2.9	33.64	2,208,926	4.4	43.23	-9.59	34,886	3.47	37,957	2.36	1.11	11,414	5.63
Streams, gravity and pumped.....	15,406,871	22.9	67.48	4,374,096	8.7	41.88	25.60	145,667	1.31	56,930	1.91	-0.60	19,872	1.77
Wells, pumped.....	34,741	0.1	35.45	14,259	(3)	49.34	-13.89	777	4.64	171	9.38	-4.74	49	5.41
Wells, flowing.....	13,290	(3)	17.65	9,025	(3)	7.69	9.96	33	0.67	753	1.62	-0.95	154	7.24
Wells, pumped and flowing.....														
Lakes, gravity.....	491,592	0.7	24.66	128,526	0.2	9.56	15.1	6,462	1.11	4,348	0.45	0.66	8,063	5.46
Lakes, pumped.....	22,997	(3)	74.67	194,880	0.4	18.94	55.73	225	4.34	5,528	4.52	-0.18	41	11.07
Springs.....	91,284	0.1	7.74	79,313	0.1	6.08	1.66	9,477	0.61	9,369	0.70	-0.09	7,821	1.57
Springs and streams.....	86,464	0.1	4.24					16,586	0.32					
Stored storm water.....	45,379	0.1	12.54	131,355	0.3	18.52	-5.98	2,192	1.03	4,714	1.32	-0.29	1,957	5.74
City water.....	(4)	(4)	(4)	4,050	(3)	8.77	(4)	(4)	(4)	312	3.30	(4)		
Sewage.....	(4)	(4)	(4)	25	(3)	5.00	(4)	(4)	(4)					
Streams, gravity; wells, pumped...	15,411	(3)	9.42	25,267	(3)	5.59	3.83	1,248	0.75	1,425	1.11	-0.36	150	6.67
Streams, gravity; wells, flowing..	(4)	(4)	(4)					(4)	(4)				6,065	1.41
Streams, pumped; wells, pumped...	(4)	(4)	(4)					(4)	(4)					
Waste water, seepage or drainage..	4,212	(3)	2.84					1,363	0.72					
Other mixed.....	279,235	0.4	21.20	1,855,891	3.7	19.55	1.65	12,124	0.95	74,883	0.79	0.16	64,675	0.99
Other and not reported.....				805	(3)	6.54				103	0.19			
Supplemental sources:²														
Streams, gravity and/or storage...	5,457,887	8.1	23.34					168,462	0.12					
Streams, pumped.....	10,940	(3)	28.27					299	2.03					
Wells, pumped.....	(4)	(4)	(4)					(4)	(4)					
Wells, flowing.....	(4)	(4)	(4)											

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁵Areas shown under "Supplemental sources" are a part of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	
	1940		1930				1940		1930			
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises		
AREA IRRIGATED												
Total.....	Acres 1,711,409	Acres 168,863	Acres 1,594,912	Acres 1,661,729	Percent 7.3							
Individual and partnership.....	827,564	5,504	885,274	976,615	-6.5	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued						
Cooperative, incorporated.....	285,029	132,791	418,862	393,257	5.9		Bureau of Reclamation ²	Acres 323,197	Acres 247,756	Acres 172,206	Acres 172,206	Percent 30.4
Cooperative, unincorporated.....	158,344	490	163,374	163,374	-14.8		Office of Indian Affairs ²	241,184	220,870	215,940	9.2	
Irrigation district.....	71,434	30,072	83,870	35,153	80.5		State.....	328,353	360	50	(⁴)	
Commercial.....	40,384		22,375	34,115	89.2		City and/or sewage.....	(⁵)		390	(⁵)	
Bureau of Reclamation ²	186,002		98,327	88,291	76.1		Other.....		17,000	84,478		
Office of Indian Affairs ²	133,542		75,844	98,867	(⁴)							
State.....	³ 9,110		360	20	(⁶)							
City and/or sewage.....	(⁵)			320	(⁶)							
Other.....			10,000	55,071								
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						IRRIGABLE AREA⁵						
Total.....	2,344,390	234,269	2,276,000	2,753,498	3.0	Total.....	2,588,214	271,269	2,622,423	4,329,146	-1.3	
Individual and partnership.....	986,782	6,238	1,099,699	1,617,617	-10.3	Individual and partnership...	1,030,610	6,238	1,243,248	2,372,086	-17.1	
Cooperative, incorporated.....	356,348	177,243	524,077	553,952	8.7	Cooperative, incorporated...	371,143	182,243	544,738	699,310	8.0	
Cooperative, unincorporated.....	213,532	716	137,458	70,650	-39.8	Cooperative, unincorporated...	217,120	716	141,648	71,687	-32.6	
Irrigation district.....	82,711	50,072	28,780	38,215	290.1	Irrigation district.....	95,511		29,780	39,160	349.8	
Commercial.....	112,263					Commercial.....	133,943	74,002	311,471	436,982	14.8	
						Bureau of Reclamation ²	357,559		334,178	526,690	4.2	
						Office of Indian Affairs ²	348,087		100	(⁴)		
						State.....	³ 34,241	8,000	360	(⁵)		
						City and/or sewage.....	(⁵)		530	(⁵)		
						Other.....		17,000	182,603			

¹Irrigated areas shown under "Supplemental enterprises" are a part of irrigated areas in "Primary enterprises," (see text). ²U. S. Dept. of the Interior. ³Data for 1 "City and/or sewage" enterprise are included with "State" enterprises in the 1940 Census. ⁴Percent not shown when more than 1,000. ⁵For 1920 relates to total area. Irrigable area for that year was not reported. ⁶For explanation of areas, see text, p. 317.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total ✓	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area ✓	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 5,555	Number 351	Acres 2,588,214	Acres 2,344,390	Dollars 26.17	Dollars 0.72	Dollars 23.33	Dollars 0.12	Number 17,094	Acres 1,711,409	Acres 1,501,678	Acres 7,844	Acres 201,667
Individual and partnership.....	5,123	59	1,030,610	986,782	6.05	0.42	4.04	0.31	6,023	827,564	709,666	3,175	114,723
Cooperative, incorporated.....	132	120	371,143	356,348	12.16	0.50	15.92	0.11	3,045	285,029	260,597	238	24,194
Cooperative, unincorporated.....	126	103	217,120	213,532	20.56	0.64	1.89	0.36	1,609	158,344	139,423	402	18,519
Irrigation district.....	26	26	85,511	82,711	44.08	0.92			1,161	71,434	66,591	700	4,143
Commercial.....	17	17	133,943	112,263	16.30	1.98	42.69	0.15	594	40,384	36,135	37	4,212
U. S. Bureau of Reclamation.....	18	18	357,559	323,197	82.33	1.45			2,666	186,002	173,271	1,215	11,516
U. S. Office of Indian Affairs.....	8	6	348,087	241,184	58.39	1.44			1,905	133,542	108,700	1,487	23,355
State.....	⁴ 105	2	⁴ 34,241	⁴ 28,353	⁴ 17.81	1.23			⁴ 91	⁴ 9,110	⁴ 7,495	590	⁴ 1,025
City and/or sewage.....	(⁵)		(⁵)	(⁵)	(⁵)				(⁵)	(⁵)	(⁵)		(⁵)
Other.....													

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 1 "City and/or sewage" enterprise are included with "State" enterprises in the 1940 Census. ⁵For explanation of areas and investment, see text, p. 317.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								Increase or decrease (-) 1930-40	AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940				1930	1920	Primary enterprises	Supplemental enterprises					
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment						Investment in water rights			
Total.....	Dollars 67,352,505	Dollars 61,882,978	Dollars 5,469,527	Dollars 66,830,409	Dollars 522,096	Dollars 50,319,204	Dollars 52,143,363	Percent 33.9	Dollars 26.40	Dollars 23.35	Dollars 2,328,541	Dollars 7,822,140	
Individual and partnership.....	6,238,533	6,212,642	25,891	5,997,741	240,792	7,585,504	15,543,287	-17.9	6.30	4.15	1,049	399,999	
Cooperative, incorporated.....	7,245,601	4,421,100	2,824,501	7,156,251	89,350	8,466,936	6,692,877	38.9	12.41	15.94	57,870	92,120	
Cooperative, unincorporated.....	4,514,497	4,513,047	1,450	4,391,948	122,549	5,404,781	1,708,851	-30.9	21.14	2.03	6,306	21,200	
Irrigation district.....	3,736,632	3,711,632	2,137,660	3,670,622	66,010	6,692,877	6,692,877		44.87		74,252	114,800	
Commercial.....	3,945,268	1,832,608	2,137,660	3,942,693	2,575	6,692,877	6,692,877		16.32	42.69	4,375	371,881	
U. S. Bureau of Reclamation.....	26,607,374	26,607,374		26,607,374		18,325,910	14,381,316	45.2	82.33		1,066,144	1,314,731	
U. S. Office of Indian Affairs.....	14,079,522	14,079,522		14,079,522	815	9,588,693	8,133,390	46.8	58.38		1,054,262	5,478,984	
State.....	² 985,078	² 505,053	480,025	² 985,073	5	3,900	100	(³)	² 17.81		67,283	28,425	
City and/or sewage.....	(⁵)	(⁵)		(⁵)		105,538			(⁵)				
Other.....						300,000	4,841,467						

¹Only for enterprises serving 5 or more farms. ²Data for 1 "City and/or sewage" enterprise are included with "State" enterprises in the 1940 Census. ³Percent not shown when more than 1,000. ⁴For explanation of investment, see text, p. 317.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter- prises 1940	Area		Total indebt- ness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter- prises 1940	Total arrearages		Average per acre assessed 1939 ⁵	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri- gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	103	1,441,464	1,261,979	44,542,281	52.72	39.97	27	1,820,069	1,853,066	5.64	1,242,450	1,150,790	794,317
Partnership.....	52	384,981	378,721	1,668,479	2.38	2.12	9	49,607	28,377	0.70	38,299	13,046	2,464
Cooperative, incorporated.....	4	119,860	119,860	4,115,396	42.52	34.34	2	(?)	(?)	(?)	426,289	268,701	232,994
Cooperative, unincorporated.....	18	81,917	74,117	1,515,852	21.33	20.45	2	(?)	(?)	(?)	182,186	135,347	124,015
Irrigation district.....	8	150,160	126,000	1,456,322	4.08	1.23	2	(?)	(?)	(?)	80,668	119,505	129,699
Commercial.....	15	357,559	323,197	21,024,089	86.15	65.05	11	42,368	71,439	0.22	89,382	82,589	50,677
Bureau of Reclamation ⁶	6	346,987	240,084	14,762,143	80.33	6.49	11	45,682	42,320	33.81	241,848	322,635	147,427
Office of Indian Affairs ⁷	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)
State.....	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)
City and/or sewage.....	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)	(⁸)

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$15.98. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$12.13. ⁵Based on primary enterprises only; State average for supplemental enterprises is \$1.33. ⁶Data for 1 "State" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁷Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁸U. S. Dept. of the Interior. ⁹Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ¹⁰Represents construction costs of irrigation works less cancellations and repayments. ¹¹Data for less than 3 enterprises shown with permission of the enterprises involved. ¹²For explanation of areas and investment, see text, p. 317.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	1,650,373	1,180,189	168,762	20,908	0.72	0.12	248	1,501,148	1,904
Individual and partnership.....	779,184	329,322	5,403	1,672	0.42	0.31	24	4,137	35
Cooperative, incorporated.....	284,516	142,646	132,791	14,599	0.50	0.11	101	92,806	246
Cooperative, unincorporated.....	153,932	99,343	496	180	0.65	0.36	63	71,908	270
Irrigation district.....	70,697	64,846	30,072	4,457	0.92	0.12	24	33,457	70
Commercial.....	40,384	79,653			1.98	0.15	15	38,229	61
U. S. Bureau of Reclamation ²	186,002	269,783			1.45		15	773,413	767
U. S. Office of Indian Affairs.....	133,542	191,802			1.44		6	487,198	455
State.....	2,116	2,594			1.23				
City and/or sewage.....									

¹Only for enterprises serving 5 or more farms.

²For explanation of areas and investment, see text, p. 317.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS	PUMPING PLANTS				
	Diver- sion	Stor- age	Capac- ity at main head- ing	Length ¹		Num- ber	Capacity	Length	Num- ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac- ity	Number	Rated capac- ity
	Number	Number	Sec.-ft.	Miles	Miles		Ac.-ft.	Miles		G. p. m.		G. p. m.	Hp.		G. p. m.	
Total.....	6,136	468	66,745	15,555	147.5	517	1,301,422	148.1	44	9,834	102	33,883	651	29,110	680	1,309,014
Individual and partnership.....	5,818	297	37,355	8,331	79.7	331	45,058	89.1	43	9,804	100	32,883	576	8,399	601	666,476
Cooperative, incorporated.....	89	32	10,966	1,342	5.5	32	361,292	4.4			2	1,000	7	140	7	10,075
Cooperative, unincorporated.....	111	5	4,772	1,076	10.5	8	147,759	7.1					3	26	3	1,750
Irrigation district.....	15	11	1,847	484	5.9	11	14,217	6.7					23	1,530	21	83,200
Commercial.....	16	14	2,450	245	7.0	14	109,145	2.3	1	30			10	3,870	16	96,000
Bureau of Reclamation ³	21	10	6,167	1,806	17.2	10	405,190	39.8					11	4,515	11	213,791
Office of Indian Affairs ³	32	23	2,549	2,160	20.5	23	188,658	4.6					18	10,540	18	224,622
State.....	434	76	639	111	1.2	88	30,103	0.1					3	90	3	3,100
City and/or sewage.....	(⁴)		(⁴)													

¹Includes main and lateral canals but not farm ditches.

²Includes flumes.

³U. S. Dept. of the Interior.

⁴Data for 1 "City and/or sewage" enterprise are included with "State" enterprises in the 1940 Census.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
Total.....	Number 6,136	Number 468	Number 2,856	Number 326	Earth and rock.....	Number 3,217	Number 385	Number 1,990	Number 176
Concrete or masonry.....	254	19	188	40	Other and mixed.....	1,512	47	206	86
Timber.....	1,067	4	472	.....	Not reported.....	86	13	.....	24

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	680	100.0	1,309,014	100.0	21	Total, 1940.....	651	100.0	29,110	100.0
Electric motor.....	160	23.6	465,579	35.6	31	Centrifugal pump.....	555	85.3	17,952	61.7
Centrifugal.....	133	19.6	444,360	34.0	28	Electric.....	133	20.4	9,974	34.3
Turbine.....	8	1.2	8,862	0.7	64	Internal-combustion.....	409	62.9	7,191	24.7
Plunger.....	14	2.1	611	(¹)	36	Other.....	13	2.0	787	2.7
Other.....	5	0.7	11,726	0.9	31	Turbine pump.....	19	2.9	349	1.2
Internal-combustion engine.....	461	67.8	583,334	44.6	17	Electric.....	5	0.8	102	0.4
Centrifugal.....	418	61.5	521,815	39.9	17	Internal-combustion.....	14	2.1	247	0.8
Turbine.....	17	2.5	27,522	2.1	18	Other.....	.....	.....	.....	.....
Plunger.....	12	1.8	982	0.1	36	Plunger pump.....	34	5.2	96	0.3
Other.....	14	2.0	33,015	2.5	16	Electric.....	14	2.1	28	0.1
Other kinds of motive power.....	18	2.6	40,698	3.1	25	Internal-combustion.....	13	2.0	40	0.1
Centrifugal.....	11	1.6	40,200	3.1	18	Other.....	7	1.1	28	0.1
Turbine.....	.....	.....	.....	.....	.....	Other and mixed types of pumps.....	43	6.6	10,713	36.8
Plunger.....	5	0.7	248	(¹)	34	Electric.....	13	2.0	9,309	31.9
Other.....	2	0.3	250	(¹)	41	Internal-combustion.....	24	3.7	745	2.6
Mixed kinds of motive power.....	41	6.0	219,403	16.7	29	Other.....	6	0.9	659	2.3
Centrifugal.....	33	4.9	186,475	14.2	25	Total, 1930.....	² 198	.....	9,095	.....
Turbine.....	2	0.3	29,700	2.3	44	Increase or decrease (-) 1930-1940.....	453	.....	20,015	.....
Plunger.....	3	0.4	28	(¹)	66					
Other.....	3	0.4	3,200	0.2	20					
Total, 1930.....	233	.....	523,194	.....	22					
Increase or decrease (-) 1930-1940..	447	.....	785,520	.....	-1					

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
	Miles	Miles	Percent		Miles	Miles	Percent
Total.....	148.1	64.9	128.2	Wood-stave:			
Concrete:				1 to 12 inches.....	10.8	4.7	129.8
1 to 12 inches.....	1.8	0.2	800.0	13 to 24 inches.....	6.2	11.1	37.6
13 to 24 inches.....	3.9	.....	.....	Over 24 inches.....	9.1	.....	.....
Over 24 inches.....	8.8	12.1	5.0	Clay and other:			
Metal:				1 to 12 inches.....	0.9	0.7	28.6
1 to 12 inches.....	56.8	19.6	189.8	13 to 24 inches.....	26.4	8.5	228.2
13 to 24 inches.....	12.9	.....	.....	Over 24 inches.....	1.5	.....	.....
Over 24 inches.....	9.0	8.0	173.8				

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	199	184	276	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	822,140	840,007	¹ 751,274	(a) Enterprises reporting lands drained and/or needing drainage...percent..	31.1	³ 10.1	¹ 8.1
Area irrigated in these enterprises.....acres...	473,604	(²)	(²)	(b) All irrigation enterprises.....percent..	8.6	5.3	3.7
Area for which drains have been installed.....acres...	147,151	85,189	62,872	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	52,071	59,995	50,901	(a) Irrigable area reporting.....percent..	24.2	17.3	¹ 15.1
				(b) Irrigated area reporting.....percent..	42.1	(²)	(²)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ² Not available. ³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,577,861	2,244,723	4,103,486	1,359,246	678,245	1,802,871	1,218,615	1,566,478	2,300,615
Area irrigated by these enterprises.....acres.....	760,345	516,637	745,925	411,749	212,746	424,712	348,596	303,891	321,213
Average water per acre irrigated.....acre-feet..	3.4	4.3	5.5	3.3	3.2	4.2	3.5	5.2	7.2
Total water delivered to irrigators.....acre-feet..	3,209,500	602,515	968,991	868,707	283,818	409,939	2,339,793	318,697	559,052
Area irrigated by these enterprises.....acres.....	1,522,132	349,323	290,884	453,025	172,770	181,430	1,069,107	176,553	109,454
Average water per acre irrigated.....acre-feet..	2.1	1.7	3.3	1.9	1.6	2.3	2.2	1.8	5.1
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	4,646	.....	.....	.....	.....	.....	4,646	.....	.....
Area irrigated by these enterprises.....acres.....	2,258	.....	.....	.....	.....	.....	2,258	.....	.....
Average water per acre irrigated.....acre-feet..	2.1	.....	.....	.....	.....	.....	2.1	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	249,475	.....	.....	249,095	.....	.....	380	.....	.....
Area irrigated by these enterprises.....acres.....	116,814	.....	.....	116,599	.....	.....	215	.....	.....
Average water per acre irrigated.....acre-feet..	2.1	.....	.....	2.1	.....	.....	1.8	.....	.....
Total water delivered to irrigators.....acre-feet..	155,540	.....	.....	144,399	.....	.....	11,141	.....	.....
Area irrigated by these enterprises.....acres.....	123,468	.....	.....	113,544	.....	.....	9,924	.....	.....
Average water per acre irrigated.....acre-feet..	1.3	.....	.....	1.3	.....	.....	1.1	.....	.....
From underground sources reported:									
Total water delivered to irrigated.....acre-feet..	3	.....	.....	.....	.....	.....	3	.....	.....
Area irrigated by these enterprises.....acres.....	1	.....	.....	.....	.....	.....	1	.....	.....
Average water per acre irrigated.....acre-feet..	3.0	.....	.....	.....	.....	.....	3.0	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	1,711,409	100.0	168,863	1,594,912	100.0	1,681,729	100.0
Appropriation ²	1,293,069	75.6	125,534	696,590	43.7	901,692	53.6
Underground.....	1,565	0.1	57	1,064	0.1	482	(3)
Appropriation and underground.....	271	(3)	.....	.....	.....	.....	.....
Adjudicated by court.....	393,604	23.0	30,183	805,729	50.5	701,015	41.7
Other mixed and not reported.....	22,900	1.3	13,089	91,529	5.7	78,540	4.7

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²"Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," "Certificate or license from State," and "Riparian."
³Less than one-tenth of 1 percent.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 186,002 acres irrigated in 1939 which were within the Bitter Root, Frenchtown, Huntley, Milk River, and Sun River Projects, and the area within Montana of the Lower Yellowstone Project (North Dakota) and a small area of the Shoshone (Wyoming) Project. The area in State table 7 includes that of the first or Glendive Division of the Buffalo Rapids Project, which began operating in 1940.

The investment attributed to the Bureau of Reclamation in State tables relates to the areas within Montana of these eight projects and reflects construction costs incurred by the United States for irrigation works and an investment totalling \$1,429,456 of non-Federal funds by irrigation districts in facilities which are included in the Chinook Division of the Milk River Project. Costs of drainage systems on Bureau of Reclamation Projects are excluded from the totals in this census. Data are omitted relating to an extension of the first division of the Buffalo Rapids Project and a second division of this project, which were under construction in 1940.

Since the Irrigation Census of 1930, the Bureau of Reclamation, under congressional authorization, took over

the Bitter Root Project, which had been constructed by private capital, and much of the system was rehabilitated. The Frenchtown Project was completed, new areas were brought in on the Sun River and Milk River Projects, and the construction of the Buffalo Rapids Project begun. The Buffalo Rapids Project was authorized in 1937 under the Emergency Relief Act of 1935 to provide employment in the Glendive area and provide family-size irrigated farms in an area where farming was unsuccessful without irrigation. The extension of the first division, and the second division of this project were authorized under the Water Conservation and Utilization Program which grew out of drought conditions in the Great Plains and areas to the westward.

Expansion of irrigation in eastern Montana and western North Dakota may follow the utilization of power produced at Fort Peck Dam, construction by the Corps of Engineers, United States Army, to provide low-cost electric energy for pumping projects along the Missouri River and its tributaries. Under the Fort Peck Power Act of 1938, the Bureau of Reclamation is the distributing agency for this power.

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

PRIMARY ENTERPRISES (For definitions and explanations, see text)		Total	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	5,501	99	4,618	465	241	58	19	² 1
2	Irrigated farms, 1939.....number...	17,094	.....	4,618	1,155	2,289	2,760	5,050	1,222
3	Area irrigated, 1939.....acres...	1,711,400	.....	667,794	137,556	273,542	221,279	334,992	76,240
4	(a) From which crops were harvested.....acres...	1,501,878	.....	570,682	117,419	236,092	202,546	312,887	60,252
5	(b) On which crops failed.....acres...	7,944	.....	2,508	1,324	834	2,562	164	452
6	(c) Irrigated pasture.....acres...	201,687	.....	94,604	18,813	34,616	16,171	21,941	15,542
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	61,882,978	2,765,763	5,161,520	1,210,246	3,904,574	11,446,828	29,377,622	8,016,425
8	(a) Cost of irrigation works and equipment.....dollars..	61,363,783	2,763,213	4,980,323	1,107,255	3,818,677	11,401,083	29,276,807	8,016,425
9	(b) Investment in water rights.....dollars..	519,195	2,550	181,197	102,991	85,897	45,745	100,815	.....
10	Area works were capable of supplying with water.....acres...	2,344,390	38,756	797,080	166,874	317,157	400,264	519,769	104,490
11	Average investment per acre irrigated.....dollars..	36.16	.....	7.73	8.80	14.27	51.73	87.70	105.14
12	Average investment per acre which the works could supply with water.....dollars..	26.40	71.36	6.48	7.25	12.31	28.60	56.52	76.72
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	4,818	21	4,071	428	225	54	18	² 1
14	(a) Area irrigated in these enterprises.....acres...	1,650,373	.....	627,291	130,745	265,557	215,542	334,992	76,246
15	(b) Cost of maintenance and operation.....dollars..	1,180,189	1,657	281,600	44,835	97,267	235,840	429,376	89,614
16	(c) Average cost per acre irrigated.....dollars..	0.72	.....	0.45	0.34	0.37	1.09	1.28	1.18
17	Total annual charges ³.....dollars..	1,057,500	500	108	183	123,984	310,116	501,601	121,008
18	Average charge per irrigated acre reporting.....dollars..	1.18	.....	1.33	0.21	0.47	1.40	1.50	1.59
19	Area against which charges were assessed.....acres...	1,065,494	4,000	86	860	282,885	248,610	423,829	105,224
20	Average annual charge per acre assessed.....dollars..	0.99	0.12	1.26	0.21	0.44	1.25	1.18	1.15
21	Total charges collected ³.....dollars..	729,103	.....	37	147	87,122	221,545	318,513	101,739
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ⁴.....number...	94	3	² 1	.....	32	40	17	1
23	(a) Area irrigated in these enterprises.....acres...	641,746	.....	81	.....	64,350	169,177	331,892	76,246
24	(b) Indebtedness.....dollars..	41,968,921	242,323	4,759	.....	748,005	5,851,508	26,190,845	8,931,481
25	(c) Average indebtedness per acre irrigated.....dollars..	65.40	.....	58.75	.....	11.62	34.59	78.91	117.14
26	(d) Cost of irrigation works and equipment.....dollars..	51,092,213	1,722,013	6,861	.....	1,593,987	10,539,130	29,213,797	8,016,425
27	(e) Investment in water rights.....dollars..	187,305	.....	.....	.....	43,810	42,680	100,815	.....
28	(f) Total investment.....dollars..	51,279,518	1,722,013	6,861	.....	1,637,797	10,581,810	29,314,612	8,016,425
29	(g) Maintenance and operation.....dollars..	714,838	.....	84	.....	28,689	171,875	424,576	89,614
30	(h) Total annual charges ³.....dollars..	942,262	.....	108	.....	53,114	271,391	496,641	121,008
31	(i) Total charges collected ³.....dollars..	656,750	.....	37	.....	37,678	203,743	313,553	101,739
32	(j) Area against which annual charges were assessed.....acres...	791,462	.....	86	.....	72,999	429,424	420,729	105,224
33	(k) Average indebtedness per acre assessed.....dollars..	52.72	.....	55.34	.....	10.25	30.41	62.25	84.88
34	(l) Average charges per acre assessed.....dollars..	1.19	.....	1.26	.....	0.73	1.41	1.18	1.15
35	(m) Average charges per acre irrigated.....dollars..	1.47	.....	1.33	.....	0.83	1.60	1.50	1.59
36	Enterprises reporting arrearage ⁴.....number...	24	² 1	.....	.....	7	8	8	.....
37	(a) Area assessed in these enterprises.....acres...	314,973	.....	86	.....	9,810	47,183	257,894	.....
38	(b) Total arrearage.....dollars..	1,777,398	.....	149	.....	462,444	55,688	1,259,217	.....
39	(c) Average arrearage per acre assessed.....dollars..	5.64	.....	1.73	.....	47.14	1.18	4.88	.....
40	(d) Indebtedness.....dollars..	24,353,535	.....	4,759	.....	622,478	2,960,770	20,765,528	.....
TYPE, 1940									
41	Individual and partnership.....number...	5,089	41	4,547	446	55	.....	.....	.....
42	Cooperative (incorporated and unincorporated).....number...	242	4	20	14	167	31	6	.....
43	Irrigation district.....number...	25	2	.....	.....	9	12	2	.....
44	Commercial.....number...	15	1	.....	.....	9	4	1	.....
45	U. S. Bureau of Reclamation.....number...	18	1	1	.....	1	7	8	.....
46	U. S. Office of Indian Affairs.....number...	8	.....	1	1	.....	3	2	1
47	All other.....number...	104	50	49	4	.....	1	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....number...	235	2	² 1	2	156	55	18	1
49	Wages and salaries paid and payable for 1939.....dollars..	1,487,290	(⁵)	42	(⁵)	54,505	214,651	381,407	266,035
50	Persons employed during week ending April 29, 1939.....number...	1,693	(⁵)	.....	(⁵)	325	279	621	205
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....number...	4,427	77	3,613	437	234	49	17	.....
52	Streams, pumped.....number...	381	17	248	11	1	4	.....	.....
53	Wells, pumped.....number...	62	1	58	3	.....	.....	.....	.....
54	Wells, pumped and flowing; or wells flowing.....number...	24	.....	24	.....	.....	.....	.....	.....
55	Lakes, gravity or pumped.....number...	47	1	42	1	1	2	.....	.....
56	Streams and springs; or springs.....number...	368	1	357	9	1	.....	.....	.....
57	Mixed, streams and wells.....number...	70	2	59	2	1	3	2	1
58	Other mixed or stored storm water.....number...	122	.....	117	2	3	.....	.....	.....
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		Total	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	54	1	33	2	7	7	4	.....
2	Irrigated farms, 1939.....number...	1,219	.....	33	.....	109	425	652	.....
3	Area irrigated, 1939.....acres...	168,863	.....	2,411	.....	10,756	93,064	62,632	.....
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	5,469,527	503,099	.....	114,767	.....	1,426,857	3,424,804	.....
5	(a) Cost of irrigation works and equipment.....dollars..	5,466,626	502,615	.....	112,850	.....	1,426,357	3,424,804	.....
6	(b) Investment in water rights.....dollars..	2,901	.....	484	1,917	.....	500	.....	.....
7	Area works were capable of supplying with water.....acres...	234,269	.....	3,205	16,126	.....	111,895	103,043	.....
8	Average investment per acre irrigated.....dollars..	32.39	.....	9.57	10.67	.....	15.33	54.68	.....
9	Average investment per acre which the works could supply with water.....dollars..	23.35	.....	7.20	7.12	.....	12.75	33.24	.....

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Data for less than 3 enterprises shown with permission of the enterprises involved.
³Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES,
FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
99	3,179	1,268	819	113	22	² 1	5,053	275	113	51	9	1
.....	3,374	1,702	3,091	2,971	4,734	1,222	6,452	1,386	2,035	3,399	3,820	2
.....	113,979	208,291	524,275	391,713	396,905	76,246	732,903	191,242	211,464	303,485	272,295	3
.....	99,418	177,023	459,088	351,988	354,109	60,252	633,090	169,324	187,234	263,980	246,250	4
.....	1,294	1,043	2,286	1,624	1,145	452	3,371	427	1,137	2,368	521	5
.....	13,287	30,225	62,901	36,101	41,651	15,542	96,442	21,491	23,113	37,117	23,524	6
2,765,763	1,749,738	1,630,444	6,331,452	10,905,996	30,483,160	8,016,425	3,560,515	2,107,713	3,718,616	20,006,049	32,489,865	7
2,763,213	1,690,199	1,543,683	6,219,277	10,753,141	30,377,845	8,016,425	3,376,821	1,987,067	3,620,426	19,339,584	32,439,585	8
2,550	59,599	86,761	112,175	152,855	105,315	.....	183,694	120,646	98,390	66,465	50,000	9
38,756	172,208	251,008	623,289	548,330	606,309	104,490	877,536	218,798	311,088	482,850	453,118	10
.....	15.35	7.83	12.08	27.84	76.80	105.14	4.86	11.02	17.58	65.92	119.32	11
71.36	10.16	6.50	10.16	19.89	50.28	76.72	4.06	9.63	11.95	41.35	71.70	12
21	2,737	1,159	769	110	21	² 1	4,396	260	109	45	8	13
.....	100,048	190,814	499,047	386,713	396,905	76,246	683,942	185,187	210,404	298,485	272,295	14
1,657	107,893	92,418	193,089	257,951	437,567	89,614	269,497	80,065	115,867	345,176	369,544	15
.....	1.07	0.48	0.39	0.07	1.10	1.18	0.43	0.43	0.55	1.16	1.36	16
500	865	2,559	93,854	334,628	503,985	121,008	17,327	46,325	126,156	432,474	435,118	17
.....	1.61	0.56	0.59	1.21	1.32	1.59	0.22	0.55	0.67	1.58	1.60	16
4,000	716	5,451	168,824	313,800	467,479	105,224	80,995	88,589	197,794	314,283	383,533	19
0.12	1.21	0.49	0.56	1.07	1.08	1.15	0.22	0.52	0.64	1.38	1.13	20
.....	342	1,044	76,093	241,519	308,366	101,739	9,657	20,276	119,108	316,904	263,156	21
3	² 1	.....	27	44	18	² 1	2	13	35	36	8	22
.....	81	.....	28,718	173,196	363,505	76,246	19,058	96,731	253,662	272,295	23	
242,323	4,759	.....	2,050,667	4,116,401	26,623,070	8,931,461	28,043	234,698	9,144,361	32,550,399	24	
.....	58.75	.....	71.41	23.77	73.24	117.14	1.50	2.43	36.05	119.58	25	
1,722,013	6,861	.....	2,467,991	8,777,888	30,081,035	8,016,425	126,341	1,353,068	17,172,929	32,439,875	26	
.....	.....	.....	10,035	76,455	100,815	.....	.....	71,990	65,315	50,000	27	
1,722,013	6,861	.....	2,498,026	8,854,343	30,181,850	8,016,425	126,341	1,425,058	17,238,244	32,489,875	28	
.....	84	.....	32,490	158,020	434,630	89,614	9,118	54,397	281,779	369,544	29	
.....	108	.....	38,945	280,397	501,804	121,008	20,778	77,686	409,280	435,118	30	
.....	37	.....	32,052	217,211	305,711	101,739	9,894	74,687	309,013	263,156	31	
.....	86	.....	32,015	205,058	449,079	105,224	20,788	101,541	265,600	383,533	32	
.....	55.34	.....	64.06	20.07	59.28	84.88	1.38	2.17	31.22	84.90	33	
.....	1.26	.....	1.22	1.37	1.12	1.15	1.00	0.76	1.43	1.13	34	
.....	1.33	.....	1.36	1.62	1.38	1.59	1.09	0.80	1.61	1.60	35	
.....	² 1	.....	7	8	8	.....	4	3	12	5	36	
.....	86	.....	7,801	52,127	254,959	.....	2,381	5,055	110,314	196,323	37	
.....	149	.....	507,774	9,746	1,259,727	.....	936	9,805	646,704	1,119,893	38	
.....	1.73	.....	65.09	0.19	4.94	.....	0.39	1.73	5.86	5.70	39	
.....	4,759	.....	1,917,895	2,737,257	19,693,624	.....	10,546	33,805	5,035,578	19,273,606	40	
41	3,112	1,242	655	38	1	.....	4,657	197	30	5	.....	41
4	23	18	137	53	7	.....	97	65	64	15	.....	42
2	.....	.....	13	8	2	.....	1	4	11	9	.....	43
1	.....	.....	8	5	1	.....	1	2	7	5	.....	44
1	1	.....	.....	8	8	.....	.....	1	.....	11	.....	45
.....	1	.....	3	.....	3	1	1	.....	.....	5	.....	46
50	42	8	3	1	.....	.....	96	6	1	1	.....	47
2	5	15	127	65	20	² 1	61	54	73	39	8	48
570,864	.....	1,204	111,843	118,435	418,909	266,035	8,410	18,692	62,084	841,828	556,276	49
476	.....	13	332	222	643	205	121	113	188	856	615	50
77	2,301	1,144	782	104	19	.....	4,027	250	103	40	7	51
17	313	38	9	3	1	.....	363	10	5	3	.....	52
1	60	1	.....	.....	.....	.....	62	.....	.....	.....	.....	53
.....	24	.....	.....	.....	.....	.....	24	.....	.....	.....	.....	54
1	38	5	2	1	.....	.....	43	2	.....	2	.....	55
1	316	39	9	3	.....	.....	362	5	1	.....	.....	56
2	36	19	9	1	2	1	58	2	3	5	2	57
.....	91	22	8	1	.....	.....	114	6	1	1	.....	58
ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
1	25	11	3	7	7	.....	38	2	5	9	.....	1
.....	26	26	39	232	896	.....	96	193	.....	930	.....	2
.....	921	2,055	1,734	20,927	143,226	.....	6,395	12,242	.....	150,226	.....	3
497,866	.....	14,350	50,174	396,628	4,510,509	.....	32,365	185,244	.....	5,251,918	.....	4
497,325	.....	12,640	50,024	396,128	4,510,509	.....	31,564	183,144	.....	5,251,918	.....	5
.....	541	1,710	160	500	.....	.....	801	2,100	.....	.....	.....	6
.....	1,383	3,452	2,734	28,232	198,468	.....	7,349	17,452	.....	209,468	.....	7
.....	19.37	6.98	28.94	18.95	31.49	.....	5.06	15.13	.....	34.96	.....	8
.....	12.90	4.16	16.35	14.05	22.73	.....	4.40	10.61	.....	25.07	.....	9

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - MONTANA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
10	Enterprises reporting maintenance and operation.....number...	49	29	2	7	7	4	.....
11	(a) Area irrigated in these enterprises.....acres.....	168,762	2,310	10,756	90,064	62,632	.....	.....
12	(b) Cost of maintenance and operation.....dollars.....	20,908	1,195	2,316	10,537	6,860	.....	.....
13	(c) Average cost per irrigated acre reporting.....dollars..	0.12	0.52	0.22	0.11	0.11	.....	.....
14	Total annual charges ².....dollars.....	93,290	.....	2,595	31,655	59,040	.....	.....
15	Average charge per acre irrigated.....dollars.....	0.65	.....	0.25	0.34	1.47	.....	.....
16	Area against which charges were assessed.....acres.....	176,956	.....	14,692	93,264	69,000	.....	.....
17	Average annual charge per acre assessed.....dollars.....	0.53	.....	0.18	0.34	0.86	.....	.....
18	Total charges collected ².....dollars.....	65,214	.....	771	35,635	28,808	.....	.....
INDEBTEDNESS AND ARREARAGE, 1939									
19	Enterprises reporting indebtedness ³.....number.....	9	.....	.....	.....	5	4	.....
20	(a) Area irrigated in these enterprises.....acres.....	152,826	.....	.....	90,194	62,632	.....	.....
21	(b) Indebtedness.....dollars.....	2,573,360	.....	.....	687,852	1,885,508	.....	.....
22	(c) Average indebtedness per acre irrigated.....dollars.....	16.84	.....	.....	7.63	30.10	.....	.....
23	(d) Cost of irrigation works and equipment.....dollars.....	4,832,637	.....	.....	1,407,833	3,424,804	.....	.....
24	(e) Investment in water rights.....dollars.....	.....	.....	.....	.....	.....	.....	.....
25	(f) Total investment.....dollars.....	4,832,637	.....	.....	1,407,833	3,424,804	.....	.....
26	(g) Maintenance and operation.....dollars.....	17,257	.....	.....	10,997	6,860	.....	.....
27	(h) Total annual charges ².....dollars.....	90,200	.....	.....	31,160	59,040	.....	.....
28	(i) Total charges collected ².....dollars.....	63,971	.....	.....	35,163	28,808	.....	.....
29	(j) Area against which annual charges were assessed.....acres.....	159,394	.....	.....	90,394	69,000	.....	.....
30	(k) Average indebtedness per acre assessed.....dollars.....	15.98	.....	.....	7.61	26.93	.....	.....
31	(l) Average charges per acre assessed.....dollars.....	0.57	.....	.....	0.34	0.86	.....	.....
32	(m) Average charges per acre irrigated.....dollars.....	0.69	.....	.....	0.35	1.47	.....	.....
33	Enterprises reporting arrearage ³.....number.....	3	.....	.....	.....	1	2	.....
34	(a) Area assessed in these enterprises.....acres.....	32,200	.....	.....	.....	32,200	.....	.....
35	(b) Total arrearage.....dollars.....	42,671	.....	.....	.....	42,671	.....	.....
36	(c) Average arrearage per acre assessed.....dollars.....	1.33	.....	.....	.....	1.33	.....	.....
37	(d) Indebtedness.....dollars.....	676,729	.....	.....	.....	676,729	.....	.....
TYPE, 1940									
38	Individual and partnership.....number.....	34	.....	31	.....	1	.....	.....
39	Cooperative (incorporated and unincorporated).....number.....	16	.....	2	.....	5	.....	.....
40	Irrigation district.....number.....	1	.....	.....	.....	1	.....	.....
41	Commercial.....number.....	2	.....	.....	.....	.....	.....	.....
42	All other.....number.....	1	1	.....	.....	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
43	Enterprises reporting pay roll.....number.....	13	.....	.....	.....	4	5	4
44	Wages and salaries paid and payable for 1939.....dollars.....	13,858	.....	.....	.....	1,256	5,866	6,736
45	Persons employed during week ending April 29, 1939.....number.....	11	.....	.....	.....	1	6	4
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939									
46	Streams, pumped.....number.....	8	.....	8	.....	.....	.....	.....
47	Wells, pumped or flowing.....number.....	2	.....	2	.....	.....	.....	.....
48	Streams, gravity or storage.....number.....	44	1	23	2	7	7	4	

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
² Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.—Dec.		Jan.—Mar.		Apr.—June		July.—Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Missouri River														
Lima.....	Beaverhead.....	Feet 6,265	Inches 13.63	+4.30	4.61	+3.05	1.07	+0.05	4.26	+0.17	3.69	+1.03	41.7	+2.7
Dillon.....	Beaverhead.....	5,228	12.67	-4.70	4.31	+1.65	0.89	-2.23	5.05	-2.25	2.42	-1.87	44.8	+0.7
Cut Bank.....	Glacier.....	3,762	7.96	-3.23	1.19	+0.03	0.72	-0.23	4.37	-0.76	1.68	-2.27	45.1	+3.3
Choteau.....	Teton.....	3,810	8.20	-4.39	1.04	-0.59	0.32	-1.30	5.00	-0.60	1.84	-1.90	46.2	+3.9
Helena.....	Lewis and Clark.....	4,090	10.71	-2.92	2.75	+0.34	1.37	-0.94	4.78	-0.97	1.81	-1.35	46.5	+3.2
Great Falls.....	Cascade.....	3,654	10.11	-5.69	1.89	-0.44	0.86	-1.25	4.81	-2.07	2.55	-1.93	48.5	+2.8
Agricultural College.....	Gallatin.....	4,900	16.94	-0.75	5.13	+1.70	2.28	-0.59	6.61	-0.50	2.92	-1.36	44.4	+2.6
Livingston.....	Park.....	4,485	11.22	-2.93	3.55	+0.93	0.98	-0.98	4.04	-1.67	2.65	-1.21	48.2	+2.3
Stanford.....	Judith Basin.....	4,229	14.65	+0.24	3.32	+1.14	1.26	-0.51	7.44	+1.39	2.63	-1.78	45.0	+1.7
Havre.....	Hill.....	2,488	11.19	-2.71	3.19	+1.30	1.07	-0.67	5.24	-0.65	1.69	-2.69	46.1	+4.5
Red Lodge.....	Carbon.....	5,254	18.43	-0.53	3.26	+0.01	2.59	-0.24	9.32	+0.89	3.26	-1.19	43.2	+3.1
Roundup.....	Musselshell.....	3,246	17.17	+4.68	3.13	+0.93	1.15	-0.38	9.85	+4.32	3.04	-0.19	48.8	+2.8
Billings.....	Yellowstone.....	3,570	15.88	+2.70	2.96	+0.69	1.67	-0.15	9.88	+4.28	1.37	-2.12	48.9	+2.4
Malta.....	Phillips.....	2,255	17.68	+3.72	4.40	+2.83	1.59	+0.02	9.61	+3.16	2.08	-2.29	44.0	+2.0
Jordan.....	Garfield.....	2,674	9.99	-1.55	2.30	+0.80	0.63	-1.08	6.58	+1.48	0.48	-2.75	47.2	+3.8
Frazier.....	Valley.....	2,068	15.81	+1.87	2.60	+0.80	0.87	-1.44	9.82	+3.85	2.52	-1.34	42.8	+2.9
Miles City.....	Custer.....	2,951	11.05	-2.74	1.65	-0.45	0.87	-1.14	6.40	+0.98	2.13	-1.53	48.1	+3.8
Outlook.....	Sheridan.....	2,342	14.30	+0.76	2.49	+1.21	0.79	-0.51	8.16	+2.63	2.86	-2.57	39.8	+1.5
Glendive.....	Dawson.....	2,090	11.89	-2.82	1.81	-0.02	1.34	-0.34	6.08	-0.41	2.66	-2.05	46.8	+2.8
Elkalla.....	Carter.....	3,200	13.25	-0.44	0.85	-0.56	0.64	-0.79	6.88	+0.72	4.88	+0.19	45.8	+1.6
Clark Fork														
Missoula.....	Missoula.....	3,200	11.43	-3.16	1.81	-1.74	2.87	+0.10	5.28	+0.36	1.47	-1.88	48.5	+4.0
Hamilton.....	Ravalli.....	3,529	10.72	-0.30	3.27	+0.88	1.74	-0.48	3.81	-0.09	1.90	-0.61	48.5	+2.3
Kalispell.....	Flathead.....	2,956	13.24	-1.78	3.20	-0.86	3.04	-0.59	5.45	+1.13	1.55	-1.66	45.4	+2.9
Thompson Falls.....	Sanders.....	2,435	14.40	-7.98	5.44	-1.31	4.89	-1.26	2.70	-3.20	1.37	-2.21	49.3	+3.9
Kootenai River														
Libby.....	Lincoln.....	2,150	12.02	-7.20	4.64	1.92	3.76	-1.58	2.81	-1.18	0.81	-2.52	(²)	(²)

¹ Departure from normal.

² Not available.

CENSUS OF IRRIGATION — MONTANA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999
.....	21	11	3	7	7	.....	34	2	5	8	.....
.....	820	2,055	1,734	20,927	143,226	.....	6,294	12,242		150,226	.....
.....	811	846	303	3,711	15,237	.....	1,972	2,979	15,957	.....	.....
.....	0.99	0.41	0.17	0.18	0.11	.....	0.31	0.24	0.11	.....	.....
.....	.....	410	570	12,170	80,140	.....	1,416	4,534	87,340	.....	.....
.....	.....	0.83	0.42	0.58	0.66	.....	0.40	0.37	0.68	.....	.....
.....	.....	1,560	1,370	24,432	149,594	.....	3,710	16,452	156,794	.....	.....
.....	.....	0.26	0.42	0.50	0.54	.....	0.38	0.28	0.56	.....	.....
.....	.....	331	552	10,220	54,111	.....	352	3,751	61,111	.....	.....
.....	.....	.....	.....	2	7	.....	.....	.....	1	8	.....
.....	.....	.....	.....	152,826	2,573,360	.....	.....	.....	152,826		.....
.....	.....	.....	.....	2,573,360	16.84	.....	.....	.....	2,573,360		.....
.....	.....	.....	.....	4,832,637	4,832,637	.....	.....	.....	16.84		.....
.....	.....	.....	.....	4,832,637	17,257	.....	.....	.....	4,832,637		.....
.....	.....	.....	.....	17,257	90,200	.....	.....	.....	17,257		.....
.....	.....	.....	.....	90,200	63,971	.....	.....	.....	90,200		.....
.....	.....	.....	.....	63,971	159,394	.....	.....	.....	63,971		.....
.....	.....	.....	.....	159,394	15.98	.....	.....	.....	159,394		.....
.....	.....	.....	.....	15.98	0.57	.....	.....	.....	15.98		.....
.....	.....	.....	.....	0.57	0.69	.....	.....	.....	0.57		.....
.....	.....	.....	.....	0.69	.....	.....	.....	.....	0.69		.....
.....	.....	.....	.....	1	2	.....	.....	.....	3		.....
.....	.....	.....	.....	32,200	42,671	.....	.....	.....	32,200		.....
.....	.....	.....	.....	42,671	1.33	.....	.....	.....	42,671		.....
.....	.....	.....	.....	1.33	676,729	.....	.....	.....	1.33		.....
.....	.....	.....	.....	676,729	.....	.....	.....	.....	676,729		.....
.....	24	8	1	1	.....	.....	34	.....	.....	.....	.....
.....	1	3	2	5	5	.....	4	2	4	6	.....
.....	.....	.....	.....	1	2	.....	.....	.....	1	.....	.....
.....	.....	.....	.....	.....	2	.....	.....	.....	.....	2	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	5	7	.....	.....	.....	.....	.....	.....
.....	.....	(4)	.....	1,876	11,982	.....	1	2	2	8	.....
.....	.....	.....	.....	2	9	.....	1,376		12,462	.....	.....
.....	.....	.....	.....	.....	.....	.....	1	.....	10	.....	.....
.....
.....	8	.....	.....	.....	.....	.....	8	.....	.....	.....	.....
.....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
.....	1	15	11	3	7	7	28	2	5	9	.....

¹Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁴Data for 1 enterprise from the "100 to 299 acres" group are included with the "1,800 to 7,499 acres" group.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

The average precipitation in Montana for the calendar year 1938 was 1.51 inches above normal and for the calendar year 1939 was 2.40 inches below, or 84 percent of a normal of 15.23 inches, as reported by the U. S. Weather Bureau. The average precipitation for the water year (October 1938 through September 1939) for the 25 typical stations tabulated above was 12.96 inches, showing an average departure of -1.50 inches for the water year at these stations. A deficiency for the calendar year 1939 of slightly more than three inches occurred in both the western and central divisions, and slightly more than one inch in the eastern division. All months were drier than normal with the exception of February, June, and December. June was abnormally wet, particularly in the eastern division, where it was the wettest of record. November was the driest of record.

The greatest 1939 precipitation was 25.88 inches at Trout Creek (near); the least was 6.13 inches at Lonepine. The greatest monthly amount, 7.07 inches, occurred at Billings No. 2 Station in June; the least monthly amount was none at 17 stations during November.

The trend to warmer and drier weather that has been characteristic of average conditions in Montana during the last decade continued in 1939. The year was the third warmest of record since 1895, the warmest year occurring in 1934 and the next warmest in 1931. The

average temperature was above the normal for all months except February and June. January was exceptionally mild as were also November and December. Monthly record high temperatures were exceeded at many stations during the last parts of March and April and the first part of December. A new extreme high of 97° for the State for April was recorded at Winifred on the 29th of the month. February was unusually cold with two severe blizzards. No killing frosts of importance occurred after May 12 and before September 25. The average length of the frost-free season west of the Continental Divide was 129 days; central division, 135 days; and eastern division, 144 days. The fall season, September to November, inclusive, shared with 1922 the distinction of the second warmest fall of record.

Winter grain and perennial grass crops⁶ survived the winter of 1938-39 in good shape. Winter wheat matured satisfactorily but dryland spring grains were injured to considerable extent as a result of midsummer heat and drought despite excellent moisture conditions during June. Grasshoppers again caused much damage to grain crops and range grasses in the eastern part of the State. Farm operations got off to a good start and progressed satisfactorily throughout the year except as rains interfered with shearing and haying in May and June, and as drought conditions hindered plowing and seeding in the fall.

CENSUS OF IRRIGATION — MONTANA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSOURI RIVER				
		Total	Direct ¹			
			(1)			
IRRIGATED FARMS AND AREAS						
1 Irrigated farms.....1939..number....	17,094	11,970	751			
2 Area irrigated.....1939..acres.....	1,711,409	1,369,536	73,035			
3 (a) Cropland harvested.....1939..acres.....	1,501,878	1,221,347	68,007			
4 (b) Crop failure.....1939..acres.....	7,944	6,048	511			
5 (c) Pasture.....1939..acres.....	201,637	142,141	4,517			
6 Area irrigated.....1929..acres.....	1,594,912	1,324,496	17,069			
7 ..1919..acres.....	1,681,729	1,389,763	15,635			
8 Increase or decrease (-), 1929-1939.....percent....	7.3	3.4	327.9			
9 Irrigable area in enterprises.....1940..acres.....	2,598,214	2,132,881	155,579			
10 ..1930..acres.....	2,622,423	2,188,247	19,924			
11 ..1920 ² ..acres.....	4,329,148	3,713,068	34,194			
12 Excess of irrigable area over the area irrigated..1940..acres.....	876,805	763,345	82,544			
13 ..1930..acres.....	1,027,511	863,761	2,855			
14 ..1920 ² ..acres.....	2,647,419	2,323,305	18,559			
15 Area works were capable of supplying with water..1940..acres.....	2,344,390	1,939,940	111,831			
16 ..1930..acres.....	2,276,000	1,871,958	18,234			
17 ..1920..acres.....	2,753,498	2,299,910	28,174			
18 Increase or decrease (-), 1930-1940.....percent....	3.0	3.6	513.3			
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	632,981	570,404	38,796			
20 ..1930..acres.....	681,088	547,472	1,165			
21 ..1920..acres.....	1,071,769	910,147	12,539			
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	73.0	70.6	65.3			
23 ..1929..percent....	70.1	70.8	93.6			
24 ..1919..percent....	61.1	60.4	55.5			
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars....	67,352,505	53,905,460	2,804,932			
26 (a) Cost of irrigation works and equipment.....1940..dollars....	66,830,409	53,483,944	2,791,669			
27 (b) Investment in water rights (reported).....1940..dollars....	522,096	421,516	13,263			
28 Total investment in irrigation enterprises.....1930..dollars....	50,319,204	41,092,294	298,910			
29 ..1920..dollars....	52,143,363	43,507,296	440,345			
30 Increase or decrease (-), 1930-1940.....percent....	33.9	31.2	870.9			
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	28.73	27.79	25.08			
32 ..1930..dollars....	22.11	21.95	15.84			
33 ..1920..dollars....	18.94	18.92	15.63			
34 Average investment per acre irrigated.....1939..dollars....	39.36	39.36	38.41			
35 Estimated final investment in existing enterprises..1940..dollars....	75,174,645	60,540,833	3,637,019			
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	29.04	28.38	23.38			
MAINTENANCE AND OPERATION, CHARGES⁴ AND INDEBTEDNESS						
	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
	Enterprises		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation...1939..number....	4,823	49	3,244	37	473	2
38 Area irrigated in these enterprises.....1939..acres.....	1,650,373	168,762	1,324,720	149,301	70,138	(3)
39 Cost of maintenance and operation.....1939..dollars....	1,180,189	20,908	932,199	17,209	89,654	(3)
40 Average cost, per acre irrigated.....1939..dollars....	0.72	0.12	0.70	0.12	1.28	(3)
41 Total annual charges (reported) ⁴.....1939..dollars....	1,057,500	93,290	817,150	66,896	18,427
42 Average annual charge per acre irrigated.....1939..dollars....	1.18	0.65	1.12	0.54	0.77
43 Area against which charges were assessed.....1939..acres.....	1,065,494	176,956	863,777	140,454	27,335
44 Average annual charge per acre assessed.....1939..dollars....	0.99	0.53	0.95	0.48	0.67
45 Total charges collected ⁴.....1939..dollars....	729,103	65,214	567,666	52,192	7,355
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars....	41,968,921	2,573,360	30,971,749	2,074,852	1,433,333
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number....	4,931	44	3,236	32	508	2
48 Area irrigated by these enterprises.....1939..acres.....	1,524,390	123,469	1,194,552	106,075	70,357	(3)
49 Water delivered.....1939..acre-feet..	3,214,146	155,543	2,347,100	136,702	156,282	(3)
50 Average water delivered per acre irrigated.....1939..acre-feet..	2.1	1.3	2.0	1.3	2.2	(3)
51 Average cost of water per acre irrigated.....1939..dollars....	0.84	0.70	0.82	0.57	0.67	(3)
52 Average cost of water per acre-foot delivered.....1939..dollars....	0.40	0.56	0.41	0.44	0.30	(3)
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number....	199	152	18
54 Irrigable area in these enterprises.....1939..acres.....	822,140	673,790	8,861
55 Irrigated area in these enterprises.....1939..acres.....	473,604	386,317	5,236
56 Area for which drains have been installed.....1939..acres.....	147,151	144,517	698
57 Additional area needing drainage.....1939..acres.....	52,071	49,307	1,258

¹Data for 2 enterprises in Dog Creek Drainage Basin (17) (number refers to separate map) are included with Missouri River "Direct" Drainage Basin (1).

²For 1920 relates to total area in enterprises. Irrigable area for that year not reported.

³Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

MISSOURI RIVER—Continued													
Jefferson River													
Total	Direct (2)	Beaverhead River					Big Hole River (6)	Boulder River (7)					
		Total	Direct (3)	Blacktail Deer Creek (4)	Ruby River (5)								
2,206	343	523	305	5	213	293	136		1				
431,027	35,079	143,159	111,515	3,074	28,570	124,532	15,974		2				
383,850	32,111	123,146	95,595	3,037	24,414	118,152	14,534		3				
237	22	109	14	.....	95	20	86		4			
46,940	19,904	19,904	15,806	37	4,061	6,760	1,354		5				
363,380	16,393	131,354	.....	.....	31,071	146,736	.....		6	
425,685	21,276	145,573	.....	.....	34,474	184,355	.....		7	
18.6	114.0	9.0	.....	.....	-8.0	-14.9	.....		8	
510,750	47,716	169,939	133,924	3,093	32,922	127,910	22,791		9				
476,421	19,882	155,916	.....	.....	36,901	166,846	.....		10	
831,898	40,347	296,079	.....	.....	76,107	306,885	.....		11	
79,723	12,637	26,780	22,409	19	4,352	2,978	6,817		12				
113,041	3,489	24,562	.....	.....	5,830	20,110	.....		13	
406,213	19,071	150,406	.....	.....	41,633	122,230	.....		14	
498,857	17,416	163,988	128,939	3,093	31,956	127,550	18,355		15				
403,325	18,940	142,333	.....	.....	33,526	162,503	.....		16	
574,672	34,894	199,797	.....	.....	48,036	227,920	.....		17	
23.7	150.3	15.2	.....	.....	-4.7	-21.5	.....		18	
67,830	12,331	20,829	17,424	19	3,386	2,618	2,381		19				
39,945	2,547	10,979	.....	.....	2,455	15,767	.....		20	
148,987	13,618	54,124	.....	.....	13,562	43,265	.....		21	
86.4	74.0	87.3	86.5	99.4	89.4	97.9	87.0		22				
90.1	86.6	92.3	.....	.....	92.7	90.3	.....		23	
74.1	61.0	72.9	.....	.....	71.8	81.0	.....		24	
4,509,720	648,702	1,643,102	709,421	52,200	881,481	391,647	429,217		25				
4,430,707	640,379	1,593,273	674,408	52,200	865,365	381,780	423,600		26				
79,013	8,323	49,829	35,013	.....	14,816	9,867	5,617		27			
2,417,277	125,116	987,324	.....	.....	212,595	699,070	.....		28	
5,370,454	587,388	1,723,746	.....	.....	553,000	1,669,767	.....		29	
86.6	418.5	66.4	.....	.....	314.6	-44.0	.....		30	
9.04	13.68	10.02	5.50	16.88	27.58	3.07	23.38		31				
5.99	6.61	6.94	.....	.....	6.34	1.30	.....		32	
9.35	16.83	8.63	.....	.....	11.64	7.33	.....		33	
10.46	18.49	11.48	6.36	16.98	30.85	3.13	26.87		34				
4,568,705	650,952	1,661,812	727,481	52,200	882,131	407,002	446,267		35				
8.95	13.64	9.78	5.43	10.88	25.79	3.18	19.58		36				
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.				
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises					
979	17	140	4	324	6	187	5	4	133	1	203	75	2
412,130	87,857	34,887	7,611	133,182	74,420	104,964	61,406	2,957	25,231	(3)	123,096	15,797	(3)
127,121	9,726	14,147	1,335	52,711	7,409	33,277	5,809	470	18,964	(3)	17,836	9,081	(3)
0.31	0.11	0.41	0.17	0.40	0.10	0.32	0.09	0.16	0.75	(3)	0.14	0.57	(3)
55,850	22,546	8,188	10,800	7,473	10,500	4,835	8,900	2,638	1,600	2,520	2,378
0.41	0.26	0.39	1.42	0.42	0.14	0.39	0.15	0.51	0.12	0.18	0.75
145,074	56,654	21,338	7,580	18,432	74,014	13,240	61,000	5,192	13,014	14,906	7,440
0.38	0.26	0.38	1.42	0.41	0.14	0.37	0.15	0.51	0.12	0.17	0.32
46,584	25,503	5,708	7,366	5,251	18,137	3,472	8,989	1,779	9,148	2,320	1,486
26,040	495,047	154,657	295	340,390	295	125,390	215,000
967	16	120	5	339	6	196	5	5	138	1	210	77	2
377,467	82,972	28,723	7,826	124,572	74,420	95,914	61,406	3,074	25,584	(3)	119,995	15,691	(3)
941,174	112,307	74,090	6,286	350,739	104,850	265,898	97,475	14,340	70,501	(3)	301,501	30,299	(3)
2.5	1.4	2.6	0.8	2.8	1.4	2.8	1.6	4.7	2.8	(3)	2.5	1.9	(3)
0.34	0.26	0.36	1.39	0.42	0.14	0.34	0.15	0.16	0.75	(3)	0.15	0.55	(3)
0.14	0.19	0.14	1.73	0.15	0.10	0.12	0.09	0.03	0.27	(3)	0.06	0.29	(3)
28	16	(3) 2	(3) 2	(3) 1
21,180	9,326	(3)	(3)	(3)
14,471	2,896	(3)	(3)	(3)
345	15	(3)	(3)	(3)
1,138	345	(3)	(3)	(3)

⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - MONTANA

DRAINAGE BASIN TABLE I.-AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSOURI RIVER-Continued				
		Jefferson River-Continued				
		Madison River	Gallatin River	Smith River	Sun River	Belt River
		(8)	(9)	(10)	(11)	(12)
IRRIGATED FARMS AND AREAS						
1	Irrigated farms.....1939..number.....	134	777	89	936	16
2	Area irrigated.....1939..acres.....	24,234	87,649	27,139	87,025	394
3	(a) Cropland harvested.....1939..acres.....	19,357	76,550	26,389	67,585	334
4	(b) Crop failure.....1939..acres.....	.....	.....	.....	.....	308
5	(c) Pasture.....1939..acres.....	4,877	11,099	750	19,132	.....
6	Area irrigated.....1929..acres.....	30,368	93,753	25,461	28,070	.....
7	.....1919..acres.....	34,425	95,063	16,861	31,785	.....
8	Increase or decrease (-), 1929-1939.....percent.....	-20.2	-6.5	6.6	210.0	.....
9	Irrigable area in enterprises.....1940..acres.....	28,728	113,666	28,057	134,879	458
10	.....1930..acres.....	46,339	120,321	31,389	121,277	.....
11	.....1920 ¹ ..acres.....	88,524	228,056	38,369	244,071	.....
12	Excess of irrigable area over the area irrigated..1940..acres.....	4,494	26,017	918	47,854	124
13	.....1930..acres.....	15,971	26,568	5,928	93,207	.....
14	.....1920 ¹ ..acres.....	54,099	132,993	21,508	212,286	.....
15	Area works were capable of supplying with water...1940..acres.....	28,649	112,905	27,760	133,715	376
16	.....1930..acres.....	37,004	114,408	31,259	67,566	.....
17	.....1920..acres.....	62,065	152,515	29,691	95,522	.....
18	Increase or decrease (-), 1930-1940.....percent.....	-22.6	-1.3	-11.2	97.9	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	4,415	25,256	621	46,690	42
20	.....1930..acres.....	6,636	20,655	5,798	39,496	.....
21	.....1920..acres.....	27,640	57,452	12,830	63,737	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.6	77.6	97.8	65.1	86.8
23	.....1929..percent.....	82.1	81.9	81.5	41.5	.....
24	.....1919..percent.....	55.5	62.3	56.8	33.3	.....
CAPITAL INVESTED TO JANUARY 1						
25	Total investment in irrigation enterprises.....1940..dollars....	260,091	1,136,961	358,003	9,513,431	4,843
26	(a) Cost of irrigation works and equipment.....1940..dollars....	259,025	1,132,650	349,549	9,510,556	4,815
27	(b) Investment in water rights (reported).....1940..dollars....	1,066	4,311	8,454	2,875	28
28	Total investment in irrigation enterprises.....1930..dollars....	193,345	885,558	134,099	7,048,875	.....
29	.....1920..dollars....	460,823	977,786	190,836	4,709,303	.....
30	Increase or decrease (-), 1930-1940.....percent.....	34.5	28.4	167.0	35.0	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	9.08	10.07	12.90	71.15	12.88
32	.....1930..dollars....	5.22	7.74	4.29	104.33	.....
33	.....1920..dollars....	7.42	6.41	6.43	49.30	.....
34	Average investment per acre irrigated.....1939..dollars....	10.73	12.97	13.19	109.32	14.50
35	Estimated final investment in existing enterprises..1940..dollars....	264,991	1,137,681	360,093	10,671,778	9,993
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	9.22	10.01	12.83	79.12	21.62
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
		Primary		Supplemental		
		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation...1939..number.....	54	183	5	85	1
38	Area irrigated in these enterprises.....1939..acres.....	21,871	83,297	5,182	26,248	(2)
39	Cost of maintenance and operation.....1939..dollars....	6,655	26,691	862	6,502	(2)
40	Average cost, per acre irrigated.....1939..dollars....	0.30	0.32	0.17	0.25	(2)
41	Total annual charges (reported) ^{3 4}.....1939..dollars....	2,888	32,403	1,246	.....	7,200
42	Average annual charge per acre irrigated.....1939..dollars....	0.28	0.47	0.25	.....	1.03
43	Area against which charges were assessed.....1939..acres.....	12,488	70,470	5,060	.....	7,200
44	Average annual charge per acre assessed.....1939..dollars....	0.23	0.46	0.25	.....	1.00
45	Total charges collected ³.....1939..dollars....	2,320	29,499	.....	.....	7,000
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars....	.....	25,745	.....	.....	151,221
WATER DELIVERED TO IRRIGATORS, 1939						
47	Enterprises reporting water delivered.....1939..number.....	41	180	3	87	1
48	Area irrigated by these enterprises.....1939..acres.....	18,362	70,134	282	26,087	(2)
49	Water delivered.....1939..acre-feet.....	50,080	134,465	333	31,567	(2)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.7	1.9	1.2	1.2	(2)
51	Average cost of water per acre irrigated.....1939..dollars....	0.28	0.50	0.11	0.25	(2)
52	Average cost of water per acre-foot delivered..1939..dollars....	0.10	0.28	0.09	0.20	(2)
DRAINAGE OF IRRIGATED LAND						
53	Enterprises reporting land drained or needing drainage.....1939..number.....	5	4	.....	.....	5
54	Irrigable area in these enterprises.....1939..acres.....	2,168	4,930	.....	.....	103,451
55	Irrigated area in these enterprises.....1939..acres.....	2,068	4,798	.....	.....	63,874
56	Area for which drains have been installed.....1939..acres.....	160	170	.....	.....	48,046
57	Additional area needing drainage.....1939..acres.....	205	245	.....	.....	1,739

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSOURI RIVER—Continued									
Marias River				Missoula River					
Total	Direct	Teton River	Arrow River	Judith River	Total	Direct	Boxelder-Flat Willow Creeks	Dry Creek	
	(13)	(14)	(15)	(16)		(18)	(19)	(20)	
867	543	324	26	123	315	224	91	8	1
124,176	71,833	52,343	4,275	10,320	56,460	43,613	12,947	505	2
108,406	61,796	46,610	4,075	9,951	51,496	39,380	12,116	286	3
727	699	38	.....	12	137	66	71	219	4
15,043	9,348	5,695	200	357	4,827	4,167	660	.....	5
102,334	.....	46,974	.....	7,435	59,286	.....	.....	.....	6
108,703	.....	44,945	.....	15,173	45,559	.....	.....	.....	7
21.3	.....	11.4	.....	38.8	.....	.....	.....	.....	8
250,549	181,358	69,191	4,601	19,752	88,692	57,747	30,945	3,300	9
169,513	.....	67,699	.....	14,693	96,570	.....	.....	.....	10
454,626	.....	146,468	.....	40,993	141,363	.....	.....	.....	11
126,373	109,525	16,848	326	9,432	32,232	14,134	18,098	2,795	12
67,179	.....	20,725	.....	7,168	37,284	.....	.....	.....	13
345,923	.....	101,523	.....	25,820	95,804	.....	.....	.....	14
209,602	140,624	68,978	4,468	18,644	83,900	55,921	27,979	1,630	15
166,723	.....	66,799	.....	13,075	84,738	.....	.....	.....	16
204,672	.....	82,241	.....	35,459	113,964	.....	.....	.....	17
25.7	.....	3.3	.....	42.6	-1.0	.....	.....	.....	18
85,426	68,791	16,635	193	8,324	27,440	12,308	15,132	1,125	19
64,389	.....	19,825	.....	5,640	25,452	.....	.....	.....	20
95,969	.....	37,296	.....	20,286	68,405	.....	.....	.....	21
59.2	51.1	75.9	95.7	55.4	67.3	78.0	45.9	31.0	22
61.4	.....	70.3	.....	56.9	70.0	.....	.....	.....	23
53.1	.....	54.7	.....	42.8	40.0	.....	.....	.....	24
5,877,681	4,249,340	1,628,341	14,705	393,014	716,804	342,162	374,642	21,322	25
5,796,138	4,194,740	1,601,393	14,705	390,639	660,171	335,601	324,570	21,296	26
81,543	54,600	26,943	.....	2,315	56,633	6,561	50,072	26	27
4,800,336	.....	1,160,236	.....	90,134	765,729	.....	.....	.....	28
6,753,900	.....	1,251,130	.....	281,842	986,755	.....	.....	.....	29
22.4	.....	40.3	.....	324.9	-6.4	.....	.....	.....	30
23.04	30.22	23.61	3.29	20.54	8.54	6.12	13.39	13.08	31
28.79	.....	17.37	.....	6.89	9.04	.....	.....	.....	32
33.00	.....	15.21	.....	7.95	8.66	.....	.....	.....	33
47.33	59.16	31.11	3.44	37.11	12.70	7.85	29.16	42.22	34
8,809,136	7,176,820	1,632,316	15,570	386,164	743,764	362,657	381,107	23,522	35
35.16	39.57	23.59	3.38	19.55	8.39	6.23	12.32	7.13	36
Primary	Supplemental	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
173	1	91	82	26	53	233	153	80	3
122,352	(2)	71,205	51,147	4,275	9,219	54,295	41,687	12,608	115
90,031	(2)	74,729	15,302	1,680	5,141	36,213	26,555	9,658	307
0.74	(2)	1.05	0.30	0.39	0.56	0.67	0.64	0.77	2.67
114,218	.....	82,985	31,233	.....	2,265	4,673	4,673	.....	41
1.19	.....	1.44	0.82	.....	0.74	0.70	0.70	.....	42
124,285	.....	82,985	41,300	.....	2,630	7,440	7,440	.....	43
0.92	.....	1.00	0.76	.....	0.86	0.63	0.63	.....	44
93,394	350	68,439	24,955	350	3,995	325	325	.....	45
5,234,272	27,000	4,968,825	265,447	27,000	100,279	38,022	22	38,000	46
189	.....	93	96	21	47	235	156	79	5
123,203	.....	71,268	51,940	3,990	9,302	51,494	39,045	12,449	445
164,857	.....	107,201	57,656	2,412	10,028	51,241	40,237	11,004	350
1.3	.....	1.5	1.1	0.60	1.1	1.0	0.9	0.9	0.8
1.06	.....	1.31	0.72	0.38	0.66	0.63	0.59	0.75	0.42
0.79	.....	0.87	0.65	0.63	0.61	0.63	0.58	0.84	0.53
(2)	1	.....	(2)	.....	(2)	5	.....	.....	53
(2)	.....	.....	(2)	.....	(2)	875	875	.....	54
(2)	.....	.....	(2)	.....	(2)	485	485	.....	55
(2)	.....	.....	(2)	.....	(2)	25	25	.....	56
.....	.....	.....	.....	.....	.....	75	75	.....	57

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - MONTANA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSOURI RIVER—Continued					
		Milk River					
		Total	Direct	Sandy Creek	Clear Creek	Lodge-Battle Creeks	Snake Creek
		(21)	(22)	(23)	(24)	(25)	
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	1,178	1,061	12	18	37	6
2	Area irrigated.....1939..acres.....	110,125	82,327	2,871	1,825	3,720	914
3	(a) Cropland harvested.....1939..acres.....	94,067	68,788	1,892	1,825	3,153	466
4	(b) Crop failure.....1939..acres.....	1,576	1,189	313	.....	67	7
5	(c) Pasture.....1939..acres.....	14,482	12,350	666	.....	500	421
6	Area irrigated.....1929..acres.....	88,218	55,499	.....	.....	.....	60
7	.....1919..acres.....	108,555	19,766	.....	.....	.....	910
8	Increase or decrease (-), 1929-1939.....percent.....	24.8	48.3	.....	.....	.....	(1)
9	Irrigable area in enterprises.....1940..acres.....	234,797	191,865	6,660	2,141	5,076	2,264
10	.....1930..acres.....	216,998	169,716	.....	.....	.....	160
11	.....1920 ² ..acres.....	349,716	26,358	.....	.....	.....	3,130
12	Excess of irrigable area over the area irrigated.....1940..acres.....	124,672	109,538	3,789	316	1,356	1,350
13	.....1930..acres.....	128,780	114,217	.....	.....	.....	100
14	.....1920 ² ..acres.....	241,161	6,592	.....	.....	.....	2,220
15	Area works were capable of supplying with water...1940..acres.....	191,422	155,319	5,165	2,079	4,388	1,620
16	.....1930..acres.....	190,218	148,661	.....	.....	.....	160
17	.....1920..acres.....	179,063	23,443	.....	.....	.....	2,275
18	Increase or decrease (-), 1930-1940.....percent.....	0.6	4.5	.....	.....	.....	912.5
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	81,297	72,992	2,294	254	668	706
20	.....1930..acres.....	102,000	93,162	.....	.....	.....	100
21	.....1920..acres.....	70,508	3,677	.....	.....	.....	1,365
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	57.5	53.0	55.6	87.8	84.8	56.4
23	.....1929..percent.....	46.4	37.3	.....	.....	.....	37.5
24	.....1919..percent.....	60.6	84.3	.....	.....	.....	40.0
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars....	11,977,397	11,410,513	204,148	21,071	67,845	6,025
26	(a) Cost of irrigation works and equipment.....1940..dollars....	11,967,538	11,401,423	204,123	21,045	67,375	5,950
27	(b) Investment in water rights (reported).....1940..dollars....	9,859	9,090	25	26	470	75
28	Total investment in irrigation enterprises.....1930..dollars....	8,561,785	5,503,687	.....	.....	.....	800
29	.....1920..dollars....	7,271,098	154,208	.....	.....	.....	8,600
30	Increase or decrease (-), 1930-1940.....percent.....	39.9	107.3	.....	.....	.....	653.1
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	62.57	73.47	39.53	10.14	15.46	3.72
32	.....1930..dollars....	45.01	37.02	.....	.....	.....	5.00
33	.....1920..dollars....	40.61	6.58	.....	.....	.....	3.78
34	Average investment per acre irrigated.....1939..dollars....	108.76	138.60	71.11	11.55	18.24	6.59
35	Estimated final investment in existing enterprises..1940..dollars....	12,173,094	11,473,553	222,155	21,321	76,645	7,825
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	51.85	59.80	33.36	9.96	15.10	3.46
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.		
		Enterprises		Enterprises			
37	Enterprises reporting maintenance and operation...1939..number.....	166	2	105	1	11	3
38	Area irrigated in these enterprises.....1939..acres.....	109,446	(3)	81,929	(3)	2,871	654
39	Cost of maintenance and operation.....1939..dollars....	148,387	(3)	137,294	(3)	2,459	86
40	Average cost, per acre irrigated.....1939..dollars....	1.36	(3)	1.68	(3)	0.86	0.13
41	Total annual charges (reported) ⁴ 5.....1939..dollars....	192,894	.....	188,359	.....	.....	1,880
42	Average annual charge per acre irrigated.....1939..dollars....	2.28	.....	2.60	.....	.....	0.94
43	Area against which charges were assessed.....1939..acres.....	128,386	.....	113,786	.....	.....	2,000
44	Average annual charge per acre assessed.....1939..dollars....	1.50	.....	1.66	.....	.....	0.94
45	Total charges collected ⁴.....1939..dollars....	41,139	.....	37,618	.....	.....	1,880
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	8,052,472	.....	8,045,272	.....	.....	6,000
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	170	2	108	1	11	4
48	Area irrigated by these enterprises.....1939..acres.....	85,852	(3)	66,408	(3)	2,871	740
49	Water delivered.....1939..acre-feet.....	82,814	(3)	61,029	(3)	2,807	300
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.0	(3)	0.9	(3)	1.0	0.4
51	Average cost of water per acre irrigated.....1939..dollars....	2.16	(3)	2.63	(3)	0.86	0.13
52	Average cost of water per acre-foot delivered.....1939..dollars....	2.24	(3)	2.86	(3)	0.88	0.32
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	23	.....	18	2	.....	2
54	Irrigable area in these enterprises.....1939..acres.....	172,902	.....	170,342	(3)	(3)	.....
55	Irrigated area in these enterprises.....1939..acres.....	68,336	.....	67,747	(3)	(3)	.....
56	Area for which drains have been installed.....1939..acres.....	4,924	.....	3,984	(3)	(3)	.....
57	Additional area needing drainage.....1939..acres.....	17,605	.....	17,585	(3)	.....	.....

¹Less than one-tenth of 1 percent.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSOURI RIVER—Continued											
Milk River—Continued						Yellowstone River					
Frenchman Creek	Beaver Creek	Rock Creek	Redwater Creek	Poplar River	Big Muddy Creek	Total	Direct	Shields River	Boulder River		
(26)	(27)	(28)	(29)	(30)	(31)		(33)	(34)	(35)		
14	8	22	17	9	4	5,413	2,993	200	120	1	
2,607	7,750	8,111	569	680	446	443,230	226,615	27,078	16,889	2	
2,092	7,720	8,111	404	605	431	405,271	210,698	25,197	12,729	3	
.....	.....	.....	5	.....	.....	2,316	1,657	.....	.....	4
515	30	.....	160	75	15	35,643	14,260	1,881	4,160	5
.....	.....	.....	.....	.....	.....	434,550	162,312	32,866	11,309	6
.....	.....	.....	.....	.....	.....	440,354	189,453	25,940	.....	7
.....	.....	.....	.....	.....	.....	2.0	39.6	-17.6	49.3	8
4,810	12,366	9,615	3,513	787	671	694,462	326,585	37,604	18,881	9	
.....	.....	.....	.....	.....	.....	651,065	242,693	59,417	12,981	10
2,203	4,616	1,504	2,944	107	225	858,817	279,211	94,238	.....	11
.....	.....	.....	.....	.....	.....	251,232	99,970	10,326	1,922	12
.....	.....	.....	.....	.....	.....	216,515	80,381	26,551	1,672	13
.....	.....	.....	.....	.....	.....	418,463	89,758	68,298	.....	14
3,870	9,366	9,615	3,133	787	471	651,505	309,863	36,675	18,418	15	
.....	.....	.....	.....	.....	.....	613,707	236,401	49,462	12,479	16
.....	.....	.....	.....	.....	.....	668,355	262,801	53,062	.....	17
.....	.....	.....	.....	.....	.....	6.2	31.1	-25.9	47.6	18
1,263	1,616	1,504	2,564	107	25	208,275	83,248	9,597	1,529	19	
.....	.....	.....	.....	.....	.....	179,157	74,089	16,596	1,170	20
.....	.....	.....	.....	.....	.....	228,001	73,348	27,122	.....	21
67.4	82.7	84.4	18.2	86.4	94.7	68.0	73.1	73.8	91.7	22	
.....	.....	.....	.....	.....	.....	70.8	68.7	66.4	90.6	23
.....	.....	.....	.....	.....	.....	65.9	72.1	48.9	.....	24
21,713	213,539	32,543	24,689	6,753	7,806	17,661,091	10,347,506	163,882	109,422	25	
21,700	213,422	32,500	24,667	6,750	7,800	17,438,615	10,259,196	161,045	108,600	26	
13	117	43	22	3	6	167,476	88,312	2,837	822	27	
.....	.....	.....	.....	.....	.....	12,915,910	7,070,112	397,120	92,927	28
.....	.....	.....	.....	.....	.....	13,762,337	7,508,390	424,103	.....	29
.....	.....	.....	.....	.....	.....	36.7	46.4	-58.7	17.8	30
5.61	22.80	3.38	7.88	8.58	16.57	27.11	33.39	4.47	5.94	31	
.....	.....	.....	.....	.....	.....	21.05	29.91	8.03	7.45	32
.....	.....	.....	.....	.....	.....	20.59	28.57	7.99	.....	33
8.33	27.55	4.01	43.39	9.93	17.50	39.85	45.66	6.05	6.48	34	
24,713	314,339	32,543	26,489	6,753	8,756	19,073,603	10,662,694	168,282	111,122	35	
5.14	25.42	3.38	7.54	8.58	13.05	27.47	32.65	4.48	5.89	36	
		Primary	Sup.			Primary	Sup.	Primary	Sup.		
		Enterprises				Enterprises		Enterprises			
6	7	2	1	7	4	929	13	394	5	108	44
2,607	7,732	(3)	(3)	67	605	428,150	31,505	221,257	2,919	23,541	16,138
1,205	2,072	(3)	(3)	550	248	356,758	6,100	204,664	1,571	7,567	3,294
0.46	0.27	(3)	(3)	8.21	0.41	0.83	0.19	0.93	0.54	0.32	0.20
.....
675	1,920	370,834	37,150	249,106	2,860	1,260	1,271
0.34	0.24	1.17	1.21	1.43	1.10	0.29	0.12
3,000	9,600	358,929	46,600	189,931	2,600	4,286	11,170
0.22	0.20	1.03	0.60	1.31	1.10	0.29	0.11
.....	1,641	338,164	19,339	264,183	2,860	564	710
200	1,000	7,461,575	1,401,584	4,552,864	41,584
.....
5	8	2	1	9	8	874	10	364	4	113	40
2,527	7,750	(3)	(3)	379	680	357,546	15,696	209,679	319	23,530	7,888
2,009	5,650	(3)	(3)	179	2,743	758,093	16,554	474,732	244	44,630	11,264
0.8	0.7	(3)	(3)	0.5	4.0	2.1	1.1	2.3	0.8	1.9	1.4
0.53	0.27	(3)	(3)	2.13	0.41	1.01	2.01	1.26	0.85	0.34	0.29
0.67	0.37	(3)	(3)	2.94	0.10	0.48	1.90	0.56	1.11	0.18	0.20
.....
.....	67	34	6
.....	(3)	(3)	348,266	170,664	(3)	8,455
.....	(3)	(3)	215,774	134,026	(3)	7,364
.....	(3)	(3)	87,860	64,925
.....	26,249	15,681	(3)	2,560

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — MONTANA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued				
	Yellowstone River—Continued				
	Stillwater River				
	Total	Direct (36)	Fishtail—West Rosebud Creeks		
Total			Direct (37)	East Rosebud Creek (38)	
IRRIGATED FARMS AND AREAS					
1 Irrigated farms.....1939..number.....	248	90	158	84	74
2 Area irrigated.....1939..acres.....	22,163	7,907	14,256	7,449	6,807
3 (a) Cropland harvested.....1939..acres.....	17,180	6,766	10,414	4,949	5,465
4 (b) Crop failure.....1939..acres.....	38	38	.....	.....	.....
5 (c) Pasture.....1939..acres.....	4,945	1,103	3,842	2,500	1,342
6 Area irrigated.....1929..acres.....	22,162	.....	.....	.....	.....
7 ".....1919..acres.....	23,926	.....	.....	.....	.....
8 Increase or decrease (-), 1929-1939.....percent.....	(¹)	.....	.....	.....	.....
9 Irrigable area in enterprises.....1940..acres.....	36,151	9,805	26,346	9,048	17,298
10 ".....1930..acres.....	32,327	.....	.....	.....	.....
11 ".....1920 ² ..acres.....	35,643	.....	.....	.....	.....
12 Excess of irrigable area over the area irrigated.....1940..acres.....	13,968	1,898	12,090	1,599	10,491
13 ".....1930..acres.....	10,165	.....	.....	.....	.....
14 ".....1920 ² ..acres.....	11,717	.....	.....	.....	.....
15 Area works were capable of supplying with water.....1940..acres.....	28,595	9,749	18,846	9,048	9,798
16 ".....1930..acres.....	31,087	.....	.....	.....	.....
17 ".....1920..acres.....	30,969	.....	.....	.....	.....
18 Increase or decrease (-), 1930-1940.....percent.....	-8.0	.....	.....	.....	.....
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	6,432	1,842	4,590	1,599	2,991
20 ".....1930..acres.....	8,925	.....	.....	.....	.....
21 ".....1920..acres.....	7,043	.....	.....	.....	.....
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	77.5	81.1	75.6	82.3	69.5
23 ".....1929..percent.....	71.3	.....	.....	.....	.....
24 ".....1919..percent.....	77.3	.....	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1					
25 Total investment in irrigation enterprises.....1940..dollars.....	602,510	94,406	508,104	32,235	475,869
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	595,275	94,260	501,015	32,215	468,800
27 (b) Investment in water rights (reported).....1940..dollars.....	7,235	146	7,089	20	7,069
28 Total investment in irrigation enterprises.....1930..dollars.....	674,220	.....	.....	.....	.....
29 ".....1920..dollars.....	307,873	.....	.....	.....	.....
30 Increase or decrease (-), 1930-1940.....percent.....	-10.6	.....	.....	.....	.....
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	21.07	9.68	26.96	3.56	48.57
32 ".....1930..dollars.....	21.69	.....	.....	.....	.....
33 ".....1920..dollars.....	9.94	.....	.....	.....	.....
34 Average investment per acre irrigated.....1939..dollars.....	27.19	11.94	35.64	4.33	69.91
35 Estimated final investment in existing enterprises.....1940..dollars.....	614,110	96,006	518,104	32,235	485,869
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	16.99	9.79	19.67	3.56	28.08
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
	Primary		Sup.		
	Enterprises		Enterprises		
37 Enterprises reporting maintenance and operation.....1939..number.....	105	(³) 1	34	(³) 1	71
38 Area irrigated in these enterprises.....1939..acres.....	20,459	(³)	7,096	(³)	13,363
39 Cost of maintenance and operation.....1939..dollars.....	8,105	(³)	3,065	(³)	5,040
40 Average cost, per acre irrigated.....1939..dollars.....	0.40	(³)	0.43	(³)	0.38
41 Total annual charges (reported) ^{4 5}.....1939..dollars.....	2,837	.....	1,739	.....	1,098
42 Average annual charge per acre irrigated.....1939..dollars.....	0.36	.....	0.43	.....	0.30
43 Area against which charges were assessed.....1939..acres.....	8,235	.....	4,085	.....	4,150
44 Average annual charge per acre assessed.....1939..dollars.....	0.34	.....	0.43	.....	0.26
45 Total charges collected ⁶.....1939..dollars.....	900	.....	900	.....	.....
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	453,000	.....	.....	.....	453,000
WATER DELIVERED TO IRRIGATORS, 1939					
47 Enterprises reporting water delivered.....1939..number.....	80	.....	26	.....	54
48 Area irrigated by these enterprises.....1939..acres.....	15,540	.....	5,953	.....	9,587
49 Water delivered.....1939..acre-feet.....	33,287	.....	17,661	.....	15,626
50 Average water delivered per acre irrigated.....1939..acre-feet.....	2.1	.....	3.0	.....	1.6
51 Average cost of water per acre irrigated.....1939..dollars.....	0.46	.....	0.40	.....	0.49
52 Average cost of water per acre-foot delivered.....1939..dollars.....	0.21	.....	0.14	.....	0.30
DRAINAGE OF IRRIGATED LAND					
53 Enterprises reporting land drained or needing drainage.....1939..number.....	10	.....	7	.....	3
54 Irrigable area in these enterprises.....1939..acres.....	1,643	.....	467	.....	1,176
55 Irrigated area in these enterprises.....1939..acres.....	1,466	.....	401	.....	1,065
56 Area for which drains have been installed.....1939..acres.....	273	.....	273	.....	.....
57 Additional area needing drainage.....1939..acres.....	138	.....	7	.....	131

² Data for 2 enterprises in Little Powder River Drainage Basin (47) (number refers to separate map) are included with Powder River Drainage Basin (46).

¹ Less than one-tenth of 1 percent.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - MONTANA

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IRRIGABLE AREA, 1940, 1930, 1920, AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSOURI RIVER—Continued														
Yellowstone River—Continued														
Clarks Fork (Yellowstone)			Big Horn River				Rosebud Creek	Tongue River	Powder River ^a					
Total	Direct	Red Lodge-Rock Creeks	Total	Direct	Shoshone River- Sage Creek	Little Horn River					(44)	(45)	(46)	
	(39)	(40)		(41)	(42)	(43)								
840	365	475	762	606	10	146	13	217	17	1				
77,252	32,372	44,880	56,323	44,294	1,064	10,965	700	13,880	2,195	2				
71,410	31,082	40,328	53,467	41,975	993	10,499	700	12,018	1,752	3				
479	65	414	106	46	40	20	.....	11	25	4			
5,363	1,225	4,138	2,750	2,273	31	446	.....	1,851	418	5			
86,310	.....	.....	43,319	.....	.....	.....	.....	13,303	1,144	6
68,839	.....	.....	51,103	.....	.....	.....	.....	11,170	728	7
-10.5	.....	.....	30.0	.....	.....	.....	.....	4.3	91.9	8
97,533	37,217	60,316	147,539	123,178	1,245	23,116	1,648	23,377	4,129	9				
102,285	.....	.....	87,171	.....	.....	.....	.....	18,604	1,672	10
125,367	.....	.....	92,036	.....	.....	.....	.....	31,396	5,871	11
20,281	4,845	15,436	91,216	78,884	181	12,151	948	9,497	1,934	12				
15,975	.....	.....	43,852	.....	.....	.....	.....	5,301	528	13
56,528	.....	.....	40,933	.....	.....	.....	.....	20,226	5,143	14
96,097	36,105	59,992	136,641	116,252	1,245	19,144	1,111	19,271	3,819	15				
100,548	.....	.....	77,447	.....	.....	.....	.....	18,497	1,217	16
116,506	.....	.....	66,206	.....	.....	.....	.....	21,403	4,841	17
-4.4	.....	.....	76.4	.....	.....	.....	.....	4.2	213.8	18
18,845	3,733	15,112	80,318	71,958	181	8,179	411	5,391	1,624	19				
14,238	.....	.....	34,128	.....	.....	.....	.....	5,194	73	20
47,667	.....	.....	15,103	.....	.....	.....	.....	10,233	4,113	21
80.4	89.7	74.8	41.2	38.1	85.5	57.3	63.0	72.0	57.5	22				
85.8	.....	.....	55.9	.....	.....	.....	.....	71.9	94.0	23
59.1	.....	.....	77.2	.....	.....	.....	.....	52.2	15.0	24
1,618,384	395,629	1,222,755	2,790,670	2,041,987	11,663	737,020	34,679	1,952,622	28,443	25				
1,603,639	392,304	1,211,335	2,790,494	2,041,962	11,661	736,871	34,679	1,899,639	28,077	26				
14,745	3,325	11,420	176	25	2	149	.....	52,983	366	27			
856,462	.....	.....	2,385,806	.....	.....	.....	.....	483,979	7,200	28
1,108,191	.....	.....	2,339,457	.....	.....	.....	.....	608,504	35,402	29
89.0	.....	.....	17.0	.....	.....	.....	.....	303.5	295.0	30
16.84	10.96	20.38	20.42	17.57	9.37	38.50	31.21	101.32	7.45	31				
8.52	.....	.....	30.81	.....	.....	.....	.....	26.17	5.92	32
9.51	.....	.....	35.34	.....	.....	.....	.....	28.43	7.31	33
20.95	12.22	27.24	49.55	46.10	10.96	67.22	49.54	140.68	12.96	34				
1,624,084	401,329	1,222,755	3,824,038	2,757,353	11,713	1,054,972	38,872	1,984,302	30,878	35				
16.65	10.78	20.27	25.92	22.39	9.41	45.64	23.59	84.88	7.48	36				
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.					
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises						
188	6	38	2	150	4	37	13	6	18	6	35	1	11	37
75,626	15,377	32,369	(3)	43,257	15,322	55,763	44,294	504	10,965	695	13,258	(3)	1,343	38
38,135	2,339	20,605	(3)	17,530	2,214	85,529	62,910	334	22,285	991	7,084	(3)	1,364	39
0.50	0.15	0.64	(3)	0.41	0.14	1.53	1.42	0.66	2.03	1.43	0.53	(3)	1.02	40
32,970	31,000	23,141	9,829	31,000	72,224	55,242	108	16,874	326	10,840	3,290	41
0.57	2.07	0.77	0.35	2.07	1.37	1.27	1.33	1.85	1.88	1.08	0.25	42
59,607	31,000	30,663	28,944	31,000	74,554	58,774	86	15,694	173	10,973	13,000	43
0.55	1.00	0.75	0.34	1.00	0.97	0.94	1.26	1.08	1.88	0.99	0.25	44
32,563	14,973	17,561	15,002	14,973	28,925	25,743	37	3,146	10,318	1,506	45
26,347	700,000	17,510	8,837	700,000	2,301,364	1,598,375	4,759	698,230	9,288	118,712	660,000	46
180	6	35	2	145	4	34	11	8	15	6	42	14	47
61,499	15,377	24,857	(3)	36,642	15,322	23,036	20,294	1,021	1,721	524	13,770	2,010	48
121,724	16,310	59,801	(3)	61,923	16,225	44,068	41,033	1,147	1,888	1,062	28,200	2,046	49
2.0	1.1	2.4	(3)	1.7	1.1	1.9	2.0	1.1	1.1	2.0	1.8	1.0	50
0.61	2.03	0.80	(3)	0.47	2.03	0.97	1.03	0.67	0.44	1.43	1.06	0.94	51
0.31	1.91	0.33	(3)	0.28	1.92	0.50	0.50	0.59	0.40	0.70	0.58	0.92	52
7	(3)	2	5	4	3	6	1	(3)	1	53
14,800	(3)	5,200	141,015	122,242	18,774	(3)	(3)	(3)	54
11,640	(3)	4,400	51,722	43,500	8,222	(3)	(3)	(3)	55
160	160	21,752	21,368	384	(3)	(3)	56
990	(3)	490	6,415	4,934	1,481	(3)	(3)	57

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁶ Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - MONTANA

DRAINAGE BASIN TABLE I--AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER--Continued				COLUMBIA RIVER			
	Yellowstone River--Con.	Little Missouri River			Total	Kootenai River		
	O'Fallon Creek	Total	Direct ¹	Beaver Creek				
	(48)		(49)	(52)		(54)		
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....1939..number.....	3	12	8	4	5,124	202	
2	Area irrigated.....1939..acres.....	135	190	152	38	341,873	7,163	
3	(a) Cropland harvested.....1939..acres.....	120	190	152	38	280,531	6,558	
4	(b) Crop failure.....1939..acres.....					1,796	8	
5	(c) Pasture.....1939..acres.....	15				59,546	597	
6	Area irrigated.....1929..acres.....		1,462			270,426	7,590	
7	.....1919..acres.....		380			291,966	6,982
8	Increase or decrease (-), 1929-1939.....percent.....		-87.0			26.4	-5.6	
9	Irrigable area in enterprises.....1940..acres.....	1,015	2,034	1,619	415	455,333	10,035	
10	.....1930..acres.....		2,127			434,176	10,330
11	.....1920 ³ ..acres.....		3,205			616,080	14,423
12	Excess of irrigable area over the area irrigated..1940..acres.....	880	1,844	1,467	377	113,460	2,872	
13	.....1930..acres.....		665			163,750	2,740
14	.....1920 ³ ..acres.....		2,825			324,114	8,441
15	Area works were capable of supplying with water...1940..acres.....	1,015	1,839	1,479	360	404,450	8,835	
16	.....1930..acres.....		1,962			404,042	9,432
17	.....1920..acres.....		1,480			453,588	9,724
18	Increase or decrease (-), 1930-1940.....percent.....		-6.3			0.1	-6.3	
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	880	1,649	1,327	322	62,577	1,672	
20	.....1930..acres.....		500			133,616	1,842
21	.....1920..acres.....		1,100			161,622	3,742
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	13.3	10.3	10.3	10.6	84.5	81.1	
23	.....1929..percent.....		74.5			66.9	80.5
24	.....1919..percent.....		25.7			64.4	61.5
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars....	12,971	23,269	7,154	16,115	13,447,045	222,549	
26	(a) Cost of irrigation works and equipment.....1940..dollars....	12,971	23,269	7,154	16,115	13,346,465	220,514	
27	(b) Investment in water rights (reported).....1940..dollars....					100,580	2,035	
28	Total investment in irrigation enterprises.....1930..dollars....		28,656			9,226,910	230,535	
29	.....1920..dollars....		15,064			8,636,067	221,976
30	Increase or decrease (-), 1930-1940.....percent.....		-18.8			45.7	-3.5	
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	12.78	12.65	4.84	44.76	33.25	25.19	
32	.....1930..dollars....		14.61			22.84	24.44
33	.....1920..dollars....		10.18			19.04	22.83
34	Average investment per acre irrigated.....1939..dollars....	96.08	122.47	47.07	424.08	39.33	31.07	
35	Estimated final investment in existing enterprises..1940..dollars....	15,221	26,394	9,804	16,590	14,633,812	234,524	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	15.00	12.98	6.06	39.98	32.14	23.37	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
37	Enterprises reporting maintenance and operation...1939..number.....	1	5	2	3	1,579	12	133
38	Area irrigated in these enterprises.....1939..acres.....	(4)	94	(4)	17	325,653	19,461	6,785
39	Cost of maintenance and operation.....1939..dollars....	(4)	225	(4)	125	247,990	3,699	6,250
40	Average cost, per acre irrigated.....1939..dollars....	(4)	2.39	(4)	7.35	0.76	0.19	0.92
41	Total annual charges (reported) ⁵.....1939..dollars....					240,350	26,394	4,283
42	Average annual charge per acre irrigated.....1939..dollars....					1.44	1.36	2.15
43	Area against which charges were assessed.....1939..acres.....					201,717	36,502	2,419
44	Average annual charge per acre assessed.....1939..dollars....					1.19	0.72	1.77
45	Total charges collected ⁵.....1939..dollars....					161,437	13,022	3,668
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars....					10,997,172	498,508	13,000
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	1	6	2	4	1,695	12	158
48	Area irrigated by these enterprises.....1939..acres.....	(4)	115	(4)	38	329,838	17,394	7,163
49	Water delivered.....1939..acre-feet.....	(4)	164	(4)	59	867,046	18,841	24,474
50	Average water delivered per acre irrigated.....1939..acre-feet.....	(4)	1.4	(4)	1.6	2.6	1.1	3.4
51	Average cost of water per acre irrigated.....1939..dollars....	(4)	1.86	(4)	2.14	0.92	1.51	1.17
52	Average cost of water per acre-foot delivered..1939..dollars....	(4)	1.31	(4)	2.50	0.35	1.39	0.34
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....		2		2	47		4
54	Irrigable area in these enterprises.....1939..acres.....	(4)		(4)		148,350		520
55	Irrigated area in these enterprises.....1939..acres.....	(4)		(4)		87,287		442
56	Area for which drains have been installed.....1939..acres.....	(4)		(4)		2,694		100
57	Additional area needing drainage.....1939..acres.....	(4)		(4)		2,764		44

¹Data for 2 enterprises in Boxelder Creek Drainage Basin (50) (number refers to separate map) and 1 enterprise in Little Beaver Creek Drainage Basin (51) are included with Little Missouri River "Direct" Drainage Basin (49).
²Data for the 1930 and 1920 Censuses for Upper Clark Fork Drainage Basin (58) (number refers to separate map) are included with Lower Clark Fork "Direct" Drainage Basin (55).
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - MONTANA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER—Continued															
Lower Clark Fork															
Total	Direct ²	Upper Clark Fork ²	Blackfoot River	Bitterroot River	Flathead River										
					Total	Direct	Swan River	Little Bitterroot River							
	(55)	(56)	(57)	(58)		(59)	(60)	(61)							
4,922	535	789	174	1,786	1,638	1,402	28	210	1						
334,710	22,885	83,073	30,062	113,822	84,888	75,139	887	8,862	2						
273,973	20,655	72,337	28,821	84,248	67,912	59,574	887	7,451	3						
1,788	46	668	200	356	518	482	.....	36	4					
58,949	2,164	10,068	1,041	28,218	16,458	15,083	.....	1,375	5					
262,836	12,771	.....	32,435	89,762	50,787	.....	.....	.....	6		
285,984	5,432	.....	40,604	112,622	44,333	.....	.....	.....	7		
27.3	79.0	.....	-7.3	26.6	67.1	.....	.....	.....	8		
445,298	37,931	91,519	40,962	126,827	148,059	131,024	1,165	15,870	9						
423,946	16,919	.....	48,246	114,631	143,787	.....	.....	.....	10		
601,657	14,403	.....	83,716	158,241	154,233	.....	.....	.....	11		
110,588	15,066	8,446	10,900	13,005	63,171	55,685	278	7,008	12						
161,010	4,148	.....	12,811	24,889	93,000	.....	.....	.....	13		
316,673	8,971	.....	43,112	45,619	109,900	.....	.....	.....	14		
395,615	31,986	90,271	40,053	120,292	113,013	98,970	943	13,100	15						
394,610	15,417	.....	43,572	109,782	128,588	.....	.....	.....	16		
443,864	10,499	.....	61,476	139,481	113,150	.....	.....	.....	17		
0.3	107.5	.....	-8.1	9.6	-12.1	.....	.....	.....	18		
60,905	9,121	7,198	9,991	6,470	28,125	23,831	56	4,238	19						
131,774	2,646	.....	11,137	20,020	77,601	.....	.....	.....	20		
157,880	5,067	.....	20,872	26,859	68,817	.....	.....	.....	21		
84.6	71.5	92.0	75.1	94.6	75.1	75.9	94.1	67.6	22						
66.6	82.9	.....	74.4	81.8	39.5	.....	.....	.....	23		
64.4	51.7	.....	66.0	80.7	39.2	.....	.....	.....	24		
13,224,496	715,657	1,607,241	474,512	2,340,188	8,086,898	6,701,159	9,212	1,376,527	25						
13,125,951	704,762	1,548,773	462,913	2,325,717	8,083,786	6,698,316	8,965	1,376,485	26						
98,545	10,695	58,468	11,599	14,471	3,112	2,843	227	42	27						
8,996,375	453,769	.....	233,832	1,935,651	5,603,512	.....	.....	.....	28		
8,414,091	362,027	.....	624,291	1,138,329	4,737,311	.....	.....	.....	29		
47.0	57.7	.....	102.9	20.9	44.3	.....	.....	.....	30		
33.43	22.37	17.80	11.85	19.45	71.56	67.71	9.77	105.08	31						
22.80	29.43	.....	5.37	17.63	43.58	.....	.....	.....	32		
18.96	34.48	.....	10.16	8.16	41.87	.....	.....	.....	33		
39.51	31.30	19.35	15.78	20.56	95.27	89.18	10.39	155.33	34						
14,396,288	887,297	1,614,893	487,687	2,344,838	9,064,573	7,582,019	11,327	1,471,227	35						
32.34	23.39	17.65	11.91	18.49	61.22	57.87	9.72	92.70	36						
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.						
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises							
1,446	12	250	3	379	1	114	473	8	230	205	14	11	37	
318,868	19,461	22,113	381	79,322	(4)	23,558	111,054	6,980	82,821	74,312	281	8,228	38	
241,740	3,699	15,038	75	37,494	(4)	8,460	83,550	1,325	97,198	84,804	165	12,229	39	
0.76	0.19	0.68	0.20	0.47	(4)	0.36	0.75	0.19	1.17	1.14	0.59	1.49	40	
236,067	26,394	14,616	370	8,474	24,750	6,000	83,959	1,274	123,018	109,477	13,541	41	
1.43	1.36	1.30	1.00	0.87	2.05	1.20	1.35	0.18	1.60	1.59	1.73	42	
199,296	36,502	14,461	370	10,046	25,000	5,000	64,171	11,132	105,620	93,845	11,775	43	
1.18	0.72	1.01	1.00	0.84	0.99	1.2	1.31	0.11	1.16	1.17	1.15	44	
157,769	13,022	9,276	352	7,212	11,979	36,387	691	104,894	93,625	11,269	45	
10,984,172	498,508	497,525	3,900	498,506	220,234	1,507,567	8,755,846	7,314,232	1,441,614	46	
1,537	12	278	4	399	1	129	481	7	250	212	23	15	47	
322,675	17,394	22,592	366	60,918	(4)	29,859	106,892	4,908	82,414	73,270	887	8,257	48	
842,572	18,841	61,579	513	271,680	(4)	63,687	320,784	6,228	124,842	109,505	3,471	11,866	49	
2.6	1.1	2.7	1.3	3.4	(4)	2.1	3.0	1.3	1.5	1.5	3.9	1.4	50	
0.91	1.51	0.98	1.12	0.51	(4)	0.51	0.79	0.22	1.58	1.57	0.59	1.71	51	
0.95	1.39	0.36	0.84	0.15	(4)	0.24	0.26	0.17	1.05	1.05	0.15	1.19	52	
43	27	8	6	4	7	1	53
147,830	8,740	(4)	4,308	134,347	(4)	14,641	54	
86,845	8,198	(4)	3,778	74,437	(4)	7,811	55	
2,534	1,664	(4)	760	760	56	
2,720	433	237	2,060	1,230	(4)	800	57

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

⁷Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - MONTANA

DRAINAGE BASIN TABLE II- ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSOURI RIVER					
		Total	Direct ¹	Jefferson River			
				Total	Direct	Deaverhead River	
						Total	Direct
ENTERPRISES AND IRRIGATION WORKS JANUARY 1			(1)	(2)	(3)		
1 Enterprises.....1940..number.....	2 5,560	3,759	540	1,138	152	379	226
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	422	516	207	438	312	433	571
3 Diversion dams.....1940..total number.....	6,136	4,013	464	1,588	128	695	561
4 1930..total number.....	2,856	2,377	6	728	23	298	.....
5 1920..total number.....	3,545	2,805	19	1,174	22	516	.....
6 (a) Concrete and masonry.....1940..number.....	254	220	26	78	2	49	15
7 (b) Timber.....1940..number.....	1,067	611	55	368	79	96	35
8 (c) Earth and rock.....1940..number.....	3,217	2,200	229	901	27	468	445
9 (d) Other, mixed, and not reported.....1940..number.....	1,598	982	154	241	20	82	66
10 Main canals and laterals.....1940..total length, miles.....	15,702.5	11,822.7	1,128.9	2,537.2	378.1	807.2	440.8
11 1930..total length, miles.....	15,957	12,468	131	2,369	142	930	.....
12 1920..total length, miles.....	22,496	18,150	511	4,312	228	1,373	.....
13 (a) Earth.....1940..length, miles.....	15,555	11,736	1,122	2,510	372	798	437
14 (b) Lined.....1940..length, miles.....	147.5	85.7	6.9	27.2	7.1	9.2	3.8
15 1940..capacity, c.f.s. ³	66,745	55,287	4,446	20,526	1,823	5,350	3,937
16 1930..capacity, c.f.s. ³	53,253	45,956	543	9,440	766	3,258	.....
17 1920..capacity, c.f.s. ³	94,429	78,615	778	25,319	1,331	5,340	.....
18 Pipe lines ⁴.....1940..total length, miles.....	148.1	91.8	11.4	4.7	1.1	0.9	0.3
19 1930..total length, miles.....	64.9	26.7	0.7	0.5	.....	.....	.....
20 1920..total length, miles.....	48.0	17.6	4.0	0.1	0.1	.....	.....
21 (a) Concrete.....1940..length, miles.....	14.5	9.9	0.4	0.1	.....	.....	.....
22 (b) Metal.....1940..length, miles.....	78.7	42.5	9.5	2.1	0.1	0.4	0.3
23 (c) Wood-stave.....1940..length, miles.....	26.1	10.8	1.5	2.5	1.0	0.5	.....
24 (d) Other.....1940..length, miles.....	28.8	28.6	.....	.....	.....	.....	.....
25 Storage dams.....1940..total number.....	468	358	45	37	1	15	4
26 1930..total number.....	326	263	.....	41	.....	12	.....
27 1920..total number.....	523	414	11	45	2	15	.....
28 (a) Concrete and masonry.....1940..number.....	19	9	.....	1	.....	.....	.....
29 (b) Earth and rock.....1940..number.....	385	311	42	25	1	13	2
30 (c) Other, mixed, and not reported.....1940..number.....	64	38	3	11	.....	2	2
31 Reservoirs.....1940..total number.....	517	402	51	39	1	14	3
32 (a) 1-99 acre-feet capacity.....1940..number.....	294	236	38	15	.....	3	.....
33 (b) 100-999 acre-feet capacity.....1940..number.....	149	116	12	16	.....	8	1
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	74	50	1	8	1	3	2
35 1940..total capacity, ac.-ft. ⁵	1,301,422	1,061,682	7,093	209,094	(⁶)	168,229	127,160
36 1930..total capacity, ac.-ft. ⁵	282	227	.....	40	.....	13	.....
37 1920..total capacity, ac.-ft. ⁵	857,067	694,023	.....	65,327	.....	54,025	.....
38 Wells, flowing.....1940..number.....	44	5	1	.....	.....	.....	.....
39 1930..number.....	40	3	.....	.....	.....	.....	.....
40 1920..number.....	41	28	.....	2	.....	1	.....
41 1940..yield, g.p.m.....	9,834	234	(⁶)	.....	.....	.....	.....
42 1930..yield, g.p.m.....	4,106	308	.....	.....	.....	.....	.....
43 1920..yield, g.p.m.....	4,608	1,245	.....	2	.....	.....	.....
44 Wells, pumped.....1940..number.....	102	65	29	2	.....	.....	.....
45 1930..number.....	49	32	.....	7	.....	.....	.....
46 1920..number.....	22	19	.....	.....	.....	.....	.....
47 1940..yield, g.p.m.....	33,863	23,145	8,105	(⁶)	.....	.....	.....
48 1930..yield, g.p.m.....	18,653	12,750	.....	978	.....	.....	.....
49 1920..yield, g.p.m.....	11,085	11,005	.....	.....	.....	.....	.....
50 Pumping plants.....1940..total number.....	651	526	134	8	1	2	.....
51 1930..total number.....	198	154	9	7	2	.....	.....
52 Prime movers.....1940..capacity, hp.....	29,110	18,996	6,829	105	(⁶)	(⁶)	.....
53 1930..capacity, hp.....	9,095	8,755	646	64	40	.....	.....
54 1920..capacity, hp.....	10,341	10,058	4,494	135	25	.....	.....
55 (a) Electric.....1940..number.....	165	103	35	2	.....	.....	.....
56 1940..capacity, hp.....	19,413	9,835	4,745	(⁶)	.....	.....	.....
57 (b) Internal-combustion.....1940..number.....	460	403	97	6	1	2	.....
58 1940..capacity, hp.....	8,223	7,802	1,994	102	(⁶)	(⁶)	.....
59 (c) Other.....1940..number.....	26	20	2	.....	.....	.....	.....
60 1940..capacity, hp.....	1,474	1,359	(⁶)	.....	.....	.....	.....
61 Pumps.....1940..total number.....	680	556	143	8	1	2	.....
62 1930..number.....	233	188	9	9	2	.....	.....
63 1920..number.....	299	271	34	4	2	.....	.....
64 1940..capacity, g.p.m.....	1,309,014	1,152,731	335,840	12,796	(⁶)	(⁶)	.....
65 1930..capacity, g.p.m.....	523,494	498,089	42,310	3,230	2,250	.....	.....
66 1920..capacity, g.p.m.....	453,231	440,779	115,975	4,968	1,968	.....	.....
67 (a) Centrifugal.....1940..number.....	595	504	128	4	1	2	.....
68 1940..capacity, g.p.m.....	1,192,870	1,061,611	322,828	7,000	(⁶)	(⁶)	.....
69 1940..average capacity, g.p.m.....	2,005	2,106	2,522	1,750	(⁶)	(⁶)	.....
70 (b) Turbine.....1940..number.....	27	21	9	2	.....	.....	.....
71 1940..capacity, g.p.m.....	66,084	54,872	10,602	(⁶)	.....	.....	.....
72 1940..average capacity, g.p.m.....	2,448	2,613	1,178	(⁶)	.....	.....	.....
73 (c) Plunger.....1940..number.....	34	16	5	2	.....	.....	.....
74 1940..capacity, g.p.m.....	1,869	807	210	(⁶)	.....	.....	.....
75 1940..average capacity, g.p.m.....	55	38	42	(⁶)	.....	.....	.....
76 (d) Other.....1940..number.....	24	15	1	.....	.....	.....	.....
77 1940..capacity, g.p.m.....	48,191	35,641	(⁶)	.....	.....	.....	.....
78 Pumping lift, from all sources.....1940..average, feet.....	21	18	22	18	(⁶)	(⁶)	.....
79 1930..average, feet.....	22	19	31	31	6	.....	.....
80 1920..average, feet.....	20	19	24	25	24	.....	.....
81 from pumped wells.....1940..average, feet.....	24	20	23	(⁶)	.....	.....	.....
82 from surface sources.....1940..average, feet.....	20	18	22	14	(⁶)	(⁶)	.....

¹ Data for 4 enterprises in Dog Creek Drainage Basin (17) (number refers to separate map) are included with Missouri River "Direct" Drainage Basin (1).
² Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.
³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — MONTANA

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WORKS, 1940, 1930, AND 1920

MISSOURI RIVER—Continued														
Jefferson River—Continued						Marias River								
Beaverhead River—Con.		Big Hole River	Boulder River	Madison River	Gallatin River	Smith River	Sun River	Belt River	Total	Direct	Teton River	Arrow River	Judith River	
Blacktail Deer Creek	Ruby River														(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
5	148	217	86	74	230	90	96	16	198	97	101	26	66	1
619	216	598	213	387	491	308	1,393	24	1,059	1,450	683	172	292	2
36	98	432	74	71	198	105	67	14	197	107	90	32	57	3
41	297	297	.....	23	159	34	27	.....	49	.....	19	.....	38	4
54	442	442	48	100	98	96	91	.....	59	.....	21	.....	147	5
30	4	1	1	10	15	.....	1	.....	5	4	1	.....	2	6
6	55	104	6	28	55	.....	3	2	24	7	17	.....	4	7
23	289	38	38	27	73	82	53	8	139	73	66	6	37	8
16	59	29	6	45	13	10	4	.....	29	23	26	.....	14	9
68.0	298.4	470.8	203.5	183.6	493.0	169.8	837.3	10.5	1,406.4	1,015.4	391.0	29.0	159.2	10
203	674	283	.....	818	225	471	.....	.....	901	.....	291	.....	155	11
359	1,612	187	672	1,113	449	512	.....	.....	1,324	.....	378	.....	395	12
68	293	468	202	180	490	169	830	10	1,404	1,013	391	29	157	13
5.4	2.8	1.5	3.6	3.0	0.8	7.3	0.5	.....	2.4	2.4	.....	.....	2.2	14
1,307	8,812	688	845	3,008	274	2,604	30	.....	3,938	1,990	1,948	245	732	15
793	3,612	.....	1,005	3,040	603	1,829	.....	.....	2,830	.....	1,383	.....	423	16
1,456	7,171	649	2,709	4,243	983	2,467	.....	.....	5,200	.....	2,566	.....	1,479	17
0.5	0.1	0.2	.....	.....	2.5	1.3	.....	.....	11.0	9.9	1.1	1.0	.....	18
.....	.....	.....	0.2	.....	0.2	.....	.....	.....	1.0	.....	.....	.....	1.1	19
.....	.....	.....	.....	.....	0.5	.....	.....	.....	2.1	.....	0.5	.....	2.4	20
.....	.....	.....	.....	.....	1.1	.....	.....	.....	0.3	.....	.....	.....	.....	21
.....	0.1	0.2	.....	.....	1.4	0.2	.....	.....	7.0	5.9	1.1	.....	.....	22
0.5	.....	.....	.....	.....	1.0	1.1	.....	.....	1.0	1.0	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
.....	11	8	10	1	2	7	3	.....	32	19	13	4	2	25
7	9	.....	.....	6	1	1	5	.....	19	.....	4	.....	3	26
7	8	3	10	5	4	14	.....	.....	22	.....	7	.....	5	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
.....	11	2	7	1	1	3	2	.....	28	15	13	4	2	29
.....	6	2	.....	.....	.....	4	.....	.....	4	4	.....	.....	.....	30
.....	11	8	12	1	3	7	3	.....	34	20	14	5	3	31
3	.....	10	1	1	1	7	2	.....	14	10	4	5	2	32
7	8	.....	.....	.....	.....	.....	.....	.....	12	6	6	.....	.....	33
.....	1	2	.....	.....	2	.....	.....	.....	8	4	.....	.....	1	34
.....	41,069	4,418	10,092	(⁶)	9,501	31	90,011	.....	277,892	179,839	98,053	130	6,016	35
7	8	.....	7	.....	.....	2	4	.....	22	.....	4	.....	1	36
.....	985	2,965	791	.....	.....	700	127,600	.....	238,320	.....	96,001	.....	1	37
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	.....	.....	.....	.....	.....	.....	(⁶)	.....	3	.....	3	.....	.....	40
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	1,000	.....	1,000	.....	.....	43
.....	.....	.....	.....	1	1	.....	.....	.....	4	1	3	.....	1	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	45
.....	.....	.....	.....	(⁶)	(⁶)	.....	.....	.....	4	.....	1	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	1,985	(⁶)	1,815	.....	(⁶)	47
.....	.....	.....	.....	.....	.....	.....	660	.....	1,600	.....	1,600	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	8,010	.....	10	.....	1,500	49
.....	2	.....	1	2	2	.....	41	1	52	36	16	.....	7	50
.....	(⁶)	.....	(⁶)	(⁶)	(⁶)	1	12	.....	15	.....	10	.....	2	51
.....	.....	.....	.....	.....	15	.....	640	(⁶)	1,118	826	292	.....	110	52
.....	.....	110	.....	.....	70	18	74	.....	295	.....	112	.....	16	53
.....	.....	.....	.....	.....	1	.....	325	.....	753	.....	130	.....	72	54
.....	.....	.....	.....	.....	(⁶)	.....	31	.....	6	.....	4	.....	1	55
.....	.....	.....	.....	.....	(⁶)	.....	432	.....	87	(⁶)	52	.....	(⁶)	56
.....	2	.....	1	1	(⁶)	.....	8	.....	42	31	11	.....	6	57
.....	(⁶)	.....	(⁶)	(⁶)	(⁶)	.....	2	(⁶)	889	651	238	.....	102	58
.....	.....	.....	.....	.....	.....	.....	4	.....	4	3	.....	.....	.....	59
.....	2	.....	1	2	.....	.....	(⁶)	.....	142	140	(⁶)	1	.....	60
.....	.....	.....	.....	.....	.....	.....	42	.....	56	37	19	.....	7	61
.....	.....	.....	.....	.....	.....	.....	16	.....	18	.....	13	.....	2	62
.....	.....	.....	.....	.....	.....	.....	20	.....	30	.....	8	.....	16	63
.....	(⁶)	.....	(⁶)	(⁶)	(⁶)	.....	41,190	(⁶)	88,916	61,880	27,036	.....	9,280	64
.....	.....	.....	.....	.....	.....	.....	5,358	.....	16,340	.....	7,800	.....	2,450	65
.....	.....	3,000	.....	.....	.....	6,000	20,210	.....	50,575	.....	13,410	.....	10,600	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
.....	(⁶)	.....	(⁶)	(⁶)	.....	.....	41	1	52	36	16	.....	7	67
.....	(⁶)	.....	(⁶)	(⁶)	.....	.....	41,115	(⁶)	86,506	60,480	26,026	.....	9,260	68
.....	.....	.....	.....	.....	.....	.....	1,003	(⁶)	1,664	1,680	1,627	.....	1,323	69
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70
.....	.....	.....	(⁶)	.....	(⁶)	.....	.....	.....	(⁶)	(⁶)	.....	.....	.....	71
.....	.....	.....	(⁶)	.....	(⁶)	.....	.....	.....	(⁶)	(⁶)	.....	.....	.....	72
.....	.....	.....	.....	.....	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	(⁶)	.....	(⁶)	.....	.....	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	(⁶)	.....	(⁶)	.....	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	(⁶)	2	(⁶)	2	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	77
.....	(⁶)	.....	(⁶)	(⁶)	(⁶)	.....	.....	.....	16	17	15	.....	14	78
.....	.....	.....	.....	.....	.....	.....	.....	.....	16	.....	.....	.....	8	79
.....	.....	24	.....	.....	.....	.....	.....	.....	16	.....	.....	.....	11	80
.....	(⁶)	.....	(⁶)	(⁶)	(⁶)	.....	.....	.....	7	.....	.....	.....	7	81
.....	.....	.....	.....	.....	.....	.....	.....	.....	17	.....	16	.....	14	82

⁴ Includes siphons and farm pipe lines reported.
⁵ Total capacity of all reservoirs regardless of size.
⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

DRAINAGE BASIN TABLE II— ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued						
	Musselshell River				Milk River		
	Total	Direct	Boxelder-Flat Willow Creeks	Dry Creek	Total	Direct	Sandy Creek
	(18)	(19)	(20)		(21)	(22)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1 Enterprises.....1940..number.....	255	168	87	12	187	120	12
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	329	333	322	136	1,024	1,294	430
3 Diversion dams.....1940..total number.....	300	180	120	12	175	101	12
4 ..1930..total number.....	202				151	25	
5 ..1920..total number.....	192				201	5	
6 (a) Concrete and masonry.....1940..number.....	6	6			32	25	2
7 (b) Timber.....1940..number.....	3	3			3		
8 (c) Earth and rock.....1940..number.....	175	72	103	12	116	66	4
9 (d) Other, mixed, and not reported.....1940..number.....	116	99	17		24	10	6
10 Main canals and laterals.....1940..total length, miles.....	680.2	504.2	176.0	20.0	958.0	768.0	36.0
11 ..1930..total length, miles.....	615				1,051	748	
12 ..1920..total length, miles.....	1,152				1,246	33	
13 (a) Earth.....1940..length, miles.....	677	501	176	20	951	762	36
14 (b) Lined.....1940..length, miles.....	3.2	3.2			7.0	6.0	
15 ..1940..capacity, c.f.s. ¹	2,920	1,658	1,262	95	3,728	2,360	95
16 ..1930..capacity, c.f.s. ¹	3,153				4,429	2,230	
17 ..1920..capacity, c.f.s. ¹	4,277				7,416	200	
18 Pipe lines ².....1940..total length, miles.....	1.1	0.6	0.5	1.1	32.2	31.5	0.2
19 ..1930..total length, miles.....	0.4				10.2	10.2	
20 ..1920..total length, miles.....					1.2		
21 (a) Concrete.....1940..length, miles.....					3.3	3.1	
22 (b) Metal.....1940..length, miles.....	1.1	0.6	0.5	1.1	3.1	2.6	0.2
23 (c) Wood-stave.....1940..length, miles.....							
24 (d) Other.....1940..length, miles.....					25.8	25.8	
25 Storage dams.....1940..total number.....	26	8	18	8	73	34	8
26 ..1930..total number.....	14				74	9	
27 ..1920..total number.....	35				104		
28 (a) Concrete and masonry.....1940..number.....					7	5	1
29 (b) Earth and rock.....1940..number.....	19	7	12	7	66	29	7
30 (c) Other, mixed, and not reported.....1940..number.....	7	1	6	1			
31 Reservoirs.....1940..total number.....	35	13	22	8	82	38	8
32 (a) 1-99 acre-feet capacity.....1940..number.....	24	11	13	4	35	19	4
33 (b) 100-999 acre-feet capacity.....1940..number.....	8	1	7	4	28	11	4
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	3	1	2		19	8	
35 ..1940..total capacity, ac.-ft. ³	32,665	3,809	28,856	1,102	297,423	271,762	2,098
36 ..1930..total capacity, ac.-ft.....	9				63	6	
37 ..1920..total capacity, ac.-ft.....	30,164				181,490	80,870	
38 Wells, flowing.....1940..number.....	1		1		1		
39 ..1930..number.....					1		
40 ..1920..number.....					1		
41 ..1940..yield, g.p.m.....	(⁴)		(⁴)		(⁴)		
42 ..1930..yield, g.p.m.....					8		
43 ..1920..yield, g.p.m.....					50		
44 Wells, pumped.....1940..number.....	11	11			11	4	2
45 ..1930..number.....	5				3		
46 ..1920..number.....							
47 ..1940..yield, g.p.m.....	3,785	3,785			6,226	2,826	(⁴)
48 ..1930..yield, g.p.m.....	2,765				4,176		
49 ..1920..yield, g.p.m.....							
50 Pumping plants.....1940..total number.....	46	37	9		78	55	5
51 ..1930..total number.....	19				19	7	
52 Prime movers.....1940..capacity, hp.....	708	511	197		1,379	1,092	39
53 ..1930..capacity, hp.....	234				454	230	
54 ..1920..capacity, hp.....	178				377	70	
55 (a) Electric.....1940..number.....	8	8			8	7	
56 ..1940..capacity, hp.....	91	91			314	284	
57 (b) Internal-combustion.....1940..number.....	37	29	8		68	48	5
58 ..1940..capacity, hp.....	581	420	161		1,063	808	39
59 (c) Other.....1940..number.....	1		1		2		
60 ..1940..capacity, hp.....	(⁴)		(⁴)				
61 Pumps.....1940..total number.....	48	39	9		83	59	5
62 ..1930..number.....	19				23	11	
63 ..1920..number.....	12				23	4	
64 ..1940..capacity, g.p.m.....	62,275	47,525	14,750		134,310	110,802	4,400
65 ..1930..capacity, g.p.m.....	18,713				56,654	35,810	
66 ..1920..capacity, g.p.m.....	16,250				24,345	2,570	
67 (a) Centrifugal.....1940..number.....	44	35	9		73	55	3
68 ..1940..capacity, g.p.m.....	55,325	40,575	14,750		131,326	109,326	4,200
69 ..1940..average capacity, g.p.m.....	1,257	1,159	1,639		1,799	1,988	1,400
70 (b) Turbine.....1940..number.....					2	1	
71 ..1940..capacity, g.p.m.....					(⁴)	(⁴)	
72 ..1940..average capacity, g.p.m.....					(⁴)	(⁴)	
73 (c) Plunger.....1940..number.....	1	1			6	1	2
74 ..1940..capacity, g.p.m.....	(⁴)	(⁴)			288	(⁴)	(⁴)
75 ..1940..average capacity, g.p.m.....	(⁴)	(⁴)			48	(⁴)	(⁴)
76 (d) Other.....1940..number.....	3	3			2	2	
77 ..1940..capacity, g.p.m.....	6,900	6,900			(⁴)	(⁴)	
78 Pumping lift, from all sources.....1940..average, feet.....	14	14	17		18	17	23
79 ..1930..average, feet.....	14				17	14	
80 ..1920..average, feet.....	19				16	18	
81 from pumped wells.....1940..average, feet.....	14	14			27	19	(⁴)
82 from surface sources.....1940..average, feet.....	14	14	17		17	17	24

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — MONTANA

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WORKS, 1940, 1930, AND 1920—Continued

MISSOURI RIVER—Continued												
Milk River—Continued						Yellowstone River						
Clear Creek	Lodge- Battle Creeks	Snake Creek	Frenchman Creek	Beaver Creek	Rock Creek	Redwater Creek	Poplar River	Big Muddy Creek	Total	Direct	Shields River	
(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)		(33)	(34)	
16	16	5	6	8	4	22	8	4	1,085	466	122	1
130	274	324	645	1,171	2,404	142	98	118	600	665	301	2
13	29	6	6	7	1	6	3	5	983	379	193	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	598	23	161	4
.....	.....	13	.....	.....	.....	.....	.....	.....	449	14	88	5
2	2	.....	1	.....	.....	.....	.....	.....	70	21	6	6
7	27	3	5	7	.....	.....	.....	.....	149	54	39	7
4	.....	3	.....	.....	1	6	3	5	415	158	55	8
.....	.....	.....	.....	.....	.....	.....	.....	.....	349	146	98	9
35.6	53.2	5.1	12.0	34.1	14.0	22.0	7.0	4.0	3,845.2	1,714.7	263.6	10
.....	.....	.....	.....	.....	.....	.....	.....	.....	3,995	1,096	453	11
.....	.....	61	.....	.....	.....	.....	.....	.....	4,683	1,167	532	12
35	53	5	12	34	14	22	7	4	3,816	1,699	255	13
0.6	0.2	0.1	.....	0.1	.....	.....	.....	.....	29.2	15.7	8.6	14
53	341	37	29	70	743	98	40	13	15,547	7,769	905	15
.....	.....	72	.....	.....	.....	.....	.....	.....	15,936	5,349	1,166	16
.....	.....	.....	.....	.....	.....	.....	.....	.....	19,605	5,508	1,620	17
.....	0.3	0.2	.....	.....	.....	.....	.....	.....	20.1	15.3	0.1	18
.....	.....	.....	.....	.....	.....	.....	.....	.....	2.4	1.0	.....	19
.....	.....	.....	.....	.....	.....	.....	.....	.....	2.7	2.0	.....	20
.....	.....	0.2	.....	.....	.....	.....	.....	.....	2.8	2.7	.....	21
.....	0.3	.....	.....	.....	.....	.....	.....	.....	12.0	8.4	0.1	22
.....	.....	.....	.....	.....	.....	.....	.....	.....	3.5	2.4	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	1.8	1.8	.....	24
2	10	2	.....	16	1	17	1	1	32	60	2	25
.....	.....	1	.....	.....	.....	.....	.....	.....	40	2	2	26
.....	.....	6	.....	.....	.....	.....	.....	.....	86	11	1	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
2	9	2	.....	16	1	16	1	.....	87	57	2	29
.....	.....	.....	.....	.....	.....	.....	.....	.....	5	3	.....	30
3	14	2	.....	16	1	21	1	1	96	61	2	31
1	7	1	.....	2	1	17	1	.....	62	37	1	32
2	5	1	.....	5	.....	4	.....	.....	27	18	1	33
.....	.....	.....	.....	9	.....	.....	.....	.....	9	6	.....	34
571	10,908	(*)	.....	11,809	(*)	2,145	(*)	(*)	136,697	42,364	(*)	35
.....	.....	1	.....	.....	.....	.....	.....	.....	29	2	1	36
.....	.....	5	.....	.....	.....	.....	.....	.....	17,068	1,700	800	37
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	39
.....	.....	.....	.....	.....	.....	.....	.....	.....	18	3	.....	40
.....	.....	(*)	.....	.....	.....	.....	.....	.....	(*)	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	300	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	188	69	.....	43
.....	.....	.....	2	3	.....	.....	.....	.....	7	6	1	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	46
.....	.....	.....	(*)	100	.....	.....	.....	.....	2,538	2,238	(*)	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	555	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	50	.....	40	49
.....	6	.....	5	5	2	2	4	2	150	113	1	50
.....	80	.....	88	40	(*)	(*)	26	(*)	46	27	1	51
.....	.....	.....	.....	.....	.....	.....	.....	.....	8,000	7,327	(*)	52
.....	.....	.....	.....	.....	.....	.....	.....	.....	3,136	2,952	20	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	3,173	2,501	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	12	11	.....	55
.....	6	.....	.....	.....	(*)	.....	.....	.....	4,155	4,125	.....	56
.....	80	.....	88	38	(*)	2	4	2	129	93	1	57
.....	.....	.....	.....	.....	(*)	(*)	26	(*)	2,896	2,253	(*)	58
.....	.....	.....	.....	.....	.....	.....	.....	.....	9	9	.....	59
.....	.....	.....	.....	.....	.....	.....	.....	.....	949	949	.....	60
.....	6	.....	6	5	.....	.....	.....	.....	159	121	1	61
.....	.....	.....	.....	.....	.....	.....	.....	.....	58	36	.....	62
.....	.....	.....	.....	.....	.....	.....	.....	.....	90	45	.....	63
.....	7,180	.....	6,500	2,378	(*)	(*)	2,330	(*)	458,204	408,524	(*)	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	261,894	245,249	4,000	65
.....	.....	.....	.....	.....	.....	.....	.....	.....	166,553	127,662	.....	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	145	110	1	67
.....	5,900	.....	6,500	(*)	(*)	(*)	2,330	(*)	398,311	353,531	(*)	68
.....	1,180	.....	1,083	(*)	(*)	(*)	582	(*)	2,747	3,214	(*)	69
.....	(*)	.....	.....	.....	.....	.....	.....	.....	7	5	.....	70
.....	(*)	.....	.....	.....	.....	.....	.....	.....	34,690	31,090	.....	71
.....	.....	.....	.....	.....	.....	.....	.....	.....	4,956	6,218	.....	72
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	(*)	.....	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	(*)	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	6	5	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	25,200	23,900	.....	77
.....	13	.....	18	35	(*)	(*)	16	(*)	17	19	(*)	78
.....	.....	.....	.....	.....	.....	.....	.....	.....	18	22	14	79
.....	.....	.....	.....	.....	.....	.....	.....	.....	19	24	.....	80
.....	.....	.....	(*)	66	(*)	(*)	.....	.....	13	16	(*)	81
.....	13	.....	18	19	(*)	(*)	16	(*)	18	19	.....	82

³Total capacity of all reservoirs regardless of size.
⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSOURI RIVER—Continued					
		Yellowstone River—Continued					
		Boulder River (35)	Stillwater River				
			Total	Direct	Fishtail—West Rosebud Creeks		
		(36)	Total	Direct	East Rosebud Creek (38)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940..number.....	46	118	42	76	40	36
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	400	242	232	248	226	272
3	Diversion dams.....1940..total number.....	14	101	32	69	27	42
4	.....1930..total number.....	3	57				
5	.....1920..total number.....		16				
6	(a) Concrete and masonry.....1940..number.....	2	16	1	15		15
7	(b) Timber.....1940..number.....	4	11	2	9	1	8
8	(c) Earth and rock.....1940..number.....	5	53	22	31	25	6
9	(d) Other, mixed, and not reported.....1940..number.....	3	21	7	14	1	13
10	Main canals and laterals.....1940..total length, miles.....	127.0	358.0	74.4	283.6	51.0	232.6
11	.....1930..total length, miles.....	93	332				
12	.....1920..total length, miles.....		346				
13	(a) Earth.....1940..length, miles.....	127	357	74	283	51	232
14	(b) Lined.....1940..length, miles.....		1.0	0.4	0.6		0.6
15	.....1940..capacity, c.f.s. ¹	686	1,019	379	640	248	392
16	.....1930..capacity, c.f.s. ¹	524	1,168				
17	.....1920..capacity, c.f.s. ¹		1,357				
18	Pipe lines ².....1940..total length, miles.....		0.9		0.9		0.9
19	.....1930..total length, miles.....						
20	.....1920..total length, miles.....						
21	(a) Concrete.....1940..length, miles.....						
22	(b) Metal.....1940..length, miles.....						
23	(c) Wood-stave.....1940..length, miles.....		0.9		0.9		0.9
24	(d) Other.....1940..length, miles.....						
25	Storage dams.....1940..total number.....						
26	.....1930..total number.....		1				
27	.....1920..total number.....		2				
28	(a) Concrete and masonry.....1940..number.....						
29	(b) Earth and rock.....1940..number.....						
30	(c) Other, mixed, and not reported.....1940..number.....						
31	Reservoirs.....1940..total number.....						
32	(a) 1-99 acre-feet capacity.....1940..number.....						
33	(b) 100-999 acre-feet capacity.....1940..number.....						
34	(c) 1,000 and over acre-feet capacity.....1940..number.....						
35	.....1940..total capacity, ac.-ft. ³						
36	.....1930..total number.....						
37	.....1930..total capacity, ac.-ft.....						
38	Wells, flowing.....1940..number.....						
39	.....1930..number.....						
40	.....1920..number.....						
41	.....1940..yield, g.p.m.....						
42	.....1930..yield, g.p.m.....						
43	.....1920..yield, g.p.m.....						
44	Wells, pumped.....1940..number.....						
45	.....1930..number.....						
46	.....1920..number.....						
47	.....1940..yield, g.p.m.....						
48	.....1930..yield, g.p.m.....						
49	.....1920..yield, g.p.m.....						
50	Pumping plants.....1940..total number.....	1					
51	.....1930..total number.....		1				
52	Prime movers.....1940..capacity, hp.....	(4)					
53	.....1930..capacity, hp.....		9				
54	.....1920..capacity, hp.....						
55	(a) Electric.....1940..number.....						
56	.....1940..capacity, hp.....						
57	(b) Internal-combustion.....1940..number.....	1					
58	.....1940..capacity, hp.....	(4)					
59	(c) Other.....1940..number.....						
60	.....1940..capacity, hp.....						
61	Pumps.....1940..total number.....	1					
62	.....1930..number.....		1				
63	.....1920..number.....						
64	.....1940..capacity, g.p.m.....	(4)					
65	.....1930..capacity, g.p.m.....		160				
66	.....1920..capacity, g.p.m.....						
67	(a) Centrifugal.....1940..number.....	1					
68	.....1940..capacity, g.p.m.....	(4)					
69	.....1940..average capacity, g.p.m.....	(4)					
70	(b) Turbine.....1940..number.....						
71	.....1940..capacity, g.p.m.....						
72	.....1940..average capacity, g.p.m.....						
73	(c) Plunger.....1940..number.....						
74	.....1940..capacity, g.p.m.....						
75	.....1940..average capacity, g.p.m.....						
76	(d) Other.....1940..number.....						
77	.....1940..capacity, g.p.m.....						
78	Pumping lift, from all sources.....1940..average, feet.....	(4)					
79	.....1930..average, feet.....		12				
80	.....1920..average, feet.....						
81	from pumped wells.....1940..average, feet.....						
82	from surface sources.....1940..average, feet.....	(4)					

⁴ Data for 2 enterprises in Little Powder River Drainage Basin (47) (number refers to separate map) are included with Powder River Drainage Basin (46).
¹ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
² Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - MONTANA

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WORKS, 1940, 1930, AND 1920—Continued

MISSOURI RIVER—Continued												
Yellowstone River—Continued												
Clarks Fork (Yellowstone)			Big Horn River				Rosebud Creek	Tongue River	Powder River ^a		O'Fallon Creek	
Total	Direct (39)	Red Lodge- Rock Creeks (40)	Total	Direct (41)	Shoshone River- Sage Creek (42)	Little Horn River (43)			Total	Direct (46)			(45)	(46)	(46)
207	41	166	40	13	9	18	7	47	25	25	7	1
464	881	361	3,416	8,942	138	1,064	159	410	153	153	145	2
176	28	148	24	7	3	14	6	65	22	22	3	3
47	.....	.....	18	.....	.....	.....	.....	28	8	.....	.....	4
101	.....	.....	45	.....	.....	.....	.....	23	17	.....	.....	5
27	3	24	.....	.....	.....	.....	2	1	.....	.....	.....	6
36	.....	36	3	.....	2	1	.....	2	.....	.....	.....	7
66	14	52	10	4	.....	6	2	43	22	22	1	8
47	11	38	11	3	1	7	2	19	.....	.....	.....	9
746.0	153.6	592.4	434.6	292.4	22.2	120.0	21.0	153.2	21.1	21.1	6.0	10
727	.....	.....	439	.....	.....	.....	.....	93	3	.....	.....	11
924	.....	.....	416	.....	.....	.....	.....	158	26	.....	.....	12
745	153	592	433	291	22	120	21	152	21	21	6	13
1.0	0.6	0.4	1.6	1.4	0.2	.....	.....	1.2	0.1	0.1	.....	14
2,698	1,067	1,631	1,340	977	38	325	68	929	102	102	31	15
3,693	.....	.....	1,110	.....	.....	.....	.....	429	18	.....	.....	16
3,139	.....	.....	1,675	.....	.....	.....	.....	974	111	.....	.....	17
0.9	0.5	0.4	0.3	0.2	.....	0.1	.....	0.3	2.3	2.3	.....	18
0.4	.....	.....	.....	.....	.....	.....	.....	1.0	.....	.....	.....	19
.....	.....	.....	0.1	.....	.....	.....	.....	0.1	.....	.....	.....	20
0.1	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21
0.6	0.2	0.4	0.3	0.2	.....	0.1	.....	0.3	2.3	2.3	.....	22
0.2	0.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
4	2	2	2	.....	.....	2	.....	8	12	12	4	25
.....	.....	.....	.....	.....	.....	.....	.....	4	3	.....	.....	26
5	.....	.....	1	.....	.....	.....	.....	12	13	.....	.....	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
2	2	.....	2	.....	.....	2	.....	8	12	12	4	29
2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
4	2	2	2	.....	.....	2	.....	10	14	14	5	31
2	2	.....	1	.....	.....	1	.....	8	10	10	3	32
.....	.....	.....	1	.....	.....	1	.....	1	4	4	2	33
2	.....	2	.....	.....	.....	.....	.....	1	.....	.....	.....	34
31,020	(*)	(*)	(*)	.....	.....	(*)	.....	60,535	1,044	1,044	904	35
.....	.....	.....	1	.....	.....	.....	.....	2	4	.....	.....	36
.....	.....	.....	2	.....	.....	.....	.....	10	60	.....	.....	37
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	38
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	39
.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	40
.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	(*)	.....	41
100	.....	.....	.....	.....	.....	.....	.....	.....	200	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	119	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
4	4	.....	4	2	.....	2	3	20	4	4	.....	50
2	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	51
86	86	.....	50	(*)	.....	(*)	60	307	142	142	.....	52
12	.....	.....	.....	.....	.....	.....	.....	96	.....	.....	.....	53
10	.....	.....	38	.....	.....	.....	.....	286	221	.....	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	55
.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....	56
4	4	.....	4	2	.....	2	3	19	4	4	.....	57
86	86	.....	50	(*)	.....	(*)	60	277	142	142	.....	58
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	59
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
4	4	.....	4	2	.....	2	3	20	5	5	.....	61
2	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	62
2	.....	.....	3	.....	.....	.....	.....	16	13	.....	.....	63
3,995	3,995	.....	5,400	(*)	.....	(*)	2,040	24,000	12,745	12,745	.....	64
1,410	.....	.....	.....	.....	.....	.....	.....	5,900	.....	.....	.....	65
470	.....	.....	1,850	.....	.....	.....	.....	14,575	13,365	.....	.....	66
4	4	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	67
3,995	3,995	.....	4,200	(*)	.....	(*)	2,040	20,300	12,745	12,745	.....	68
999	999	.....	1,400	(*)	.....	(*)	680	1,128	2,549	2,549	.....	69
.....	.....	.....	1	(*)	.....	(*)	.....	.....	.....	.....	.....	70
.....	.....	.....	(*)	(*)	.....	.....	.....	(*)	.....	.....	.....	71
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	72
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77
22	22	.....	13	(*)	.....	(*)	18	14	12	12	.....	78
9	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	79
8	.....	.....	17	.....	.....	.....	.....	15	15	.....	.....	80
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	81
22	22	.....	13	(*)	.....	(*)	18	14	12	12	.....	82

³Total capacity of all reservoirs regardless of size.
⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued			COLUMBIA RIVER				
	Little Missouri River			Total	Kootenai River	Lower Clark Fork		
	Total	Direct ¹	Beaver Creek			Total	Direct ²	
		(49)	(52)		(54)	(55)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	16	9	7	1,801	162	1,639	294
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	115	164	51	225	55	241	109
3	Diversion dams.....1940..total number.....	5	3	2	2,123	164	1,959	327
4	1930..total number.....	14			479	85	394	6
5	1920..total number.....	12			740	30	710	1
6	(a) Concrete and masonry.....1940..number.....				34	6	28	8
7	(b) Timber.....1940..number.....				456	78	378	89
8	(c) Earth and rock.....1940..number.....	3	1	2	1,017	52	965	176
9	(d) Other, mixed, and not reported.....1940..number.....	2	2		616	28	588	54
10	Main canals and laterals.....1940..total length, miles.....	8.0	5.0	3.0	3,879.8	148.3	3,731.5	343.4
11	1930..total length, miles.....	5			3,489	106	3,383	118
12	1920..total length, miles.....	29			4,346	119	4,227	74
13	(a) Earth.....1940..length, miles.....	8	5	3	3,819	140	3,679	335
14	(b) Lined.....1940..length, miles.....				60.8	8.3	52.5	8.4
15	1940..capacity, c.f.s. ³	51	33	18	11,458	437	11,021	1,307
16	1930..capacity, c.f.s. ³	54			7,297	266	7,031	426
17	1920..capacity, c.f.s. ³	70			15,614	1,095	14,519	1,300
18	Pipe lines ⁴.....1940..total length, miles.....	0.1		0.1	56.3	8.8	47.5	13.1
19	1930..total length, miles.....	2.0			38.2	4.9	33.3	0.3
20	1920..total length, miles.....				30.4	3.6	26.8	1.5
21	(a) Concrete.....1940..length, miles.....				4.6		4.6	
22	(b) Metal.....1940..length, miles.....	0.1		0.1	36.2	3.2	33.0	8.5
23	(c) Wood-stave.....1940..length, miles.....				15.3	5.6	9.7	4.5
24	(d) Other.....1940..length, miles.....				0.2		0.2	0.1
25	Storage dams.....1940..total number.....	10	5	5	110	12	98	15
26	1930..total number.....	12			63	6	57	2
27	1920..total number.....	7			109	7	102	
28	(a) Concrete and masonry.....1940..number.....				10		10	
29	(b) Earth and rock.....1940..number.....	9	4	5	74	4	70	12
30	(c) Other, mixed, and not reported.....1940..number.....	1	1		26	8	18	
31	Reservoirs.....1940..total number.....	14	5	9	115	10	105	16
32	(a) 1-99 acre-foot capacity.....1940..number.....	10	2	8	58	9	49	11
33	(b) 100-999 acre-foot capacity.....1940..number.....	4	3	1	33		33	5
34	(c) 1,000 and over acre-foot capacity.....1940..number.....				24	1	23	
35	1940..total capacity, ac.-ft. ⁵	1,183	914	269	239,740	3,107	236,633	822
36	1930..total number.....	4			55	3	52	1
37	1930..total capacity, ac.-ft.....	120			163,044	6,503	156,541	500
38	Wells, flowing.....1940..number.....				39		39	1
39	1930..number.....				37		37	
40	1920..number.....				13	2	11	
41	1940..yield, g.p.m.....				9,600		9,600	(⁶)
42	1930..yield, g.p.m.....				3,798		3,798	
43	1920..yield, g.p.m.....				3,363	30	3,333	
44	Wells, pumped.....1940..number.....				37	3	34	14
45	1930..number.....				17		17	7
46	1920..number.....				3		3	
47	1940..yield, g.p.m.....				10,738	740	9,998	3,888
48	1930..yield, g.p.m.....				5,903		5,903	1,200
49	1920..yield, g.p.m.....				80		80	
50	Pumping plants.....1940..total number.....	1	1		125	8	117	32
51	1930..total number.....				44	4	40	5
52	Prime movers.....1940..capacity, hp.....	(⁶)	(⁶)		10,114	39	10,075	243
53	1930..capacity, hp.....				340	11	329	53
54	1920..capacity, hp.....				283		283	
55	(a) Electric.....1940..number.....				62		62	16
56	1940..capacity, hp.....				9,578		9,578	103
57	(b) Internal-combustion.....1940..number.....	1	1		57	6	51	15
58	1940..capacity, hp.....	(⁶)	(⁶)		421	32	389	125
59	(c) Other.....1940..number.....				6	2	4	1
60	1940..capacity, hp.....				115	(⁶)	108	(⁶)
61	Pumps.....1940..total number.....	1	1		124	8	116	31
62	1930..number.....				45	4	41	5
63	1920..number.....				28	1	27	
64	1940..capacity, g.p.m.....	(⁶)	(⁶)		156,283	2,480	153,803	16,168
65	1930..capacity, g.p.m.....				25,405	4,650	20,755	1,930
66	1920..capacity, g.p.m.....				12,452	5	12,447	
67	(a) Centrifugal.....1940..number.....	1	1		91	5	86	21
68	1940..capacity, g.p.m.....	(⁶)	(⁶)		131,259	1,880	129,379	9,930
69	1940..average capacity, g.p.m.....	(⁶)	(⁶)		1,442	376	1,504	473
70	(b) Turbine.....1940..number.....				6		6	4
71	1940..capacity, g.p.m.....				11,212		11,212	5,740
72	1940..average capacity, g.p.m.....				1,869		1,869	1,435
73	(c) Plunger.....1940..number.....				18	2	16	3
74	1940..capacity, g.p.m.....				1,262	(⁶)	1,112	280
75	1940..average capacity, g.p.m.....				70	(⁶)	70	93
76	(d) Other.....1940..number.....				9	1	8	3
77	1940..capacity, g.p.m.....				12,550	(⁶)	12,100	218
78	Pumping lift, from all sources.....1940..average, feet.....	(⁶)	(⁶)		32	15	33	26
79	1930..average, feet.....				28	15	29	30
80	1920..average, feet.....				31	10	8	8
81	from pumped wells.....1940..average, feet.....				29	15	30	36
82	from surface sources.....1940..average, feet.....	(⁶)	(⁶)		33	15	34	20

¹Data for 2 enterprises in Boxelder Creek Drainage Basin (50) (number refers to separate map) and 1 enterprise in Little Beaver Creek Drainage Basin (51) are included with Little Missouri River "Direct" Drainage Basin (49). ²Data for the 1930 and 1920 Censuses for Upper Clark Fork Drainage Basin (58) (number refers to separate map) are included with Lower Clark Fork "Direct" Drainage Basin (55). ³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁴Includes siphons and farm pipe lines reported. ⁵Total capacity of all reservoirs regardless of size. ⁶Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM <small>(For definitions and explanations, see text. Major basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	COLUMBIA RIVER—Continued							
	Lower Clark Fork—Continued							
	Upper Clark Fork ¹	Blackfoot River	Bitterroot River	Flathead River				
				Total	Direct	Swan River	Little Bitterroot River	
	(56)	(57)	(58)	(59)	(60)	(61)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	412	131	505	297	239	23	95
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	219	306	238	381	414	41	374
3	Diversions dams.....1940..total number.....	696	208	556	172	133	22	17
4	1930..total number.....	78	67	87				
5	1920..total number.....	137	173	100				
6	(a) Concrete and masonry.....1940..number.....	4	3	4	9	7	1	1
7	(b) Timber.....1940..number.....	100	71	47	71	49	20	2
8	(c) Earth and rock.....1940..number.....	329	93	306	61	48	1	12
9	(d) Other, mixed, and not reported.....1940..number.....	263	41	199	31	29		2
10	Main canals and laterals.....1940..total length, miles.....	1,046.8	222.7	918.9	1,199.7	1,046.1	18.0	135.6
11	1930..total length, miles.....	772	272	963	1,089			
12	1920..total length, miles.....	412	412	1,028	1,131			
13	(a) Earth.....1940..length, miles.....	1,040	221	906	1,177	1,027	18	132
14	(b) Lined.....1940..length, miles.....	6.8	1.7	12.9	22.7	19.1		3.6
15	1940..capacity, c.f.s. ²	3,644	1,025	3,475	1,570	1,276	70	224
16	1930..capacity, c.f.s. ²		751	2,689	1,115			
17	1920..capacity, c.f.s. ²		2,378	4,073	1,221			
18	Pipe lines ³.....1940..total length, miles.....	3.4	1.3	-3.1	26.6	24.3	2.2	0.1
19	1930..total length, miles.....		0.8	2.9	21.8			
20	1920..total length, miles.....		0.4	3.4	8.1			
21	(a) Concrete.....1940..length, miles.....	0.2		0.2	4.2	4.2		
22	(b) Metal.....1940..length, miles.....	1.8	1.1	2.7	18.9	17.4	1.4	0.1
23	(c) Wood-stave.....1940..length, miles.....	1.4	0.2	0.2	3.4	2.6	0.8	
24	(d) Other.....1940..length, miles.....				0.1	0.1		
25	Storage dams.....1940..total number.....	29	5	22	27	20	4	3
26	1930..total number.....		1	18	17			
27	1920..total number.....		10	37	23			
28	(a) Concrete and masonry.....1940..number.....	1		1	5	3	2	
29	(b) Earth and rock.....1940..number.....	26	4	12	16	13		3
30	(c) Other, mixed, and not reported.....1940..number.....	2	1	9	6	4	2	
31	Reservoirs.....1940..total number.....	29	5	22	33	24	5	4
32	(a) 1-99 acre-feet capacity.....1940..number.....	15	4	2	17	12	5	
33	(b) 100-999 acre-feet capacity.....1940..number.....	12		16				
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	2	1	4	16	12		4
35	1940..total capacity, ac.-ft. ⁴	25,483	12,099	46,297	151,932	115,062	45	36,825
36	1930..total capacity, ac.-ft.....		1	14	18			
37	1920..total capacity, ac.-ft.....		40	46,453	104,828			
38	Wells, flowing.....1940..number.....				38	2		36
39	1930..number.....		1		36			
40	1920..number.....				10			
41	1940..yield, g.p.m.....				9,500	(⁵)		8,950
42	1930..yield, g.p.m.....		125		3,673			
43	1920..yield, g.p.m.....				1,083			
44	Wells, pumped.....1940..number.....	7		2	11	10		1
45	1930..number.....							
46	1920..number.....							
47	1940..yield, g.p.m.....	3,410		(⁵)	1,975	1,475		(⁵)
48	1930..yield, g.p.m.....							
49	1920..yield, g.p.m.....							
50	Pumping plants.....1940..total number.....	12	2	5	66	64		2
51	1930..total number.....		2		18			
52	1940..capacity, hp.....	120	(⁵)	21	9,626	9,521		(⁵)
53	1930..capacity, hp.....		26		160			
54	1920..capacity, hp.....		16	12	177			
55	(a) Electric.....1940..number.....	7	1		38	37		1
56	1940..capacity, hp.....	54	(⁵)		9,351	9,261		(⁵)
57	(b) Internal-combustion.....1940..number.....	4	1	5	26	25		1
58	1940..capacity, hp.....	65	(⁵)	21	173	168		(⁵)
59	(c) Other.....1940..number.....	1			2	2		
60	1940..capacity, hp.....	(⁵)			(⁵)	(⁵)		
61	Pumps.....1940..total number.....	11	2	5	67	65		2
62	1930..number.....		2		18			
63	1920..number.....		1	1	16			
64	1940..capacity, g.p.m.....	9,160	(⁵)	1,695	124,780	120,308		(⁵)
65	1930..capacity, g.p.m.....		1,702		11,160			
66	1920..capacity, g.p.m.....		650	1,406	9,165			
67	(a) Centrifugal.....1940..number.....	11	1	3	50	49		1
68	1940..capacity, g.p.m.....	9,100	(⁵)	1,300	108,489	107,969		(⁵)
69	1940..average capacity, g.p.m.....	893	(⁵)	433	2,170	2,204		(⁵)
70	(b) Turbine.....1940..number.....		1		1			1
71	1940..capacity, g.p.m.....		(⁵)		(⁵)			(⁵)
72	1940..average capacity, g.p.m.....		(⁵)					(⁵)
73	(c) Plunger.....1940..number.....			1	12	12		
74	1940..capacity, g.p.m.....				562	562		
75	1940..average capacity, g.p.m.....				47	47		
76	(d) Other.....1940..number.....			1	4	4		
77	1940..capacity, g.p.m.....			(⁵)	11,757	11,757		
78	Pumping lift, from all sources.....1940..average, feet.....	24	(⁵)	13	39	39		(⁵)
79	1930..average, feet.....		42		23			
80	1920..average, feet.....		12	7	37			
81	from pumped wells.....1940..average, feet.....	32		(⁵)	23			(⁵)
82	from surface sources.....1940..average, feet.....	14	(⁵)	15	42	42		(⁵)

¹Data for the 1930 and 1920 Censuses for Upper Clark Fork Drainage Basin (58) (number refers to separate map) are included with Lower Clark Fork "Direct" Drainage Basin (55). ²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ³Includes siphons and farm pipe lines reported. ⁴Total capacity of all reservoirs regardless of size. ⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — MONTANA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL		Beaverhead		Big Horn	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^c						
1 All farms.....1940..number.....	41,823		457		1,103	
2 ..1930..number.....	47,495		581		1,086	
3 Irrigated farms.....1940..number.....	15,087		407		511	
4 ..1930..number.....	11,925		481		420	
5 Increase or decrease (-), 1930-1940.....percent.....	26.5		-15.4		21.7	
Operated by—						
6 (a) Owners and managers.....1940..number.....	10,858		341		196	
7 ..1930..number.....	8,701		410		231	
8 (b) Tenants.....1940..number.....	4,229		66		315	
9 ..1930..number.....	3,224		71		189	
10 Land in all farms.....1940..acres.....	46,451,594		1,284,488		1,646,014	
11 Land in irrigated farms.....1940..acres.....	16,022,060		1,257,327		448,528	
12 Average per farm.....1940..acres.....	1,062		3,089		878	
13 (a) Operated by owners and managers.....1940..acres.....	14,015,361		1,193,301		363,149	
14 Average per farm.....1940..acres.....	1,291		3,499		1,853	
15 (b) Operated by tenants.....1940..acres.....	2,006,699		64,026		85,379	
16 Average per farm.....1940..acres.....	475		970		271	
17 Approximate land area.....1940..acres.....	² 93,642,240		3,555,840		3,221,120	
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939..acres.....	1,711,409		209,548		56,380	
19 (a) Cropland harvested.....1939..acres.....	1,501,878		192,414		53,523	
20 (b) Crop failure.....1939..acres.....	7,844		25		69	
21 (c) Pasture.....1939..acres.....	201,687		17,109		2,788	
22 Area irrigated.....1929..acres.....	1,594,912		250,895		43,492	
23 ..1919..acres.....	1,681,729		302,375		48,306	
24 Increase or decrease (-), 1929-1939.....percent.....	7.3		-16.5		29.6	
25 Irrigable area in enterprises.....1940..acres.....	2,598,214		230,743		149,446	
26 ..1930..acres.....	2,622,423		289,704		86,437	
27 ..1920 ³ ..acres.....	4,329,148		525,181		87,765	
28 Excess of irrigable area over the area irrigated..1940..acres.....	876,805		21,195		93,066	
29 ..1930..acres.....	1,027,511		38,809		42,945	
30 Area works were capable of supplying with water..1940..acres.....	2,344,390		226,343		138,167	
31 ..1930..acres.....	2,276,000		275,300		76,773	
32 ..1920..acres.....	2,753,498		385,619		60,591	
33 Increase or decrease (-), 1930-1940.....percent.....	3.0		-17.8		80.0	
34 Excess, capability of works over area irrigated..1940..acres.....	632,981		16,795		81,787	
35 ..1930..acres.....	681,088		24,405		33,281	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	10.7		16.7		12.6	
37 ..1929..percent.....	13.3		26.2		6.8	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	73.0		92.6		40.8	
39 ..1929..percent.....	70.1		91.1		56.7	
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940..dollars.....	67,352,505		992,068		2,891,329	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	66,830,409		949,008		2,888,753	
42 (b) Investment in water rights (reported).....1940..dollars.....	522,096		43,060		2,576	
43 Total investment in all enterprises.....1930..dollars.....	50,319,204		1,489,426		2,360,156	
44 ..1920..dollars.....	52,143,363		2,385,045		2,311,418	
45 Increase or decrease (-), 1930-1940.....percent.....	33.9		-33.4		22.5	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	28.73		4.38		20.93	
47 ..1930..dollars.....	22.11		5.41		30.74	
48 ..1920..dollars.....	18.94		6.18		38.15	
49 Average investment per acre irrigated.....1939..dollars.....	39.36		4.73		51.28	
50 Estimated final investment in existing enterprises..1940..dollars.....	75,174,645		1,020,538		3,964,348	
51 ..1930..dollars.....	58,489,575		1,494,726		2,967,656	
52 ..1920..dollars.....	70,079,028		2,433,395		2,686,470	
53 Increase or decrease (-), 1930-1940.....percent.....	28.5		-31.7		33.6	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	29.04		4.42		26.53	
55 ..1930..dollars.....	22.30		5.16		34.33	
56 ..1920 ³ ..dollars.....	16.19		4.63		30.61	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
Enterprises						
57 Enterprises reporting maintenance and operation...1939..number.....	4,837	53	297	3	34	1
58 Area irrigated in these enterprises.....1939..acres.....	1,650,373	168,762	201,865	61,160	58,330	(⁵)
59 Cost of maintenance and operation.....1939..dollars.....	1,180,189	20,908	40,559	5,699	87,602	(⁵)
60 Average cost, per acre irrigated.....1939..dollars.....	0.72	0.12	0.20	0.09	1.56	(⁵)
61 ..1929..dollars.....	0.87	.....	0.32	.....	1.86	.....
62 Total annual charges (reported) ⁶ 7.....1939..dollars.....	1,057,500	93,290	6,069	8,900	73,959	30
63 Average annual charge per acre irrigated.....1939..dollars.....	1.18	0.65	0.45	0.15	1.37	0.10
64 Area against which charges were assessed.....1939..acres.....	1,065,494	176,956	15,060	61,000	76,464	300
65 Average annual charge per acre assessed.....1939..dollars.....	0.99	0.53	0.40	0.15	0.97	0.10
66 Total charges collected ⁸.....1939..dollars.....	729,103	65,214	5,022	8,989	29,078	13
67 Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	41,968,921	2,573,360	295	125,390	2,383,795	5,663
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939..number.....	4,945	45	326	3	30	.....
69 Area irrigated in these enterprises.....1939..acres.....	1,524,390	123,469	195,192	61,160	22,058	.....
70 Water delivered in these enterprises.....1939..acre-feet.....	3,214,146	155,543	515,029	96,940	43,361	.....
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.1	1.3	2.6	1.6	2.0	.....
72 Average cost of water per acre irrigated.....1939..dollars.....	0.84	0.70	0.21	0.15	0.98	.....
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939..number.....	205	.....	.....	.....	3	.....
74 Irrigable area in these enterprises.....1939..acres.....	822,140	.....	.....	.....	143,360	.....
75 Irrigated area in these enterprises.....1939..acres.....	473,604	.....	.....	.....	52,760	.....
76 Area for which drains have been installed.....1939..acres.....	147,151	.....	.....	.....	21,800	.....
77 Additional area needing drainage.....1939..acres.....	52,071	.....	.....	.....	6,600	.....

^a Census of Agriculture.
^b Data are included only in State totals because less than 3 farms reported in the 1940 Census.
^c Includes 172,100 acres in Yellowstone National Park (part of) not shown in detail.
^d For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — MONTANA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
[irrigation data omitted from any of the counties listed are included under "All other counties"]

Blaine	Broadwater	Carbon	Carter	Cascade	Chouteau	Custer	Daniels	Dawson	Deer Lodge		
1,078	268	1,074	637	1,401	1,383	496	804	834	179	1	
1,288	328	1,170	848	1,404	1,587	715	906	1,018	142	2	
464	204	799	4	381	84	146	2	36	137	3	
290	198	746	12	227	49	116	2	16	104	4	
60.0	3.0	7.1	-66.7	67.6	71.4	25.9	.....	125.0	31.7	5
360	148	528	3	288	65	110	(1)	29	110	6	
216	140	518	11	169	44	97	.....	12	85	7
104	56	271	1	93	19	36	.....	7	27	8
74	58	228	1	58	5	19	.....	4	19	9
1,628,690	326,983	583,341	1,272,843	1,276,707	2,074,470	1,306,430	699,978	942,918	59,605	10	
770,170	270,489	393,709	17,552	417,895	259,819	355,994	(1)	64,903	53,049	11	
1,660	1,326	493	4,388	1,097	3,093	2,438	(1)	1,803	387	12	
719,685	240,892	316,487	(1)	370,960	231,523	327,702	(1)	52,283	43,087	13	
1,999	1,628	599	(1)	1,288	3,562	2,979	(1)	1,803	392	14	
50,485	29,597	77,222	(1)	46,935	28,292	28,292	.....	12,620	9,962	15
485	529	285	(1)	505	1,489	786	.....	1,803	369	16
2,730,690	795,520	1,324,800	2,120,320	1,701,120	2,508,800	2,409,600	923,520	1,509,120	472,320	17	
48,917	27,617	84,179	127	31,515	5,085	14,851	487	1,705	18,371	18	
38,076	25,445	77,214	127	27,728	4,520	13,815	412	1,682	15,032	19	
1,132	48	519	.....	190	241	217	.....	3	227	20
9,709	2,124	6,446	.....	3,597	324	819	75	20	3,112	21
41,734	35,745	90,514	1,407	13,638	7,638	13,368	.....	1,728	19,048	22
59,119	25,733	99,336	380	14,864	6,029	8,469	.....	1,674	13,474	23
17.2	-22.7	-7.0	-91.0	131.0	-33.4	11.0	.....	-1.3	-3.6	24
90,449	54,269	114,904	1,246	50,120	10,837	29,516	500	21,102	21,593	25	
86,828	43,735	112,872	1,927	66,574	10,042	23,263	.....	4,638	27,351	26
190,347	109,435	156,675	3,045	144,376	40,244	25,872	.....	7,663	40,125	27
41,532	26,652	30,725	1,119	18,605	5,752	14,665	13	19,397	3,222	28	
45,094	7,990	22,358	520	52,936	2,404	9,878	.....	2,910	8,303	29
67,525	32,638	105,965	1,106	49,096	9,494	22,163	500	14,096	20,727	30	
74,441	43,735	109,995	1,762	37,247	9,461	21,404	.....	3,336	26,562	31
99,764	61,175	147,195	1,320	53,163	18,790	21,960	.....	6,860	24,271	32
-9.3	-25.4	-3.7	-37.2	31.8	0.3	3.5	.....	322.5	-22.0	33
18,608	5,021	21,786	979	17,581	4,409	7,312	13	12,391	2,356	34	
32,707	7,990	19,481	355	23,609	1,823	8,019	.....	1,608	7,514	35
6.4	10.2	21.4	0.7	7.5	2.0	4.2	15.1	2.6	34.6	36	
15.3	13.2	36.5	4.9	6.0	2.9	6.4	.....	3.1	17.0	37
72.4	84.6	79.4	11.5	64.2	53.6	67.0	97.4	12.1	88.6	38	
56.1	51.7	52.3	79.9	36.6	80.7	62.5	.....	51.8	71.7	39
4,396,820	824,671	2,120,840	6,078	2,597,353	111,215	1,134,899	3,403	1,141,772	177,967	40	
4,387,692	822,269	2,098,771	6,078	2,594,859	110,775	1,082,593	3,400	1,141,758	160,565	41	
9,128	2,402	22,069	.....	2,494	440	52,306	3	14	17,412	42
2,125,834	254,171	1,269,627	22,656	799,292	107,372	613,502	.....	28,484	148,485	43
2,549,735	476,675	1,456,985	14,095	2,555,563	640,556	299,355	.....	154,334	354,148	44
106.8	224.5	67.0	-73.2	225.0	3.6	85.0	.....	(1)	19.9	45
65.11	25.27	20.01	5.60	52.90	11.71	51.21	6.81	81.00	8.59	46	
28.56	5.81	11.54	12.86	21.46	11.35	28.66	.....	8.54	5.59	47
26.56	7.79	9.90	10.68	48.07	34.10	13.63	.....	22.50	14.59	48
89.88	29.86	25.19	47.86	82.42	21.87	76.42	6.99	669.66	9.69	49	
4,430,620	1,196,052	2,136,590	6,228	2,820,003	136,475	1,231,117	3,403	1,289,026	180,967	50	
2,489,334	254,171	1,362,127	22,756	805,445	113,422	638,002	.....	28,484	148,485	51
2,737,185	482,625	1,463,610	18,095	5,120,595	1,051,398	376,180	.....	189,070	356,338	52
78.0	370.6	56.9	-72.6	250.1	20.3	93.0	.....	(1)	21.9	53
48.98	22.04	18.59	5.0	56.27	12.59	41.71	6.81	61.09	8.38	54	
28.67	5.61	12.07	11.81	12.10	11.29	27.42	.....	6.14	5.43	55
14.36	4.41	9.34	5.04	35.47	26.13	14.54	.....	24.67	8.98	56
	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.			
56	Enterprises	1	Enterprises	6	Enterprises	1	Enterprises	1	14	77	
48,522	122	(5)	223	(5)	82	(5)	36	(5)	1,390	17,268	
85,340	26,264	(5)	81,977	15,377	31,163	(5)	4,931	(5)	1,487	9,548	
1.76	11,342	(5)	42,456	2,339	32,334	(5)	7,913	(5)	1.07	0.55	
1.70	0.43	(5)	0.52	0.15	1.04	(5)	0.59	(5)	0.33	0.70	
103,686	0.45	.....	0.68	.....	1.14	.....	2.39	.....	787	75
2.49	1,244	.....	33,134	31,000	23,796	.....	8,814	1,476	1.21	0.15
59,309	0.15	.....	0.56	2.07	0.85	.....	1.00	0.30	787	500
1.87	8,320	.....	61,649	31,000	29,889	.....	9,793	4,862	1.00	0.15
24,267	0.15	.....	0.54	1.00	0.31	.....	0.90	0.30	911	.....
2,041,959	4,422	.....	31,956	14,973	16,052	.....	10,246	726	152,389	.....
	4,000	.....	484,106	700,000	1,896,974	.....	63,000	317,968		
60	134	1	224	6	90	1	72	3	17	78	
39,622	26,767	(5)	69,183	15,377	31,502	(5)	5,078	497	1,545	18,222	
56,517	81,730	(5)	134,433	16,310	57,209	(5)	5,892	203	2,044	52,001	
1.4	3.1	(5)	2.0	1.1	1.8	(5)	1.2	0.4	1.3	2.9	
2.34	0.35	(5)	0.61	2.03	1.02	(5)	1.62	0.29	1.06	0.55	
12	.....	.....	7	.....	5	.....	3	.....	(5)	7
73,945	.....	.....	14,900	.....	39,945	.....	2,141	.....	(5)	1,495
36,699	.....	.....	11,640	.....	23,356	.....	392	.....	(5)	995
955	.....	.....	160	.....	12,431	.....	721	.....	(5)	1,495
15,420	.....	.....	990	.....	1,700	.....	20	.....	.....	77

⁴Percent not shown when more than 1000.

⁵Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁶Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁷Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - MONTANA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Fallon	Fergus	Flathead	Gallatin	Garfield	
	FARMS, ACREAGE, AND TENURE OF FARM OPERATORS¹					
1 All farms.....1940..number.....	510	1,486	1,701	1,242	587	
2.....1930..number.....	650	2,073	1,349	1,336	1,077	
3 Irrigated farms.....1940..number.....		148	212	856	8	
4.....1930..number.....	2	99	97	840	6	
5 Increase or decrease (-), 1930-1940.....percent.....		49.5	118.6	1.9	33.3	
6 Operated by—						
7 (a) Owners and managers.....1940..number.....		104	179	537	7	
8.....1930..number.....		75	77	523	5	
9 (b) Tenants.....1940..number.....		44	33	319	1	
10.....1930..number.....		24	20	317	1	
11 Land in all farms.....1940..acres.....	770,487	1,718,623	281,018	853,033	887,075	
12 Land in irrigated farms.....1940..acres.....		398,285	53,917	622,731	9,644	
13 Average per farm.....1940..acres.....		2,691	254	727	1,206	
14 (a) Operated by owners and managers.....1940..acres.....		328,501	45,331	429,111	(2)	
15 Average per farm.....1940..acres.....		3,159	253	799	(2)	
16 (b) Operated by tenants.....1940..acres.....		69,784	8,586	193,620	(2)	
17 Average per farm.....1940..acres.....		1,586	260	607	(2)	
17 Approximate land area.....1940..acres.....	1,045,120	2,720,000	3,313,280	1,610,880	3,067,520	
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939..acres.....	90	14,435	7,376	104,705	313	
19 (a) Cropland harvested.....1939..acres.....	90	13,597	6,532	88,863	253	
20 (b) Crop failure.....1939..acres.....		12	30		60	
21 (c) Pasture.....1939..acres.....		826	814	15,842		
22 Area irrigated.....1929..acres.....		9,857	3,703	112,792	145	
23.....1919..acres.....		33,499	11,244	103,975	370	
24 Increase or decrease (-), 1929-1939.....percent.....		46.4	99.2	-7.2	115.9	
25 Irrigable area in enterprises.....1940..acres.....	1,308	24,978	9,224	139,964	3,300	
26.....1930..acres.....		17,333	7,792	147,838	783	
27.....1920 ² ..acres.....		96,690	33,787	287,590	4,090	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	1,218	10,543	1,848	35,259	2,987	
29.....1930..acres.....		7,476	4,089	35,046	638	
30 Area works were capable of supplying with water.....1940..acres.....	1,308	22,625	8,502	138,918	1,563	
31.....1930..acres.....		16,395	7,177	136,621	600	
32.....1920..acres.....		82,521	24,642	174,906	390	
33 Increase or decrease (-), 1930-1940.....percent.....		38.0	18.5	1.7	160.5	
34 Excess, capability of works over area irrigated.....1940..acres.....	1,218	8,190	1,126	34,213	1,250	
35.....1930..acres.....		6,538	3,474	23,829	455	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....		3.6	13.7	16.8	3.2	
37.....1929..percent.....		5.2	17.3	31.6	1.4	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	6.9	63.8	86.8	75.4	20.0	
39.....1929..percent.....		60.1	51.6	82.6	24.2	
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940..dollars.....	11,810	359,401	149,240	1,359,186	30,686	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	11,810	309,319	147,993	1,351,664	30,476	
42 (b) Investment in water rights (reported).....1940..dollars.....		50,082	1,247	7,522	210	
43 Total investment in all enterprises.....1930..dollars.....		165,362	146,533	930,207	20,687	
44.....1920..dollars.....		729,436	836,723	1,176,492	50,385	
45 Increase or decrease (-), 1930-1940.....percent.....		117.3	1.8	46.1	48.3	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	9.03	15.89	17.55	9.78	19.63	
47.....1930..dollars.....		10.09	20.42	6.81	34.48	
48.....1920..dollars.....		8.84	33.96	6.73	129.19	
49 Average investment per acre irrigated.....1939..dollars.....	131.22	24.90	20.23	12.98	98.04	
50 Estimated final investment in existing enterprises.....1940..dollars.....	16,310	309,379	158,993	1,362,056	35,306	
51.....1930..dollars.....		173,442	147,383	930,527	22,687	
52.....1920..dollars.....		743,186	1,234,620	1,211,747	50,885	
53 Increase or decrease (-), 1930-1940.....percent.....		113.0	7.9	46.4	55.6	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	12.47	14.79	17.24	9.73	10.70	
55.....1930..dollars.....		10.01	18.91	6.29	28.97	
56.....1920 ² ..dollars.....		7.69	36.54	4.21	12.44	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
57 Enterprises reporting maintenance and operation.....1939..number.....	Primary		Supplemental	Primary		Supplemental
	Enterprises					
58 Area irrigated in these enterprises.....1939..acres.....	105	(*)	1	111	237	8
59 Cost of maintenance and operation.....1939..dollars.....	13,996	(*)		6,956	99,163	9,150
60 Average cost, per acre irrigated.....1939..dollars.....	11,269	(*)		8,205	30,418	1,553
61.....1929..dollars.....	0.81	(*)		1.18	0.31	0.17
62 Total annual charges (reported) ⁵.....1939..dollars.....	0.82			1.53	0.56	4.30
63 Average annual charge per acre irrigated.....1939..dollars.....	705			5,011	33,464	6,761
64 Area against which charges were assessed.....1939..acres.....	0.66			3.97	0.45	0.77
65 Average annual charge per acre assessed.....1939..dollars.....	1,070			1,960	75,810	8,931
66 Total charges collected.....1939..dollars.....	0.66			2.56	0.44	0.76
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	455			4,005	29,609	3,708
68.....1939..dollars.....	17,305			25,515	25,745	78,983
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939..number.....	92	(*)	1	134	230	7
69 Area irrigated in these enterprises.....1939..acres.....	13,047	(*)		7,106	83,825	4,265
70 Water delivered in these enterprises.....1939..acre-feet.....	13,449	(*)		13,302	157,895	3,550
71 Average water delivered per acre irrigated.....1939..acre-feet.....	1.0	(*)		1.9	1.9	0.8
72 Average cost of water per acre irrigated.....1939..dollars.....	0.83	(*)		1.36	0.46	1.31
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939..number.....	(*)	1		3	7	(*)
74 Irrigable area in these enterprises.....1939..acres.....	(*)			425	13,090	(*)
75 Irrigated area in these enterprises.....1939..acres.....	(*)			400	6,674	(*)
76 Area for which drains have been installed.....1939..acres.....	(*)			60	185	(*)
77 Additional area needing drainage.....1939..acres.....	(*)			40	410	(*)

¹Census of Agriculture.

²Percent not shown when more than 1,000.

³Data are included only in State totals because less than 3 farms reported in the 1940 Census.

⁵For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION – MONTANA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"]

Glacier	Golden Valley	Granite	Hill	Jefferson	Judith Basin	Lake	Lewis and Clark	Liberty	Lincoln	McCone	
495	268	205	1,245	331	599	1,673	532	420	534	754	1
455	387	247	1,423	385	776	1,197	612	402	503	1,041	2
64	63	173	66	191	51	1,211	374	4	197	29	3
21.8	47	177	49	207	41	723	308	10	125	2	4
204.8	34.0	-2.3	34.7	-7.7	24.4	67.5	21.4	-60.0	57.6	(1)	5
53	51	144	48	144	38	918	288	4	162	22	6
18	37	128	35	163	30	553	235	10	99	.....	7
11	12	29	18	47	13	293	86	.....	35	.....	8
3	10	49	14	44	11	170	73	.....	26	.....	9
822,373	611,842	297,103	1,416,912	296,337	825,076	472,296	938,186	810,386	105,377	1,012,434	10
149,093	213,486	283,969	139,680	211,921	180,804	272,482	807,305	20,910	52,556	51,121	11
2,330	3,389	1,641	2,116	1,110	3,545	225	2,159	5,228	267	1,763	12
143,286	206,059	254,444	121,642	149,460	162,851	228,658	748,919	20,910	43,760	40,597	13
2,704	4,040	1,767	2,534	1,038	4,286	249	2,600	5,228	270	1,845	14
5,807	7,427	29,525	18,038	62,461	17,953	43,824	58,386	.....	8,876	10,524	15
528	619	1,018	1,002	1,329	1,381	150	679	.....	254	1,503	16
1,903,360	753,920	1,098,680	1,884,160	1,056,640	1,203,200	960,000	2,225,920	933,760	2,377,600	1,688,320	17
7,822	3,459	24,004	6,592	22,869	7,984	71,193	37,268	355	6,408	1,440	18
7,444	2,682	20,429	4,790	20,989	7,724	56,280	36,126	355	5,883	992	19
12	15	329	388	86	.....	485	130	.....	8	248	20
366	562	3,246	1,414	1,794	260	14,428	1,012	.....	517	200	21
5,760	3,561	24,503	6,641	25,783	6,617	41,237	33,709	751	6,960	.....	22
9,767	.....	31,177	2,528	24,946	.....	.....	33,226	.....	5,923	.....	23
35.8	-2.9	-0.7	-0.7	20.7	.....	72.6	10.6	-52.7	-7.9	.....	24
53,239	4,307	25,681	10,795	32,529	12,336	125,625	56,555	1,005	9,219	5,563	25
82,602	6,011	28,556	8,063	81,771	10,194	121,502	52,122	1,151	9,200	.....	26
118,500	.....	58,394	14,824	86,086	.....	.....	94,133	.....	13,737	.....	27
45,417	848	1,677	4,203	9,660	4,352	54,432	19,287	650	2,811	4,123	28
76,842	2,450	4,053	1,422	55,988	3,577	80,265	18,413	400	2,240	.....	29
22,804	4,097	25,169	7,418	28,093	11,418	94,035	48,157	955	8,019	4,701	30
23,467	5,472	26,394	7,563	31,314	8,744	108,452	46,327	1,001	8,302	.....	31
25,600	.....	38,500	12,033	45,553	.....	.....	69,907	.....	9,353	.....	32
-2.8	-25.1	-4.6	-1.9	-10.3	30.6	-13.3	4.0	4.6	-3.4	.....	33
14,982	638	1,165	826	5,224	3,434	22,842	10,889	600	1,611	3,261	34
17,707	1,911	1,881	922	5,531	2,127	67,215	12,618	250	1,342	.....	35
5.2	1.6	8.5	4.7	10.8	4.4	26.1	4.6	1.7	12.2	2.8	36
8.7	2.4	12.0	7.6	17.7	4.8	16.5	5.4	0.8	19.6	.....	37
34.3	84.4	95.4	88.9	81.4	69.9	75.7	77.4	37.2	79.9	30.6	38
24.5	65.1	92.9	87.8	82.3	75.7	38.0	72.8	75.0	83.8	.....	39
733,240	17,049	914,321	280,768	504,512	151,489	6,575,603	486,891	9,750	219,869	47,913	40
733,244	17,045	889,564	280,233	492,825	149,284	6,573,618	477,261	9,750	217,924	46,266	41
2	4	24,757	535	11,687	2,205	1,985	9,630	.....	1,945	72	42
3,603,416	46,115	303,573	87,342	359,178	56,526	4,358,604	711,720	23,237	217,635	.....	43
3,545,069	.....	344,544	188,622	685,014	.....	.....	784,413	.....	195,752	.....	44
-79.7	-63.0	201.2	221.5	40.5	168.0	50.9	-31.6	-58.0	1.0	.....	45
32.15	4.16	36.33	37.85	17.96	13.27	69.93	10.11	10.21	27.42	8.98	46
153.55	8.43	11.50	11.55	11.47	6.46	40.19	15.36	23.21	26.21	.....	47
138.48	.....	8.95	15.69	15.04	.....	.....	11.22	.....	20.93	.....	48
93.74	4.93	39.09	42.59	22.06	18.97	92.36	13.06	27.46	34.31	23.43	49
3,107,566	19,349	915,571	304,475	521,662	151,854	7,448,840	492,099	9,750	231,829	56,563	50
5,216,072	49,265	318,773	87,467	569,628	59,376	6,605,429	723,570	24,437	222,135	.....	51
7,219,059	.....	355,744	208,222	699,764	.....	.....	819,113	.....	197,902	.....	52
-40.4	-60.7	187.2	248.1	-8.4	155.7	12.8	-32.0	-50.1	4.4	.....	53
58.37	4.49	35.65	28.21	16.04	12.31	59.29	8.70	9.70	25.15	9.13	54
63.15	8.20	11.16	10.85	6.97	5.82	54.36	13.88	21.23	24.14	.....	55
60.92	.....	6.09	14.05	8.13	.....	.....	8.70	.....	14.41	.....	56
3	27	103	44	108	34	120	268	4	126	18	57
7,822	3,399	23,940	6,456	22,371	7,427	69,768	35,145	340	6,056	796	58
5,207	1,734	6,698	6,819	12,899	2,566	77,512	58,900	800	5,852	1,480	59
0.67	0.51	0.29	1.06	0.58	0.35	1.11	1.68	2.35	0.97	1.86	60
4.59	1.27	0.84	0.99	0.62	1.90	1.28	1.47	4.41	1.73	.....	61
7,748	348	190	651	4,779	1,560	104,466	14,813	.....	4,283	.....	62
1.00	0.63	0.08	0.31	0.58	0.78	1.54	1.41	.....	2.15	.....	63
7,748	1,160	2,450	2,100	12,882	1,560	91,885	13,891	.....	2,419	.....	64
1.00	0.30	0.08	0.31	0.37	1.00	1.14	1.07	.....	1.77	.....	65
.....	325	.....	631	3,363	3,540	89,620	800	.....	3,668	.....	66
714,824	22	488,508	4,000	.....	82,974	7,288,717	30	.....	13,000	.....	67
3	27	108	45	113	33	126	294	4	149	22	68
7,822	3,206	23,304	4,489	22,564	7,669	69,509	37,023	340	6,408	1,315	69
7,879	4,042	91,103	5,040	50,003	6,031	103,501	69,241	698	22,974	1,749	70
1.0	1.3	3.9	1.1	2.2	0.8	1.5	1.9	2.1	3.6	1.3	71
1.00	0.54	0.29	1.42	0.56	0.45	1.55	0.80	2.35	1.24	1.38	72
.....	.....	13	.....	.....	.....	3	8	.....	3	3	73
.....	.....	5,130	.....	.....	.....	119,621	7,761	.....	180	510	74
.....	.....	5,089	.....	.....	.....	66,566	4,733	.....	102	259	75
.....	.....	75	.....	.....	.....	700	188	.....	100	168	76
.....	.....	182	.....	.....	.....	1,250	1,115	.....	4	45	77

⁴Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - MONTANA

COUNTY TABLE I—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Madison		Meagher		Mineral		Missoula	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a								
1 All farms.....1940...number....	655		228		112		776	
2 .....1930...number....	748		276		96		688	
3 Irrigated farms.....1940...number....	576		126		49		619	
4 .....1930...number....	576		111		30		500	
5 Increase or decrease (-), 1930-1940.....percent....			13.5		53.3		23.8	
Operated by—								
6 (a) Owners and managers.....1940...number....	419		117		43		496	
7 .....1930...number....	461		101		25		401	
8 (b) Tenants.....1940...number....	157		9		6		123	
9 .....1930...number....	115		10		5		99	
10 Land in all farms.....1940...acres....	810,416		900,573		28,155		251,684	
11 Land in irrigated farms.....1940...acres....	746,775		815,040		14,882		205,805	
12 Average per farm.....1940...acres....	1,296		6,469		304		332	
13 (a) Operated by owners and managers.....1940...acres....	671,338		756,992		13,220		177,546	
14 Average per farm.....1940...acres....	1,602		6,470		307		368	
15 (b) Operated by tenants.....1940...acres....	75,437		58,048		1,662		28,259	
16 Average per farm.....1940...acres....	480		6,450		277		230	
17 Approximate land area.....1940...acres....	2,259,200		1,505,560		782,720		1,682,560	
IRRIGATED AND IRRIGABLE AREAS								
18 Area irrigated.....1939...acres....	88,007		40,056		1,241		30,867	
19 (a) Cropland harvested.....1939...acres....	76,196		39,186		987		28,405	
20 (b) Crop failure.....1939...acres....	123		50				145	
21 (c) Pasture.....1939...acres....	11,688		820		254		2,317	
22 Area irrigated.....1929...acres....	96,296		39,633		1,039		19,038	
23 .....1919...acres....	115,598		25,075		967		50,237	
24 Increase or decrease (-), 1929-1939.....percent....	-8.6		1.1		19.4		62.1	
25 Irrigable area in enterprises.....1940...acres....	102,614		44,787		1,761		44,277	
26 .....1930...acres....	123,497		50,027		1,214		29,956	
27 .....1920 ² ...acres....	265,103		60,348		6,690		156,883	
28 Excess of irrigable area over the area irrigated.....1940...acres....	14,607		4,731		520		13,410	
29 .....1930...acres....	27,201		10,394		175		10,918	
30 Area works were capable of supplying with water.....1940...acres....	100,963		44,226		1,549		38,922	
31 .....1930...acres....	111,105		45,772		1,184		27,472	
32 .....1920...acres....	172,083		48,175		2,105		120,456	
33 Increase or decrease (-), 1930-1940.....percent....	-9.1		-3.4		30.8		41.7	
34 Excess, capability of works over area irrigated.....1940...acres....	12,956		4,170		308		8,055	
35 .....1930...acres....	14,809		6,139		145		8,434	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939...percent....	11.8		4.9		8.3		15.0	
37 .....1929...percent....	18.3		6.0		14.2		10.8	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent....	87.2		90.6		80.1		79.3	
39 .....1929...percent....	85.7		86.6		87.8		69.3	
CAPITAL INVESTED TO JANUARY 1								
40 Total investment in all enterprises.....1940...dollars....	1,604,247		419,048		25,734		767,176	
41 (a) Cost of irrigation works and equipment.....1940...dollars....	1,587,645		411,044		25,280		753,625	
42 (b) Investment in water rights (reported).....1940...dollars....	18,177		8,004		454		13,551	
43 Total investment in all enterprises.....1930...dollars....	649,263		301,941		19,880		595,085	
44 .....1920...dollars....	2,566,017		346,257		41,481		3,975,483	
45 Increase or decrease (-), 1930-1940.....percent....	147.1		38.8		29.4		28.9	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars....	15.99		9.48		16.61		19.71	
47 .....1930...dollars....	5.84		6.60		16.79		21.66	
48 .....1920...dollars....	14.91		7.19		19.71		33.00	
49 Average investment per acre irrigated.....1939...dollars....	18.35		10.46		20.74		24.85	
50 Estimated final investment in existing enterprises.....1940...dollars....	1,609,797		430,598		28,359		930,201	
51 .....1930...dollars....	656,613		301,941		19,980		625,945	
52 .....1920...dollars....	2,587,647		363,507		47,646		5,909,973	
53 Increase or decrease (-), 1930-1940.....percent....	145.2		42.6		41.9		48.6	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars....	15.79		9.61		16.1		21.01	
55 .....1930...dollars....	5.32		6.04		16.46		20.90	
56 .....1920 ² ...dollars....	9.76		6.02		7.12		37.67	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57 Enterprises reporting maintenance and operation.....1939...number....	Primary		Supplemental		Primary		Supplemental	
	Enterprises		Enterprises		Enterprises		Enterprises	
58 Area irrigated in these enterprises.....1939...acres....	83,336	17,103	39,165	(4)	1,196	29,510	596	
59 Cost of maintenance and operation.....1939...dollars....	40,305	2,354	12,947	(4)	1,242	19,279	362	
60 Average cost, per acre irrigated.....1939...dollars....	0.48	0.14	0.33	(4)	1.04	0.65	0.61	
61 .....1929...dollars....	0.41		0.50		0.92	1.53		
62 Total annual charges (reported) ⁵.....1939...dollars....	11,557	6,885		7,200		20,233	630	
63 Average annual charge per acre irrigated.....1939...dollars....	0.29	0.41		1.03		1.43	1.08	
64 Area against which charges were assessed.....1939...acres....	41,362	16,723		7,200		17,996	1,650	
65 Average annual charge per acre assessed.....1939...dollars....	0.28	0.41		1.00		1.14	0.38	
66 Total charges collected ⁵.....1939...dollars....	8,590	12,806		7,000		14,893	683	
67 Indebtedness to December 31 (reported) ⁶.....1939...dollars....		290,674		151,221		485,525		
WATER DELIVERED TO IRRIGATORS								
68 Enterprises reporting water delivered.....1939...number....	292		5		119		1	
69 Area irrigated in these enterprises.....1939...acres....	68,960		17,103		39,014		(4)	
70 Water delivered in these enterprises.....1939...acre-feet....	205,832		10,979		44,337		(4)	
71 Average water delivered per acre irrigated.....1939...acre-feet....	2.9		0.6		1.1		(4)	
72 Average cost of water per acre irrigated.....1939...dollars....	0.48		0.41		0.33		(4)	
DRAINAGE OF IRRIGATED LAND								
73 Enterprises reporting land drained or needing drainage.....1939...number....	21						2	
74 Irrigable area in these enterprises.....1939...acres....	8,090						(4)	
75 Irrigated area in these enterprises.....1939...acres....	7,797						(4)	
76 Area for which drains have been installed.....1939...acres....	160						(4)	
77 Additional area needing drainage.....1939...acres....	728							

^a Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms reported in the 1940 Census.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Percent not shown when more than 1,000.

CENSUS OF IRRIGATION - MONTANA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939--Continued
 irrigation data omitted from any of the counties listed are included under "All other counties"]

Mussel- shell	Park	Petroleum	Phillips	Pondera	Powder River	Powell	Prairie	Ravalli	Richland	Roosevelt	
314	623	180	1,046	879	688	309	257	1,501	1,218	1,043	1
525	656	363	1,476	919	896	343	559	1,286	1,341	1,276	2
50	480	26	304	415	23	261	9	1,427	393	16	3
30	462	24	157	377	4	231	3	1,154	274	7	4
66.7	3.9	8.3	93.6	10.1	475.0	13.0	200.0	23.7	43.4	128.6	5
40	311	19	225	262	21	213	9	1,082	266	14	6
25	394	13	121	252	.....	195	3	850	183	6	7
10	169	7	79	133	2	48	.....	345	127	2	8
5	128	11	36	125	.....	36	.....	304	91	1	9
724,016	714,116	268,171	1,371,941	826,512	1,347,101	645,243	388,224	318,633	901,588	801,804	10
147,173	626,406	77,270	539,755	449,641	86,047	603,462	27,594	305,833	138,085	6,937	11
2,943	1,305	2,972	1,776	1,083	3,741	2,312	3,066	214	351	434	12
121,094	514,362	57,270	511,408	367,007	(1)	542,508	27,594	246,213	103,109	(1)	13
3,027	1,694	3,014	2,273	1,301	(1)	2,547	3,066	228	388	(1)	14
26,078	112,044	20,000	26,947	82,634	(1)	60,953	.....	59,620	34,986	(1)	15
2,608	663	2,857	359	621	(1)	1,270	.....	173	275	(1)	16
1,207,040	1,681,280	1,064,960	3,368,960	1,051,520	2,102,400	1,495,680	1,105,280	1,525,760	1,321,600	1,526,400	17
4,400	51,047	5,320	36,567	57,245	1,156	60,630	736	109,752	30,024	360	18
3,266	46,356	5,049	34,308	52,291	737	57,386	579	80,830	30,007	326	19
41	1	71	31	678	29	217	.....	352	.....	5	20
1,103	4,690	200	2,228	4,276	390	3,027	157	28,570	17	29	21
2,381	55,165	5,412	28,839	54,366	.....	58,045	515	87,058	18,157	3,713	22
4,138	52,854	.....	26,047	55,754	.....	64,045	486	107,028	15,450	1,190	23
84.8	-7.5	-1.7	22.5	5.3	.....	4.5	42.9	26.1	65.4	-90.3	24
5,994	70,356	18,336	90,559	125,944	2,986	73,728	1,853	121,182	38,609	21,732	25
5,734	89,623	16,527	84,694	100,205	.....	74,614	737	110,132	38,380	42,000	26
19,265	125,767	.....	85,132	212,743	.....	194,742	834	143,892	41,885	115,955	27
1,594	19,309	13,016	53,992	68,689	1,830	13,098	1,217	11,430	8,585	21,372	28
3,363	34,458	11,115	54,855	45,839	.....	16,569	222	23,074	20,223	38,287	29
5,416	68,181	17,365	74,627	116,076	2,810	73,313	1,953	114,838	37,941	14,937	30
4,539	77,005	15,427	75,209	98,465	.....	73,681	720	105,395	38,380	16,890	31
11,659	88,940	.....	49,748	103,411	.....	93,120	834	126,401	35,835	7,537	32
19.3	-10.2	12.6	-0.8	17.9	.....	-0.5	171.2	9.0	-1.1	-11.6	33
1,016	18,134	12,045	38,060	58,831	1,654	12,683	1,217	5,086	7,917	14,577	34
2,158	21,840	10,015	45,370	44,099	.....	15,636	205	18,337	20,223	13,177	35
3.0	8.1	6.9	6.8	12.7	1.3	10.0	2.7	35.9	21.7	5.2	36
3.7	9.9	7.8	8.0	16.5	.....	8.9	6.5	33.4	25.3	39.3	37
81.2	73.8	30.6	49.0	49.3	41.1	82.7	37.7	95.6	79.1	2.4	38
52.5	71.6	35.1	39.7	55.2	.....	78.8	71.5	82.6	47.3	22.0	39
69,410	549,970	266,896	4,485,191	3,769,440	20,359	926,306	445,760	2,286,758	2,531,900	455,292	40
68,935	517,707	266,896	4,845,017	3,719,375	20,227	899,739	445,749	2,275,367	2,531,249	455,292	41
475	32,263	.....	174	50,065	132	26,567	11	11,391	651	.....	42
75,362	753,087	228,045	2,759,930	3,600,100	.....	401,212	10,827	1,904,534	2,266,671	469,208	43
155,269	672,677	.....	1,417,559	4,919,860	.....	877,108	66,866	994,246	2,442,376	713,197	44
-7.9	-27.0	18.1	75.6	4.7	.....	1,309	(5)	20.1	11.7	3.0	45
12.82	7.95	15.37	64.93	32.47	7.25	12.63	228.24	19.91	66.73	30.48	46
16.90	9.78	14.65	36.70	36.56	.....	5.44	15.04	18.07	59.06	27.78	47
13.32	7.56	.....	32.40	47.58	.....	9.42	80.18	7.87	68.16	94.63	48
15.78	10.77	50.17	132.50	65.85	17.61	15.28	605.65	20.84	84.33	1,264.70	49
73,210	555,410	267,133	4,964,681	4,313,660	21,074	941,358	460,393	2,290,308	2,539,075	760,189	50
78,012	766,442	226,045	2,957,815	3,602,600	.....	401,812	10,827	2,190,617	2,404,069	469,208	51
160,209	691,027	.....	1,430,709	5,264,860	.....	929,633	66,866	998,697	2,664,392	4,327,335	52
-6.2	-27.5	18.2	67.8	19.7	.....	194.3	(5)	4.6	5.6	62.0	53
12.34	7.89	14.57	54.82	34.25	7.06	12.77	235.74	18.90	65.76	34.98	54
13.60	8.55	13.68	34.92	35.95	.....	5.38	14.69	19.89	62.64	11.17	55
8.32	5.49	.....	16.81	24.75	.....	6.90	80.18	6.94	64.38	37.32	56
	Primary	Sup.		Primary	Sup.			Primary	Sup.		
	Enterprises			Enterprises				Enterprises			
36	221	1	25	36	22	14	223	7	427	7	17
3,815	46,020	(4)	5,181	36,450	56,939	795	55,538	736	107,430	6,765	29,688
3,204	13,972	(4)	3,003	40,394	66,143	1,085	22,108	721	82,064	1,038	36,124
0.94	0.30	(4)	0.58	1.11	1.16	136	0.40	0.98	0.76	0.15	1.22
3.12	0.76	.....	1.23	1.09	1.52	.....	0.47	1.26	0.87	.....	1.72
325	8,065	2,660	59,175	93,325	.....	8,567	.....	83,959	1,014	30,992	155
0.16	0.62	1.10	2.41	1.77	.....	0.97	.....	1.35	0.15	1.06	1.00
2,280	15,146	2,600	42,517	81,327	.....	8,810	.....	64,171	9,852	30,992	155
0.14	0.53	1.10	1.39	1.15	.....	0.97	.....	1.31	0.10	1.00	1.00
.....	4,662	2,850	9,000	85,939	126	1,570	.....	36,387	360	49,035	290
.....	67,000	41,584	38,000	4,080,449	4,263,901	9,720	220,234	84,323	1,507,567	1,951,428	590,805
37	199	.....	24	33	24	17	226	6	434	6	18
4,230	42,678	.....	5,112	31,692	57,045	971	60,326	868	103,258	4,693	29,892
4,712	89,496	.....	4,206	17,215	92,331	1,069	147,275	381	310,588	5,908	59,104
1.1	2.1	.....	0.8	0.5	1.6	1.1	2.4	0.6	3.0	1.3	2.0
0.84	0.43	.....	0.55	1.79	1.67	1.24	0.48	1.05	0.81	0.17	1.08
(4)	(4)	.....	8	.....	.....	.....	4	.....	8	.....	2
(4)	(4)	.....	68,109	.....	.....	.....	2,046	.....	4,308	.....	(4)
(4)	(4)	.....	23,374	.....	.....	.....	2,042	.....	8,778	.....	(4)
(4)	(4)	.....	2,001	.....	.....	.....	25	.....	.....	.....	(4)
(4)	(4)	.....	2,120	.....	.....	.....	251	.....	237	.....	(4)

⁴ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms; and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — MONTANA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Rosebud	Sanders	Sheridan	Silver Bow	Stillwater	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940..number.....	690	854	1,238	202	796	
2	.....1930..number.....	940	663	1,492	212	962
3	Irrigated farms.....1940..number.....	188	365	7	96	360	
4	.....1930..number.....	94	234	5	88	283
5	Increase or decrease (-), 1930-1940.....percent.....	100.0	56.0	40.0	9.1	27.2	
Operated by—							
6	(a) Owners and managers.....1940..number.....	122	287	6	73	249	
7	.....1930..number.....	54	197	.....	68	207
8	(b) Tenants.....1940..number.....	66	78	1	23	111	
9	.....1930..number.....	40	37	.....	20	76
10	Land in all farms.....1940..acres.....	1,664,342	307,775	873,137	86,842	808,439	
11	Land in irrigated farms.....1940..acres.....	325,500	142,698	12,830	59,849	257,079	
12	Average per farm.....1940..acres.....	1,731	391	1,833	623	714	
13	(a) Operated by owners and managers.....1940..acres.....	290,222	130,515	(3)	42,924	209,430	
14	Average per farm.....1940..acres.....	2,379	455	(3)	588	841	
15	(b) Operated by tenants.....1940..acres.....	35,278	12,183	(3)	16,925	47,649	
16	Average per farm.....1940..acres.....	535	156	(3)	736	429	
17	Approximate land area.....1940..acres.....	3,220,480	1,799,040	1,088,000	458,240	1,150,080	
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres.....	20,712	11,785	431	7,873	32,382	
19	(a) Cropland harvested.....1939..acres.....	17,059	10,095	431	5,402	28,203	
20	(b) Crop failure.....1939..acres.....	1,300	3	.....	3	38
21	(c) Pasture.....1939..acres.....	2,353	1,687	.....	2,468	4,141
22	Area irrigated.....1929..acres.....	15,428	9,243	.....	9,468	31,890
23	.....1919..acres.....	20,814	6,373	.....	11,519	33,039
24	Increase or decrease (-), 1929-1939.....percent.....	34.2	27.5	.....	-16.8	1.5
25	Irrigable area in enterprises.....1940..acres.....	33,829	22,028	1,112	8,461	36,545	
26	.....1930..acres.....	21,689	20,123	.....	10,483	36,487
27	.....1920 ⁴ ..acres.....	36,733	26,537	.....	20,386	49,432
28	Excess of irrigable area over the area irrigated.....1940..acres.....	13,117	10,243	681	598	6,163	
29	.....1930..acres.....	6,261	10,880	.....	1,015	4,597
30	Area works were capable of supplying with water.....1940..acres.....	28,906	18,701	912	8,361	38,339	
31	.....1930..acres.....	20,289	17,466	.....	9,613	36,243
32	.....1920 ⁴ ..acres.....	29,670	13,291	.....	15,521	44,926
33	Increase or decrease (-), 1930-1940.....percent.....	42.5	7.1	.....	-13.0	5.8
34	Excess, capability of works over area irrigated.....1940..acres.....	8,194	6,916	481	488	5,957	
35	.....1930..acres.....	4,861	8,223	.....	145	4,353
Proportion which area irrigated is of all lands in irrigated farms.....							
37	.....1939..percent.....	6.4	8.3	3.4	13.2	12.6
38	.....1929..percent.....	7.2	7.0	.....	16.4	16.0
Proportion which area irrigated is of area works were capable of supplying with water.....							
39	.....1939..percent.....	71.7	63.0	47.3	94.2	84.5
39	.....1929..percent.....	76.0	52.9	.....	98.5	88.0
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars.....	1,934,760	1,447,805	41,918	30,252	378,671	
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	1,934,531	1,445,620	41,912	30,140	378,456	
42	(b) Investment in water rights (reported).....1940..dollars.....	229	2,185	6	112	215	
43	Total investment in all enterprises.....1930..dollars.....	681,945	1,160,384	.....	70,238	461,808
44	.....1920 ⁴ ..dollars.....	1,024,981	595,212	.....	292,302	402,941
45	Increase or decrease (-), 1930-1940.....percent.....	183.7	24.7	.....	-56.9	-18.0
Average investment, based on area works were capable of supplying with water, per acre.....							
47	.....1940..dollars.....	66.93	77.42	45.96	3.62	9.88
48	.....1930..dollars.....	33.61	66.44	.....	7.31	12.74
49	.....1920 ⁴ ..dollars.....	34.55	44.78	.....	18.83	8.97
50	Average investment per acre irrigated.....1939..dollars.....	93.41	122.85	97.26	3.84	11.69	
51	.....1929..dollars.....	1,974,228	1,549,620	42,868	34,197	381,571
52	.....1930..dollars.....	687,195	1,228,134	.....	70,363	467,008
53	.....1920 ⁴ ..dollars.....	1,040,341	854,850	.....	296,827	407,541
54	Increase or decrease (-), 1930-1940.....percent.....	187.3	26.2	.....	-51.4	-18.3
Average investment, based on estimated final investment and irrigable area, per acre.....							
55	.....1940..dollars.....	58.36	70.35	38.55	4.04	9.90
55	.....1930..dollars.....	31.68	61.03	.....	6.71	12.80
56	.....1920 ⁴ ..dollars.....	28.32	32.21	.....	14.56	8.24
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental			Primary	Supplemental
		Enterprises				Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number.....	47	1	124	3	66	1
58	Area irrigated in these enterprises.....1939..acres.....	20,240	(5)	11,266	431	5,220	(5)
59	Cost of maintenance and operation.....1939..dollars.....	26,365	(5)	14,477	375	4,994	(5)
60	Average cost, per acre irrigated.....1939..dollars.....	1.30	(5)	1.29	0.87	0.96	(5)
611929..dollars.....	1.43	1.60	0.94
62	Total annual charges (reported) %.....1939..dollars.....	26,392	1,784	13,566	12,633
63	Average annual charge per acre irrigated.....1939..dollars.....	1.86	0.23	1.73	0.63
64	Area against which charges were assessed.....1939..acres.....	16,835	7,898	11,826	20,935
65	Average annual charge per acre assessed.....1939..dollars.....	1.57	0.23	1.15	0.60
66	Total charges collected.....1939..dollars.....	42,966	767	11,294	10,836
67	Indebtedness to December 31 (reported) %.....1939..dollars.....	436,504	336,369	1,456,614	34,212	30,200
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number.....	45	138	3	77
69	Area irrigated in these enterprises.....1939..acres.....	19,129	10,992	431	6,598
70	Water delivered in these enterprises.....1939..acre-feet.....	48,772	19,689	491	14,749
71	Average water delivered per acre irrigated.....1939..acre-feet.....	2.5	1.8	1.1	2.2
72	Average cost of water per acre irrigated.....1939..dollars.....	1.79	1.53	0.87	0.97
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number.....	14	1	1	3
74	Irrigable area in these enterprises.....1939..acres.....	15,299	(5)	(5)	69
75	Irrigated area in these enterprises.....1939..acres.....	11,032	(5)	(5)	69
76	Area for which drains have been installed.....1939..acres.....	3,484	(5)	(5)	69
77	Additional area needing drainage.....1939..acres.....	2,245	(5)	69

* Census of Agriculture.

¹ Data between census years not comparable (see headnote).

² Percent not shown when more than 1,000.

³ Data are included only in State totals because less than 3 farms reported in the 1940 Census.

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued
Irrigation data omitted from any of the counties listed are included under "All other counties"]

Sweet Grass	Teton	Toole	Treasure	Valley	Wheatland	Wibaux	Yellowstone	All other counties ¹		
483	1,081	569	203	1,297	229	373	1,703	.....	1
532	1,023	597	256	1,833	324	459	1,748	.....	2
294	529	55	97	159	70	14	1,257	.....	3
200	236	9	80	88	90	1	1,102	.....	4
13.1	124.2	511.1	21.2	80.7	-22.2	(²)	14.1	.....	5
194	387	49	60	132	58	11	794	.....	6
180	188	7	52	73	69	.....	701	.....	7
100	142	6	37	27	12	3	463	.....	8
80	48	2	28	15	21	.....	401	.....	9
1,045,591	1,101,546	1,042,688	299,702	1,253,311	820,384	365,542	1,253,023	.....	10
795,400	590,729	214,970	116,465	148,631	474,304	12,252	299,966	.....	11
2,705	1,117	3,909	1,201	935	6,776	874	239	.....	12
693,213	507,801	193,209	104,495	141,562	461,465	10,792	207,050	.....	13
3,573	3,943	1,742	1,742	1,072	7,956	981	261	.....	14
102,187	82,928	21,761	11,990	7,069	12,839	1,440	92,916	.....	15
1,022	594	3,627	324	282	1,070	480	201	.....	16
1,181,440	1,468,160	1,257,600	629,760	3,252,480	912,000	568,960	1,686,400	.....	17
44,883	105,477	8,130	8,331	19,318	24,759	98	94,727	.....	18
35,391	83,017	2,832	7,782	19,027	22,357	98	91,068	.....	19
7	15	2	102	72	.....	.....	85	.....	20
9,485	22,445	5,296	447	219	2,402	.....	3,574	.....	21
49,060	58,241	438	9,350	12,185	29,744	.....	97,116	.....	22
47,306	55,433	639	7,788	20,800	14,478	.....	101,378	.....	23
-8.5	81.1	(³)	-10.9	58.5	-15.8	.....	-2.5	.....	24
63,735	142,640	9,788	9,222	53,880	31,963	490	117,410	.....	25
67,452	119,213	653	13,150	45,794	42,749	.....	145,591	.....	26
146,265	222,521	1,291	21,462	93,308	48,091	.....	135,190	.....	27
18,852	37,163	1,658	891	34,562	7,204	392	22,883	.....	28
18,392	60,972	215	3,800	33,609	13,005	.....	48,475	.....	29
63,135	142,343	9,326	9,107	47,194	31,492	420	116,435	.....	30
62,745	92,786	653	12,150	41,119	38,086	.....	144,431	.....	31
79,069	119,323	976	21,017	36,336	36,946	.....	123,506	.....	32
0.6	53.4	(³)	-25.0	14.8	-17.3	.....	-19.4	.....	33
18,252	36,866	1,196	776	27,876	6,733	322	21,708	.....	34
13,685	34,545	215	2,800	28,934	8,342	.....	47,315	.....	35
5.6	17.9	3.8	7.2	13.0	5.2	0.8	31.6	.....	36
11.2	17.5	1.0	13.4	4.8	4.9	.....	40.7	.....	37
71.1	74.1	87.2	91.5	40.9	78.6	23.3	81.4	.....	38
78.2	62.8	67.1	77.0	29.6	78.1	.....	67.2	.....	39
652,079	8,281,810	99,010	493,761	3,204,985	161,145	21,422	3,371,230	.....	40
617,102	8,255,045	94,401	474,512	3,204,596	155,273	21,422	3,369,465	.....	41
34,977	26,765	4,609	19,269	390	5,872	.....	1,765	.....	42
692,702	7,459,377	18,050	413,225	1,456,828	162,070	.....	3,351,972	.....	43
1,032,451	2,698,814	26,231	483,790	1,006,823	234,750	.....	3,303,880	.....	44
-5.9	10.4	448.5	19.5	120.0	-0.6	.....	0.6	.....	45
10.33	58.18	10.62	54.22	67.91	5.12	51.00	28.95	.....	46
11.04	80.82	27.64	34.01	35.43	4.26	.....	23.21	.....	47
13.06	22.62	26.88	23.02	27.71	6.35	.....	26.75	.....	48
14.53	78.52	12.18	59.27	165.91	6.51	218.59	35.59	.....	49
663,029	9,226,488	110,700	494,651	3,338,836	161,170	22,022	3,372,850	.....	50
695,552	9,549,433	18,050	413,225	1,521,528	187,070	.....	3,393,472	.....	51
1,032,951	4,771,005	26,731	485,340	2,097,253	246,350	.....	3,491,298	.....	52
-4.7	-3.4	513.3	19.7	119.4	-13.8	.....	-0.6	.....	53
10.40	64.68	11.31	53.64	61.97	5.04	44.94	28.73	.....	54
10.31	80.10	27.64	31.42	33.22	4.38	.....	23.31	.....	55
7.06	21.26	20.71	22.61	22.48	5.12	.....	25.83	.....	56
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.			
Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises	Enterprises			
149	1	84	1	55	10	3	95	50	5	49
42,582	(⁵)	103,941	(⁵)	8,130	8,331	144	19,243	23,545	77	94,415
14,737	(⁵)	46,031	(⁵)	6,653	10,583	206	24,554	13,542	180	101,213
0.35	(⁵)	0.44	(⁵)	0.82	1.27	1.43	1.28	0.58	2.34	1.07
0.54	0.47	1.90	1.18	1.63	1.28
7,201	48,398	15,673	30,508	4,000	153,284
0.40	0.64	2.08	1.73	1.66
19,772	79,332	8,024	29,656	4,000	98,542
0.36	0.61	1.95	1.03	1.56
6,071	28,113	11,294	9,084	141,109
3,775	6,964,229	17,280	72,983	2,740,350	1,732,072
143	1	97	55	10	3	36	52	5	5	43
33,827	(⁵)	104,679	8,130	8,331	144	10,022	20,655	68	87,666
49,843	(⁵)	140,456	7,737	19,673	148	5,560	18,306	89	229,869
1.5	(⁵)	1.3	1.0	2.4	1.0	0.5	0.9	1.3	0.6
0.41	(⁵)	0.51	0.82	2.12	1.4	3.02	0.49	2.23	1.63
8	3	3	8	1	13
9,822	81,506	7,954	29,275	110	102,521
8,531	58,518	7,525	8,113	46	80,361
80	38,115	1,792	1,577	39	49,627
2,606	1,239	3,120	143	51	9,680

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
³ Annual charges may include costs of maintenance and operation, and assessments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — MONTANA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	STATE TOTAL	Beaverhead	Big Horn	Blaine	Broadwater	Carbon	Carter
FARM VALUES, 1940*							
1 Land and buildings, all farms.....dollars..	350,178,461	9,224,365	11,865,291	9,024,697	3,060,747	8,297,067	3,416,128
2 Land and buildings, irrigated farms.....dollars..	163,896,136	9,003,680	4,927,444	4,479,584	2,648,697	6,964,651	72,580
3 Operated by—							
4 (a) Owners and managers.....dollars..	129,225,314	8,198,230	2,780,510	3,856,267	2,101,171	4,917,916	(1)
5 (b) Tenants.....dollars..	34,610,822	805,450	2,146,934	623,317	547,526	2,046,735	(1)
6 Average, land and buildings, per farm.....dollars..	10,859.42	22,122.06	9,642.75	9,654.28	12,983.81	8,716.71	18,145.00
7 Average, per acre in farms.....dollars..	10.23	7.16	10.99	5.82	9.79	17.69	4.14
8 Buildings, irrigated farms reporting value.....number...	14,813	402	500	440	202	789	4
9 Total reported.....dollars..	33,750,271	1,439,938	773,522	799,027	505,323	1,440,865	8,800
10 Average, per irrigated farm reporting.....dollars..	2,278.42	3,581.94	1,547.04	1,815.97	2,501.60	1,826.19	2,200.00
11 Average, per acre on all irrigated farms.....dollars..	2.11	1.15	1.72	1.04	1.87	3.66	0.50
12 Buildings, nonirrigated farms reporting value.....number...	25,333	49	568	579	61	264	621
13 Total reported.....dollars..	32,860,604	82,745	614,551	689,200	87,400	247,867	576,460
14 Average, per nonirrigated farm reporting.....dollars..	1,297.15	1,688.67	1,081.96	1,190.33	1,432.79	938.89	928.28
15 Average, per acre on all nonirrigated farms.....dollars..	1.08	2.23	0.51	0.80	1.55	1.31	0.46
16 Implements and machinery, irrigated farms reporting value.....number...	13,990	392	451	436	200	763	4
17 Total reported.....dollars..	16,967,155	707,545	749,167	642,255	255,064	827,031	8,200
18 Average, per irrigated farm reporting.....dollars..	1,212.81	1,804.96	1,661.12	1,466.34	1,275.32	1,083.92	2,050.00
19 Average, per acre, on all irrigated farms.....dollars..	1.06	0.56	1.67	0.83	0.94	2.10	0.47
20 Implements and machinery, nonirrigated farms reporting value.....number...	24,144	36	510	573	56	244	589
21 Total reported.....dollars..	26,226,447	19,455	537,725	595,620	59,550	195,375	305,866
22 Average, per acre, on all nonirrigated farms.....dollars..	0.86	0.52	0.45	0.69	1.05	1.03	0.24
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
23 Enterprises.....1940.....number.....	2 5,581	345	36	63	139	253	8
24 .....1930.....number.....	2 4,474	427	37	47	143	220	14
25 .....1920.....number.....	6,035	521	38	87	211	258	10
26 Average size of enterprise based on irrigable area.....1940.....acres.....	464	669	4,151	1,436	390	454	156
27 .....1930.....acres.....	586	678	2,336	1,847	306	513	138
28 .....1920.....acres.....	717	1,008	2,310	2,188	519	607	304
29 Diversion dams.....1940.....number.....	6,136	922	31	75	195	217	3
30 .....1940.....length, miles.....	15,702.5	762.6	416.4	325.5	396.8	1,009.8	3.0
31 .....1930.....length, miles.....	15,957	1,399	413	449	339	899	5
32 .....1920.....length, miles.....	22,496	2,673	413	687	640	1,061	26
33 .....1940.....capacity, c.f.s. ⁴	66,745	11,746	1,683	851	1,763	3,164	22
34 .....1930.....capacity, c.f.s. ⁴	53,253	5,809	1,080	1,145	1,107	4,088	54
35 .....1920.....capacity, c.f.s. ⁴	94,429	10,119	1,540	2,110	1,893	3,772	70
36 Pipe lines ⁵.....1940.....length, miles.....	148.1	1.0	0.3	0.6	0.1	2.1	.....
37 Storage dams.....1940.....number.....	468	11	3	23	2	4	4
38 .....1940.....number.....	517	10	2	25	4	4	5
39 .....1930.....number.....	282	19	2	21	1	2	3
40 .....1920.....number.....	468	25	8	45	4	1	13
41 .....1940.....capacity, acre-feet..	1,301,422	131,441	60,580	17,144	(6)	31,020	850
42 .....1930.....capacity, acre-feet..	857,067	56,947	10	15,434	1	3	113
43 .....1920.....capacity, acre-feet..	1,571,720	136,446	128	15,671	211	91	1,513
44 Wells, flowing.....1940.....number.....	44	.....	.....	1	.....	.....	.....
45 .....1930.....number.....	40	.....	.....	.....	.....	1	.....
46 .....1920.....number.....	41	1	.....	.....	.....	.....	.....
47 .....1940.....yield, g.p.m.....	9,834	.....	.....	(6)	.....	.....	.....
48 .....1930.....yield, g.p.m.....	4,106	.....	.....	.....	.....	100	.....
49 .....1920.....yield, g.p.m.....	4,608	.....	.....	.....	.....	.....	.....
50 Wells, pumped.....1940.....number.....	102	.....	.....	.....	.....	.....	.....
51 .....1930.....number.....	49	.....	.....	.....	5	.....	.....
52 .....1920.....number.....	22	.....	.....	.....	.....	.....	.....
53 .....1940.....yield, g.p.m.....	33,883	.....	.....	.....	.....	.....	.....
54 .....1930.....yield, g.p.m.....	18,653	.....	.....	.....	.....	.....	.....
55 .....1920.....yield, g.p.m.....	11,085	.....	.....	.....	.....	.....	.....
56 Pumping plants.....1940.....number.....	651	.....	6	22	2	7	1
57 .....1930.....number.....	198	.....	4	4	.....	2	.....
58 .....1920.....number.....	253	.....	9	7	8	4	.....
59 Prime movers.....1940.....capacity, hp.....	29,110	.....	85	636	(6)	121	(6)
60 .....1930.....capacity, hp.....	9,095	.....	46	145	.....	12	.....
61 .....1920.....capacity, hp.....	10,341	.....	172	136	94	26	.....
62 Pumps.....1940.....capacity, g.p.m.....	1,309,014	.....	7,600	76,356	(6)	5,895	(6)
63 .....1930.....capacity, g.p.m.....	523,494	.....	2,600	29,150	.....	1,410	.....
64 .....1920.....capacity, g.p.m.....	453,231	.....	10,225	8,785	2,688	1,741	.....
65 Pumping lift, from all sources.....1940.....average, feet.....	21	.....	14	14	(6)	18	(6)
66 .....1930.....average, feet.....	22	.....	9	10	.....	9	.....
67 .....1920.....average, feet.....	20	.....	14	20	16	10	.....
68 from pumped wells.....1940.....average, feet.....	24	.....	.....	.....	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷							
69 Enterprises reporting pay roll.....number.....	269	6	6	8	3	36	.....
70 Irrigated area in these enterprises.....acres.....	827,767	13,360	53,797	41,606	6,170	48,003	.....
71 Wages and salaries paid and payable.....dollars..	1,501,148	6,581	107,603	39,399	1,287	20,527	.....
Persons employed during week ending April 29.....number.....	1,904	18	164	49	6	125	.....

*Census of Agriculture. ¹Data are included only in State totals because less than 3 farms reported in the 1940 Census. ²Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1. ³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁵Includes siphons and farm pipe lines reported. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁷Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - MONTANA

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	Cascade	Chouteau	Custer	Daniels	Dawson	Deer Lodge	Fallon	Fergus
FARM VALUES, 1940*								
1 Land and buildings, all farms.....dollars..	14,353,419	15,298,607	4,490,508	5,338,365	4,149,392	1,362,225	3,472,845	14,126,965
2 Land and buildings, irrigated farms.....dollars..	3,894,856	1,492,594	1,778,771	(¹)	289,276	1,204,065	.....	2,570,590
3 Operated by—								
4 (a) Owners and managers.....dollars..	3,287,696	1,342,294	1,589,741	(¹)	235,276	1,023,505	.....	2,139,302
5 (b) Tenants.....dollars..	607,260	150,300	195,030	.....	54,000	180,560	.....	431,291
6 Average, land and buildings, per farm.....dollars..	10,222.98	17,768.98	12,183.36	(¹)	8,035.44	8,788.80	.....	17,368.87
per acre in farms.....dollars..	9.32	5.74	5.00	(¹)	4.46	22.70	.....	6.45
7 Buildings, irrigated farms reporting value.....number...	376	84	143	(¹)	36	136	.....	147
8 Total reported.....dollars..	910,905	190,835	425,540	(¹)	60,691	366,250	.....	428,678
9 Average, per irrigated farm reporting.....dollars..	2,422.62	2,271.85	2,975.80	(¹)	1,585.86	2,693.01	.....	2,916.18
10 per acre on all irrigated farms.....dollars..	2.18	0.73	1.20	(¹)	0.94	6.90	.....	1.08
11 Buildings, nonirrigated farms reporting value.....number...	987	1,217	345	(¹)	734	42	474	1,295
12 Total reported.....dollars..	2,223,940	1,695,202	475,152	(¹)	875,295	89,220	571,875	1,909,445
13 Average, per nonirrigated farm reporting.....dollars..	2,253.23	1,392.94	1,377.25	(¹)	1,192.50	2,124.29	1,206.49	1,474.47
14 per acre on all nonirrigated farms.....dollars..	2.59	0.93	0.50	(¹)	1.00	13.61	0.74	1.45
15 Implements and machinery, irrigated farms reporting value.....number...	363	80	114	(¹)	35	106	.....	146
16 Total reported.....dollars..	448,402	145,478	155,426	(¹)	43,450	128,680	.....	268,487
17 Average, per irrigated farm reporting.....dollars..	1,235.27	1,818.48	1,363.39	(¹)	1,241.43	1,213.96	.....	1,825.25
18 per acre, on all irrigated farms.....dollars..	1.07	0.56	0.44	(¹)	0.67	2.43	.....	0.67
19 Implements and machinery, nonirrigated farms reporting value.....number...	946	1,232	334	(¹)	699	22	465	1,295
20 Total reported.....dollars..	1,238,465	2,072,724	208,900	(¹)	635,641	18,910	414,526	1,495,646
21 Average, per acre, on all nonirrigated farms.....dollars..	1.44	1.14	0.22	(¹)	0.72	2.88	0.54	1.13
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22 Enterprises.....1940.....number.....	97	77	62	3	27	81	7	116
23 .....1930.....number.....	36	58	25	1	11	75	1	84
24 .....1920.....number.....	100	98	44	.....	14	90	.....	232
25 Average size of enterprise based on irrigable area.....1940.....acres.....	517	141	476	167	782	267	187	215
26 .....1930.....acres.....	1,849	173	931	.....	422	365	.....	206
27 .....1920.....acres.....	1,444	411	588	.....	547	446	.....	417
28 Diversion dams.....1940.....number.....	51	50	57	2	11	109	3	129
29 Main canals and laterals.....1940.....length, miles.....	286.3	132.6	122.6	5.0	101.0	214.2	7.0	194.1
30 .....1930.....length, miles.....	198	240	57	.....	15	266	.....	185
31 .....1920.....length, miles.....	260	692	92	.....	20	350	.....	775
32 .....1940.....capacity, c.f.s. ³	657	261	757	25	951	714	38	691
33 .....1930.....capacity, c.f.s. ³	411	238	463	.....	66	690	.....	469
34 .....1920.....capacity, c.f.s. ³	1,264	972	882	.....	83	1,304	.....	3,283
35 Pipe lines ⁴.....1940.....length, miles.....	12.5	0.3	3.5	.....	1.9	0.5	.....	0.5
36 Storage dams.....1940.....number.....	8	20	24	1	17	10	4	12
37 Reservoirs.....1940.....number.....	8	25	27	1	19	9	4	17
38 .....1930.....number.....	2	11	3	.....	4	2	.....	2
39 .....1920.....number.....	15	27	18	.....	2	9	.....	16
40 .....1940.....capacity, acre-feet.....	57	1,031	2,537	(⁵)	1,655	1,691	717	587
41 .....1930.....capacity, acre-feet.....	16,600	3,170	177	.....	18	61	.....	201
42 .....1920.....capacity, acre-feet.....	218,086	3,124	844	.....	2	109	.....	31,638
43 Wells, flowing.....1940.....number.....	1	.....	1	.....	.....	.....	.....	1
44 .....1930.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
45 .....1920.....number.....	.....	.....	1	.....	.....	1	.....	.....
46 .....1940.....yield, g.p.m.....	(⁵)	.....	(⁵)	.....	.....	.....	.....	(⁵)
47 .....1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
48 .....1920.....yield, g.p.m.....	.....	.....	1	.....	.....	2,250	.....	.....
49 Wells, pumped.....1940.....number.....	.....	3	.....	.....	5	2	.....	1
50 .....1930.....number.....	2	.....	.....	.....	.....	.....	.....	.....
51 .....1920.....number.....	.....	1	.....	.....	.....	.....	.....	1
52 .....1940.....yield, g.p.m.....	.....	380	.....	.....	1,238	(⁵)	.....	(⁵)
53 .....1930.....yield, g.p.m.....	660	1,600	.....	.....	.....	.....	.....	.....
54 .....1920.....yield, g.p.m.....	.....	10	.....	.....	.....	.....	.....	1,500
55 Pumping plants.....1940.....number.....	63	47	21	.....	10	2	.....	13
56 .....1930.....number.....	13	17	8	.....	.....	1	.....	3
57 .....1920.....number.....	22	26	12	.....	4	.....	.....	14
58 Prime movers.....1940.....capacity, hp.....	915	1,095	683	.....	82	(⁵)	.....	225
59 .....1930.....capacity, hp.....	115	247	446	.....	.....	8	.....	24
60 .....1920.....capacity, hp.....	565	577	375	.....	487	.....	.....	204
61 Pumps.....1940.....capacity, g.p.m.....	61,590	84,876	78,635	.....	5,028	(⁵)	.....	18,410
62 .....1930.....capacity, g.p.m.....	9,613	17,400	62,097	.....	.....	75	.....	2,635
63 .....1920.....capacity, g.p.m.....	32,310	42,260	28,250	.....	7,750	.....	.....	16,180
64 Pumping lift, from all sources.....1940.....average, feet.....	19	19	15	.....	19	(⁵)	.....	16
65 .....1930.....average, feet.....	20	16	17	.....	.....	180	.....	7
66 .....1920.....average, feet.....	18	18	14	.....	41	.....	.....	14
67 from pumped wells.....1940.....average, feet.....	.....	18	.....	.....	18	(⁵)	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶								
68 Enterprises reporting pay roll.....number.....	4	.....	2	.....	2	1	.....	1
69 Irrigated area in these enterprises.....acres.....	24,138	.....	(⁵)	.....	(⁵)	(⁵)	.....	(⁵)
70 Wages and salaries paid and payable.....dollars..	22,500	.....	(⁵)	.....	(⁵)	(⁵)	.....	(⁵)
71 Persons employed during week ending April 29.....number.....	25	.....	(⁵)	.....	(⁵)	(⁵)	.....	(⁵)

¹Census of Agriculture. ²Data are included only in State totals because less than 3 farms reported in the 1940 Census. ³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁵Includes siphons and farm pipe lines reported. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁷Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - MONTANA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Flathead	Gallatin	Garfield	Glacier	Golden Valley	Granite	Hill
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	9,580,230	18,125,465	1,657,211	4,809,140	1,536,919	2,991,917	9,195,041
2	Land and buildings, irrigated farms.....dollars..	1,456,955	14,621,463	30,060	792,836	614,640	2,871,862	1,098,043
3	Operated by—							
4	(a) Owners and managers.....dollars..	1,270,475	7,858,518	(¹)	732,486	571,303	2,540,602	924,243
5	(b) Tenants.....dollars..	186,480	6,762,945	(¹)	60,350	43,337	331,260	173,800
6	Average, land and buildings, per farm.....dollars..	6,872.43	17,061.15	3,757.50	12,388.06	9,756.19	16,600.36	16,637.02
7	per acre in farms.....dollars..	27.02	23.48	3.12	5.32	2.88	10.11	7.86
8	Buildings, irrigated farms reporting value.....number..	210	844	8	64	61	171	65
9	Total reported.....dollars..	434,700	2,554,182	2,950	115,725	107,210	586,712	212,000
10	Average, per irrigated farm reporting.....dollars..	2,070.00	3,026.28	368.75	1,808.20	1,757.54	3,431.06	3,261.64
11	per acre on all irrigated farms.....dollars..	8.06	4.10	0.31	0.78	0.50	2.07	1.52
12	Buildings, nonirrigated farms reporting value.....number..	1,474	361	548	398	200	30	1,130
13	Total reported.....dollars..	2,486,189	769,540	338,820	591,684	176,085	27,190	1,913,805
14	Average, per nonirrigated farm reporting.....dollars..	1,686.70	2,187.09	618.28	1,486.64	880.42	906.33	1,162.48
15	per acre on all nonirrigated farms.....dollars..	10.95	3.43	0.39	0.88	0.44	2.07	1.03
16	Implements and machinery, irrigated farms reporting value.....number..	188	765	8	60	63	166	62
17	Total reported.....dollars..	149,045	1,202,327	6,300	83,683	74,410	210,836	111,850
18	Average, per irrigated farm reporting.....dollars..	792.79	1,531.50	787.50	1,394.72	1,181.11	1,270.10	1,804.03
19	per acre, on all irrigated farms.....dollars..	2.76	1.93	0.66	0.56	0.35	0.74	0.80
20	Implements and machinery, nonirrigated farms reporting value.....number..	1,229	315	526	404	196	30	1,117
21	Total reported.....dollars..	743,031	456,818	265,775	549,388	147,170	10,450	1,563,739
22	Average, per acre, on all nonirrigated farms.....dollars..	3.27	1.98	0.30	0.82	0.37	0.80	1.22
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940...number.....	135	301	19	5	28	110	48
23	.....1930...number.....	55	272	9	5	34	146	29
24	.....1920...number.....	129	463	2	2	.....	170	42
25	Average size of enterprise based on irrigable area.....1940...acres.....	68	465	174	10,648	154	233	225
26	.....1930...acres.....	142	544	87	16,520	177	196	278
27	.....1920...acres.....	252	621	2,045	59,250	.....	343	353
28	Diversion dams.....1940...number.....	118	254	8	2	19	230	36
29	Main canals and laterals.....1940...length, miles.....	127.5	618.1	28.0	209.8	37.0	360.6	48.4
30	.....1930...length, miles.....	88	978	11	390	61	383	68
31	.....1920...length, miles.....	422	1,396	15	114	.....	316	186
32	.....1940...capacity, c.f.s. ²	425	3,790	109	1,201	80	1,280	212
33	.....1930...capacity, c.f.s. ²	255	3,540	59	1,220	233	745	163
34	.....1920...capacity, c.f.s. ²	1,292	5,315	3	341	.....	1,822	235
35	Pipe lines ⁴.....1940...length, miles.....	11.2	2.5	1.1	1.1	.....	0.9	0.3
36	Storage dams.....1940...number.....	14	2	10	2	1	2	24
37	Reservoirs.....1940...number.....	11	3	11	2	4	2	30
38	.....1930...number.....	4	1	6	3	.....	2	20
39	.....1920...number.....	11	4	.....	3	.....	2	31
40	.....1940...capacity, acre-feet..	7,632	9,501	1,060	682,000	85	(⁶)	132,200
41	.....1930...capacity, acre-feet..	12,103	3	322	98,000	.....	5	1,355
42	.....1920...capacity, acre-feet..	38,101	2,199	.....	95,000	.....	330	7,205
43	Wells, flowing.....1940...number.....	.....	.....	.....	.....	.....	.....	.....
44	.....1930...number.....	.....	.....	.....	.....	.....	.....	1
45	.....1920...number.....	9	.....	.....	.....	.....	.....	1
46	.....1940...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
47	.....1930...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	8
48	.....1920...yield, g.p.m.....	1,083	.....	.....	.....	.....	.....	50
49	Wells, pumped.....1940...number.....	7	1	.....	1	.....	1	2
50	.....1930...number.....	.....	.....	.....	.....	.....	1	2
51	.....1920...number.....	.....	.....	.....	.....	.....	.....	1
52	.....1940...yield, g.p.m.....	1,640	(⁶)	.....	(⁶)	.....	(⁶)	(⁶)
53	.....1930...yield, g.p.m.....	.....	.....	.....	.....	.....	500	4,171
54	.....1920...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	3,000
55	Pumping plants.....1940...number.....	39	4	5	2	5	3	12
56	.....1930...number.....	17	1	2	.....	1	1	5
57	.....1920...number.....	15	6	.....	.....	.....	.....	12
58	Prime movers.....1940...capacity, hp.....	332	46	125	(⁶)	87	26	108
59	.....1930...capacity, hp.....	158	15	7	.....	5	15	127
60	.....1920...capacity, hp.....	170	115	.....	.....	.....	.....	352
61	Pumps.....1940...capacity, g.p.m.....	18,427	5,956	8,200	(⁶)	7,800	3,260	15,516
62	.....1930...capacity, g.p.m.....	11,080	2,300	1,270	.....	900	500	15,009
63	.....1920...capacity, g.p.m.....	9,165	6,729	.....	.....	.....	.....	21,335
64	Pumping lift, from all sources.....1940...average, feet.....	21	18	16	(⁶)	13	13	11
65	.....1930...average, feet.....	22	13	12	.....	10	3	17
66	.....1920...average, feet.....	38	14	.....	.....	.....	.....	16
67	from pumped wells.....1940...average, feet.....	18	(⁶)	.....	(⁶)	.....	(⁶)	(⁶)
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷								
68	Enterprises reporting pay roll.....number.....	1	33	.....	1	1	1	1
69	Irrigated area in these enterprises.....acres.....	(⁶)	70,209	.....	(⁶)	(⁶)	(⁶)	(⁶)
70	Wages and salaries paid and payable.....dollars..	(⁶)	17,444	.....	(⁶)	(⁶)	(⁶)	(⁶)
71	Persons employed during week ending April 29.....number..	(⁶)	29	.....	(⁶)	.....	(⁶)	(⁶)

* Census of Agriculture.

¹Data are included only in State totals because less than 3 farms reported in the 1940 Census.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION - MONTANA

1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"]

Jefferson	Judith Basin	Lake	Lewis and Clark	Liberty	Lincoln	McCone	Madison	Meagher	Mineral	Missoula	Musselshell	Park	Petroleum	
2,274,761	6,265,977	9,031,603	6,023,476	5,419,827	1,645,218	3,550,602	8,033,051	4,862,099	463,800	5,529,990	1,654,156	7,335,009	842,890	1
1,807,926	1,133,104	6,919,710	5,261,603	77,810	819,035	223,375	7,659,124	4,352,924	256,250	4,913,350	399,493	6,518,158	314,540	2
1,324,831	1,015,468	5,694,625	4,747,353	77,810	728,615	160,335	6,489,349	4,103,464	226,450	4,148,890	344,393	4,972,293	243,940	3
289,095	117,836	1,225,085	514,250	.....	90,420	63,040	1,169,775	249,460	29,800	764,460	55,100	1,545,865	70,600	4
8,418.46	22,217.73	5,714.05	14,068.46	19,452.50	4,157.54	7,702.59	13,297.09	34,547.02	5,229.59	7,937.56	7,989.86	13,579.50	12,097.69	5
7.59	6.27	25.40	6.52	3.72	15.55	4.37	10.26	5.34	17.22	23.87	2.71	10.41	4.07	6
187	50	1,192	370	4	192	29	567	124	49	610	50	475	24	7
436,950	151,263	1,823,191	1,108,686	4,300	198,375	38,350	1,635,995	442,920	82,650	1,542,661	72,100	1,276,574	29,300	8
2,336.63	3,025.26	1,529.52	2,996.45	1,075.00	1,033.20	1,322.41	2,885.35	3,571.94	1,686.73	2,528.95	1,442.00	2,687.52	1,220.83	9
2.06	0.84	6.69	1.37	0.21	3.77	0.75	2.19	0.54	5.55	7.50	0.49	2.04	0.38	10
136	524	458	152	375	328	672	77	96	61	152	259	139	151	11
186,625	836,407	556,929	207,402	752,850	282,579	549,159	95,795	85,915	52,890	243,270	204,880	228,300	80,385	12
1,372.24	1,596.20	1,216.00	1,364.49	2,007.07	800.55	817.20	1,244.09	894.95	867.05	1,600.46	791.04	1,642.45	532.35	13
2.21	1.30	2.79	1.58	0.95	4.98	0.57	1.51	1.00	3.98	5.30	0.36	2.60	0.42	14
171	50	1,114	356	4	169	29	554	123	48	588	47	427	26	15
163,971	114,015	821,813	392,624	5,700	92,762	36,165	798,473	233,460	23,345	387,686	42,019	581,066	27,430	16
958.89	2,280.30	737.71	1,102.88	1,425.00	548.89	1,247.07	1,441.29	1,898.05	486.35	659.33	894.02	1,360.81	1,055.00	17
0.77	0.63	3.02	0.49	0.27	1.76	0.71	1.07	0.29	1.57	1.88	0.29	0.93	0.35	18
109	509	395	129	399	274	658	52	90	55	130	247	110	146	19
88,460	765,530	155,866	74,205	1,046,120	101,196	566,179	40,675	50,910	18,625	60,875	187,433	87,051	69,954	20
1.05	1.19	0.78	0.57	1.33	1.92	0.59	0.64	0.60	1.40	1.33	0.32	0.99	0.37	21
123	39	158	304	5	153	38	365	122	46	219	41	251	28	22
124	43	98	180	9	92	2	358	125	31	193	22	282	17	23
175	.....	.....	311	.....	64	.....	517	137	57	253	47	314	.....	24
264	316	795	186	201	60	146	231	367	38	202	145	280	655	25
659	237	1,240	290	128	100	.....	345	400	39	155	261	318	972	26
492	.....	.....	303	.....	215	.....	513	440	117	620	410	401	.....	27
103	44	76	264	3	156	12	299	125	59	240	18	260	37	28
271.5	71.1	965.6	383.6	3.0	132.3	44.0	841.8	344.7	38.7	432.2	57.2	448.4	97.0	29
286	89	896	323	19	96	.....	785	353	11	232	32	788	90	30
492	.....	.....	742	.....	105	.....	1,561	617	43	1,189	204	878	.....	31
1,021	497	996	2,129	32	411	153	3,688	664	116	1,404	201	2,242	1,050	32
756	211	669	880	23	258	.....	3,069	1,067	24	866	185	2,727	1,091	33
9,547	.....	.....	2,356	.....	577	.....	6,290	1,546	239	2,404	671	3,180	.....	34
0.5	1.0	15.9	3.4	6.0	8.2	.....	1.2	1.1	3.3	6.9	0.4	1.0	.....	35
11	5	17	6	.....	6	20	13	6	2	13	1	3	7	36
13	6	23	6	1	6	23	13	5	2	15	2	3	7	37
10	.....	11	14	12	1	.....	17	2	2	5	2	1	3	38
11	.....	.....	31	.....	10	.....	37	7	6	8	2	7	.....	39
10,094	6,130	107,596	16,826	(6)	3,096	2,276	57,923	906	(6)	1,114	(6)	375	28,285	40
6,072	.....	60,638	74	669	6,500	.....	3,083	700	81	336	205	800	27,001	41
8,288	651,071	313	24,879	181	129	43,297	129	8,029	42
.....	27	1	1	43
.....	20	1	44
.....	7,100	(6)	(6)	45
.....	1,960	125	46
.....	47
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⁴ Includes siphons and farm pipe lines reported.
⁵ Data for less than 3 enterprises shown with permission of the enterprises involved.
⁶ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁷ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - MONTANA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Phillips	Pondera	Fowler River	Powell	Prairie	Ravalli	Richland
FARM VALUES, 1940^a							
1 Land and buildings, all farms.....dollars..	6,581,800	11,306,414	3,462,844	5,761,632	1,757,440	8,773,891	7,211,866
2 Land and buildings, irrigated farms.....dollars..	2,919,098	6,301,741	230,500	5,454,528	100,334	8,582,811	2,989,037
3 Operated by—							
4 (a) Owners and managers.....dollars..	2,434,425	4,943,137	(^b)	4,901,508	100,334	6,959,238	2,072,327
5 (b) Tenants.....dollars..	484,673	1,358,604	(^b)	553,020	.....	1,623,573	916,710
6 Average, land and buildings, per farm.....dollars..	9,602.30	15,184.92	10,021.74	20,898.57	11,148.22	6,014.58	7,005.69
7 per acre in farms.....dollars..	6.64	14.02	2.68	9.04	3.64	28.06	21.64
8 Buildings, irrigated farms reporting value.....number..	298	391	23	258	9	1,388	385
9 Total reported.....dollars..	648,963	840,183	42,050	1,066,381	25,980	2,463,911	746,410
10 Average, per irrigated farm reporting.....dollars..	2,177.73	2,148.81	1,828.26	4,133.26	2,886.67	1,775.17	1,938.73
11 Buildings, nonirrigated farms reporting value.....number..	705	404	653	45	0.94	8.06	5.40
12 Total reported.....dollars..	614,917	749,435	631,310	58,100	313,580	68,930	962,882
13 Average, per nonirrigated farm reporting.....dollars..	872.22	1,855.04	966.78	1,291.11	1,334.38	1,028.61	1,252.12
14 per acre on all nonirrigated farms.....dollars..	0.74	1.99	0.50	1.09	0.67	5.39	1.26
15 Implements and machinery, irrigated farms reporting value.....number..	290	393	21	251	9	1,274	375
16 Total reported.....dollars..	362,197	823,469	24,595	384,889	9,710	886,035	575,870
17 Average, per irrigated farm reporting.....dollars..	1,248.96	2,095.34	1,171.19	1,533.42	1,078.89	695.47	1,535.65
18 per acre, on all irrigated farms.....dollars..	0.67	1.83	0.29	0.64	0.35	2.90	4.17
19 Implements and machinery, nonirrigated farms reporting value.....number..	681	416	615	36	240	46	753
20 Total reported.....dollars..	526,617	794,174	377,081	19,760	224,698	16,186	745,800
21 Average, per acre, on all nonirrigated farms.....dollars..	0.63	2.11	0.30	0.47	0.62	1.26	0.98
ENTERPRISES AND IRRIGATION WORKS							
JANUARY 1							
22 Enterprises.....1940...number.....	39	26	25	229	8	455	29
23 1930...number.....	38	22	5	196	5	295	4
24 1920...number.....	36	30	.....	272	10	449	9
25 Average size of enterprise based on irrigable area.....1940...acres.....	2,322	4,844	119	322	244	266	1,331
26 1930...acres.....	2,229	4,555	.....	381	147	373	9,585
27 1920 ^c ...acres.....	2,365	7,091	.....	495	83	320	4,588
28 Diversion dams.....1940...number.....	37	28	44	445	4	503	9
29 Main canals and laterals.....1940...length, miles.....	331.4	639.1	15.1	577.3	14.0	809.2	196.2
30 1930...length, miles.....	367	593	.....	411	2	927	212
31 1920...length, miles.....	244	642	.....	871	9	892	138
32 1940...capacity, c.f.s. ⁴	695	1,163	55	2,110	361	3,176	69
33 1930...capacity, c.f.s. ⁴	1,172	1,429	.....	1,149	30	2,448	872
34 1920...capacity, c.f.s. ⁴	852	3,184	.....	3,233	55	3,430	672
35 Pipe lines ⁵.....1940...length, miles.....	14.2	2.8	.....	0.4	0.3	3.1	.....
36 Storage dams.....1940...number.....	23	8	6	15	6	19	14
37 1940...number.....	23	8	8	16	6	19	16
38 1930...number.....	19	11	.....	7	3	14	.....
39 1920...number.....	8	6	.....	8	3	10	4
40 1940...capacity, acre-feet.....	81,829	162,707	325	19,015	35	45,916	955
41 1930...capacity, acre-feet.....	84,710	141,760	.....	4,675	43	46,453	.....
42 1920...capacity, acre-feet.....	48,221	62,800	.....	276	8	7,634	395
43 Wells, flowing.....1940...number.....	.....	.....	.....	.....	.....	.....	.....
44 1930...number.....	.....	.....	.....	.....	.....	.....	.....
45 1920...number.....	.....	3	.....	.....	5	.....	.....
46 1940...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
47 1930...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
48 1920...yield, g.p.m.....	.....	1,000	.....	.....	104	.....	.....
49 Wells, pumped.....1940...number.....	3	.....	.....	2	.....	2	.....
50 1930...number.....	.....	.....	.....	6	.....	.....	.....
51 1920...number.....	.....	.....	.....	.....	.....	.....	.....
52 1940...yield, g.p.m.....	3,380	.....	.....	(^b)	.....	(^b)	.....
53 1930...yield, g.p.m.....	.....	.....	.....	700	.....	.....	.....
54 1920...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
55 Pumping plants.....1940...number.....	15	2	4	4	3	4	10
56 1930...number.....	3	.....	.....	1	1	.....	1
57 1920...number.....	6	.....	.....	1	3	.....	3
58 Prime movers.....1940...capacity, hp.....	206	(^b)	70	41	3,015	17	422
59 1930...capacity, hp.....	100	.....	.....	4	15	.....	220
60 1920...capacity, hp.....	154	.....	.....	16	462	.....	125
61 Pumps.....1940...capacity, g.p.m.....	14,650	(^b)	6,900	4,200	99,336	1,245	34,000
62 1930...capacity, g.p.m.....	5,000	.....	.....	700	500	.....	20,000
63 1920...capacity, g.p.m.....	10,420	.....	.....	650	19,015	.....	9,750
64 Pumping lift, from all sources.....1940...average, feet.....	19	(^b)	10	16	68	16	20
65 1930...average, feet.....	14	.....	.....	10	30	.....	31
66 1920...average, feet.....	18	.....	.....	12	24	.....	20
67 from pumped wells.....1940...average, feet.....	20	.....	.....	(^b)	.....	(^b)	.....
PAY ROLL AND NUMBER OF EMPLOYEES							
1939⁷							
68 Enterprises reporting pay roll.....number.....	3	4	.....	4	1	34	1
69 Irrigated area in these enterprises.....acres.....	24,526	52,784	.....	3,010	.....	57,623	(^b)
70 Wages and salaries paid and payable.....dollars..	29,740	63,309	.....	1,570	(^b)	43,292	(^b)
71 Persons employed during week ending April 29.....number..	23	41	.....	20	(^b)	196	(^b)

^a Census of Agriculture.
¹ Data between census years not comparable (see headnote).
² Data are included only in State totals because less than 3 farms reported in the 1940 Census.
³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — MONTANA

1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Roosevelt	Rosebud	Sanders	Sheridan	Silver Bow	Stillwater	Sweet Grass	Teton	Toole	Treasure	Valley	Wheatland	Wibaux	Yellowstone	All other counties ¹	
6,580,128	7,027,992	3,610,256	7,112,214	881,760	6,424,124	5,748,036	13,362,114	7,000,987	1,329,938	8,522,999	3,070,000	2,152,871	14,190,152	.....	1
68,890	1,886,079	1,781,352	76,323	570,765	3,630,955	4,756,905	5,837,559	1,561,647	811,324	1,696,388	1,999,860	86,630	11,092,008	.....	2
(2)	1,541,969	1,536,752	(2)	433,255	2,597,890	3,869,630	4,727,744	1,466,079	623,919	1,566,625	1,919,460	69,630	7,330,918	.....	3
(2)	444,110	244,600	(2)	137,500	1,033,125	887,275	1,109,815	95,568	187,405	129,763	90,400	17,000	3,761,090	.....	4
4,305.62	10,564.25	4,880.42	10,903.29	5,945.46	10,085.99	16,179.95	11,035.08	25,393.58	8,364.16	10,669.11	28,569.43	6,187.86	8,824.19	.....	5
9.93	6.10	12.48	5.95	9.54	14.12	5.98	9.88	7.26	6.97	11.41	4.22	7.08	36.98	.....	6
12	185	354	7	91	356	294	511	55	97	155	70	13	1,254	.....	7
16,290	387,384	481,643	18,086	164,275	721,265	824,948	1,268,912	230,225	180,540	278,070	324,270	32,000	2,770,597	.....	8
1,357.50	2,093.97	1,360.57	2,583.71	1,805.22	2,026.03	2,805.95	2,483.19	4,185.91	1,861.24	1,794.00	4,632.43	2,461.54	2,209.41	.....	9
2.35	1.19	3.38	1.41	2.74	2.81	1.04	2.15	1.07	1.55	1.87	0.68	2.62	3.24	.....	10
977	486	474	1,091	100	419	167	517	482	101	1,076	154	326	431	.....	11
1,124,425	511,190	475,477	1,316,930	139,565	548,851	240,609	1,039,245	732,500	90,450	1,077,140	138,835	462,464	502,947	.....	12
1,150.90	1,051.83	1,003.12	1,207.09	1,395.65	1,309.91	1,440.77	2,010.15	1,519.71	895.54	1,001.06	901.53	1,418.60	1,166.93	.....	13
1.41	0.38	2.88	1.53	5.17	1.00	0.96	2.03	0.88	0.49	0.98	0.40	1.31	0.53	.....	14
10	186	323	7	82	335	284	498	55	95	157	67	14	1,132	.....	15
8,745	332,389	179,245	10,698	57,565	291,355	302,625	773,059	134,788	162,670	226,683	125,232	18,195	1,337,876	.....	16
874.50	1,787.04	554.94	1,528.29	702.01	869.72	1,065.58	1,552.33	2,450.69	1,712.32	1,443.84	1,869.13	1,299.64	1,181.87	.....	17
1.26	1.02	1.26	0.83	0.96	1.13	0.38	1.31	0.63	1.40	1.53	0.26	1.49	4.46	.....	18
897	458	426	1,126	78	393	153	500	481	103	1,063	142	327	389	.....	19
1,184,292	307,041	173,552	1,271,003	51,015	426,819	98,166	1,102,869	1,028,432	83,765	1,146,460	107,369	369,427	471,658	.....	20
1.49	0.23	1.05	1.48	1.89	0.77	0.39	2.16	1.24	0.46	1.04	0.31	1.05	0.49	.....	21
14	60	162	4	85	111	155	104	55	14	41	54	9	50	.....	22
2	26	106		79	114	101	15	5	5	19	86	1	40	.....	23
8	36	83	.....	144	128	164	62	10	15	30	61	.....	48	.....	24
1,552	564	136	278	100	347	411	1,372	178	659	1,314	592	54	2,348	.....	25
21,000	834	190	.....	133	320	668	7,948	131	2,630	2,410	497	.....	3,640	.....	26
14,494	1,020	320	.....	142	386	892	3,589	129	1,431	3,110	788	.....	2,816	.....	27
4	100	153	5	2	81	108	97	77	2	16	110	2	19	.....	28
123.2	193.5	240.1	8.1	59.1	199.5	520.3	914.9	223.1	55.7	265.1	234.0	3.1	542.9	.....	29
150	114	166	.....	76	247	442	572	7	60	227	216	.....	688	.....	30
111	138	158	.....	256	364	706	527	17	74	175	391	.....	758	.....	31
126	876	553	112	561	1,852	1,511	3,710	396	388	1,410	996	21	1,570	.....	32
313	526	310	.....	226	971	1,697	2,756	13	368	1,201	1,048	.....	2,996	.....	33
287	1,540	1,343	.....	720	1,600	3,173	2,239	46	397	4,324	1,179	.....	2,545	.....	34
0.1	0.4	4.2	0.1	1.6	1.2	0.2	1.4	1.1	1.1	18.0	0.2	0.1	8.3	.....	35
.....	11	8	1	5	.....	5	15	8	2	4	2	7	1	.....	36
.....	10	8	1	5	.....	3	16	8	2	5	2	11	3	.....	37
.....	5	6	.....	3	2	5	5	1	.....	5	2	.....	3	.....	38
.....	6	1	.....	6	3	9	6	7	.....	13	5	.....	3	.....	39
.....	690	36,840	(6)	164	.....	18,840	188,058	521	(6)	4,515	(6)	389	2,800	.....	40
.....	100	32,092	.....	143	175	14,070	207,000	50	.....	10,661	2,723	.....	1,707	.....	41
.....	50,095	40	3,778	12	2	18,153	85,718	60	.....	1,546	2,803	.....	2,509	.....	42
.....	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	2,400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	1,713	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	7	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	.....	5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
.....	.....	7	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	.....	5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51
.....	.....	2,368	.....	(6)	.....	(6)	1,815	.....	.....	100	(6)	.....	.....	.....	52
.....	.....	4,100	.....	5	.....	90	.....	.....	.....	.....	.....	.....	.....	.....	53
.....	.....	.....	.....	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
9	43	16	2	2	2	6	8	18	13	35	1	.....	30	.....	56
2	5	5	.....	1	2	.....	.....	.....	3	6	1	.....	11	.....	57
1	10	1	.....	2	1	.....	.....	.....	5	14	1	.....	11	.....	58
126	1,137	153	(6)	(6)	(6)	48	90	301	405	1,678	(6)	.....	2,085	.....	59
400	233	48	.....	1	10	.....	.....	48	245	81	32	.....	1,598	.....	60
50	269	7	.....	10	45	.....	.....	258	434	137	20	.....	767	.....	61
8,530	102,800	8,670	(6)	(6)	(6)	4,200	8,575	26,340	25,800	148,778	(6)	.....	93,660	.....	62
27,000	54,850	2,785	.....	5	250	.....	.....	3,700	26,932	7,490	8	.....	74,520	.....	63
4,500	13,100	.....	(6)	130	(6)	.....	.....	12,100	71,870	9,020	1,000	.....	5,102	.....	64
17	14	18	(6)	(6)	(6)	17	12	15	21	21	(6)	.....	17	.....	65
20	12	15	.....	25	16	.....	.....	14	20	14	4	.....	26	.....	66
22	16	10	.....	58	63	.....	.....	16	18	14	30	.....	26	.....	67
.....	.....	18	.....	(6)	.....	(6)	7	.....	.....	66	.....	.....	.....	.....	68
(6)	5	2	.....	.....	8	8	7	.....	3	5	.....	.....	19	.....	69
(6)	14,181	(6)	.....	.....	15,035	13,731	75,818	.....	7,525	17,638	.....	.....	92,555	.....	70
(6)	23,920	(6)	.....	.....	5,338	4,725	56,689	.....	6,038	63,724	.....	.....	58,919	.....	71
(6)	38	(6)	.....	.....	14	26	76	.....	7	48	.....	.....	165	.....	71

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.
³Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁴Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — NEBRASKA

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	^a 49,057,920	49,157,120	49,157,120	49,157,120	49,157,120	49,157,120	49,157,120
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	121,062	133,616	129,458	124,417	129,678	121,525	113,608
Land in all farms.....acres....	47,343,981	46,615,762	44,708,565	42,235,475	38,622,021	29,911,779 ^b	21,593,444
Farms irrigated: ¹							
Farms.....number....	6,913	5,140	4,602	3,021	1,652	1,932	214
Increase or decrease (-) over preceding census.....percent..	² 50.2	.....	52.3	63.1	-4.1	802.8	.....
Proportion of all farms.....percent..	5.7	3.8	3.6	2.4	1.4	1.6	0.2
Land in farms.....acres....	3,577,439	⁽³⁾	1,648,339	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Proportion of all farm land.....percent..	7.6	⁽³⁾	3.7	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Area irrigated.....acres....	⁴ 473,775	⁵ 345,417	⁶ 404,481	⁽⁷⁾	⁽⁷⁾	148,538	11,744
Increase or decrease (-) over preceding census.....percent..	² 17.1	⁽⁸⁾
Proportion of total land area of State.....percent..	1.0	0.7	0.8	.....	.....	0.3	⁽⁹⁾
Proportion of all farm land.....percent..	1.0	0.7	0.9	.....	.....	0.5	0.1
Value of irrigated farms (land and buildings).....dollars..	92,846,541	⁽³⁾	85,097,442	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per farm.....dollars..	13,430.72	⁽³⁾	18,491.40	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per acre.....dollars..	25.95	⁽³⁾	51.63	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Value of farm implements and machinery ¹⁰.....dollars..	9,398,048	⁽³⁾	6,676,291	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per farm ¹⁰.....dollars..	1,359.47	⁽³⁾	1,450.74	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per acre ¹⁰.....dollars..	2.63	⁽³⁾	4.05	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number....	2,717	⁽³⁾	721	470	474	⁽³⁾	⁽³⁾
Farms irrigated.....number....	9,156	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Area irrigated.....acres....	610,379	⁽³⁾	532,617	442,690	255,950	⁽³⁾	⁽³⁾
Area existing works were capable of supplying with water.....acres....	992,967	⁽³⁾	703,641	562,468	429,225	⁽³⁾	⁽³⁾
Area irrigable.....acres....	1,095,567	⁽³⁾	763,039	¹¹ 766,766	¹¹ 680,133	⁽³⁾	⁽³⁾
Additional area existing works were capable of supplying with water.....acres....	382,578	⁽³⁾	171,024	119,778	173,275	⁽³⁾	⁽³⁾
Additional irrigable area in enterprises not supplied with water.....acres....	485,188	⁽³⁾	230,422	¹¹ 324,078	¹¹ 424,183	⁽³⁾	⁽³⁾
Investment in irrigation enterprises.....dollars..	39,056,207	⁽³⁾	21,386,319	13,909,185	7,798,310	1,310,698	¹² 47,798
Increase or decrease (-) over preceding census.....percent..	² 82.6	⁽³⁾	53.8	78.4	495.0	⁽³⁾
Average per acre based on area works were capable of supplying with water.....dollars..	39.33	⁽³⁾	30.39	24.73	18.17	⁽³⁾	⁽³⁾
Increase or decrease (-) over preceding census.....percent..	² 29.4	⁽³⁾	22.9	36.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	41,995,361	⁽³⁾	21,465,772	18,030,154	9,485,231	⁽³⁾	⁽³⁾
Average per acre based on irrigable area in enterprises.....dollars..	38.33	⁽³⁾	28.13	¹¹ 23.51	¹¹ 13.95	⁽³⁾	⁽³⁾
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	1.59	⁽³⁾	1.54	1.48	1.09	⁽³⁾	⁽³⁾

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³Not available. ⁴Irrigated land from which crops were harvested plus 10,869 acres of irrigated land used only for pasture. ⁵Irrigated land from which crops were harvested. ⁶Acres of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸Percent not shown when more than 1,000. ⁹Less than one-tenth of 1 percent. ¹⁰Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹¹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹²Based on average for "subhumid" region. Average for Nebraska not shown separately in 1890. ¹³The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	Number 121,062	Acres 47,343,981	17,304,802	462,906	10,869	1,137,808,019	24.03	256,753,804	5.42	97,645,085	2.06
Owners and managers.....	57,115	28,964,009	8,919,421	225,958	7,082	616,275,106	21.28	148,403,334	5.12	52,831,318	1.82
Tenants.....	63,947	18,379,972	8,385,381	236,948	3,787	521,532,913	28.38	108,350,470	5.90	44,813,767	2.44
Irrigated farms, total.....	6,913	3,577,439	1,025,290	462,906	10,869	92,846,541	25.95	17,318,057	4.84	9,398,048	2.63
Owners and managers.....	3,342	2,600,098	585,574	225,958	7,082	54,397,466	20.92	10,685,061	4.11	5,101,064	1.96
Tenants.....	3,571	977,341	439,716	236,948	3,787	38,449,055	39.34	6,632,996	6.79	4,296,984	4.40
Wholly irrigated farms.....	2,761	607,112	236,324	236,324	4,826	28,717,583	47.30	6,022,194	9.92	3,730,037	6.14
Owners and managers.....	1,194	355,003	102,051	102,051	2,788	13,656,110	38.47	3,357,432	9.46	1,659,145	4.67
Tenants.....	1,567	252,109	134,273	134,273	2,038	15,061,473	59.74	2,664,762	10.57	2,070,892	8.21
Partly irrigated farms.....	4,152	2,970,327	788,966	226,582	6,043	64,128,958	21.59	11,295,863	3.80	5,668,011	1.91
Owners and managers.....	2,148	2,245,095	483,523	123,907	4,294	40,741,376	18.15	7,327,829	3.26	3,441,919	1.53
Tenants.....	2,004	725,232	305,443	102,675	1,749	23,387,582	32.25	3,968,034	5.47	2,226,092	3.07
Nonirrigated farms, total.....	114,149	43,766,542	16,279,512	.....	.....	1,044,961,478	23.88	239,435,747	5.47	88,247,037	2.02

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION - NEBRASKA

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ²	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
Total.....	Number 2,717	Acres 1,095,567	Acres 992,957	Acres 610,379	Acres 532,617	Acres 442,690	Percent 14.6	Acres 573,110	Acres 602,671	Acres 567,998	Acres-feet 2.1	Dollars 1.94	Dollars 0.93
Primary sources:													
Streams, gravity.....	247	863,349	792,703	488,499	501,195	435,567	-2.5	457,848	483,459	454,785	2.0	1.37	0.68
Streams, pumped.....	311	21,053	19,482	10,176	2,458	1,115	314.0	10,055	9,851	9,663	1.3	3.26	2.49
Streams, gravity and pumped.....	7	29,301	26,301	12,814	.....	850	.....	12,694	12,614	12,694	2.3	2.45	1.06
Wells, pumped.....	1,707	132,966	126,423	80,673	23,452	546	244.0	80,155	79,114	79,023	1.5	3.48	2.31
Wells, flowing.....	14	465	465	361	.....	.....	.....	25	66	10	1.0	0.50	0.50
Wells, pumped and flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakes, gravity.....	.....	.....	.....	.....	81	.....	.....	.....	.....	.....	.....	.....	.....
Lakes, pumped.....	13	596	589	251	255	.....	-1.6	251	251	251	2.2	4.90	2.27
Springs.....	27	4,981	4,957	2,113	414	2,050	410.4	2,022	2,107	2,016	0.7	0.35	0.49
Springs and streams.....	4	260	260	117	.....	.....	.....	92	117	92	2.2	1.68	0.77
Stored storm water.....	59	2,038	1,433	711	1,245	1,200	-42.9	489	448	260	1.1	1.34	1.21
City water.....	2	84	84	74	.....	7	.....	71	71	68	2.0	1.63	0.80
Sewage.....	2	.....	.....	.....	.....	120	.....	.....	.....	.....	.....	.....	.....
Streams, gravity; wells, pumped..	28	5,979	5,866	5,019	70	115	(²)	3,565	5,019	3,565	2.2	1.63	0.74
Streams, gravity; wells, flowing..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Streams, pumped; wells, pumped...	11	1,092	1,038	529	.....	.....	.....	529	449	449	2.3	3.77	1.66
Waste water, seepage or drainage..	8	6,634	6,590	4,362	.....	.....	.....	4,362	4,285	4,285	1.3	2.55	1.94
Other mixed.....	15	6,769	6,766	4,660	2,259	1,120	107.2	952	4,620	837	4.6	3.12	0.67
Other and not reported.....	.....	.....	.....	.....	1,188	.....	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:³													
Streams, gravity and/or storage...	4	301,387	289,567	153,377	.....	.....	.....	153,377	153,377	153,377	0.5	0.63	1.28
Streams, pumped.....	47	3,554	3,413	2,708	.....	.....	.....	2,634	2,668	2,594	1.0	2.55	2.54
Wells, pumped.....	211	24,179	23,750	15,548	.....	.....	.....	15,508	15,403	15,363	0.8	1.41	1.82
Wells, flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered.

²Percent not shown when more than 1,000.

³Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT						COST OF MAINTENANCE AND OPERATION ¹							
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Average per acre ²	Amount	Pro- por- tion of total	Average per acre ²		Irrigated area reporting	Average per acre	Irrigated area reporting	Average per acre		Irrigated area reporting	Average per acre
Total.....	Dollars 39,056,207	Percent 100.0	Dollars 39.33	Dollars 21,386,319	Percent 100.0	Dollars 30.39	Dollars 8.94	Acres 602,582	Dollars 1.59	Acres 524,260	Dollars 1.54	Dollars 0.05	Acres 394,392	Dollars 1.48
Primary sources:														
Streams, gravity.....	32,147,527	82.3	40.55	20,581,922	96.2	31.24	9.31	483,370	0.99	495,259	1.41	-0.42	389,699	1.48
Streams, pumped.....	219,587	0.6	11.27	71,933	0.3	13.11	-1.84	9,851	3.33	2,246	3.85	-0.52	572	2.86
Streams, gravity and pumped.....	1,515,810	3.9	57.63	.....	.....	.....	.....	12,814	2.08	.....	.....	.....	850	1.04
Wells, pumped.....	1,989,248	5.1	15.73	616,939	2.9	19.95	-4.22	79,114	3.49	22,432	4.03	-0.54	436	5.16
Wells, flowing.....	2,205	(³)	4.74	.....	.....	.....	.....	66	0.24	.....	.....	.....	.....	.....
Wells, pumped and flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakes, gravity.....	.....	.....	.....	17,000	0.1	209.88	.....	.....	.....	81	2.94	.....	.....	.....
Lakes, pumped.....	4,325	(³)	7.34	5,000	(³)	9.26	-1.92	251	4.90	255	5.88	-0.98	.....	.....
Springs.....	35,099	0.1	7.08	6,460	(³)	15.60	-8.52	2,107	0.55	413	2.42	-1.87	1,700	1.14
Springs and streams.....	7,360	(³)	28.31	.....	.....	.....	.....	117	1.75	.....	.....	.....	.....	.....
Stored storm water.....	31,666	0.1	22.10	33,565	0.2	13.06	9.04	448	1.11	1,245	2.87	-1.76	895	0.36
City water.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sewage.....	1,845	(³)	21.96	.....	.....	.....	.....	71	1.63	.....	.....	.....	.....	.....
Streams, gravity; wells, pumped..	85,477	0.2	14.57	2,330	(³)	33.29	-18.72	5,019	1.36	70	2.86	-1.48	10	3.00
Streams, gravity; wells, flowing..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Streams, pumped; wells, pumped...	16,425	(³)	15.82	.....	.....	.....	.....	449	3.77	.....	.....	.....	.....	.....
Waste water, seepage or drainage..	77,595	0.2	11.77	.....	.....	.....	.....	4,285	2.71	.....	.....	.....	.....	.....
Other mixed.....	57,617	0.1	8.52	21,470	0.1	6.12	2.40	4,620	0.94	2,257	1.20	-0.26	230	2.63
Other and not reported.....	.....	.....	.....	29,700	0.1	25.00	.....	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:⁴														
Streams, gravity and/or storage...	2,565,407	6.6	8.86	.....	.....	.....	.....	153,377	0.59	.....	.....	.....	.....	.....
Streams, pumped.....	30,370	0.1	8.90	.....	.....	.....	.....	2,668	2.65	.....	.....	.....	.....	.....
Wells, pumped.....	268,644	0.7	11.31	.....	.....	.....	.....	15,403	1.44	.....	.....	.....	.....	.....
Wells, flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation.

²Based on area works were capable of supplying with water.

³Less than one-tenth of 1 percent.

⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION - NEBRASKA

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930				1940		1930		
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED						AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued					
Total.....	Acres 610,379	Acres 171,633	Acres 532,617	Acres 442,690	Percent 14.6						
Individual and partnership....	123,979	17,986	57,472	68,140	115.7						
Cooperative, incorporated.....	53,488	365	54,811	55,408	11.8						
Cooperative, unincorporated....	7,764										
Irrigation district.....	234,688	56,680	219,590	206,206	6.9						
Commercial.....	28,723		53,574	25,335	46.4						
Bureau of Reclamation ²	160,799	96,602	147,026	87,558	9.4						
State.....	762		134		468.7						
Other.....	176		10	43	(⁴)						
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						IRRIGABLE AREA ⁶					
Total.....	992,957	316,730	703,641	562,468	41.1						
Individual and partnership....	197,075	26,893	77,296	96,465	155.0						
Cooperative, incorporated.....	76,509	8,365	77,324	102,242	11.6						
Cooperative, unincorporated....	9,821										
						Total.....					
						1,095,567	329,120	763,039	766,768	43.6	
						Individual and partnership....					
						209,914	27,463	82,193	124,098	155.4	
						82,329	8,365	88,361	145,444	5.5	
						10,904					
						483,522	187,296	254,327	244,383	90.1	
						126,673	(⁵)	155,753	76,925	-18.7	
						181,155	105,996	182,185	175,820	-0.6	
						874		200		347.0	
						176		20	98	780.0	

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises." See text, p. 4, for explanation. ²U. S. Dept. of the Interior. ³Does not include land supplied with stored water under the Warren Act. ⁴Percent not shown when more than 1,000. ⁵Data for 1 "Commercial" enterprise are included with "Cooperative" enterprises in the 1940 Census. ⁶For 1920 relates to total area. Irrigable area for that year was not reported. ⁷For explanation of areas, see text, p. 353.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 2,717	Number 69	Acres 1,095,567	Acres 992,957	Dollars 36.14	Dollars 1.39	Dollars 9.04	Dollars 0.70	Number 9,156	Acres 610,379	Acres 579,535	Acres 10,717	Acres 20,127
Individual and partnership....	2,620	3	209,914	197,075	13.46	2.77	10.99	1.64	2,317	123,979	116,495	3,443	4,041
Cooperative, incorporated.....	24	16	82,329	76,509	11.50	0.62	4.33	0.64	614	53,488	50,850	520	2,118
Cooperative, unincorporated....	15	3	10,904	9,821	10.85	0.45			47	7,764	6,772	402	590
Irrigation district.....	38	38	483,522	400,674	44.03	1.04	8.49	0.40	3,194	234,688	226,807	3,039	4,842
Commercial.....	5	5	126,673	126,673	7.52	1.49	(⁴)		826	28,723	28,723		
U. S. Bureau of Reclamation ⁵	4	4	181,155	181,155	75.09	1.13	9.91	0.70	2,146	160,799	149,072	3,249	8,478
State.....	7		894	874	42.67	4.55			8	762	640	64	58
Other.....	4		176	176	72.35	4.85			4	176	176		

¹Reported by enterprises in the Census of Irrigation, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 1 "Commercial" enterprise are included with "Cooperative" enterprises in the 1940 Census. ⁵For explanation of areas and investment, see text, p. 358.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works	
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment								Investment in water rights
Total.....	Dollars 39,056,207	Dollars 36,191,786	Dollars 2,864,421	Dollars 38,749,216	Dollars 306,991	Dollars 21,386,319	Dollars 13,909,185	Percent 82.6	Dollars 36.45	Dollars 9.04	Dollars 4,344,324	Dollars 2,939,154
Individual and partnership....	2,967,486	2,671,642	295,844	2,948,350	19,136	1,041,547	1,146,227	184.9	13.56	11.00	384	147,924
Cooperative, incorporated.....	1,036,557	1,036,557		880,642	155,915	751,302	547,104	52.6	13.54	3.39	825	6,000
Cooperative, unincorporated....	109,591	2,144,788	228,370	108,900	691				10.91		800	110
Irrigation district.....	19,205,720	17,716,079	1,489,641	19,129,996	75,724	5,082,366	2,811,474	277.9	44.22	8.49	4,327,525	2,784,823
Commercial.....	1,027,010	(²)	(²)	977,010	50,000	899,054	726,560	14.2	7.91	(²)	11,079	
U. S. Bureau of Reclamation ⁵	14,659,810	13,609,244	1,050,566	14,654,295	5,515	13,603,568	8,674,250	7.8	75.12	9.91	3,710	
State.....	37,300	37,300		37,290	10	7,482		398.5	42.68			
Other.....	12,733	12,733		12,733		1,000	3,570	(³)	72.35			297

¹Only for enterprises serving 5 or more farms. ²Data for 1 "Commercial" enterprise are included with "Cooperative" enterprises in the 1940 Census. ³Percent not shown when more than 1,000. ⁴For explanation of investment, see text, p. 358.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ⁶	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrigable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	34	917,675	825,817	21,727,368	52.08	31.46	11	178,738	57,871	2.44	674,574	770,745	576,412
Partnership.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,149	1,284	764
Cooperative, incorporated.....	3	29,153	25,963	13,968	1.07	0.54	.....	.....	.....	.....	56,377	35,952	32,225
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,868	1,174	634
Irrigation district.....	27	707,367	618,699	11,957,098	49.25	24.11	9	149,106	25,858	2.61	323,013	432,704	416,815
Commercial.....	1	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	1	(⁵)	(⁵)	(⁵)	28,723	40,423	46,483
Bureau of Reclamation ⁷	3	181,155	181,155	9,756,302	59.91	53.86	1	29,632	32,013	1.83	259,444	259,208	79,471
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$22.42. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$7.24. ⁵Based on primary enterprises only; no supplemental enterprises reported arrearage. ⁶Data for 1 "Commercial" enterprise are included with "Irrigation district" enterprises in the 1940 Census. ⁷U. S. Dept. of the Interior. ⁸Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁹Data for less than 3 enterprises shown with permission of the enterprise involved. ¹⁰For explanation of areas and investment, see text, p. 358.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	602,582	839,682	171,448	119,770	1.39	0.70	56	308,746	685
Individual and partnership.....	120,099	332,936	17,801	29,186	2.77	1.64	1	(²)	.....
Cooperative, incorporated.....	50,191	30,998	365	235	0.62	0.64	12	20,336	60
Cooperative, unincorporated.....	7,144	3,245	.....	.....	0.45	.....	1	(²)	.....
Irrigation district.....	234,668	244,153	56,680	22,756	1.04	0.40	35	164,034	317
Commercial.....	28,723	42,873	.....	.....	1.49	.....	4	14,352	34
U. S. Bureau of Reclamation ³	160,799	181,154	96,602	67,593	1.13	0.70	3	109,749	277
State.....	762	3,470	.....	.....	4.55	.....	.....	.....	.....
Other.....	176	853	.....	.....	4.85	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ³For explanation of areas and investment, see text, p. 358.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES		FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS				
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Number	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²										Number	Rated capac-ity	Number	Rated capacity
	Number	Number	Sec.-ft.	Miles	Miles		Ac.-ft.	Miles		G. p. m.		G. p. m.		Hp.		G. p. m.		
Total.....	351	156	14,256	3,287	44.3	164	2,306,159	126.1	19	370	2,412	2,053,184	2,664	53,572	2,848	2,498,246		
Individual and partnership....	278	146	2,054	395	4.0	153	8,226	68.3	19	370	2,385	2,036,874	2,626	52,811	2,810	2,498,246		
Cooperative, incorporated.....	21	.....	1,960	236	.....	.....	.....	.....	.....	.....	6	5,950	6	140	6	6,350
Cooperative, unincorporated....	7	.....	208	47	.....	1	1,700	0.6	.....	.....	5	3,200	7	120	7	4,000
Irrigation district.....	40	5	8,923	1,275	12.0	5	2,213,448	37.2	.....	.....	.....	.....	2	75	2	5,000
Commercial.....	4	2	1,098	215	.....	2	7,625	1.0	.....	.....	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ³.....	.....	3	.....	1,117	28.3	3	75,160	14.3	.....	.....	.....	.....	.....	.....	.....	.....
State.....	1	.....	11	2	.....	.....	.....	1.7	.....	.....	13	6,060	14	331	14	11,490
Other.....	.....	.....	2	.....	.....	.....	.....	3.0	.....	.....	3	1,100	9	95	9	3,583

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversions	Storage	Diversions	Storage		Diversions	Storage	Diversions	Storage
Total.....	Number 351	Number 156	Number 185	Number 28	Earth and rock.....	Number 185	Number 146	Number	Number 20
Concrete or masonry.....	76	4	61	3	Other and mixed.....	180	2	102	3
Timber.....	24	.....	18	.....	Not reported.....	6	4	4	2

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	2,848	100.0	2,528,669	100.0	32	Total, 1940.....	2,664	100.0	53,572	100.0
Electric motor.....	180	6.3	160,030	6.3	36	Centrifugal pump.....	1,409	52.9	25,448	47.5
Centrifugal.....	93	3.3	81,085	3.2	31	Electric.....	106	4.0	1,407	2.6
Turbine.....	78	2.7	75,020	3.0	42	Internal-combustion.....	1,288	48.3	23,732	44.3
Plunger.....	4	0.1	1,125	(¹)	42	Other.....	15	0.6	309	0.6
Other.....	5	0.2	2,800	0.1	23	Turbine pump.....	979	36.7	23,367	43.6
Internal-combustion engine.....	2,485	87.3	2,228,395	88.1	32	Electric.....	91	3.4	1,661	3.1
Centrifugal.....	1,456	51.1	1,272,366	50.3	25	Internal-combustion.....	882	33.1	21,624	40.4
Turbine.....	966	33.9	913,045	36.1	42	Other.....	6	0.2	82	0.1
Plunger.....	16	0.6	2,794	0.1	32	Plunger pump.....	46	1.8	214	0.4
Other.....	47	1.7	40,190	1.6	29	Electric.....	5	0.2	50	0.1
Other kinds of motive power.....	37	1.3	17,457	0.7	37	Internal-combustion.....	21	0.8	143	0.3
Centrifugal.....	16	0.6	13,160	0.5	21	Other.....	20	0.8	21	(¹)
Turbine.....	6	0.2	4,000	0.2	26	Other and mixed types of pumps.....	230	8.6	4,543	8.5
Plunger.....	14	0.5	282	(¹)	58	Electric.....	44	1.6	1,092	2.0
Other.....	1	(¹)	15	(¹)	25	Internal-combustion.....	184	6.9	3,415	6.4
Mixed kinds of motive power.....	146	5.1	122,787	4.9	33	Other.....	2	0.1	36	0.1
Centrifugal.....	57	2.0	49,450	2.0	28	Total, 1930.....	² 610	.....	10,991	.....
Turbine.....	78	2.7	70,670	2.8	33	Increase or decrease (-) 1930-1940.....	2,054	.....	42,581	.....
Plunger.....	8	0.3	217	(¹)	66					
Other.....	3	0.1	2,450	0.1	30					
Total, 1930.....	636	.....	536,752	.....	29					
Increase or decrease (-) 1930-1940..	2,212	.....	1,991,917	.....	3					

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 126.1	Miles 27.5	Percent 358.5	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	5.1	1.2	325.0
1 to 12 inches.....	3.1	.....	.....	13 to 24 inches.....	1.3	6.3	17.5
13 to 24 inches.....	2.8	6.6	174.2	Over 24 inches.....	6.1		
Over 24 inches.....	15.3					Clay and other:	
Metal:				1 to 12 inches.....	2.7	9.5	-31.6
1 to 12 inches.....	65.8	2.3	(³)	13 to 24 inches.....	1.5		
13 to 24 inches.....	4.2	1.6	987.5	Over 24 inches.....	5.0		
Over 24 inches.....	13.2						

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

³ Percent not shown when more than 1,000.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 160,799 acres irrigated in 1939 and related areas within the Pathfinder, Gering-Fort Laramie, and Northport Irrigation Districts of the North Platte Project, which are tabulated as separate enterprises of the Bureau of Reclamation. This acreage is not duplicated under any other classification. The 96,602 acres shown as having received supplemental service from the Bureau of Reclamation are included in the primary enterprise listings in the irrigation district classification.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 includes the cost of the irrigation and power facilities of the North Platte Project

located in Wyoming which are charged to Nebraska lands in the primary classification. Under existing contracts, net power revenues will pay a substantial part of the irrigation costs of the North Platte Project. The irrigation investment reported for the North Platte Project does not include costs for drainage. Indebtedness and arrearages shown under Bureau of Reclamation in State table 8 represent obligations of three irrigation districts to the United States Government.

Data relating to the Mirage Flats Project being constructed on the Niobrara River under the Water Conservation and Utilization Program are not included in the 1940 Census of Irrigation.

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	65	40	24	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	338,461	434,869	¹ 376,518	(a) Enterprises reporting lands drained and/or needing drainage...percent..	16.8	² 28.1	¹ 2.9
Area irrigated in these enterprises.....acres...	284,658	(?)	(?)	(b) All irrigation enterprises.....percent..	7.9	22.9	2.4
Area for which drains have been installed...acres...	47,960	122,101	10,793	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	10,305	51,505	28,606	(a) Irrigable area reporting.....percent..	17.2	39.9	¹ 9.9
				(b) Irrigated area reporting.....percent..	20.5	(?)	(?)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census.
²Not available.
³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	1,122,742	1,583,615	975,071	915,024	1,559,187	894,316	207,718	24,428	80,755
Area irrigated by these enterprises.....acres....	298,973	384,900	232,620	273,139	371,623	199,650	25,834	13,277	32,970
Average water per acre irrigated.....acre-feet..	3.8	4.1	4.2	3.4	4.2	4.5	8.0	1.8	2.4
Total water delivered to irrigators.....acre-feet..	971,526	704,085	445,565	511,857	668,636	188,089	459,669	35,449	257,496
Area irrigated by these enterprises.....acres....	486,085	233,244	185,795	265,655	213,512	76,987	220,430	19,732	108,808
Average water per acre irrigated.....acre-feet..	2.0	3.0	2.4	1.9	3.1	2.4	2.1	1.8	2.4
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	134,170	.....	.....	.....	.....	.....	134,170	.....	.....
Area irrigated by these enterprises.....acres....	87,025	.....	.....	.....	.....	.....	87,025	.....	.....
Average water per acre irrigated.....acre-feet..	1.5	.....	.....	.....	.....	.....	1.5	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	275,945	.....	.....	275,945	.....	.....	.....	.....	.....
Area irrigated by these enterprises.....acres....	56,680	.....	.....	56,680	.....	.....	.....	.....	.....
Average water per acre irrigated.....acre-feet..	4.9	.....	.....	4.9	.....	.....	.....	.....	.....
Total water delivered to irrigators.....acre-feet..	77,812	.....	.....	26,721	.....	.....	51,091	.....	.....
Area irrigated by these enterprises.....acres....	156,011	.....	.....	56,680	.....	.....	99,331	.....	.....
Average water per acre irrigated.....acre-feet..	0.5	.....	.....	0.5	.....	.....	0.5	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	12,033	.....	.....	.....	.....	.....	12,033	.....	.....
Area irrigated by these enterprises.....acres....	15,508	.....	.....	.....	.....	.....	15,508	.....	.....
Average water per acre irrigated.....acre-feet..	0.8	.....	.....	.....	.....	.....	0.8	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	610,379	100.0	171,633	532,617	100.0	442,690	100.0
Appropriation ²	507,786	83.3	154,395	385,601	72.4	411,424	93.0
Riparian.....	4,428	0.7	787	.....	.....	618	0.1
Appropriation and riparian.....	696	0.1	.....	.....	.....	.....	.....
Underground.....	81,339	13.3	15,485	23,452	4.4	546	0.1
Appropriation and underground.....	1,625	0.3	.....	.....	.....	.....	.....
Riparian and underground.....	1,830	0.3	.....	.....	.....	.....	.....
Adjudicated by court.....	9,370	1.5	63	118,916	22.3	9,280	2.1
Other mixed and not reported.....	3,107	0.5	903	4,648	0.9	20,822	4.7

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises". (see text).
²"Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

CENSUS OF IRRIGATION — NEBRASKA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	2,455	165	2,136	89	28	20	16	² 1
2	Irrigated farms, 1939.....number...	9,156	.....	2,136	211	330	1,086	4,102	1,291
3	Area irrigated, 1939.....acres....	610,379	.....	112,059	15,566	33,542	100,221	256,916	92,075
4	(a) From which crops were harvested.....acres....	579,535	.....	105,197	14,707	30,905	93,872	247,236	87,618
5	(b) On which crops failed.....acres....	10,717	.....	3,187	272	720	3,289	3,249	.....
6	(c) Irrigated pasture.....acres....	20,127	.....	3,675	587	1,917	3,060	6,431	4,457
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	36,191,786	146,335	2,308,414	320,722	514,749	1,919,793	22,865,382	8,116,391
8	(a) Cost of irrigation works and equipment.....dollars..	35,885,746	146,133	2,294,056	318,670	492,993	1,859,870	22,661,573	8,112,451
9	(b) Investment in water rights.....dollars..	306,040	202	14,358	2,052	21,756	59,923	203,809	3,940
10	Area works were capable of supplying with water.....acres....	992,957	12,888	164,573	22,766	49,829	126,480	506,281	110,140
11	Average investment per acre irrigated.....dollars..	59.29	.....	20.60	20.60	15.35	19.16	89.00	88.15
12	Average investment per acre which the works could supply with water.....dollars..	36.45	11.35	14.03	14.09	10.33	15.18	45.16	73.69
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	2,345	164	2,033	84	28	19	16	² 1
14	(a) Area irrigated in these enterprises.....acres....	602,582	.....	107,879	13,433	33,542	98,737	256,916	92,075
15	(b) Cost of maintenance and operation.....dollars..	839,682	753	311,255	27,689	15,729	73,396	293,200	117,660
16	(c) Average cost per irrigated acre reporting.....dollars..	1.39	.....	2.89	2.06	0.47	0.74	1.14	1.28
17	Total annual charges ³.....dollars..	674,403	.....	.....	.....	25,607	102,787	425,771	120,238
18	Average charge per irrigated acre reporting.....dollars..	1.40	.....	.....	.....	0.76	1.03	1.66	1.31
19	Area against which charges were assessed.....acres....	521,292	.....	.....	.....	40,528	116,906	271,763	92,075
20	Average annual charge per acre assessed.....dollars..	1.29	.....	.....	.....	0.63	0.88	1.57	1.31
21	Total charges collected ³.....dollars..	575,579	.....	.....	.....	19,502	98,537	425,614	31,926
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ⁴.....number...	33	.....	.....	.....	11	10	11	² 1
23	(a) Area irrigated in these enterprises.....acres....	359,702	.....	.....	.....	14,346	58,384	193,897	92,075
24	(b) Indebtedness.....dollars..	20,456,809	.....	.....	.....	135,710	476,612	14,369,187	5,475,300
25	(c) Average indebtedness per acre irrigated.....dollars..	57.03	.....	.....	.....	9.46	8.16	74.11	59.47
26	(d) Cost of irrigation works and equipment.....dollars..	31,652,944	.....	.....	.....	268,320	1,266,410	22,005,363	8,112,451
27	(e) Investment in water rights.....dollars..	225,751	.....	.....	.....	16,340	40,171	202,300	3,940
28	(f) Total investment.....dollars..	31,915,295	.....	.....	.....	284,660	1,306,581	22,207,663	8,116,391
29	(g) Maintenance and operation.....dollars..	399,040	.....	.....	.....	8,135	47,187	226,058	117,660
30	(h) Total annual charges ³.....dollars..	580,615	.....	.....	.....	15,931	73,867	370,679	120,238
31	(i) Total charges collected ³.....dollars..	466,358	.....	.....	.....	12,531	61,739	360,162	31,825
32	(j) Area against which annual charges were assessed.....acres....	392,831	.....	.....	.....	21,255	70,737	208,764	92,075
33	(k) Average indebtedness per acre assessed.....dollars..	52.08	.....	.....	.....	6.38	6.74	68.83	59.47
34	(l) Average charges per acre assessed.....dollars..	1.48	.....	.....	.....	0.74	1.04	1.78	1.31
35	(m) Average charges per acre irrigated.....dollars..	1.62	.....	.....	.....	1.10	1.27	1.91	1.31
36	Enterprises reporting arrearage ⁴.....number...	11	.....	.....	.....	5	2	4	.....
37	(a) Area assessed in these enterprises.....acres....	73,376	.....	.....	.....	9,091	(e)	48,569	.....
38	(b) Total arrearage.....dollars..	178,738	.....	.....	.....	16,879	(e)	150,899	.....
39	(c) Average arrearage per acre assessed.....dollars..	2.44	.....	.....	.....	1.86	(e)	3.09	.....
40	(d) Indebtedness.....dollars..	3,031,921	.....	.....	.....	102,374	(e)	2,774,347	.....
TYPE, 1940									
41	Individual and partnership.....number...	2,363	164	2,118	78	3	.....	.....	.....
42	Cooperative (incorporated and unincorporated).....number...	37	1	8	10	12	4	2	.....
43	Irrigation district.....number...	37	.....	.....	.....	12	15	10	.....
44	Commercial.....number...	4	.....	.....	.....	1	1	2	.....
45	U. S. Bureau of Reclamation.....number...	3	.....	.....	.....	.....	.....	2	1
46	All other.....number...	11	.....	10	1	.....	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
47	Enterprises reporting pay roll.....number...	⁶ 56	.....	.....	.....	19	19	16	² 1
48	Wages and salaries paid and payable for 1939.....dollars..	308,746	.....	.....	.....	8,634	45,759	184,433	69,870
49	Persons employed during week ending April 29, 1939.....number...	688	.....	.....	.....	54	131	317	185
SOURCE OF WATER SUPPLY, 1939									
50	Streams, gravity.....number...	247	12	155	22	24	19	14	1
51	Streams, pumped.....number...	311	13	287	11	.....	.....	.....	.....
52	Wells, pumped.....number...	1,707	130	1,530	47	.....	.....	.....	.....
53	Wells, pumped and flowing; or wells flowing.....number...	14	.....	13	1	.....	.....	.....	.....
54	Lakes, gravity or pumped.....number...	13	.....	.....	.....	.....	.....	.....	.....
55	Streams and springs; or springs.....number...	31	1	27	2	1	.....	.....	.....
56	Mixed, streams and wells.....number...	46	1	39	4	1	.....	.....	.....
57	Other mixed or stored storm water.....number...	86	8	72	2	2	1	1	.....
	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprise, 1940.....number...	262	29	221	10	.....	.....	.....	² 2
2	Irrigated farms, 1939.....number...	2,787	.....	221	22	.....	.....	.....	2,544
3	Area irrigated, 1939.....acres....	171,633	.....	16,665	1,686	.....	.....	.....	153,282
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	2,864,421	56,843	248,971	17,400	.....	.....	.....	2,540,207
5	(a) Cost of irrigation works and equipment.....dollars..	2,863,470	56,838	248,131	17,400	.....	.....	.....	2,540,101
6	(b) Investment in water rights.....dollars..	951	5	840	.....	.....	.....	.....	106
7	Area works were capable of supplying with water.....acres....	316,730	11,224	21,895	2,139	.....	.....	.....	281,472
8	Average investment per acre irrigated.....dollars..	16.69	.....	15.00	10.32	.....	.....	.....	16.57
9	Average investment per acre which the works could supply with water.....dollars..	9.04	5.06	11.42	8.13	.....	.....	.....	9.02

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
² Data for less than 3 enterprises shown with permission of the enterprises involved.
³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION - NEBRASKA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999
165	1,946	240	63	25	15	² 1	2,326	70	37	18	4
.....	1,999	319	321	1,415	3,811	1,291	2,289	206	1,300	2,595	2,766
.....	68,457	36,174	45,075	103,811	264,787	92,075	112,862	26,346	109,478	153,713	207,980
.....	65,301	33,534	42,655	94,055	256,372	87,618	106,939	23,314	103,561	144,649	201,072
.....	2,022	1,045	462	3,550	3,638	.....	2,954	509	2,516	4,538	200
.....	1,134	1,595	1,958	6,206	4,777	4,457	2,969	2,523	3,401	4,525	6,706
146,335	1,744,865	679,780	629,504	2,878,956	21,995,935	8,116,391	2,189,652	502,826	1,421,776	6,802,650	25,274,880
146,133	1,732,666	677,404	613,239	2,815,622	21,788,231	8,112,451	2,174,242	500,999	1,213,481	6,739,625	25,257,399
202	12,219	2,376	16,265	63,334	207,704	3,940	15,410	1,827	208,297	63,025	17,481
12,888	112,922	51,716	61,862	153,494	499,935	110,140	160,925	33,093	151,992	301,818	325,129
.....	25.49	18.79	13.97	27.73	83.07	88.15	19.40	19.09	12.99	44.26	121.53
11.35	15.45	13.14	10.18	18.76	44.90	73.69	12.10	15.19	9.35	22.54	77.74
164	1,851	231	58	25	15	² 1	2,222	65	36	18	4
.....	66,308	34,599	41,002	103,811	264,787	92,075	108,355	24,540	107,994	153,713	207,980
753	239,565	75,551	35,830	90,598	279,725	117,660	309,451	23,403	90,487	184,229	232,112
.....	3.61	2.18	0.87	0.87	1.06	1.28	2.86	0.95	0.84	1.20	1.12
.....	.....	2,923	18,920	113,615	418,707	120,238	1,597	5,578	95,177	207,686	364,365
.....	.....	5.85	0.88	1.09	1.58	1.31	0.43	0.57	0.89	1.35	1.75
.....	.....	3,159	25,428	123,176	277,454	92,075	3,832	11,342	120,237	168,779	217,102
.....	.....	0.93	0.74	0.92	1.51	1.31	0.42	0.49	0.79	1.23	1.68
.....	.....	800	12,651	115,057	415,345	31,926	1,033	12,428	81,026	196,777	282,315
.....	.....	(5)	1	6	16	9	² 1	.....	2	17	4
.....	.....	(5)	4,601	73,058	188,768	92,075	.....	(5)	58,768	89,474	207,980
.....	.....	(5)	54,853	1,650,031	13,258,625	5,475,300	.....	(5)	253,522	3,225,224	16,974,714
.....	.....	(5)	11.92	22.59	70.24	59.47	.....	(5)	4.31	36.05	81.62
.....	.....	(5)	161,450	2,243,622	21,112,021	8,112,451	.....	(5)	671,330	5,169,615	25,796,199
.....	.....	(5)	6,940	43,776	205,985	3,940	.....	(5)	188,281	56,964	17,461
.....	.....	(5)	170,390	2,287,398	21,318,016	8,116,391	.....	(5)	859,611	5,226,579	25,813,680
.....	.....	(5)	3,788	69,089	207,583	117,660	.....	(5)	49,744	116,341	232,112
.....	.....	(5)	7,608	91,781	358,415	120,238	.....	(5)	62,806	151,738	364,365
.....	.....	(5)	5,680	83,459	344,693	31,926	.....	(5)	53,556	128,845	282,315
.....	.....	(5)	8,371	88,091	201,435	92,075	.....	(5)	70,485	102,082	217,102
.....	.....	(5)	6.55	18.73	65.82	59.47	.....	(5)	3.60	31.59	78.19
.....	.....	(5)	0.91	1.04	1.78	1.31	.....	(5)	0.89	1.49	1.68
.....	.....	(5)	1.65	1.26	1.90	1.31	.....	(5)	1.07	1.70	1.75
.....	.....	.....	3	4	4	.....	.....	1	5	5	35
.....	.....	.....	4,082	16,275	53,019	.....	.....	(5)	14,150	58,144	.....
.....	.....	.....	15,000	38,546	125,192	.....	.....	(5)	17,379	158,359	.....
.....	.....	.....	3.67	2.37	2.36	.....	.....	(5)	1.23	2.72	.....
.....	.....	.....	41,354	1,246,907	1,743,660	.....	.....	(5)	103,574	2,925,347	.....
164	1,927	232	40	.....	.....	.....	2,302	55	6	.....	.....
1	11	4	14	5	2	.....	15	9	10	3	.....
.....	.....	1	8	19	9	.....	2	2	20	11	2
.....	.....	1	.....	1	2	.....	.....	.....	1	3	44
.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	2
.....	8	2	1	.....	.....	.....	7	4	.....	.....	46
.....	.....	(5)	14	24	15	² 1	3	6	24	18	4
.....	.....	.....	5,492	74,079	158,655	69,870	579	2,876	42,337	116,385	146,519
.....	.....	.....	41	187	274	185	9	31	119	247	281
12	103	49	45	23	14	1	166	30	30	17	4
13	281	17	.....	.....	.....	.....	304	7	.....	.....	51
130	1,409	161	7	.....	.....	.....	1,683	21	3	.....	52
.....	13	1	.....	.....	.....	.....	14	.....	.....	.....	53
.....	13	.....	.....	.....	.....	.....	13	.....	.....	.....	54
1	28	.....	.....	.....	.....	.....	30	.....	1	.....	55
1	32	6	6	.....	.....	.....	38	6	1	1	56
8	67	6	3	2	.....	.....	76	6	2	.....	57
29	176	49	6	.....	.....	² 1	.....	² 1	.....	1	1
.....	181	53	9	.....	.....	1,222	.....	1,322	.....	2,544	2
.....	8,842	7,437	2,072	.....	.....	56,680	.....	96,602	.....	153,282	3
56,843	169,704	84,802	12,865	.....	1,489,641	1,050,566	299,214	.....	(5)	2,540,207	4
56,838	168,864	84,802	12,865	.....	1,489,535	1,050,566	298,369	.....	(5)	2,540,101	5
5	840	.....	.....	.....	106	.....	845	.....	.....	106	6
11,224	13,235	8,540	2,259	.....	175,476	105,996	27,259	.....	(5)	281,472	7
.....	19.19	11.40	6.21	.....	28.28	10.88	16.31	.....	.....	16.57	8
5.06	12.82	9.93	5.69	.....	8.49	9.91	10.98	.....	(5)	9.02	9

¹Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
²Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
³Data for 1 supplemental enterprise included in State totals but not shown in detail.

CENSUS OF IRRIGATION — NEBRASKA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS.

Table with columns: SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text), TOTAL, IRRIGATED FARMS (No farms, 1 farm, 2 to 4 farms, 5 to 24 farms, 25 to 99 farms, 100 to 999 farms, 1,000 farms and more). Rows include Maintenance and Operation, Indebtedness and Arrearage, Type, and Source of Supplemental Water Supply.

1 Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
2 Data for less than 3 enterprises shown with permission of the enterprises involved.
3 Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

Table with columns: DRAINAGE BASIN AND WEATHER STATION, County, Elevation of station, PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939 (Water year, Oct.-Dec., Jan.-Mar., Apr.-June, July-Sept.), TEMPERATURES, 1939 (Annual mean, Departure). Rows list various drainage basins like White River, Niobrara River, Platte River, Loup River, Elkhorn River, and Republican River.

1 Departure from normal.

2 Data not available.

3 Average for drainage basin.

CENSUS OF IRRIGATION — NEBRASKA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES,
AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	
28	174	48	6		21	21	255		1	22	10
.....	8,802	7,292	2,072	.....	56,680	96,602	18,166	.....	.....	153,282	11
324	20,767	6,850	1,480	.....	22,756	67,593	29,371	.....	(³)	90,349	12
.....	2.36	0.94	0.71	.....	0.40	0.70	1.62	.....	.....	0.59	13
.....	.....	.....	.....	.....	26,721	69,621	.....	.....	.....	96,342	14
.....	.....	.....	.....	.....	0.47	0.72	.....	.....	.....	0.63	15
.....	.....	.....	.....	.....	56,680	96,602	.....	.....	.....	153,282	16
.....	.....	.....	.....	.....	0.47	0.72	.....	.....	.....	0.63	17
.....	.....	.....	.....	.....	.....	833	.....	.....	.....	833	18
.....	.....	.....	.....	.....	21	.....	.....	.....	.....	21	19
.....	.....	.....	.....	.....	56,680	.....	.....	.....	.....	56,680	20
.....	.....	.....	.....	.....	1,270,559	.....	.....	.....	.....	1,270,559	21
.....	.....	.....	.....	.....	22.42	.....	.....	.....	.....	22.42	22
.....	.....	.....	.....	.....	1,489,535	.....	.....	.....	.....	1,489,535	23
.....	.....	.....	.....	.....	106	.....	.....	.....	.....	106	24
.....	.....	.....	.....	.....	1,489,641	.....	.....	.....	.....	1,489,641	25
.....	.....	.....	.....	.....	22,756	.....	.....	.....	.....	22,756	26
.....	.....	.....	.....	.....	26,721	.....	.....	.....	.....	26,721	27
.....	.....	.....	.....	.....	833	.....	.....	.....	.....	833	28
.....	.....	.....	.....	.....	56,680	.....	.....	.....	.....	56,680	29
.....	.....	.....	.....	.....	22.42	.....	.....	.....	.....	22.42	30
.....	.....	.....	.....	.....	0.47	.....	.....	.....	.....	0.47	31
.....	.....	.....	.....	.....	0.47	.....	.....	.....	.....	0.47	32
28	175	48	6	.....	.....	.....	257	.....	.....	.....	33
.....	1	1	.....	.....	.....	.....	2	.....	.....	.....	34
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	35
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	37
2	40	4	1	.....	.....	.....	47	.....	.....	.....	38
26	135	45	5	.....	.....	.....	211	.....	.....	.....	39
1	1	.....	.....	.....	.....	.....	1	.....	.....	1	40

¹Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
²Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

According to the U. S. Weather Bureau, the calendar year 1939 for Nebraska was warm and dry, only two years in the State-wide period of record having been warmer, while only three had been drier. Much of the extreme western portion of the State received only about half the normal rainfall. Exceptional dryness also characterized November and December of the preceding year. Weather conditions were similar in mountainous sections of southern Wyoming and northern Colorado which are contributors of run-off to the Platte River Drainage Basin in Nebraska. Owing to high temperatures and low humidity during the spring months of 1939, snow in the higher mountains melted and the moisture evaporated instead of finding its way into the streams. As a result, the usual run-off did not occur and it was only on account of the large carry-over in the reservoirs from the 1938 season that there was sufficient water for irrigation in the North Platte Valley. In fact, water supplies ran low before the end of the 1939 season, resulting in some reduction of the harvested acreage of certain irrigated crops.

In comparison the year 1929, when the last previous irrigation census was taken, averaged slightly colder and drier than normal in Nebraska, mean annual temperature being 0.8° below normal and precipitation 0.45 inch below normal. In the western and northwestern counties, however, precipitation was above normal, although of the growing months, May and August were marked by fairly general deficiencies.

Precipitation.—The average annual precipitation in Nebraska for the calendar year 1939 was—eastern division 18.88 inches, central division 16.67 inches, western division 13.31 inches, and for the State 16.28 inches, a departure from a State normal, based on records since 1876, of -6.28 inches.

The average precipitation for the water year (October 1938 through September 1939) at 25 Weather Bureau stations, representative of the major drainage basins in the State (listed in State table 18) was 15.47 inches, a departure of -5.92 inches from the normal precipitation at these stations.

CENSUS OF IRRIGATION - NEBRASKA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER (Missouri River drains entire State; therefore, Missouri River total for Nebraska is identical with State total)							
	STATE TOTAL ¹	Direct (1)	South Fork Cheyenne River (Hat Creek) (2)	White River (3)	Nlobrara River ² (2)	Platte River		
						Total		
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....1939..number.....	9,156	13	19	85	88	8,442	
2	Area irrigated.....1939..acres.....	610,379	385	1,933	12,083	10,259	554,445	
3	(a) Cropland harvested.....1939..acres.....	579,535	377	1,557	11,074	9,318	527,200	
4	(b) Crop failure.....1939..acres.....	10,717	8	92	791	310	9,099	
5	(c) Pasture.....1939..acres.....	20,127	.....	284	218	631	18,146
6	Area irrigated.....1929..acres.....	532,617	.....	.....	8,678	3,498	496,867
7	.....1919..acres.....	442,690	.....	.....	2,938	8,008	400,623
8	Increase or decrease (-), 1929-1939.....percent.....	14.6	.....	.....	39.2	193.3	11.6
9	Irrigable area in enterprises.....1940..acres.....	1,095,567	633	3,895	18,258	14,371	1,017,264	
10	.....1930..acres.....	763,039	.....	.....	13,791	4,198	713,480
11	.....1920 ³ ..acres.....	766,768	.....	.....	3,755	28,511	678,053
12	Excess of irrigable area over the area irrigated..1940..acres.....	485,188	248	.....	1,962	4,112	462,819
13	.....1930..acres.....	230,422	.....	.....	5,113	700	216,623
14	.....1920 ³ ..acres.....	324,078	.....	.....	817	13,914	277,430
15	Area works were capable of supplying with water..1940..acres.....	992,957	544	3,469	14,028	13,042	922,215	
16	.....1930..acres.....	703,641	.....	.....	13,106	4,195	656,966
17	.....1920..acres.....	562,468	.....	.....	3,705	16,939	501,435
18	Increase or decrease (-), 1930-1940.....percent.....	41.1	.....	.....	7.0	210.9	40.4
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	382,578	159	1,536	1,945	2,783	367,770	
20	.....1930..acres.....	171,024	.....	.....	4,428	697	160,099
21	.....1920..acres.....	119,778	.....	.....	767	8,931	100,812
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	61.5	70.8	55.7	86.1	78.7	60.1	
23	.....1929..percent.....	75.7	.....	.....	66.2	83.4	75.6
24	.....1919..percent.....	78.7	.....	.....	79.3	58.0	79.9
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars.....	39,056,207	19,558	79,278	498,915	136,355	37,537,335	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	38,749,216	19,508	78,250	489,745	135,235	37,256,761	
27	(b) Investment in water rights (reported).....1940..dollars.....	306,991	50	1,028	9,170	1,120	280,574	
28	Total investment in irrigation enterprises.....1930..dollars.....	21,386,319	.....	.....	478,185	23,775	20,372,920
29	.....1920..dollars.....	13,909,185	.....	.....	65,243	349,874	12,894,088
30	Increase or decrease (-), 1930-1940.....percent.....	82.6	.....	.....	4.3	473.5	84.3
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	39.33	35.95	22.85	35.57	10.46	40.70	
32	.....1930..dollars.....	30.39	.....	.....	36.49	5.67	31.01
33	.....1920..dollars.....	24.73	.....	.....	23.01	10.82	25.71
34	Average investment per acre irrigated.....1939..dollars.....	63.99	50.80	41.01	41.29	13.29	67.70	
35	Estimated final investment in existing enterprises..1940..dollars.....	41,995,361	20,705	88,778	604,065	141,630	40,340,488	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	38.33	32.71	22.79	33.08	9.86	39.66	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
		Primary	Sup.				Primary	Sup.
		Enterprises					Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	2,346	258	11	22	31	76	255
38	Area irrigated in these enterprises.....1939..acres.....	602,582	171,448	384	1,888	12,003	10,118	171,436
39	Cost of maintenance and operation.....1939..dollars.....	839,682	119,770	2,054	2,176	18,411	8,390	747,268
40	Average cost, per acre irrigated.....1939..dollars.....	1.39	0.70	5.35	1.15	1.53	0.83	1.36
41	Total annual charges (reported) ⁴ ⁵.....1939..dollars.....	674,403	96,342	16,784	640,250	96,342
42	Average annual charge per acre irrigated.....1939..dollars.....	1.40	0.63	1.59	1.41	0.63
43	Area against which charges were assessed.....1939..acres.....	521,292	153,282	10,575	493,919	153,282
44	Average annual charge per acre assessed.....1939..dollars.....	1.29	0.63	1.59	1.30	0.63
45	Total charges collected ⁴.....1939..dollars.....	575,579	833	15,613	540,606	833
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	20,456,809	1,270,559	151,000	20,295,389	1,270,559
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	2,182	231	11	15	30	78	230
48	Area irrigated by these enterprises.....1939..acres.....	573,110	171,519	360	1,213	12,057	8,099	521,657
49	Water delivered.....1939..acre-feet.....	1,105,696	89,845	246	1,303	7,455	16,517	1,016,186
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.9	0.5	0.7	1.1	0.6	1.9	0.5
51	Average cost of water per acre irrigated.....1939..dollars.....	1.73	0.73	5.58	1.13	1.58	0.91	1.73
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.90	1.39	8.18	1.05	2.55	0.48	0.89
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....	65	(⁶) 1	(⁶) 1	(⁶) 1	3	44
54	Irrigable area in these enterprises.....1939..acres.....	338,461	(⁶)	(⁶)	(⁶)	626	324,755
55	Irrigated area in these enterprises.....1939..acres.....	284,658	(⁶)	(⁶)	(⁶)	604	273,746
56	Area for which drains have been installed.....1939..acres.....	47,960	(⁶)	(⁶)	(⁶)	1	47,532
57	Additional area needing drainage.....1939..acres.....	10,305	(⁶)	(⁶)	83	9,619

¹Data for unidentified tributaries of the Missouri River for the 1930 Census are included only in State totals. ²Data for 1 enterprise in Keya Paha River Drainage Basin (13) (number refers to separate map) are included with Nlobrara River Drainage Basin (2). ³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only. ⁶Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — NEBRASKA

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DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	MISSOURI RIVER—Continued						
	PLATTE RIVER—Continued						
	Direct (8)	North Platte River			South Platte River		
		Total	Direct (4)	Blue Creek (5)	Total		
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	2,784	4,505	4,394	111	360	
2	Area irrigated.....1939..acres.....	128,586	363,064	354,844	8,240	34,577	
3	(a) Cropland harvested.....1939..acres.....	125,403	341,857	334,047	7,810	32,412	
4	(b) Crop failure.....1939..acres.....	2,217	5,327	5,147	180	1,295	
5	(c) Pasture.....1939..acres.....	966	15,900	15,650	250	870	
6	Area irrigated.....1929..acres.....	71,290	373,692	352,480	.....	26,841
7	.....1919..acres.....	37,532	326,045	291,736	7,376	35,290
8	Increase or decrease (-), 1929-1939.....percent.....	80.4	-2.8	0.7	.....	26.8
9	Irrigable area in enterprises.....1940..acres.....	458,091	437,407	424,286	13,121	42,226	
10	.....1930..acres.....	179,011	465,531	435,442	.....	34,240
11	.....1920 ¹ ..acres.....	151,377	479,258	436,013	7,391	42,262
12	Excess of irrigable area over the area irrigated..1940..acres.....	329,505	74,323	69,442	4,881	7,649	
13	.....1930..acres.....	107,721	91,839	82,962	.....	7,399
14	.....1920 ¹ ..acres.....	113,845	153,213	144,277	15	6,972
15	Area works were capable of supplying with water..1940..acres.....	376,465	434,465	422,718	11,747	41,169	
16	.....1930..acres.....	140,456	450,970	421,121	.....	32,813
17	.....1920..acres.....	68,732	389,140	349,766	7,391	40,542
18	Increase or decrease (-), 1930-1940.....percent.....	168.0	-3.7	0.4	.....	25.5
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	247,879	71,381	67,874	3,507	6,592	
20	.....1930..acres.....	69,166	77,278	68,641	.....	5,972
21	.....1920..acres.....	31,200	63,095	58,030	15	5,252
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	34.2	83.6	83.9	70.1	84.0	
23	.....1929..percent.....	50.8	82.9	83.7	.....	81.8
24	.....1919..percent.....	54.6	83.8	83.4	99.8	87.0
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	14,001,510	20,032,273	19,326,141	106,132	602,546	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	13,795,794	19,961,893	19,856,311	105,582	600,025	
27	(b) Investment in water rights (reported).....1940..dollars.....	205,716	70,380	69,830	550	2,521	
28	Total investment in irrigation enterprises.....1930..dollars.....	989,656	18,288,605	18,037,289	.....	501,300
29	.....1920..dollars.....	488,642	11,934,733	11,661,937	31,050	444,413
30	Increase or decrease (-), 1930-1940.....percent.....	(²)	9.5	10.5	.....	20.2
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	37.19	46.11	47.14	9.03	14.64	
32	.....1930..dollars.....	7.05	40.55	42.83	.....	15.28
33	.....1920..dollars.....	7.11	30.67	33.34	.....	10.96
34	Average investment per acre irrigated.....1939..dollars.....	108.89	55.17	56.15	12.88	17.43	
35	Estimated final investment in existing enterprises..1940..dollars.....	16,662,253	20,076,338	19,962,071	114,267	637,221	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	36.37	45.90	47.05	8.71	15.09	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.	Primary	Sup.
	Enterprises	Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	1,328	52	177	170	151	170
38	Area irrigated by these enterprises.....1939..acres.....	125,598	57,938	360,178	110,168	352,508	110,168
39	Cost of maintenance and operation.....1939..dollars.....	270,102	27,094	360,837	87,930	354,879	87,930
40	Average cost, per acre irrigated.....1939..dollars.....	2.15	0.47	1.00	0.80	1.01	0.80
41	Total annual charges (reported) ³.....1939..dollars.....	70,538	26,335	508,233	70,007	503,852	70,007
42	Average annual charge per acre irrigated.....1939..dollars.....	1.04	0.48	1.46	0.72	1.47	0.72
43	Area against which charges were assessed.....1939..acres.....	69,452	55,434	385,229	97,848	377,374	97,848
44	Average annual charge per acre assessed.....1939..dollars.....	1.02	0.48	1.32	0.72	1.34	0.72
45	Total charges collected ³.....1939..dollars.....	74,153	404,872	833	393,613	833
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	7,771,892	10,315,456	1,270,559	10,312,456	1,270,559
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	1,252	41	150	157	134	157
48	Area irrigated by these enterprises.....1939..acres.....	126,528	58,063	333,689	110,094	329,301	110,094
49	Water delivered.....1939..acre-feet.....	231,637	28,415	688,222	58,807	678,464	58,807
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.8	0.5	2.1	0.5	2.1	0.5
51	Average cost of water per acre irrigated.....1939..dollars.....	2.18	0.53	1.51	0.81	1.51	0.81
52	Average cost of water per acre-foot delivered..1939..dollars.....	1.19	1.09	0.73	1.52	0.73	1.52
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	19	15	14
54	Irrigable area in these enterprises.....1939..acres.....	7,742	288,570	286,494
55	Irrigated area in these enterprises.....1939..acres.....	3,043	258,173	256,419
56	Area for which drains have been installed.....1939..acres.....	3,192	42,991	42,991
57	Additional area needing drainage.....1939..acres.....	49	9,441	9,429

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ² Percent not shown when more than 1,000. ³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only. ⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - NEBRASKA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued						
	Platte River—Continued				Kansas River		
	South Platte River—Continued		Loup River (6)	Elkhorn River (7)	Total		
	Direct (9)	Lodgepole Creek (10)					
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number....	183	177	719	74	509	
2	Area irrigated.....1939..acres.....	21,454	13,123	25,130	3,068	31,274	
3	(a) Cropland harvested.....1939..acres.....	21,180	11,232	24,583	2,945	30,009	
4	(b) Crop failure.....1939..acres.....	53	1,242	236	24	417	
5	(c) Pasture.....1939..acres.....	221	649	311	99	848	
6	Area irrigated.....1929..acres.....	13,975	11,830	291	.....	21,340
7	.....1919..acres.....	17,061	18,229	1,177	.....	25,428
8	Increase or decrease (-), 1929-1939.....percent....	53.5	10.9	(1)	.....	46.6
9	Irrigable area in enterprises.....1940..acres.....	25,181	17,045	74,379	5,161	41,146	
10	.....1930..acres.....	16,590	15,978	732	.....	27,903
11	.....1920 ² ..acres.....	18,623	23,639	4,512	.....	34,527
12	Excess of irrigable area over the area irrigated..1940..acres.....	3,727	3,922	49,249	2,093	9,872	
13	.....1930..acres.....	2,615	4,148	441	.....	6,563
14	.....1920 ² ..acres.....	1,562	5,410	3,338	.....	9,099
15	Area works were capable of supplying with water..1940..acres.....	24,691	16,478	65,442	4,674	39,659	
16	.....1930..acres.....	15,745	15,486	672	.....	25,952
17	.....1920..acres.....	18,590	21,952	2,377	.....	30,569
18	Increase or decrease (-), 1930-1940.....percent....	56.8	6.4	(1)	.....	52.8
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	3,237	3,355	40,312	1,606	8,385	
20	.....1930..acres.....	1,770	3,656	381	.....	4,612
21	.....1920..acres.....	1,529	3,723	1,200	.....	5,141
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	86.9	79.6	38.4	65.6	78.9	
23	.....1929..percent....	88.8	76.4	43.3	.....	82.2
24	.....1919..percent....	91.8	83.0	49.5	.....	83.2
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars....	231,179	371,367	2,842,945	58,061	784,766	
26	(a) Cost of irrigation works and equipment.....1940..dollars....	230,818	369,207	2,841,285	57,784	769,717	
27	(b) Investment in water rights (reported).....1940..dollars....	361	2,160	1,660	297	15,049	
28	Total investment in irrigation enterprises.....1930..dollars....	147,400	322,405	10,000	.....	479,214
29	.....1920..dollars....	87,712	356,701	21,000	.....	396,631
30	Increase or decrease (-), 1930-1940.....percent....	56.8	15.2	(1)	.....	63.8
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	9.36	22.54	43.44	12.42	19.79	
32	.....1930..dollars....	9.36	20.82	14.88	.....	18.47
33	.....1920..dollars....	4.72	16.25	8.96	.....	12.97
34	Average investment per acre irrigated.....1939..dollars....	10.78	28.30	113.13	18.82	25.09	
35	Estimated final investment in existing enterprises..1940..dollars....	243,934	393,287	2,900,280	64,396	799,695	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	9.69	23.07	38.99	12.48	19.44	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.	Primary	Sup.
	Enterprises	Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation..1939..number....	85	28	115	3	67	3
38	Area irrigated in these enterprises.....1939..acres.....	21,086	2,988	12,734	258	2,950	30,516
39	Cost of maintenance and operation.....1939..dollars....	23,658	4,140	20,121	250	10,093	61,383
40	Average cost, per acre irrigated.....1939..dollars....	1.12	1.39	1.58	0.97	3.42	2.01
41	Total annual charges (reported) ⁴ 5.....1939..dollars....	5,708	8,998	46,773
42	Average annual charge per acre irrigated.....1939..dollars....	0.39	2.00	2.33
43	Area against which charges were assessed.....1939..acres.....	14,640	4,499	20,089
44	Average annual charge per acre assessed.....1939..dollars....	0.39	2.00	2.63
45	Total charges collected ⁴.....1939..dollars....	5,690	9,000	47,091
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	82,000	2,126,041
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number....	83	27	105	3	130	68
48	Area irrigated by these enterprises.....1939..acres.....	21,454	2,988	12,548	258	24,398	3,040
49	Water delivered.....1939..acre-feet....	28,141	2,322	12,946	241	50,647	4,693
50	Average water delivered per acre irrigated.....1939..acre-feet....	1.3	0.8	1.0	0.9	2.1	1.5
51	Average cost of water per acre irrigated.....1939..dollars....	1.13	1.39	2.01	0.97	2.56	3.37
52	Average cost of water per acre-foot delivered..1939..dollars....	0.86	1.78	1.97	1.04	1.23	2.18
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number....	4	2	4
54	Irrigable area in these enterprises.....1939..acres.....	1,099	(8)	395
55	Irrigated area in these enterprises.....1939..acres.....	509	(8)	194
56	Area for which drains have been installed.....1939..acres.....	950	(8)	375
57	Additional area needing drainage.....1939..acres.....	41	(8)	20

¹Percent not shown when more than 1,000.
²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NEBRASKA

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DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	MISSOURI RIVER—Continued					
	Kansas River—Continued					
	Republican River					
	Total	Direct (11)	Arikaree River (17)	Frenchman Creek (16)	Big Blue River (15)	
IRRIGATED FARMS AND AREAS						
1	Irrigated farms.....1939..number.....	397	167	40	190	112
2	Area irrigated.....1939..acres.....	27,202	8,200	4,457	14,545	4,072
3	(a) Cropland harvested.....1939..acres.....	26,028	7,938	3,637	14,453	3,961
4	(b) Crop failure.....1939..acres.....	409	163	204	42	8
5	(c) Pasture.....1939..acres.....	765	99	616	50	83
6	Area irrigated.....1929..acres.....	19,523				
7	.....1919..acres.....	25,409				19
8	Increase or decrease (-), 1929-1939.....percent.....	39.3				
9	Irrigable area in enterprises.....1940..acres.....	34,597	12,264	6,527	15,806	6,549
10	.....1930..acres.....	25,441				
11	.....1920 ¹ ..acres.....	34,483				44
12	Excess of irrigable area over the area irrigated.....1940..acres.....	7,395	4,064	2,070	1,251	2,477
13	.....1930..acres.....	5,918				
14	.....1920 ¹ ..acres.....	9,074				25
15	Area works were capable of supplying with water.....1940..acres.....	33,632	11,641	6,393	15,598	6,027
16	.....1930..acres.....	23,541				
17	.....1920..acres.....	30,525				44
18	Increase or decrease (-), 1930-1940.....percent.....	42.9				
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	6,430	3,441	1,936	1,053	1,955
20	.....1930..acres.....	4,018				
21	.....1920..acres.....	5,116				25
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	80.9	70.4	69.7	93.2	67.6
23	.....1929..percent.....	82.9				
24	.....1919..percent.....	83.2				43.2
CAPITAL INVESTED TO JANUARY 1						
25	Total investment in irrigation enterprises.....1940..dollars.....	618,456	247,641	77,775	293,040	166,310
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	604,327	245,087	67,520	291,720	165,390
27	(b) Investment in water rights (reported).....1940..dollars.....	14,129	2,554	10,255	1,320	920
28	Total investment in irrigation enterprises.....1930..dollars.....	421,664				
29	.....1920..dollars.....	395,006				1,625
30	Increase or decrease (-), 1930-1940.....percent.....	46.7				
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	18.39	21.27	12.17	18.79	27.59
32	.....1930..dollars.....	17.91				
33	.....1920..dollars.....	12.94				36.93
34	Average investment per acre irrigated.....1939..dollars.....	22.74	30.20	17.45	20.15	40.84
35	Estimated final investment in existing enterprises.....1940..dollars.....	630,426	257,631	79,255	293,540	169,269
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	18.22	21.01	12.14	18.57	25.85
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
		Primary	Supplemental	Primary	Supplemental	
		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation.....1939..number.....	179	3	140	3	9
38	Area irrigated in these enterprises.....1939..acres.....	26,621	12	7,833	12	4,247
39	Cost of maintenance and operation.....1939..dollars.....	39,993	71	19,507	71	2,138
40	Average cost, per acre irrigated.....1939..dollars.....	1.50	5.92	2.49	5.92	0.50
41	Total annual charges (reported) ^{2 3}.....1939..dollars.....	17,369		4,500		1,283
42	Average annual charge per acre irrigated.....1939..dollars.....	1.03		1.58		0.44
43	Area against which charges were assessed.....1939..acres.....	16,798		2,850		2,924
44	Average annual charge per acre assessed.....1939..dollars.....	1.03		1.58		0.44
45	Total charges collected ².....1939..dollars.....	19,160		5,100		2,707
46	Indebtedness to December 31 (reported) ³.....1939..dollars.....	10,420				10,420
WATER DELIVERED TO IRRIGATORS, 1939						
47	Enterprises reporting water delivered.....1939..number.....	168	1	130	1	10
48	Area irrigated by these enterprises.....1939..acres.....	25,194	(4)	8,195	(4)	3,491
49	Water delivered.....1939..acre-feet.....	58,911	(4)	16,793	(4)	6,521
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.3	(4)	2.0	(4)	1.9
51	Average cost of water per acre irrigated.....1939..dollars.....	1.55	(4)	2.45	(4)	0.56
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.66	(4)	1.20	(4)	0.30
DRAINAGE OF IRRIGATED LAND						
53	Enterprises reporting land drained or needing drainage.....1939..number.....	6		5	1	9
54	Irrigable area in these enterprises.....1939..acres.....	212		92	(4)	214
55	Irrigated area in these enterprises.....1939..acres.....	93		53	(4)	178
56	Area for which drains have been installed.....1939..acres.....	76		36	(4)	206
57	Additional area needing drainage.....1939..acres.....	102		22	(4)	

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — NEBRASKA

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER (Missouri River drains entire State; therefore, Missouri River total for Nebraska is identical with State total)							
	STATE TOTAL ¹	Direct	South Fork Cheyenne River (Hat Creek)	White River	Niobrara River ²	Platte River		
						Total	Direct	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
1	Enterprises.....1940..number.....	2,718	12	23	33	88	2,262	1,434
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	365	45	151	425	148	408	263
3	Diversion dams.....1940..total number.....	351	1	29	32	77	174	13
4	1930..total number.....	185			21	15	110	3
5	1920..total number.....	260		11	63	27	131	4
6	(a) Concrete and masonry.....1940..number.....	76			2	14	54	4
7	(b) Timber.....1940..number.....	24			3	3	14	2
8	(c) Earth and rock.....1940..number.....	165		22	23	36	62	5
9	(d) Other, mixed, and not reported.....1940..number.....	86	1	7	4	24	44	2
10	Main canals and laterals.....1940..total length, miles.....	3,331.3		23.1	54.0	97.2	3,005.7	682.7
11	1930..total length, miles.....	3,465			76	42	3,202	493
12	1920..total length, miles.....	3,325		45	197	124	2,791	344
13	(a) Earth.....1940..length, miles.....	3,287		23	54	97	2,962	681
14	(b) Lined.....1940..length, miles.....	44.3		0.1		0.2	43.7	1.7
15	1940..capacity, c.f.s. ⁴	14,256	10	53	187	243	13,065	4,347
16	1930..capacity, c.f.s. ⁴	13,108			98	37	12,540	3,375
17	1920..capacity, c.f.s. ⁴	11,665		25	237	204	10,593	1,776
18	Pipe lines ⁵.....1940..total length, miles.....	126.1	2.7		18.5	3.0	89.6	39.6
19	1930..total length, miles.....	27.5			5.5		20.7	1.0
20	1920..total length, miles.....	3.8			0.4	0.1	0.9	
21	(a) Concrete.....1940..length, miles.....	21.2				1.1	19.8	1.2
22	(b) Metal.....1940..length, miles.....	83.2	2.5		11.0	0.2	59.9	37.8
23	(c) Wood-stave.....1940..length, miles.....	12.5	0.2		7.0	1.2	3.3	0.6
24	(d) Other.....1940..length, miles.....	9.2			0.5	0.5	6.6	
25	Storage dams.....1940..total number.....	156	1	23	8	4	104	48
26	1930..total number.....	28			3		17	2
27	1920..total number.....	73		2	23	10	29	1
28	(a) Concrete and masonry.....1940..number.....	4	1				2	
29	(b) Earth and rock.....1940..number.....	146		23	6	4	99	48
30	(c) Other, mixed, and not reported.....1940..number.....	6			2		3	
31	Reservoirs.....1940..total number.....	164	1	24	9	4	110	47
32	(a) 1-99 acre-feet capacity.....1940..number.....	137	1	20	3	4	96	45
33	(b) 100-999 acre-feet capacity.....1940..number.....	15		4	3		5	2
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	12			3		9	
35	1940..total capacity, ac.-ft. ⁶	2,306,158	(?)	1,172	14,570	42	2,289,015	526
36	1930..total capacity, ac.-ft. ⁶	40			1		29	4
37	1920..total capacity, ac.-ft. ⁶	199,185			12,000		186,603	189
38	Wells, flowing.....1940..number.....	19						
39	1930..number.....							
40	1920..number.....							
41	1940..yield, g.p.m.....	370						
42	1930..yield, g.p.m.....							
43	1920..yield, g.p.m.....							
44	Wells, pumped.....1940..number.....	2,412	7		4	13	2,228	1,653
45	1930..number.....	537					491	4
46	1920..number.....	34			2		19	14
47	1940..yield, g.p.m.....	2,053,184	2,010		1,235	13,840	1,915,664	1,411,279
48	1930..yield, g.p.m.....	428,058					396,668	990
49	1920..yield, g.p.m.....	24,701			2,200		14,501	10,551
50	Pumping plants.....1940..total number.....	2,664	12	1	6	28	2,334	1,591
51	1930..total number.....	610					528	6
52	Prime movers.....1940..capacity, hp.....	53,572	142	(?)	78	616	46,016	30,596
53	1930..capacity, hp.....	10,931					9,632	37
54	1920..capacity, hp.....	959			53		437	180
55	(a) Electric.....1940..number.....	246	3				211	113
56	1940..capacity, hp.....	4,210	16				3,065	1,425
57	(b) Internal-combustion.....1940..number.....	2,375	7	1	5	28	2,090	1,463
58	1940..capacity, hp.....	48,914	124	(?)	46	616	42,585	29,002
59	(c) Other.....1940..number.....	43	2		1		33	15
60	1940..capacity, hp.....	448	(?)		(?)		366	169
61	Pumps.....1940..total number.....	2,848	12	1	6	29	2,508	1,794
62	1930..number.....	636					551	6
63	1920..number.....	54			3		36	14
64	1940..capacity, g.p.m.....	2,528,689	3,779	(?)	3,385	24,655	2,229,055	1,506,089
65	1930..capacity, g.p.m.....	536,752					459,623	3,290
66	1920..capacity, g.p.m.....	79,886			4,000	480	36,003	14,580
67	(a) Centrifugal.....1940..number.....	1,622	5	1	6	24	1,389	935
68	1940..capacity, g.p.m.....	1,416,061	2,670	(?)	3,385	19,025	1,211,166	780,430
69	1940..average capacity, g.p.m.....	873	534	(?)	564	793	872	835
70	(b) Turbine.....1940..number.....	1,128	3			4	1,039	759
71	1940..capacity, g.p.m.....	1,062,735	890			4,630	973,980	703,025
72	1940..average capacity, g.p.m.....	942	297			1,158	937	926
73	(c) Plunger.....1940..number.....	42	4				29	14
74	1940..capacity, g.p.m.....	4,418	219				2,744	934
75	1940..average capacity, g.p.m.....	105	55				95	67
76	(d) Other.....1940..number.....	56				1	51	26
77	1940..capacity, g.p.m.....	45,455				(?)	41,165	21,700
78	Pumping lift, from all sources.....1940..average, feet.....	32	55	(?)	34	31	31	31
79	1930..average, feet.....	29					29	9
80	1920..average, feet.....	24			35	8	27	31
81	from pumped wells.....1940..average, feet.....	34	44		36	50	33	31
82	from surface sources.....1940..average, feet.....	22	65	(?)	32	18	19	19

¹Data for unidentified tributaries of the Missouri River for the 1930 Census are included only in State totals.
²Data for 1 enterprise in Keya Paha River Drainage Basin (13) (number refers to separate map) are included with Niobrara River Drainage Basin (2).
³Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.
⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — NEBRASKA

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WORKS, 1940, 1930, AND 1920

MISSOURI RIVER—Continued														
Platte River—Continued									Kansas River					
North Platte River			South Platte River				Loup River (6)	Elkhorn River (7)	Total	Republican River				Big Blue River (15)
Total	Direct (4)	Blue Creek (5)	Total	Direct (9)	Lodgepole Creek (10)	Total				Total	Direct (11)	Arikaree River (17)	Frenchman Creek (13)		Total
359	331	28	237	117	120	161	71	300	191	148	12	31	103	1
1,210	1,277	120	174	211	137	108	66	132	176	79	533	503	55	2
79	73	6	55	4	61	17		38	30	10	5	15	8	3
63	25		49	4	45			21	16					4
66	25	3	57	3	54	3		28	28					5
40	36	4	7	2	5	3		6	3			2	3	6
12	12							4	3			1	1	7
14	12	2	38	2	36	5		22	20	8	1	11	2	8
13	13		20		20	9		6	4	2	1	1	2	9
1,928.1	1,866.0	42.1	104.5	40.0	64.5	286.1	4.3	151.3	144.2	26.2	25.0	92.0	7.1	10
2,554	2,407		152	38	113			108	96					11
2,147	1,869	27	275	57	218	22		158	167				1	12
1,891	1,849	42	103	39	64	283	4	151	144	26	26	92	7	13
37.1	37.0	0.1	1.5	1.0	0.5	3.1	0.3	0.3	0.2	0.2			0.1	14
6,758	6,609	149	631	417	214	1,215	114	998	545	228	67	250	153	15
8,641	8,056		516	306	210			380	354					16
7,769	7,052	139	943	598	351	91		606	601				5	17
20.2	20.1	0.1	3.8	0.5	3.3	24.3	1.7	12.3	5.7	3.1	0.3	2.3	6.6	18
18.0	18.0		0.5					1.1	0.6					19
0.5	0.5		0.1	0.1				2.4	2.0				0.4	20
10.5	10.5		0.3	0.1	0.2	7.8		0.3	0.3	0.3				21
2.5	2.4	0.1	2.6	0.3	2.3	16.3	0.7	9.6	3.7	2.1	0.3	1.3	5.9	22
2.2	2.2		0.3		0.3	0.2		0.8	0.1	0.1			0.7	23
5.0	5.0		0.6	0.1	0.5		1.0	1.6	1.6	0.6		1.0		24
18	16	2	6	1	5	32		16	10	6	3	1	6	25
6	4		5		5	1		2	1					26
17	5		5		5	5		9	9					27
1		1	1		1			1					1	28
15	14	1	4	1	3	32		14	10	6	3	1	4	29
2	2		1		1			1					1	30
22	19	3	9	3	6	32		16	8	6	1	1	8	31
13	12	1	7	3	4	31		13	5	5			8	32
1	1		1		1	1		3	3	1	1	1		33
8	6	2	1		1									34
2,281,733	2,272,513	9,220	5,282	7	6,275	474		1,359	1,154	354	(?)	(?)	205	35
8	5		8		6	1		4	3					36
179,655	77,950		6,710		6,707	28		46	45					37
								19					19	38
														39
								370					370	40
														41
														42
														43
240	218	22	247	159	88	46	40	160	123	106	4	13	37	44
9			40	3	4			42	36					45
			5	4	1			13	13					46
225,461	207,138	18,323	217,114	145,540	71,574	31,285	30,525	120,435	96,170	76,420	4,550	15,500	23,965	47
950			32,850	2,750	5,300	7,725		27,990	23,485					48
			3,950	1,850	2,100			8,000	8,000					49
280	258	22	243	148	94	141	80	283	176	149	5	22	107	50
5			42	3	9	6		76						51
5,982	5,012	970	5,174	2,946	2,228	2,600	1,664	6,695	4,082	3,157	140	785	2,613	52
21			674	50	139	155		1,237	1,018					53
81	71		106	36	70	49		461	431				30	54
26	25	1	62	57	5	8	2	12	8			4	20	55
480	450	(?)	983	915	68	137	(?)	1,129	277	127		150	852	56
250	230	20	174	91	83	125	78	244	160	138	5	17	84	57
5,429	4,490	939	4,185	2,091	2,154	2,945	1,624	5,518	3,770	3,010	140	620	1,748	58
4	3	1	6		6	8		7	4	3		1	3	59
73	72	(?)	6		6	118		48	35	20		(?)	13	60
295	273	22	242	151	91	147	90	292	182	154	5	23	110	61
6			44	3	9	7		78	61					62
6	5		5	2	3	6		14	12				2	63
282,814	264,391	18,423	226,204	148,480	77,724	131,798	82,150	266,395	175,855	139,385	5,370	31,100	90,840	64
1,000			42,850	2,750	14,300	7,725		73,359	56,550				65	65
7,000	6,400		9,682	1,850	7,832	4,280		33,203	32,203				1,000	66
190	190		73	58	15	107	84	197	113	100	2	11	84	67
181,716	181,716		71,307	58,750	12,557	100,813	76,900	178,715	107,475	90,905	(?)	2	15,450	68
956	956		977	1,013	837	942	915	907	951	909	(?)		1,405	69
87	68	19	157	88	69	30	6	82	62	47	3	12	20	70
90,725	72,325	18,400	148,830	84,480	64,350	26,150	5,250	83,235	67,010	47,110	4,250	15,650	16,225	71
1,043	1,064	968	948	960	933	872	875	1,015	1,081	1,002	1,417	1,304	811	72
5	2	3	6		6	4		9	6	6			3	73
1,523	(?)	23	17		17	270		1,455	370	370			1,085	74
305	(?)	8	3		3	68		162	62	62			362	75
13	13		6	5	1	6		4	1	1			3	76
8,850	8,850		6,050	5,250	(?)	4,565		3,280	(?)	(?)			2,290	77
30	26	74	42	33	55	31	24	36	35	31	55	53	39	78
21			27	23	33	23		27						79
15	8		17	25	11	17		26	27				18	80
33	28	74	42	33	55	47	31	49	42	37	65	73	75	81
17	17					21	19	24	23	21	14	35	25	82

⁶Includes siphons and farm pipe lines reported.
⁷Total capacity of all reservoirs regardless of size.
⁸Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - NEBRASKA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920]

ITEM (For definitions and explanations, see text)		STATE TOTAL	Adams	Antelope	Banner	Boone	Box Butte
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940...number....	121,062	1,456	1,940	323	1,672	854
2	.....1930...number....	129,458	1,715	2,164	342	1,985	914
3	Irrigated farms.....1940...number....	6,913	10	14	4	22	27
4	.....1930...number....	4,602	5	1	1	2	6
5	Increase or decrease (-), 1930-1940.....percent....	50.2	100.0	(1)	300.0	1,000.0	350.0
Operated by—							
6	(a) Owners and managers.....1940...number....	3,342	5	10	4	12	20
7	.....1930...number....	2,276	.....	.....	.....	.....	6
8	(b) Tenants.....1940...number....	3,571	5	4	.....	10	7
9	.....1930...number....	2,220	.....	.....	.....	.....	.....
10	Land in all farms.....1940...acres....	47,343,881	338,644	533,405	453,119	427,341	2 699,008
11	Land in irrigated farms.....1940...acres....	3,577,439	2,937	3,037	20,060	7,157	66,289
12	Average per farm.....1940...acres....	517	294	217	5,015	325	2,455
13	(a) Operated by owners and managers.....1940...acres....	2,600,098	2,310	2,202	30,060	4,750	61,679
14	Average per farm.....1940...acres....	778	462	220	5,015	396	3,084
15	(b) Operated by tenants.....1940...acres....	977,341	627	835	.....	2,407	4,610
16	Average per farm.....1940...acres....	274	125	209	.....	241	659
17	Approximate land area.....1940...acres....	49,057,920	359,680	545,920	472,320	437,120	682,240
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939...acres....	610,379	513	238	645	1,100	3,435
19	(a) Cropland harvested.....1939...acres....	573,535	485	238	340	1,100	3,255
20	(b) Crop failure.....1939...acres....	10,717	8	.....	305	.....	180
21	(c) Pasture.....1939...acres....	20,127	20	.....	.....	.....	.....
22	Area irrigated.....1929...acres....	532,617	.....	.....	.....	.....	2,400
23	.....1919...acres....	442,690	.....	.....	.....	.....	2,162
24	Increase or decrease (-), 1929-1939.....percent....	14.6	.....	.....	.....	.....	43.1
25	Irrigable area in enterprises.....1940...acres....	1,095,567	774	430	1,271	2,185	6,348
26	.....1930...acres....	763,039	.....	.....	.....	.....	3,740
27	.....1920 ⁴ ...acres....	766,768	.....	.....	.....	.....	3,802
28	Excess of irrigable area over the area irrigated.....1940...acres....	485,188	261	192	626	1,085	2,913
29	.....1930...acres....	230,422	.....	.....	.....	.....	1,340
30	Area works were capable of supplying with water.....1940...acres....	992,957	655	398	1,271	2,055	4,974
31	.....1930...acres....	703,641	.....	.....	.....	.....	3,740
32	.....1920...acres....	562,468	.....	.....	.....	.....	3,062
33	Increase or decrease (-), 1930-1940.....percent....	41.1	.....	.....	.....	.....	33.0
34	Excess, capability of works over area irrigated.....1940...acres....	382,578	142	160	626	955	1,539
35	.....1930...acres....	171,024	.....	.....	.....	.....	1,340
36	Proportion which area irrigated is of all lands in irrigated farms.....1939...percent....	17.1	17.5	7.8	3.2	15.4	5.2
37	.....1929...percent....	32.3	.....	.....	.....	.....	4.3
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent....	61.5	78.3	59.8	50.7	53.5	69.1
39	.....1929...percent....	75.7	.....	.....	.....	.....	64.2
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940...dollars....	39,056,207	24,475	3,185	10,700	17,427	51,250
41	(a) Cost of irrigation works and equipment.....1940...dollars....	38,749,216	24,420	3,128	10,700	17,302	50,850
42	(b) Investment in water rights (reported).....1940...dollars....	306,991	55	57	.....	125	400
43	Total investment in all enterprises.....1930...dollars....	21,386,319	.....	.....	.....	.....	36,675
44	.....1920...dollars....	13,909,185	.....	.....	.....	.....	32,410
45	Increase or decrease (-), 1930-1940.....percent....	82.6	.....	.....	.....	.....	39.7
46	Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars....	39.33	37.37	8.00	8.42	8.48	10.30
47	.....1930...dollars....	30.39	.....	.....	.....	.....	9.81
48	.....1920...dollars....	24.73	.....	.....	.....	.....	10.58
49	Average investment per acre irrigated.....1939...dollars....	63.99	47.71	13.38	16.59	15.84	14.92
50	Estimated final investment in existing enterprises.....1940...dollars....	41,995,361	24,975	4,685	10,700	21,927	59,425
51	.....1930...dollars....	21,465,772	.....	.....	.....	.....	36,675
52	.....1920...dollars....	18,030,154	.....	.....	.....	.....	32,410
53	Increase or decrease (-), 1930-1940.....percent....	95.6	.....	.....	.....	.....	62.0
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars....	38.33	32.27	10.90	8.42	10.04	9.36
55	.....1930...dollars....	28.13	.....	.....	.....	.....	9.81
56	.....1920 ⁴ ...dollars....	23.51	.....	.....	.....	.....	8.52
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental				
		Enterprises					
57	Enterprises reporting maintenance and operation.....1939...number....	2,367	262	12	7	5	21
58	Area irrigated in these enterprises.....1939...acres....	602,582	171,448	511	166	645	1,100
59	Cost of maintenance and operation.....1939...dollars....	839,682	119,770	3,512	445	420	3,750
60	Average cost, per acre irrigated.....1939...dollars....	1.39	0.70	6.87	2.68	0.65	3.41
61	.....1929...dollars....	1.54	.....	.....	.....	.....	2.32
62	Total annual charges (reported) ⁵.....1939...dollars....	674,403	96,342	.....	.....	.....	.....
63	Average annual charge per acre irrigated.....1939...dollars....	1.40	0.63	.....	.....	.....	.....
64	Area against which charges were assessed.....1939...acres....	521,292	153,282	.....	.....	.....	.....
65	Average annual charge per acre assessed.....1939...dollars....	1.29	0.63	.....	.....	.....	.....
66	Total charges collected ⁵.....1939...dollars....	575,579	833	.....	.....	.....	.....
67	Indebtedness to December 31 (reported) ⁶.....1939...dollars....	20,456,809	1,270,559	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939...number....	2,222	208	11	9	2	19
69	Area irrigated in these enterprises.....1939...acres....	573,110	171,519	513	238	(7)	1,100
70	Water delivered in these enterprises.....1939...acre-feet....	1,105,696	89,845	1,076	568	(2)	1,196
71	Average water delivered per acre irrigated.....1939...acre-feet....	1.9	0.5	2.1	2.4	(2)	1.1
72	Average cost of water per acre irrigated.....1939...dollars....	1.73	0.73	6.87	2.68	(2)	3.41
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939...number....	69	.....	.....	.....	.....	.....
74	Irrigable area in these enterprises.....1939...acres....	388,461	.....	.....	.....	.....	.....
75	Irrigated area in these enterprises.....1939...acres....	284,658	.....	.....	.....	.....	.....
76	Area for which drains have been installed.....1939...acres....	47,960	.....	.....	.....	.....	.....
77	Additional area needing drainage.....1939...acres....	10,305	.....	.....	.....	.....	.....

⁵Census of Agriculture.

¹Percent not shown when more than 1,000.

²The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

CENSUS OF IRRIGATION - NEBRASKA

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Brown	Buffalo	Butler	Chase	Cherry	Cheyenne	Clay	Colfax	Cuming	Custer	Dawes	Dawson			
733	2,275	1,896	768	1,217	1,167	1,551	1,416	1,925	3,413	844	1,919	1		
705	2,429	1,883	766	1,480	1,116	1,782	1,393	1,943	3,735	870	2,086	2		
40	460	12	21	31	215	5	33	16	88	78	870	3		
(1) 2	250	.....	19	4	17	4	(1) 1	.....	(1) 6	60	781	4
	84.0	.....	10.5	675.0	(1) 17	25.0	.....	.....	(1) 6	30.0	11.4	5
19	215	8	13	25	111	4	20	7	51	46	420	6		
.....	149	.....	11	.....	13	.....	.....	.....	.....	35	363	7
21	245	4	8	6	104	1	13	9	37	32	450	8		
.....	101	.....	8	.....	4	.....	.....	.....	.....	25	418	9
758,793	592,714	365,312	545,773	3,572,549	753,082	357,918	253,620	360,421	2,676,166	853,756	601,343	10		
63,333	94,318	2,744	56,898	237,019	178,485	2,207	8,961	3,244	48,201	120,761	274,175	11		
1,583	205	229	2,709	7,646	835	272	203	548	203	1,548	315	12		
34,133	48,757	2,024	52,508	216,484	111,877	(2) 8,464	1,589	36,084	96,501	171,068	13	13		
1,796	227	253	4,039	8,659	1,008	(2) 323	227	708	2,076	407	14	14		
29,200	45,561	720	4,390	20,535	67,608	(2) 2,497	1,655	12,117	25,260	103,107	15	15		
1,390	186	180	549	3,422	650	192	184	327	789	229	16	16		
779,520	609,280	372,460	572,160	3,828,480	759,040	364,800	259,200	365,440	1,639,680	885,960	629,120	17		
635	24,076	399	2,520	1,837	4,178	251	1,169	421	3,797	14,301	70,308	18		
630	23,362	389	2,500	1,524	3,662	243	1,145	421	3,553	12,834	69,012	19		
5	454	.....	20	.....	320	.....	24	.....	209	829	1,106	20
.....	260	10	.....	313	196	8	.....	.....	35	638	190	21
.....	12,236	.....	2,080	.....	1,901	.....	.....	.....	.....	9,911	69,702	22
.....	3,019	.....	2,292	.....	5,247	.....	.....	.....	.....	9,005	33,700	23
.....	96.8	.....	22.3	.....	119.8	.....	.....	.....	.....	44.3	0.9	24
860	45,917	1,101	3,227	2,442	5,998	350	2,640	623	11,400	21,253	206,444	25		
.....	33,227	.....	2,135	.....	2,994	.....	.....	.....	.....	15,379	173,775	26
.....	6,419	.....	4,491	.....	5,958	.....	.....	.....	.....	24,326	141,610	27
225	21,841	702	707	605	1,820	99	1,471	202	7,603	6,952	136,136	28		
.....	20,991	.....	75	.....	793	.....	.....	.....	.....	5,468	104,073	29
809	37,956	976	3,104	2,369	5,694	283	2,570	568	9,507	16,685	200,544	30		
.....	24,019	.....	2,135	.....	2,664	.....	.....	.....	.....	14,694	134,966	31
.....	3,059	.....	4,311	.....	5,778	.....	.....	.....	.....	19,052	64,725	32
.....	58.0	.....	45.4	.....	113.7	.....	.....	.....	.....	13.5	48.6	33
174	13,880	577	584	532	1,516	32	1,401	147	5,710	2,384	130,236	34		
.....	11,783	.....	75	.....	763	.....	.....	.....	.....	4,783	65,284	35
1.0	25.5	14.5	4.4	0.8	2.3	11.4	13.0	13.0	7.9	11.8	25.3	36		
.....	25.6	.....	10.3	.....	10.1	.....	.....	.....	.....	14.8	32.4	37
78.5	63.4	40.9	81.2	77.5	73.4	88.7	45.5	74.1	39.9	85.7	35.1	38		
.....	50.9	.....	96.5	.....	.....	.....	.....	.....	.....	67.4	51.6	39
13,331	644,778	12,946	97,350	12,400	72,217	6,430	18,963	3,957	376,042	553,140	3,392,313	40		
13,206	643,695	12,901	96,150	12,115	70,167	6,310	18,608	3,902	375,463	543,975	3,200,717	41		
125	1,083	45	1,200	285	2,050	120	355	55	579	9,165	191,596	42		
.....	315,314	.....	62,500	.....	24,600	.....	.....	.....	.....	484,760	866,645	43
.....	301,750	.....	39,095	.....	49,137	.....	.....	.....	.....	211,145	170,435	44
.....	104.5	.....	55.6	.....	193.6	.....	.....	.....	.....	14.1	291.4	45
16.48	16.99	13.26	31.36	5.23	12.68	22.72	7.38	6.97	39.55	33.15	16.92	46		
.....	13.13	.....	29.30	.....	9.23	.....	.....	.....	.....	32.99	6.42	47
.....	98.64	.....	9.07	.....	8.50	.....	.....	.....	.....	11.08	2.63	48
20.99	26.78	32.45	38.63	6.75	17.29	25.62	16.22	9.40	99.04	38.68	48.25	49		
14,806	661,212	12,996	97,350	13,250	86,117	6,430	21,758	4,057	388,032	659,790	3,413,474	50		
.....	366,317	.....	62,550	.....	24,600	.....	.....	.....	.....	484,760	866,895	51
.....	301,750	.....	41,095	.....	49,437	.....	.....	.....	.....	243,245	270,435	52
.....	80.5	.....	55.6	.....	250.1	.....	.....	.....	.....	36.1	293.8	53
17.22	14.40	11.80	30.17	5.43	14.36	18.37	8.24	6.51	34.04	31.04	16.53	54		
.....	11.02	.....	29.30	.....	9.13	.....	.....	.....	.....	31.52	4.99	55
.....	47.01	.....	9.15	.....	8.30	.....	.....	.....	.....	10.00	1.91	56
	Primary	Sup.									Primary	Sup.		
	Enterprises										Enterprises			
23	450	4	16	11	19	58	4	30	11	37	36	411	48	57
618	22,337	4,030	399	2,520	1,777	3,789	245	1,169	399	3,794	14,181	69,561	53,868	58
1,306	76,740	1,161	1,146	4,261	801	7,196	831	2,756	705	10,444	20,056	114,744	25,882	59
2.11	3.44	0.29	2.87	1.69	0.45	1.90	3.39	2.36	1.77	2.75	1.41	1.65	0.48	60
.....	3.92	0.63	0.63	3.24	1.08	1.51	61
.....	4,736	1,059	695	6,250	16,784	57,199	25,276	62
.....	1.19	0.27	0.65	2.50	1.59	1.11	0.49	63
.....	3,994	3,994	1,070	2,500	10,575	52,832	51,440	64
.....	1.19	0.27	0.65	2.50	1.59	1.08	0.49	65
.....	2,475	35	3,939	15,613	62,588	792	66
.....	53,581	354,506	151,000	66,120	1,207,957	67
25	416	3	9	9	18	55	4	30	11	32	36	397	39	68
635	22,497	4,030	356	2,057	1,647	3,826	245	1,169	399	3,777	14,275	70,029	54,013	69
1,149	39,065	1,111	795	3,658	2,513	4,128	399	1,061	471	5,406	11,060	140,727	27,275	70
1.8	1.7	0.3	2.2	1.8	1.5	1.1	1.6	0.9	1.2	1.6	0.8	2.0	0.5	71
2.11	3.47	0.31	3.09	1.90	0.44	1.94	3.39	2.36	1.77	3.15	1.45	1.67	0.55	72
.....	3	7	10	73
.....	626	744	(3) 1	(3) 1	6,858	74
.....	804	282	(3)	(3)	2,707	75
.....	1	704	(3)	(3)	2,353	76
.....	83	40	4	77

3 Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
 4 For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
 5 Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
 6 Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - NEBRASKA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929, LAND IN IRRIGATED FARMS,

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	COUNTY						
	Deuel	Dodge	Douglas	Dundy	Fillmore	Franklin	Frontier
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1 All farms.....1940..number.....	515	1,793	1,761	652	1,768	1,201	1,169
2 ..1930..number.....	500	1,878	1,883	709	1,872	1,398	1,367
3 Irrigated farms.....1940..number.....	72	29	24	43	4	22	10
4 ..1930..number.....	40	.....	.....	22	1	10	.....
5 Increase or decrease (-), 1930-1940.....percent.....	80.0	.....	.....	95.5	300.0	120.0	.....
Operated by—							
6 (a) Owners and managers.....1940..number.....	33	20	7	22	3	14	10
7 ..1930..number.....	21	.....	.....	14	.....	.....	.....
8 (b) Tenants.....1940..number.....	39	9	17	21	1	8	.....
9 ..1930..number.....	19	.....	.....	8	.....	.....	.....
10 Land in all farms.....1940..acres.....	277,685	327,031	170,927	567,413	358,740	349,668	618,775
11 Land in irrigated farms.....1940..acres.....	31,840	7,287	2,597	42,912	768	8,141	10,836
12 Average per farm.....1940..acres.....	442	251	108	998	190	370	1,084
13 (a) Operated by owners and managers.....1940..acres.....	20,098	4,791	972	33,324	(3)	5,098	10,836
14 Average per farm.....1940..acres.....	609	240	139	1,515	(3)	364	1,084
15 (b) Operated by tenants.....1940..acres.....	11,742	2,496	1,625	9,588	(3)	3,043	.....
16 Average per farm.....1940..acres.....	301	277	96	457	(3)	380	.....
17 Approximate land area.....1940..acres.....	278,400	338,560	214,400	589,440	369,280	369,920	618,240
IRRIGATED AND IRRIGABLE AREAS							
18 Area irrigated.....1939..acres.....	8,585	1,289	410	4,487	122	1,088	72
19 (a) Cropland harvested.....1939..acres.....	8,423	1,289	410	3,647	122	1,042	72
20 (b) Crop failure.....1939..acres.....	67	.....	.....	204	.....	.....	.....
21 (c) Pasture.....1939..acres.....	95	.....	.....	636	.....	46	.....
22 Area irrigated.....1929..acres.....	6,857	.....	.....	3,470	.....	.....	.....
23 ..1919..acres.....	10,317	.....	.....	9,045	.....	.....	.....
24 Increase or decrease (-), 1929-1939.....percent.....	25.2	.....	.....	29.3	.....	.....	.....
25 Irrigable area in enterprises.....1940..acres.....	10,629	1,515	510	6,627	210	1,516	259
26 ..1930..acres.....	8,240	.....	.....	5,470	.....	.....	.....
27 ..1920 ⁴ ..acres.....	13,155	.....	.....	14,118	.....	.....	.....
28 Excess of irrigable area over the area irrigated.....1940..acres.....	2,044	226	100	2,140	88	428	187
29 ..1930..acres.....	1,383	.....	.....	2,000	.....	.....	.....
30 Area works were capable of supplying with water.....1940..acres.....	10,393	1,308	410	6,453	190	1,478	259
31 ..1930..acres.....	8,150	.....	.....	4,770	.....	.....	.....
32 ..1920..acres.....	11,755	.....	.....	10,918	.....	.....	.....
33 Increase or decrease (-), 1930-1940.....percent.....	27.5	.....	.....	35.3	.....	.....	.....
34 Excess, capability of works over area irrigated.....1940..acres.....	1,808	19	.....	1,965	68	390	187
35 ..1930..acres.....	1,293	.....	.....	1,300	.....	.....	.....
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	27.0	17.7	15.8	10.5	16.1	13.4	0.7
37 ..1929..percent.....	32.9	.....	.....	15.4	.....	.....	.....
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	82.6	96.5	100.0	69.5	64.2	73.6	27.8
39 ..1929..percent.....	84.1	.....	.....	72.7	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1							
40 Total investment in all enterprises.....1940..dollars.....	76,174	8,194	5,600	79,775	5,000	22,313	1,167
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	75,994	8,194	5,600	69,520	5,000	22,100	1,160
42 (b) Investment in water rights (reported).....1940..dollars.....	180	.....	.....	10,255	.....	213	7
43 Total investment in all enterprises.....1930..dollars.....	111,715	.....	.....	69,010	.....	.....	.....
44 ..1920..dollars.....	59,613	.....	.....	111,800	.....	.....	.....
45 Increase or decrease (-), 1930-1940.....percent.....	-31.8	.....	.....	15.6	.....	.....	.....
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	7.33	6.26	13.66	12.36	26.32	15.10	4.51
47 ..1930..dollars.....	13.71	.....	.....	14.47	.....	.....	.....
48 ..1920..dollars.....	5.07	.....	.....	10.24	.....	.....	.....
49 Average investment per acre irrigated.....1939..dollars.....	8.87	6.36	13.66	17.78	40.98	20.51	16.21
50 Estimated final investment in existing enterprises.....1940..dollars.....	77,484	8,934	6,600	81,755	5,000	23,468	2,367
51 ..1930..dollars.....	111,715	.....	.....	69,010	.....	.....	.....
52 ..1920..dollars.....	59,613	.....	.....	112,300	.....	.....	.....
53 Increase or decrease (-), 1930-1940.....percent.....	-30.6	.....	.....	18.5	.....	.....	.....
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	7.29	5.90	12.94	12.34	23.81	15.48	9.14
55 ..1930..dollars.....	13.56	.....	.....	12.62	.....	.....	.....
56 ..1920 ⁴ ..dollars.....	4.53	.....	.....	7.95	.....	.....	.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57 Enterprises reporting maintenance and operation.....1939..number.....	Primary		Sup.		Enterprises		
	52	6	30	3	10	3	15
58 Area irrigated in these enterprises.....1939..acres.....	8,585	717	1,289	410	4,277	122	907
59 Cost of maintenance and operation.....1939..dollars.....	8,285	772	1,797	1,170	2,338	469	1,745
60 Average cost, per acre irrigated.....1939..dollars.....	0.96	1.08	1.39	2.85	0.55	3.84	1.92
61 ..1929..dollars.....	1.24	.....	.....	.....	0.74	.....	.....
62 Total annual charges (reported) ⁵.....1939..dollars.....	2,308	.....	.....	.....	1,283	.....	.....
63 Average annual charge per acre irrigated.....1939..dollars.....	0.38	.....	.....	.....	0.44	.....	.....
64 Area against which charges were assessed.....1939..acres.....	6,140	.....	.....	.....	2,924	.....	.....
65 Average annual charge per acre assessed.....1939..dollars.....	0.38	.....	.....	.....	0.44	.....	.....
66 Total charges collected ⁵.....1939..dollars.....	2,310	.....	.....	.....	2,707	.....	.....
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	.....	.....	.....	.....	10,420	.....	.....
WATER DELIVERED TO IRRIGATORS							
68 Enterprises reporting water delivered.....1939..number.....	50	1	30	3	11	3	17
69 Area irrigated in these enterprises.....1939..acres.....	8,585	(3)	1,289	410	3,521	122	1,088
70 Water delivered in these enterprises.....1939..acre-feet.....	8,974	(3)	1,976	453	6,379	235	1,402
71 Average water delivered per acre irrigated.....1939..acre-feet.....	1.0	(3)	1.5	1.1	1.8	1.9	1.3
72 Average cost of water per acre irrigated.....1939..dollars.....	0.93	(3)	1.39	2.85	0.61	3.84	1.92
DRAINAGE OF IRRIGATED LAND							
73 Enterprises reporting land drained or needing drainage.....1939..number.....	1	.....	.....	.....	1	1	1
74 Irrigable area in these enterprises.....1939..acres.....	(3)	.....	.....	.....	(3)	(3)	(3)
75 Irrigated area in these enterprises.....1939..acres.....	(3)	.....	.....	.....	(3)	(3)	(3)
76 Area for which drains have been installed.....1939..acres.....	(3)	.....	.....	.....	(3)	(3)	(3)
77 Additional area needing drainage.....1939..acres.....	(3)	.....	.....	.....	(3)	.....	.....

*Census of Agriculture.

¹Percent not shown when more than 1,000.

²The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

CENSUS OF IRRIGATION — NEBRASKA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"]

Furnas	-Gage	Garden	Garfield	Gosper	Greeley	Hall	Hamilton	Harlan	Hayes	Hitchcock	Holt	Howard	Jefferson		
1,334	2,870	653	490	767	956	1,567	1,623	1,121	561	802	2,305	1,402	1,611	1	
1,549	2,898	710	445	846	1,173	1,628	1,766	1,257	646	942	2,410	1,553	1,716	2	
17	11	117	57	13	20	233	9	21	14	114	6	23	4	3	
4	.....	146	1	1	1	91	5	13	3	118	3	3	2	4
325.0	.....	-19.9	(¹)	(¹)	(¹)	156.0	80.0	61.5	366.7	-3.4	100.0	(¹)	100.0	5
10	9	58	26	8	9	110	8	13	9	69	5	10	1	6	
.....	.....	73	.....	.....	.....	51	.....	.....	.....	68	.....	.....	.....	7
7	2	59	31	5	11	123	1	8	5	45	1	13	3	8	
.....	.....	73	.....	.....	.....	40	.....	.....	.....	50	.....	.....	.....	9
451,156	532,014	² 1,084,381	363,308	276,712	345,569	323,851	337,120	348,768	436,177	451,727	1,427,299	337,725	349,211	10	
8,314	1,908	185,629	18,534	8,543	6,116	61,387	3,564	10,623	10,231	54,662	5,518	7,537	1,340	11	
489	173	1,672	325	657	306	263	396	606	731	479	920	328	335	12	
6,432	(³)	177,170	9,036	7,178	2,412	33,933	(³)	6,008	6,877	40,373	(³)	4,339	(³)	13	
643	(³)	3,055	348	897	268	308	(³)	462	764	585	(³)	434	(³)	14	
1,882	(³)	18,459	9,488	1,365	3,704	27,454	(³)	4,615	3,354	14,289	(³)	3,198	(³)	15	
269	(³)	313	306	273	337	223	(³)	577	671	318	(³)	246	(³)	16	
462,080	549,120	1,078,400	364,800	298,240	364,800	345,600	346,240	368,000	455,040	462,080	1,541,120	362,240	369,280	17	
699	306	11,804	2,187	937	601	10,875	1,341	624	744	11,366	49	511	87	18	
615	306	11,168	2,187	914	597	10,530	1,316	616	722	11,321	37	501	87	19	
81	.....	150	.....	15	.....	214	.....	5	22	22	12	.....	.....	20
3	.....	486	.....	8	4	131	25	3	.....	23	.....	10	.....	21
.....	.....	24,077	.....	.....	.....	6,425	.....	.....	.....	10,974	.....	.....	.....	22
.....	.....	20,488	.....	.....	.....	.....	.....	.....	.....	9,786	.....	.....	.....	23
.....	.....	-51.0	.....	.....	.....	69.3	.....	.....	.....	3.6	.....	.....	.....	24
1,364	478	19,843	4,923	9,243	1,405	17,833	1,557	1,463	1,018	11,628	49	825	167	25	
.....	.....	28,112	.....	.....	.....	10,012	.....	.....	.....	12,507	.....	.....	.....	26
.....	.....	26,714	.....	.....	.....	.....	.....	.....	.....	10,576	.....	.....	.....	27
665	172	8,039	2,736	6,306	804	6,958	216	839	274	262	.....	314	80	28
.....	.....	4,035	.....	.....	.....	3,687	.....	.....	.....	1,533	.....	.....	.....	29
1,309	458	19,843	4,389	1,436	1,291	17,128	1,557	1,314	968	11,548	49	676	167	30	
.....	.....	28,111	.....	.....	.....	9,114	.....	.....	.....	11,794	.....	.....	.....	31
.....	.....	25,554	.....	.....	.....	.....	.....	.....	.....	10,226	.....	.....	.....	32
.....	.....	-29.4	.....	.....	.....	87.9	.....	.....	.....	-2.1	.....	.....	.....	33
610	152	8,039	2,202	499	690	6,253	216	690	224	182	.....	165	80	34
.....	.....	4,034	.....	.....	.....	2,689	.....	.....	.....	820	.....	.....	.....	35
8.4	16.0	6.0	11.8	11.0	9.8	17.7	37.6	5.9	7.3	20.8	0.9	6.8	6.5	36	
.....	.....	19.2	.....	.....	.....	33.7	.....	.....	.....	33.5	.....	.....	.....	37
53.4	66.8	59.5	49.8	65.3	46.6	63.5	86.1	47.5	76.9	98.4	100.0	75.6	52.1	38	
.....	.....	85.6	.....	.....	.....	70.5	.....	.....	.....	93.0	.....	.....	.....	39
20,123	21,170	135,159	263,388	19,077	60,558	273,884	59,550	23,295	12,443	191,615	1,310	12,745	5,250	40	
20,047	21,150	132,422	263,383	19,032	60,456	273,884	59,550	23,250	12,408	191,477	1,300	12,355	5,250	41	
76	20	2,737	5	45	102	.....	.....	45	35	138	10	390	.....	42
.....	.....	252,706	.....	.....	.....	218,000	.....	.....	.....	185,905	.....	.....	.....	43
.....	.....	229,001	.....	.....	.....	.....	.....	.....	.....	162,500	.....	.....	.....	44
.....	.....	-46.5	.....	.....	.....	25.6	.....	.....	.....	3.1	.....	.....	.....	45
15.37	46.22	6.81	60.01	13.28	46.91	15.99	38.25	17.73	12.85	16.59	26.73	18.85	31.44	46	
.....	.....	8.99	.....	.....	.....	23.92	.....	.....	.....	15.76	.....	.....	.....	47
.....	.....	8.96	.....	.....	.....	.....	.....	.....	.....	15.89	.....	.....	.....	48
28.79	69.18	11.45	120.43	20.36	100.76	25.18	44.41	37.33	16.72	16.86	26.73	24.94	60.34	49	
20,348	21,424	135,359	265,927	19,077	61,135	276,601	59,550	26,705	12,523	192,115	1,310	12,845	5,950	50	
.....	.....	252,706	.....	.....	.....	218,350	.....	.....	.....	189,905	.....	.....	.....	51
.....	.....	270,201	.....	.....	.....	.....	.....	.....	.....	162,500	.....	.....	.....	52
.....	.....	-46.4	.....	.....	.....	26.7	.....	.....	.....	1.2	.....	.....	.....	53
14.92	44.82	6.82	54.02	2.06	43.51	15.51	38.25	18.25	12.30	16.52	26.73	15.57	35.63	54	
.....	.....	8.99	.....	.....	.....	21.81	.....	.....	.....	15.18	.....	.....	.....	55
.....	.....	10.11	.....	.....	.....	.....	.....	.....	.....	15.36	.....	.....	.....	56
25	7	17	5	4	15	5	251	6	18	10	15	3	16	4	57
699	247	11,804	354	2,187	937	601	10,710	1,341	604	718	11,366	49	511	77	58
2,726	1,165	5,704	870	4,732	2,477	1,557	42,051	7,760	2,120	1,157	13,538	122	1,525	239	59
3.90	4.72	0.48	2.46	2.16	2.64	2.59	3.93	5.79	3.51	1.61	1.19	2.49	2.98	3.10	60
.....	0.49	3.35	1.44	61
.....	9,434	5,202	1,178	10,891	62
.....	0.97	2.50	2.50	1.09	63
.....	15,807	2,081	471	9,954	64
.....	0.60	2.50	2.50	1.09	65
.....	14,622	5,202	1,178	11,353	66
.....	25,101	155,300	35,150	67
22	8	10	4	4	13	3	222	6	18	11	14	2	15	4	68
699	246	6,227	354	2,187	937	536	10,875	1,341	624	744	10,782	(³)	509	77	69
1,027	169	11,140	319	5,025	1,113	1,196	15,177	1,539	1,438	1,448	30,858	(³)	1,204	70	70
1.5	0.7	1.8	0.9	2.3	1.2	2.2	1.4	1.1	2.3	1.9	2.9	(³)	2.4	1.0	71
3.68	3.29	0.82	2.32	2.53	2.64	2.76	3.92	5.79	3.51	1.61	1.18	(³)	2.97	3.10	72
.....	73
.....	(³)	(³)	(³)	(³)	(³)	(³)	74
.....	(³)	(³)	(³)	(³)	(³)	(³)	75
.....	(³)	(³)	(³)	(³)	(³)	(³)	76
.....	(³)	(³)	(³)	(³)	(³)	(³)	77

³Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - NEBRASKA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Kearney	Keith	Kimball	Lincoln	Loup	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940..number.....	1,155	708	515	1,962	314	
2	.....1930..number.....	1,249	779	600	2,189	317
3	Irrigated farms.....1940..number.....	95	142	73	320	50	
4	.....1930..number.....	19	119	63	282	2
5	Increase or decrease (-), 1930-1940.....percent.....	400.0	19.3	15.9	13.5	(1)	
Operated by—							
6	(a) Owners and managers.....1940..number.....	46	51	42	157	27	
7	.....1930..number.....	11	65	34	164	.....
8	(b) Tenants.....1940..number.....	49	61	31	163	23	
9	.....1930..number.....	8	34	29	118	.....
10	Land in all farms.....1940..acres.....	319,332	2 699,074	565,754	1,447,091	317,551	
11	Land in irrigated farms.....1940..acres.....	36,389	242,448	90,987	135,591	33,961	
12	Average per farm.....1940..acres.....	383	1,707	1,246	424	679	
13	(a) Operated by owners and managers.....1940..acres.....	19,613	208,081	65,992	95,748	26,698	
14	Average per farm.....1940..acres.....	426	2,569	1,571	610	989	
15	(b) Operated by tenants.....1940..acres.....	16,776	34,367	24,985	39,843	7,263	
16	Average per farm.....1940..acres.....	342	563	806	244	316	
17	Approximate land area.....1940..acres.....	327,680	686,080	609,920	1,616,000	367,360	
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres.....	6,730	16,690	8,192	44,022	4,224	
19	(a) Cropland harvested.....1939..acres.....	6,726	16,541	6,913	42,152	4,224	
20	(b) Crop failure.....1939..acres.....	4	.....	906	502	.....
21	(c) Pasture.....1939..acres.....	.....	149	373	1,368	.....
22	Area irrigated.....1929..acres.....	860	23,141	7,422	35,708	.....
23	.....1919..acres.....	.....	25,832	9,101	35,246	.....
24	Increase or decrease (-), 1929-1939.....percent.....	682.6	-27.9	10.4	23.3	.....
25	Irrigable area in enterprises.....1940..acres.....	40,220	22,538	9,213	51,577	8,133	
26	.....1930..acres.....	1,445	27,597	9,807	42,509	.....
27	.....1920 ⁴ ..acres.....	.....	33,974	11,224	45,421	.....
28	Excess of irrigable area over the area irrigated.....1940..acres.....	33,490	5,848	1,021	-7,555	3,909	
29	.....1930..acres.....	585	4,456	2,385	6,801	.....
30	Area works were capable of supplying with water.....1940..acres.....	40,168	22,238	9,031	51,336	7,766	
31	.....1930..acres.....	1,445	26,812	9,345	42,288	.....
32	.....1920..acres.....	.....	11,466	11,117	41,811	.....
33	Increase or decrease (-), 1930-1940.....percent.....	(1)	-17.1	-3.4	21.4	.....
34	Excess, capability of works over area irrigated.....1940..acres.....	33,438	5,548	839	7,314	3,542	
35	.....1930..acres.....	585	3,671	1,923	6,580	.....
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	18.5	6.9	9.0	32.5	12.4	
37	.....1929..percent.....	13.1	15.5	18.8	36.3	.....
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	16.8	75.1	90.7	65.8	54.4	
39	.....1929..percent.....	59.5	86.3	79.4	84.4	.....
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars.....	3,713,510	191,655	281,973	580,027	248,285	
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	3,708,590	190,875	281,863	579,175	248,240	
42	(b) Investment in water rights (reported).....1940..dollars.....	4,920	780	110	852	45	
43	Total investment in all enterprises.....1930..dollars.....	33,050	326,040	279,790	489,895	.....
44	.....1920..dollars.....	.....	205,734	270,500	330,481	.....
45	Increase or decrease (-), 1930-1940.....percent.....	(1)	-41.2	0.8	18.4	.....
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	92.45	8.62	31.22	11.30	31.97	
47	.....1930..dollars.....	22.87	12.16	29.94	11.58	.....
48	.....1920..dollars.....	.....	6.54	24.33	7.90	.....
49	Average investment per acre irrigated.....1939..dollars.....	551.78	11.48	34.42	13.18	58.78	
50	Estimated final investment in existing enterprises.....1940..dollars.....	4,733,471	194,820	289,993	592,062	252,061	
51	.....1930..dollars.....	33,200	329,040	279,790	489,895	.....
52	.....1920..dollars.....	.....	221,334	270,500	330,481	.....
53	Increase or decrease (-), 1930-1940.....percent.....	(1)	-40.8	3.6	20.9	.....
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	117.69	8.64	31.48	11.48	30.99	
55	.....1930..dollars.....	22.98	11.92	28.53	11.52	.....
56	.....1920 ⁴ ..dollars.....	.....	6.51	24.10	7.28	.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary Sup.		Primary Sup.		Primary Sup.	
		Enterprises		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number.....	41	53 24	37 3	74 77	5
58	Area irrigated in these enterprises.....1939..acres.....	6,677	15,892 2,531	8,192 258	43,851 7,036	4,224
59	Cost of maintenance and operation.....1939..dollars.....	6,425	15,668 3,583	11,119 250	33,914 5,414	5,355
60	Average cost, per acre irrigated.....1939..dollars.....	0.96	0.99 1.42	1.36 0.97	0.77 0.77	1.27
611929..dollars.....	6.02	0.80	1.82	1.25
62	Total annual charges (reported) ⁵.....1939..dollars.....	5,570	5,485	8,998	25,620	6,910
63	Average annual charge per acre irrigated.....1939..dollars.....	1.06	0.48	2.00	0.66	0.31
64	Area against which charges were assessed.....1939..acres.....	5,253	11,374	4,489	42,712	1,246
65	Average annual charge per acre assessed.....1939..dollars.....	1.06	0.48	2.00	0.60	0.31
66	Total charges collected ⁶.....1939..dollars.....	2,982	3,380	9,000	24,993	6
67	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	2,513,251	1,520	82,000	20,077	9,021 136,864
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number.....	41	74 1	34 3	68 72	5
69	Area irrigated in these enterprises.....1939..acres.....	6,730	14,417 (3)	7,969 258	34,255 7,041	4,224
70	Water delivered in these enterprises.....1939..acre-feet.....	9,853	17,704 (3)	8,010 241	58,028 4,227	8,524
71	Average water delivered per acre irrigated.....1939..acre-feet.....	1.5	1.2 (3)	1.0 0.9	1.7 0.6	2.0
72	Average cost of water per acre irrigated.....1939..dollars.....	1.45	1.05 (3)	2.05 0.97	0.91 0.77	1.73
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number.....	2	5	1
74	Irrigable area in these enterprises.....1939..acres.....	(3)	30,049	(3)
75	Irrigated area in these enterprises.....1939..acres.....	(3)	25,908	(3)
76	Area for which drains have been installed.....1939..acres.....	(3)	14,820	(3)
77	Additional area needing drainage.....1939..acres.....	(3)	2,458	(3)

* Census of Agriculture.
¹ Percent not shown when more than 1,000.
² The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

CENSUS OF IRRIGATION - NEBRASKA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Madison	Merrick	Morrill	Nance	Nuckolls	Perkins	Phelps	Platte	Polk	Red Willow	Rock	Saline	Saunders	
1,874	1,238	1,007	961	1,373	897	1,161	2,094	1,383	1,047	593	2,057	2,668	1
1,980	1,390	1,081	1,197	1,587	1,034	1,196	2,174	1,507	1,189	531	2,087	2,699	2
24	83	590	14	6	3	100	46	5	83	20	14	12	3
1	16	515	.....	5	.....	9	4	1	46	3	1	.....	4
(¹)	418.8	14.6	.....	20.0	.....	(¹)	(¹)	400.0	80.4	566.7	(¹)	.....	5
14	40	236	5	5	2	50	23	4	49	15	10	6	6
.....	12	206	.....	.....	.....	.....	.....	.....	28	.....	.....	.....	7
10	43	354	9	1	1	50	23	1	34	5	4	6	8
4	309	.....	.....	.....	.....	.....	.....	.....	20	.....	.....	.....	9
357,133	282,711	781,889	272,391	347,278	529,903	327,152	421,736	270,213	434,125	² 665,541	356,892	463,111	10
6,694	19,769	243,254	10,141	1,232	3,400	32,277	10,084	1,445	30,081	44,154	3,180	2,376	11
279	238	412	724	205	1,133	323	219	259	382	2,208	227	198	12
4,395	10,097	153,210	7,564	(³)	(³)	18,061	4,424	(³)	21,881	42,280	2,580	1,355	13
314	252	649	1,513	(³)	(³)	361	192	(³)	447	2,819	258	226	14
2,299	9,672	90,044	2,577	(³)	(³)	14,216	5,660	(³)	8,200	1,874	600	1,021	15
230	225	254	286	(³)	(³)	294	246	(³)	241	375	150	170	16
366,080	286,880	897,920	280,320	370,560	566,400	348,800	430,080	277,120	458,240	647,680	368,000	483,840	17
584	2,678	79,962	225	323	353	4,502	535	308	4,542	203	249	195	18
584	2,782	70,275	201	307	313	4,483	532	308	4,537	203	249	195	19
.....	96	3,674	24	.....	.....	.....	.....	.....	5	.....	.....	.....	20
.....	835	6,013	.....	16	40	9	3	.....	.....	.....	.....	.....	21
.....	244.7	87,306	.....	.....	.....	.....	.....	.....	3,256	.....	.....	.....	22
785	4,231	55,216	.....	.....	.....	.....	.....	.....	4,013	.....	.....	.....	23
.....	1,292	-8.4	.....	.....	.....	.....	.....	.....	39.5	.....	.....	.....	24
.....	105,903	.....	256	509	500	121,506	910	362	5,994	332	521	344	25
.....	112,458	.....	.....	.....	.....	.....	.....	.....	4,267	.....	.....	.....	26
.....	100,588	.....	.....	.....	.....	.....	.....	.....	4,928	.....	.....	.....	27
201	1,353	26,941	31	186	147	117,004	375	54	1,452	129	272	149	28
.....	457	25,152	.....	.....	.....	.....	.....	.....	1,011	.....	.....	.....	29
778	4,083	105,122	230	509	465	62,855	787	362	5,737	332	473	314	30
.....	1,285	111,077	.....	.....	.....	.....	.....	.....	4,267	.....	.....	.....	31
.....	70,645	.....	.....	.....	.....	.....	.....	.....	4,700	.....	.....	.....	32
.....	217.7	-5.4	.....	.....	.....	.....	.....	.....	34.4	.....	.....	.....	33
194	1,205	25,160	5	186	112	58,353	252	54	1,195	129	224	119	34
.....	450	23,771	.....	.....	.....	.....	.....	.....	1,011	.....	.....	.....	35
8.7	14.6	32.9	2.2	26.2	10.4	13.9	5.3	21.3	15.1	0.5	7.8	8.2	36
.....	14.5	47.2	.....	.....	.....	.....	.....	.....	32.0	.....	.....	.....	37
75.1	70.5	76.1	97.6	63.5	75.9	7.2	68.0	85.1	79.2	61.1	52.6	62.1	38
.....	65.0	76.6	.....	.....	.....	.....	.....	.....	76.3	.....	.....	.....	39
25,242	56,298	4,086,708	6,290	4,130	10,200	5,776,493	11,560	8,313	149,373	2,764	4,033	4,610	40
26,132	56,292	4,086,280	6,240	4,080	10,200	5,768,798	11,550	8,235	147,290	2,744	3,981	4,565	41
110	6	8,428	50	50	.....	7,695	10	78	2,083	20	52	45	42
.....	18,080	3,804,028	.....	.....	.....	.....	.....	.....	107,550	.....	.....	.....	43
.....	211.4	2,502,018	.....	.....	.....	.....	.....	.....	74,450	.....	.....	.....	44
.....	32.44	7.7	.....	.....	.....	.....	.....	.....	38.9	.....	.....	.....	45
.....	13.79	38.97	27.35	8.11	21.94	91.90	14.69	22.96	26.04	8.33	8.53	14.68	46
.....	14.07	34.25	.....	.....	.....	.....	.....	.....	25.21	.....	.....	.....	47
.....	.....	35.42	.....	.....	.....	.....	.....	.....	15.84	.....	.....	.....	48
43.22	19.56	51.23	27.96	12.79	28.90	1,283.09	21.61	26.99	32.89	13.62	16.20	23.64	49
28,312	56,648	4,113,768	6,290	4,180	10,700	7,371,430	11,828	8,313	151,643	2,764	4,073	4,650	50
.....	18,080	3,804,528	.....	.....	.....	.....	.....	.....	109,850	.....	.....	.....	51
.....	.....	3,029,213	.....	.....	.....	.....	.....	.....	75,450	.....	.....	.....	52
.....	213.3	8.1	.....	.....	.....	.....	.....	.....	38.0	.....	.....	.....	53
36.07	13.39	38.84	24.57	8.21	21.40	60.67	13.00	22.96	25.30	8.33	7.82	13.52	54
.....	13.99	33.83	.....	.....	.....	.....	.....	.....	25.74	.....	.....	.....	55
.....	.....	30.12	.....	.....	.....	.....	.....	.....	15.31	.....	.....	.....	56
16	55	42	4	3	6	3	51	17	6	50	3	7	10
584	2,626	78,412	41,734	225	318	353	4,502	505	308	4,542	12	179	193
3,025	7,413	77,019	31,609	670	718	760	9,307	2,225	661	9,630	71	507	838
5.18	2.82	0.98	0.76	2.98	2.26	2.15	2.07	4.41	2.15	2.12	5.92	2.83	3.37
.....	4.34	1.47	.....	.....	.....	.....	.....	.....	.....	2.21	.....	.....	.....
.....	.....	153,738	31,077	.....	.....	.....	2,070	.....	.....	4,500	.....	.....	.....
.....	.....	2.03	0.75	.....	.....	.....	0.76	.....	.....	1.58	.....	.....	.....
.....	.....	94,888	41,539	.....	.....	.....	2,724	.....	.....	2,850	.....	.....	.....
.....	.....	1.62	0.75	.....	.....	.....	0.76	.....	.....	.....	.....	.....	.....
.....	.....	124,543	.....	.....	.....	.....	4,655	.....	.....	5,100	.....	.....	.....
.....	.....	2,144,855	.....	.....	.....	.....	3,930,983	.....	.....	.....	.....	.....	.....
14	56	35	4	3	7	3	48	18	6	41	1	11	9
578	2,683	76,021	41,734	225	323	353	4,492	535	308	4,542	(³)	103	249
1,254	3,552	149,989	22,424	244	268	241	6,567	580	457	11,278	(³)	133	185
2.2	1.3	2.0	0.5	1.1	0.8	0.7	1.5	1.1	1.5	2.5	(³)	1.3	0.7
4.93	2.83	2.08	0.76	2.98	2.26	2.15	1.72	4.41	2.15	2.05	(³)	5.53	3.37
.....	.....	3	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....
.....	.....	34,947	.....	.....	.....	.....	.....	.....	(³)	(³)	.....	.....	.....
.....	.....	28,616	.....	.....	.....	.....	.....	.....	(³)	(³)	.....	.....	.....
.....	.....	4,164	.....	.....	.....	.....	.....	.....	(³)	(³)	.....	.....	.....
.....	.....	400	.....	.....	.....	.....	.....	.....	(³)	(³)	.....	.....	.....

³Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NEBRASKA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	Scotts Bluff		Seward		Sheridan		Sherman		Sioux	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a										
1 All farms.....	1940..number.....	1,900	2,076	1,236	1,167	699				
2	1930..number.....	1,793	2,132	1,303	1,466	785				
3 Irrigated farms.....	1940..number.....	1,719	26	40	70	261				
4	1930..number.....	1,609			2	275				
5	Increase or decrease (-), 1930-1940.....	6.8			(¹)	-5.1				
6	Operated by—(a) Owners and managers.....	721	14	38	31	133				
7	1930..number.....	719				153				
8	(b) Tenants.....	998	12	2	39	128				
9	1930..number.....	890				122				
10	Land in all farms.....	2 468,032	359,551	1,646,802	1,341,042	1,143,861				
11	Land in irrigated farms.....	343,029	3,774	210,939	19,875	260,460				
12	Average per farm.....	200	145	5,273	284	998				
13	(a) Operated by owners and managers.....	185,842	2,488	(³)	9,436	197,810				
14	Average per farm.....	258	178	(³)	304	1,487				
15	(b) Operated by tenants.....	157,187	1,286	(³)	10,439	62,641				
16	Average per farm.....	158	107	(³)	268	489				
17	Approximate land area.....	464,640	366,080	1,578,240	364,800	1,320,320				
IRRIGATED AND IRRIGABLE AREAS										
18	Area irrigated.....	200,468	499	429	2,034	32,824				
19	(a) Cropland harvested.....	192,432	477	279	2,010	30,964				
20	(b) Crop failure.....	918		150		209				
21	(c) Pasture.....	7,118	22		24	1,651				
22	Area irrigated.....	193,816				25,578				
23	1919.....	173,245				29,796				
24	Increase or decrease (-), 1929-1939.....	3.4				28.3				
25	Irrigable area in enterprises.....	222,195	1,115	1,179	15,047	43,375				
26	1930.....	223,182				36,976				
27	1920 ⁴	251,647				47,307				
28	Excess of irrigable area over the area irrigated.....	21,727	616	750	13,013	10,551				
29	1930.....	29,366				11,398				
30	Area works were capable of supplying with water.....	222,184	947	974	12,536	41,622				
31	1930.....	219,252				36,575				
32	1920.....	196,229				39,793				
33	Increase or decrease (-), 1930-1940.....	1.3				13.8				
34	Excess, capability of works over area irrigated.....	21,716	448	545	10,502	8,798				
35	1930.....	25,436				10,997				
36	Proportion which area irrigated is of all lands in irrigated farms.....	58.4	13.2	0.2	10.2	12.6				
37	1929.....	68.5				13.6				
38	Proportion which area irrigated is of area works were capable of supplying with water.....	90.2	52.7	44.0	16.2	78.9				
39	1929.....	88.4				69.9				
CAPITAL INVESTED TO JANUARY 1										
40	Total investment in all enterprises.....	12,660,249	6,275	10,180	577,218	2,692,600				
41	(a) Cost of irrigation works and equipment.....	12,603,898	6,165	10,170	577,061	2,689,857				
42	(b) Investment in water rights (reported).....	56,351	110	10	157	2,743				
43	Total investment in all enterprises.....	11,960,785				1,595,659				
44	1920.....	7,037,085				1,978,842				
45	Increase or decrease (-), 1930-1940.....	5.8				68.7				
46	Average investment, based on area works were capable of supplying with water, per acre.....	56.98	6.63	10.45	46.04	61.69				
47	1930.....	54.55				43.63				
48	1920.....	35.86				49.73				
49	Average investment per acre irrigated.....	63.15	12.58	23.73	283.78	82.03				
50	Estimated final investment in existing enterprises.....	12,676,939	6,350	10,680	592,468	2,704,035				
51	1930.....	11,967,485				1,595,659				
52	1920.....	9,585,622				2,727,029				
53	Increase or decrease (-), 1930-1940.....	5.9				69.5				
54	Average investment, based on estimated final investment and irrigable area, per acre.....	57.05	5.70	9.06	39.37	62.34				
55	1930.....	53.62				43.15				
56	1920 ⁴	38.09				57.64				
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS										
		Primary		Supplemental		Primary		Supplemental		
		Enterprises				Enterprises				
57	Enterprises reporting maintenance and operation.....	40	81	21	10	5	46	5		
58	Area irrigated in these enterprises.....	200,179	59,963	404	429	2,034	32,779	861		
59	Cost of maintenance and operation.....	211,528	49,392	950	1,453	9,017	39,723	481		
60	Average cost, per acre irrigated.....	1.06	0.82	2.35	3.39	4.43	1.21	0.56		
61	1929.....	1.60					1.66			
62	Total annual charges (reported) ⁵	283,885	38,544			5,000	34,434			
63	Average annual charge per acre irrigated.....	1.43	0.70			2.50	1.30			
64	Area against which charges were assessed.....	207,107	55,063			2,000	26,488			
65	Average annual charge per acre assessed.....	1.37	0.70			2.50	1.30			
66	Total charges collected ⁵	232,329				6,566	9,828			
67	Indebtedness to December 31 (reported) ⁶	7,699,900				590,844	1,685,541			
WATER DELIVERED TO IRRIGATORS										
68	Enterprises reporting water delivered.....	39	74	15	10	5	35	4		
69	Area irrigated in these enterprises.....	193,673	59,884	443	429	2,034	32,104	861		
70	Water delivered in these enterprises.....	441,850	31,298	550	619	4,510	48,794	301		
71	Average water delivered per acre irrigated.....	2.3	0.5	1.2	1.4	2.2	1.5	0.3		
72	Average cost of water per acre irrigated.....	1.44	0.85	2.70	3.39	2.53	1.23	0.56		
DRAINAGE OF IRRIGATED LAND										
73	Enterprises reporting land drained or needing drainage.....	7		4		1	3			
74	Irrigable area in these enterprises.....	189,937		85		(³)	32,908			
75	Irrigated area in these enterprises.....	175,555		72		(³)	27,038			
76	Area for which drains have been installed.....	21,281		78		(³)	3,656			
77	Additional area needing drainage.....	5,792					1,279			

^aCensus of Agriculture. ¹Percent not shown when more than 1,000. ²The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county. ³Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census. ⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - NEBRASKA

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COUNTY TABLE I—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	Stanton	Thayer	Valley	Webster	York	All other counties ¹
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS *						
1 All farms.....1940..number.....	1,218	1,641	1,173	1,283	1,829	31,541
2 ..1930..number.....	1,225	1,713	1,300	1,535	1,959	32,970
3 Irrigated farms.....1940..number.....	14	7	198	14	14	61
4 ..1930..number.....	.....	.....	2	.....	3	1
5 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	(²)	.....	366.7	(²)
6 Operated by—(a) Owners and managers.....1940..number.....	8	3	78	10	10	40
7 ..1930..number.....	.....	.....	.....	.....	.....	62
8 (b) Tenants.....1940..number.....	6	4	120	4	4	21
9 ..1930..number.....	.....	.....	.....	.....	.....	26
10 Land in all farms.....1940..acres.....	265,141	355,007	349,986	350,021	360,814	9,965,810
11 Land in irrigated farms.....1940..acres.....	3,788	1,283	53,261	4,103	4,372	35,959
12 Average per farm.....1940..acres.....	271	185	269	293	312	589
13 (a) Operated by owners and managers.....1940..acres.....	2,648	737	22,853	3,130	3,546	27,216
14 Average per farm.....1940..acres.....	331	246	293	313	355	680
15 (b) Operated by tenants.....1940..acres.....	1,140	556	30,428	973	826	8,743
16 Average per farm.....1940..acres.....	190	139	254	243	206	416
17 Approximate land area.....1940..acres.....	275,940	369,280	364,800	368,000	369,280	10,104,960
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939..acres.....	453	118	9,288	384	456	702
19 (a) Cropland harvested.....1939..acres.....	339	118	9,288	334	450	694
20 (b) Crop failure.....1939..acres.....	15	.....	.....	50	.....	8
21 (c) Pasture.....1939..acres.....	99	.....	.....	.....	6	.....
22 Area irrigated.....1929..acres.....	.....	.....	.....	.....	.....	4,682
23 ..1919..acres.....	.....	.....	.....	.....	.....	5,180
24 Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	.....	.....	-85.0
25 Irrigable area in enterprises.....1940..acres.....	780	219	25,617	486	917	4,478
26 ..1930..acres.....	.....	.....	.....	.....	.....	8,215
27 ..1920 ³ ..acres.....	.....	.....	.....	.....	.....	20,510
28 Excess of irrigable area over the area irrigated.....1940..acres.....	327	101	16,329	102	461	3,776
29 ..1930..acres.....	.....	.....	.....	.....	.....	3,733
30 Area works were capable of supplying with water.....1940..acres.....	705	199	22,595	482	857	4,228
31 ..1930..acres.....	.....	.....	.....	.....	.....	7,118
32 ..1920..acres.....	.....	.....	.....	.....	.....	8,267
33 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	40.6
34 Excess, capability of works over area irrigated.....1940..acres.....	252	81	13,307	98	401	3,526
35 ..1930..acres.....	.....	.....	.....	.....	.....	2,436
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	12.0	9.1	17.4	9.4	10.4	2.0
37 ..1929..percent.....	.....	.....	.....	.....	.....	12.6
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	64.3	59.3	41.1	79.7	53.2	16.6
39 ..1929..percent.....	.....	.....	.....	.....	.....	65.8
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940..dollars.....	9,295	4,690	1,254,254	8,772	16,484	36,032
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	9,290	4,290	1,254,168	8,745	16,444	35,867
42 (b) Investment in water rights (reported).....1940..dollars.....	15	400	86	27	40	165
43 Total investment in all enterprises.....1930..dollars.....	.....	.....	.....	.....	.....	143,562
44 ..1920..dollars.....	.....	.....	.....	.....	.....	143,189
45 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	-74.9
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	13.18	23.57	55.51	18.20	19.23	8.52
47 ..1930..dollars.....	.....	.....	.....	.....	.....	20.17
48 ..1920..dollars.....	.....	.....	.....	.....	.....	17.32
49 Average investment per acre irrigated.....1939..dollars.....	20.52	39.75	135.04	22.84	36.15	51.33
50 Estimated final investment in existing enterprises.....1940..dollars.....	9,295	4,880	1,271,062	9,372	18,084	37,725
51 ..1930..dollars.....	.....	.....	.....	.....	.....	154,762
52 ..1920..dollars.....	.....	.....	.....	.....	.....	247,539
53 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	-75.6
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	11.92	22.28	49.62	19.28	19.72	8.43
55 ..1930..dollars.....	.....	.....	.....	.....	.....	18.64
56 ..1920 ³ ..dollars.....	.....	.....	.....	.....	.....	12.07
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
57 Enterprises reporting maintenance and operation.....1939..number.....	6	5	12	2	15	20
58 Area irrigated in these enterprises.....1939..acres.....	429	118	9,288	(⁴)	244	701
59 Cost of maintenance and operation.....1939..dollars.....	2,465	656	23,201	(⁴)	1,079	3,999
60 Average cost, per acre irrigated.....1939..dollars.....	5.75	5.56	2.50	(⁴)	4.42	5.70
61 ..1929..dollars.....	.....	.....	.....	.....	.....	3.69
62 Total annual charges (reported) ⁵.....1939..dollars.....	.....	.....	22,233	.....	.....	.....
63 Average annual charge per acre irrigated.....1939..dollars.....	.....	.....	2.50	.....	.....	.....
64 Area against which charges were assessed.....1939..acres.....	.....	.....	8,893	.....	.....	.....
65 Average annual charge per acre assessed.....1939..dollars.....	.....	.....	2.50	.....	.....	.....
66 Total charges collected ⁶.....1939..dollars.....	.....	.....	23,296	.....	.....	.....
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	.....	.....	853,377	.....	.....	.....
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939..number.....	7	5	12	2	12	19
69 Area irrigated in these enterprises.....1939..acres.....	453	118	9,288	(⁴)	379	702
70 Water delivered in these enterprises.....1939..acre-feet.....	1,159	143	22,289	(⁴)	894	932
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.6	1.2	2.4	(⁴)	2.4	1.3
72 Average cost of water per acre irrigated.....1939..dollars.....	5.75	5.56	2.64	(⁴)	4.51	5.70
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939..number.....	(⁴)	2	(⁴)	1	(⁴)	2
74 Irrigable area in these enterprises.....1939..acres.....	(⁴)	.....	(⁴)	.....	(⁴)	(⁴)
75 Irrigated area in these enterprises.....1939..acres.....	(⁴)	.....	(⁴)	.....	(⁴)	(⁴)
76 Area for which drains have been installed.....1939..acres.....	(⁴)	.....	(⁴)	.....	(⁴)	(⁴)
77 Additional area needing drainage.....1939..acres.....	(⁴)	.....	(⁴)	.....	(⁴)	(⁴)

¹Census of Agriculture. ²Data between census years not comparable (see headnote). ³Percent not shown when more than 1,000. ⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁵Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁶Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁷Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NEBRASKA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Adams	Antelope	Barmer	Boone	Box Butte	Brown
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	1,137,808,019	10,381,266	12,978,548	3,222,304	13,068,919	8,372,874	4,738,365
2	Land and buildings, irrigated farms.....dollars..	92,846,541	170,318	104,580	114,505	401,708	572,770	274,480
Operated by—								
3	(a) Owners and managers.....dollars..	54,397,486	147,363	73,130	114,505	286,458	506,770	156,840
4	(b) Tenants.....dollars..	38,449,055	22,955	31,450	.....	115,250	66,000	117,640
5	Average, land and buildings, per farm.....dollars..	13,430.72	17,031.80	7,470.00	28,626.25	18,259.45	21,213.70	6,862.00
6	per acre in farms.....dollars..	25.95	57.99	34.44	5.71	56.13	8.64	4.33
7	Buildings, irrigated farms reporting value.....number..	6,698	10	14	4	21	26	39
8	Total reported.....dollars..	17,318,057	56,663	36,450	13,000	98,500	99,650	49,175
9	Average, per irrigated farm reporting.....dollars..	2,585.56	5,666.30	2,603.57	3,250.00	4,690.48	3,832.69	1,260.90
10	per acre on all irrigated farms.....dollars..	4.84	19.29	12.00	0.65	13.76	1.50	0.78
11	Buildings, nonirrigated farms reporting value.....number..	109,366	1,384	1,898	287	1,604	739	669
12	Total reported.....dollars..	239,435,747	2,099,831	3,564,450	463,370	3,753,655	1,509,692	1,006,250
13	Average, per nonirrigated farm reporting.....dollars..	2,186.91	1,517.22	1,878.00	1,614.53	2,340.18	2,042.86	1,504.11
14	per acre on all nonirrigated farms.....dollars..	5.47	6.25	6.72	1.07	8.93	2.39	1.45
15	Implements and machinery, irrigated farms reporting value.....number..	6,597	10	14	4	22	27	39
16	Total reported.....dollars..	9,398,048	20,137	18,875	5,800	31,600	57,071	27,135
17	Average, per irrigated farm reporting.....dollars..	1,424.59	2,013.70	1,348.21	1,450.00	1,436.36	2,113.74	695.77
18	per acre on all irrigated farms.....dollars..	2.63	6.86	6.22	0.29	4.42	0.86	0.43
19	Implements and machinery, nonirrigated farms reporting value.....number..	106,087	1,361	1,798	284	1,532	756	641
20	Total reported.....dollars..	88,247,037	1,052,090	1,515,255	351,013	833,539	731,729	384,839
21	Average, per acre, on all nonirrigated farms.....dollars..	2.02	3.13	2.86	0.81	1.98	1.16	0.55
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940.....number.....	2,743	13	9	5	21	22	26
23	.....1930.....number.....	2,733	8	1	1	3	5	.....
24	.....1920.....number.....	470	.....	.....	.....	.....	5	.....
25	Average size of enterprise based on irrigable area.....1940.....acres.....	399	60	48	254	104	289	33
26	.....1930.....acres.....	1,041	.....	.....	.....	.....	748	.....
27	.....1920 ³.....acres.....	1,631	.....	.....	.....	.....	760	.....
28	Diversion dams.....1940.....number.....	351	.....	.....	4	.....	5	9
29	Main canals and laterals.....1940.....length, miles.....	3,331.3	24.0	.....	8.0	1.0	13.0	1.1
30	.....1930.....length, miles.....	3,465	.....	.....	.....	.....	30	.....
31	.....1920.....length, miles.....	3,325	.....	.....	.....	.....	25	.....
32	.....1940.....capacity, c.f.s. ⁴	14,256	4	15	17	45	27	19
33	.....1930.....capacity, c.f.s. ⁴	13,108	.....	.....	.....	.....	42	.....
34	.....1920.....capacity, c.f.s. ⁴	11,665	.....	.....	.....	.....	86	.....
35	Pipe lines ⁵.....1940.....length, miles.....	126.1	0.3	.....	.....	8.1	.....	0.1
36	Storage dams.....1940.....number.....	156	1	.....	2	.....	1	1
37	Reservoirs.....1940.....number.....	164	3	.....	2	.....	2	1
38	.....1930.....number.....	40	.....	.....	.....	.....	1	.....
39	.....1920.....number.....	59	.....	.....	.....	.....	.....	.....
40	.....1940.....capacity, acre-feet.....	2,306,159	10	.....	(¹)	.....	(¹)	(¹)
41	.....1930.....capacity, acre-feet.....	199,185	.....	.....	.....	.....	1,700	.....
42	.....1920.....capacity, acre-feet.....	197,890	.....	.....	.....	.....	.....	.....
43	Wells, flowing.....1940.....number.....	19	.....	.....	.....	.....	.....	.....
44	.....1930.....number.....	.....	.....	.....	.....	.....	.....	.....
45	.....1920.....number.....	.....	.....	.....	.....	.....	.....	.....
46	.....1940.....yield, g.p.m.....	370	.....	.....	.....	.....	.....	.....
47	.....1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
48	.....1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
49	Wells, pumped.....1940.....number.....	2,412	13	2	2	6	19	12
50	.....1930.....number.....	537	.....	.....	.....	.....	.....	.....
51	.....1920.....number.....	34	.....	.....	.....	.....	.....	.....
52	.....1940.....yield, g.p.m.....	2,053,184	8,100	(¹)	(¹)	4,650	18,300	9,830
53	.....1930.....yield, g.p.m.....	428,058	.....	.....	.....	.....	.....	.....
54	.....1920.....yield, g.p.m.....	24,701	.....	.....	.....	.....	.....	.....
55	Pumping plants.....1940.....number.....	2,664	16	9	2	24	19	17
56	.....1930.....number.....	610	.....	.....	.....	.....	.....	.....
57	.....1920.....number.....	51	.....	.....	.....	.....	.....	.....
58	Prime movers.....1940.....capacity, hp.....	53,572	462	184	(¹)	550	968	325
59	.....1930.....capacity, hp.....	10,991	.....	.....	.....	.....	.....	.....
60	.....1920.....capacity, hp.....	959	.....	.....	.....	.....	.....	.....
61	Pumps.....1940.....capacity, g.p.m.....	2,528,669	11,875	9,200	(¹)	23,420	18,400	12,385
62	.....1930.....capacity, g.p.m.....	536,752	.....	.....	.....	.....	.....	.....
63	.....1920.....capacity, g.p.m.....	73,666	.....	.....	.....	.....	.....	.....
64	Pumping lift, from all sources.....1940.....average, feet.....	32	42	25	(¹)	31	78	29
65	.....1930.....average, feet.....	29	.....	.....	.....	.....	.....	.....
66	.....1920.....average, feet.....	24	.....	.....	.....	.....	.....	.....
67	from pumped wells.....1940.....average, feet.....	34	60	(¹)	(¹)	56	78	39
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶								
68	Enterprises reporting pay roll.....number.....	72	.....	.....	.....	.....	.....	.....
69	Irrigated area in these enterprises.....acres.....	471,792	.....	.....	.....	.....	.....	.....
70	Wages and salaries paid and payable.....dollars..	308,746	.....	.....	.....	.....	.....	.....
71	Persons employed during week ending April 29.....number..	688	.....	.....	.....	.....	.....	.....

* Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

² Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — NEBRASKA

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1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

irrigation data omitted from any of the counties listed are included under "All other counties"]

Buffalo	Butler	Chase	Cherry	Cheyenne	Clay	Colfax	Cuming	Custer	Dawes	Dawson	Deuel	Dodge	Douglas	Dundy	
15,835,833	21,731,576	7,788,391	20,102,596	13,338,478	11,750,818	14,305,137	23,900,506	22,888,456	8,053,619	22,928,580	6,415,959	25,064,200	19,531,285	6,902,308	1
4,749,068	163,650	473,070	1,308,460	2,616,444	75,400	580,225	224,060	873,971	1,370,204	14,752,217	1,090,920	741,265	357,800	634,837	2
2,420,569	129,050	405,270	1,187,215	1,653,158	(¹)	442,680	130,760	607,261	1,068,132	8,495,742	640,755	538,685	147,500	495,001	3
2,328,499	34,600	67,800	121,245	963,266	(¹)	137,545	93,300	266,710	304,072	6,256,475	450,165	202,580	210,300	139,836	4
10,324.06	13,637.50	22,527.14	42,208.39	12,169.51	15,080.00	17,582.58	14,003.75	9,931.49	17,566.72	16,966.57	15,151.67	25,560.86	14,908.33	14,763.65	5
50.35	59.64	8.31	5.52	14.58	34.16	64.75	69.07	18.13	11.35	53.81	34.26	101.72	137.77	14.79	6
438	11	19	29	211	5	32	14	88	75	835	72	27	24	43	7
885,989	30,500	65,050	97,051	446,123	17,700	97,900	42,900	198,325	261,450	2,340,471	215,725	174,550	107,300	131,549	8
2,022.83	2,772.73	3,423.68	3,346.59	2,114.33	3,540.00	3,059.38	3,064.29	2,253.69	3,486.00	2,802.96	2,996.18	6,464.81	4,470.83	3,059.28	9
9.39	11.12	1.14	0.41	2.49	8.02	10.83	13.22	4.11	2.17	8.54	6.78	23.95	41.32	3.07	10
1,761	1,801	673	1,127	833	1,463	1,338	1,809	3,245	711	992	381	1,710	1,698	590	11
2,640,335	4,004,055	1,345,275	2,294,586	1,859,153	1,980,895	3,467,336	6,575,910	5,594,951	1,295,980	1,669,996	783,250	5,169,333	5,164,230	1,020,472	12
1,499.34	2,223.24	1,998.92	2,036.01	2,231.88	1,354.00	2,591.43	3,635.11	1,724.18	1,822.76	1,683.46	2,055.77	3,034.70	3,041.36	1,729.61	13
5.30	11.04	2.75	0.69	3.24	5.57	14.17	18.41	3.44	1.77	5.10	3.19	16.23	30.68	1.95	14
439	11	20	30	210	4	32	14	87	72	840	72	26	22	42	15
487,274	17,200	30,250	49,714	265,530	8,750	59,220	15,950	84,310	97,170	1,253,206	110,454	59,120	19,310	51,878	16
1,109.96	1,563.64	1,512.50	1,657.13	1,264.43	2,187.50	1,850.62	1,139.29	969.08	1,349.58	1,491.91	1,534.08	2,273.85	877.73	1,235.19	17
5.17	6.27	0.53	0.21	1.48	3.96	6.61	4.92	1.75	0.80	4.57	3.47	8.11	7.44	1.21	18
1,693	1,728	664	1,057	881	1,436	1,285	1,805	3,150	687	926	403	1,677	1,577	563	19
978,493	1,406,844	810,769	1,060,530	1,182,116	1,072,407	1,165,407	2,029,299	2,061,623	601,851	720,449	672,345	1,732,692	1,092,125	669,139	20
1.96	3.88	1.66	0.32	2.06	3.01	4.76	5.68	1.27	0.82	2.20	2.73	5.42	6.49	1.28	21
464	16	11	21	60	5	30	12	38	39	486	58	30	3	13	22
175	.....	4	1	18	3	2	.....	4	23	55	34	.....	.....	4	23
4	.....	13	.....	36	.....	.....	.....	.....	88	13	21	.....	.....	12	24
99	69	293	116	100	70	88	52	300	545	425	183	50	170	510	25
190	.....	534	.....	150	.....	.....	.....	.....	669	3,160	242	.....	.....	1,368	26
1,605	.....	345	.....	166	.....	.....	.....	.....	276	10,893	626	.....	.....	1,176	27
3	1	12	30	34	.....	.....	.....	4	39	4	11	.....	.....	6	28
31.0	.....	42.0	15.0	21.4	.....	1.0	1.0	69.5	89.0	301.8	13.0	.....	2.3	28.0	29
47	.....	18	.....	27	.....	.....	.....	.....	88	465	32	.....	.....	17	30
16	.....	40	.....	94	.....	.....	.....	.....	231	191	74	.....	.....	62	31
468	7	68	55	65	11	80	25	432	241	1,251	35	15	.....	78	32
600	.....	31	.....	21	.....	.....	.....	.....	111	2,575	33	.....	.....	77	33
160	.....	107	.....	78	.....	.....	.....	.....	282	1,145	296	.....	.....	203	34
.....	0.1	1.2	.....	1.4	0.3	0.3	.....	2.7	18.8	33.5	0.5	2.4	.....	0.3	35
31	.....	1	3	3	.....	.....	.....	.....	8	48	.....	.....	1	3	36
31	.....	1	3	4	.....	.....	.....	.....	9	45	.....	.....	1	1	37
1	.....	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....	.....	.....	38
2	.....	2	.....	4	.....	.....	.....	.....	17	.....	2	.....	.....	.....	39
454	.....	(¹)	41	87	.....	.....	.....	.....	14,570	517	.....	(¹)	(¹)	.....	40
48	.....	.....	.....	.....	.....	.....	.....	.....	12,000	349	1	.....	.....	.....	41
860	.....	152	.....	95	.....	.....	.....	.....	1,302	.....	3	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
587	15	3	.....	40	1	12	2	10	3	483	56	26	10	4	49
205	.....	1	.....	4	.....	.....	.....	.....	.....	33	19	.....	.....	.....	50
1	.....	1	.....	.....	.....	.....	.....	.....	2	8	2	.....	.....	.....	51
477,350	13,200	3,700	.....	30,117	(¹)	6,905	(¹)	7,900	135	440,550	58,835	24,020	5,600	4,550	52
160,664	.....	2,480	.....	5,300	.....	.....	.....	.....	.....	23,855	15,950	.....	.....	.....	53
450	.....	300	.....	.....	.....	.....	.....	.....	2,200	3,901	2,450	.....	.....	.....	54
537	15	4	1	47	5	33	12	36	6	478	56	31	10	5	55
221	.....	1	.....	6	.....	.....	.....	.....	.....	50	20	.....	.....	.....	56
3	.....	2	.....	.....	.....	.....	.....	.....	3	9	4	.....	.....	.....	57
9,161	295	163	(¹)	984	125	611	238	703	66	10,016	966	591	97	140	58
3,484	.....	20	.....	83	.....	.....	.....	.....	.....	847	337	.....	.....	.....	59
18	.....	40	.....	.....	.....	.....	.....	.....	53	97	78	.....	.....	.....	60
483,750	15,805	5,500	(¹)	34,817	5,500	34,805	13,100	33,200	2,935	472,285	60,485	29,270	5,609	5,370	61
174,564	.....	2,480	.....	5,300	.....	.....	.....	.....	.....	48,005	24,950	.....	.....	.....	62
836	.....	6,300	.....	.....	.....	.....	.....	.....	4,000	5,430	8,182	.....	.....	.....	63
26	35	48	(¹)	63	41	26	20	33	36	35	21	19	42	55	64
30	.....	18	.....	46	.....	.....	.....	.....	.....	18	28	.....	.....	.....	65
23	.....	19	.....	.....	.....	.....	.....	.....	.....	25	36	.....	.....	.....	66
27	38	56	.....	63	(¹)	32	(¹)	51	21	36	21	19	42	65	67
(¹)	1	(¹)	.....	.....	.....	.....	.....	(¹)	1	(¹)	7	(¹)	2	(¹)	68
(¹)	.....	(¹)	.....	.....	.....	.....	.....	(¹)	(¹)	51,440	(¹)	.....	.....	(¹)	69
(¹)	.....	(¹)	.....	.....	.....	.....	.....	(¹)	(¹)	23,909	(¹)	.....	.....	(¹)	70
(¹)	.....	(¹)	.....	.....	.....	.....	.....	(¹)	(¹)	45	(¹)	.....	.....	(¹)	71

¹ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

² Includes siphons and farm pipe lines reported.

³ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - NEBRASKA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Fillmore	Franklin	Frontier	Furnas	Gage	Garden	Garfield	Gosper
FARM VALUES, 1940*									
1	Land and buildings, all farms.....dollars..	14,754,247	7,075,083	8,710,090	9,124,631	31,436,597	9,320,180	2,796,272	6,113,952
2	Land and buildings, irrigated farms.....dollars..	53,036	245,865	224,100	276,300	173,140	1,881,522	586,560	313,921
Operated by—									
3	(a) Owners and managers.....dollars..	(¹)	161,200	224,100	170,800	(¹)	1,404,114	257,750	263,161
4	(b) Tenants.....dollars..	(¹)	84,635	.....	105,500	(¹)	477,408	328,800	50,700
5	Average, land and buildings, per farm.....dollars..	14,509.00	11,175.68	22,410.00	16,252.94	15,740.00	10,081.38	10,280.35	24,147.77
6	per acre in farms.....dollars..	76.56	30.20	20.68	33.23	30.74	9.62	31.95	36.75
7	Buildings, irrigated farms reporting value.....number..	4	22	10	16	10	115	51	13
8	Total reported.....dollars..	27,383	53,632	54,500	46,700	19,600	278,858	114,700	60,291
9	Average, per irrigated farm reporting.....dollars..	6,845.50	2,438.73	5,450.00	2,918.75	1,960.00	2,424.85	2,249.02	4,637.77
10	per acre on all irrigated farms.....dollars..	36.13	6.59	5.03	5.62	10.27	1.43	6.19	7.06
11	Buildings, nonirrigated farms reporting value.....number..	1,671	1,065	1,109	1,236	2,730	523	424	715
12	Total reported.....dollars..	2,944,420	1,490,336	1,888,560	2,077,304	6,902,673	1,016,952	564,000	1,171,407
13	Average, per nonirrigated farm reporting.....dollars..	1,762.07	1,374.13	1,702.94	1,680.67	2,528.45	1,944.46	1,330.33	1,638.33
14	per acre on all nonirrigated farms.....dollars..	8.23	4.37	3.11	4.69	13.02	1.14	1.64	4.37
15	Implements and machinery, irrigated farms reporting value.....number..	4	21	10	17	11	113	54	13
16	Total reported.....dollars..	8,525	30,272	15,300	23,945	8,250	115,122	52,350	24,818
17	Average, per irrigated farm reporting.....dollars..	2,131.25	1,441.52	1,530.00	1,408.53	750.00	1,018.78	969.44	1,903.08
18	per acre, on all irrigated farms.....dollars..	11.25	3.72	1.41	2.88	4.32	0.59	2.82	2.91
19	Implements and machinery, nonirrigated farms reporting value.....number..	1,677	992	1,048	1,455	2,640	515	396	378
20	Total reported.....dollars..	1,250,492	580,184	830,213	881,082	2,246,008	559,572	185,241	514,725
21	Average, per acre, on all nonirrigated farms.....dollars..	3.49	1.70	1.37	1.99	4.24	0.63	0.54	1.32
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
22	Enterprises.....1940.....number.....	3	17	5	25	10	22	4	15
23	.....1930.....number.....	1	12	.....	7	2	19	1	1
24	.....1920.....number.....	.....	.....	.....	.....	.....	31	.....	.....
25	Average size of enterprise based on irrigable area.....1940.....acres.....	70	89	52	55	48	902	1,231	513
26	.....1930.....acres.....	.....	.....	.....	.....	.....	1,480	.....	.....
27	.....1920 ².....acres.....	.....	.....	.....	.....	.....	862	.....	.....
28	Diversion dams.....1940.....number.....	.....	6	.....	.....	1	10	1	1
29	Main canals and laterals.....1940.....length, miles.....	.....	5.0	.....	.....	2.0	71.1	12.1	51.2
30	.....1930.....length, miles.....	.....	.....	.....	.....	.....	143	.....	.....
31	.....1920.....length, miles.....	.....	.....	.....	.....	.....	165	.....	.....
32	.....1940.....capacity, c.f.s. ³.....	.....	46	13	33	20	275	159	1,537
33	.....1930.....capacity, c.f.s. ³.....	.....	.....	.....	.....	.....	525	.....	.....
34	.....1920.....capacity, c.f.s. ³.....	.....	.....	.....	.....	.....	480	.....	.....
35	Pipe lines ⁴.....1940.....length, miles.....	.....	0.3	0.2	.....	1.6	0.1	0.9	2.3
36	Storage dams.....1940.....number.....	.....	1	.....	.....	1	1	.....	.....
37	Reservoirs.....1940.....number.....	.....	1	.....	.....	1	1	.....	.....
38	.....1930.....number.....	.....	.....	.....	.....	.....	1	.....	.....
39	.....1920.....number.....	.....	.....	.....	.....	.....	2	.....	.....
40	.....1940.....capacity, acre-feet.....	.....	(⁴)	.....	.....	(⁴)	(⁴)	.....	.....
41	.....1930.....capacity, acre-feet.....	.....	.....	.....	.....	.....	100,000	.....	.....
42	.....1920.....capacity, acre-feet.....	.....	.....	.....	.....	.....	100,000	.....	.....
43	Wells, flowing.....1940.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
44	.....1930.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
45	.....1920.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
46	.....1940.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
47	.....1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
48	.....1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
49	Wells, pumped.....1940.....number.....	3	16	.....	14	1	8	1	14
50	.....1930.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
51	.....1920.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
52	.....1940.....yield, g.p.m.....	1,900	10,690	.....	10,700	(⁴)	9,010	(⁴)	14,550
53	.....1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
54	.....1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
55	Pumping plants.....1940.....number.....	3	15	5	25	11	8	4	10
56	.....1930.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
57	.....1920.....number.....	.....	.....	.....	.....	.....	3	.....	.....
58	Prime movers.....1940.....capacity, hp.....	100	337	121	522	250	169	111	446
59	.....1930.....capacity, hp.....	.....	.....	.....	.....	.....	.....	.....	.....
60	.....1920.....capacity, hp.....	.....	.....	.....	.....	.....	84	.....	.....
61	Pumps.....1940.....capacity, g.p.m.....	1,950	15,510	5,310	21,650	8,310	9,010	7,300	16,300
62	.....1930.....capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
63	.....1920.....capacity, g.p.m.....	.....	.....	.....	.....	.....	5,500	.....	.....
64	Pumping lift, from all sources.....1940.....average, feet.....	125	42	23	30	43	26	30	41
65	.....1930.....average, feet.....	.....	.....	.....	.....	.....	.....	.....	.....
66	.....1920.....average, feet.....	.....	.....	.....	.....	.....	9	.....	.....
67	from pumped wells.....1940.....average, feet.....	125	49	.....	42	(⁴)	26	(⁴)	33
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁵									
68	Enterprises reporting pay roll.....number.....	.....	.....	.....	.....	.....	9	1	.....
69	Irrigated area in these enterprises.....acres.....	.....	.....	.....	.....	.....	8,849	(⁴)	.....
70	Wages and salaries paid and payable.....dollars..	.....	.....	.....	.....	.....	3,718	(⁴)	.....
71	Persons employed during week ending April 29.....number..	.....	.....	.....	.....	.....	37	(⁴)	.....

* Census of Agriculture.

¹Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — NEBRASKA

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"]

Greeley	Hall	Hamilton	Harlan	Hayes	Hitchcock	Holt	Howard	Jefferson	Kearney	Keith	Kimball	Lincoln	Loup	Madison	
6,542,161 186,555	12,527,993 2,803,931	12,357,039 267,380	7,732,667 325,895	5,830,185 166,250	7,495,284 1,370,615	15,323,098 66,810	8,312,642 158,000	15,003,755 46,200	10,953,798 1,343,885	11,769,663 3,323,795	5,659,851 1,121,635	17,851,517 4,371,452	2,225,320 593,620	15,492,115 331,600	1 2
83,280 83,295 8,327.75 27.23	1,603,181 1,200,740 12,034.04 46.88	(1) (1) 29,708.89 75.02	203,815 122,080 16,518.81 30.88	117,800 48,850 11,875.00 16.25	983,295 387,320 12,022.94 25.07	(1) (1) 11,135.00 12.11	89,350 98,650 8,173.91 24.94	(1) (1) 11,550.00 34.48	719,200 624,685 14,146.16 36.93	2,307,345 1,016,450 23,407.01 13.71	760,035 361,900 15,364.86 12.33	2,504,857 1,865,595 13,660.79 32.24	372,020 221,600 11,872.40 17.48	220,300 111,300 13,816.67 49.54	3 4 5 6
19 36,790 1,936.32 6.02 889 1,492,415 1,678.76 4.40	223 557,665 2,500.74 9.08 1,254 2,358,076 1,880.44 8.88	9 73,900 8,211.11 20.74 1,557 2,655,191 1,705.32 7.96	21 76,550 3,645.24 7.21 1,040 1,674,613 1,610.20 4.95	13 35,250 2,711.54 3.45 517 1,098,945 2,125.62 2.68	113 227,625 2,014.38 4.16 667 1,137,450 1,705.32 2.86	6 14,800 2,466.67 2.68 2,262 3,747,550 1,656.74 2.64	21 48,800 2,323.81 6.47 1,347 2,765,445 2,053.04 8.38	4 10,100 2,525.00 7.54 1,565 3,589,070 2,291.62 10.32	88 187,020 2,125.23 5.14 994 1,340,769 1,650.67 5.80	141 465,650 3,302.48 1.92 543 1,431,401 2,636.10 3.13	71 206,035 2,901.90 2.26 370 697,960 1,866.38 1.47	300 860,722 2,869.07 6.35 1,577 2,587,165 1,640.56 1.97	49 123,850 2,527.55 3.65 254 366,625 1,443.41 1.29	23 106,500 4,630.43 15.91 1,804 4,262,220 2,362.65 12.16	7 8 9 10 11 12 13
17 16,839 990.53 2.75	228 261,335 1,156.36 4.26	7 27,920 3,988.57 7.83	19 38,850 2,044.74 3.66	13 18,950 1,457.89 1.85	109 150,220 1,378.17 2.75	6 3,702 617.00 0.87	23 16,590 721.30 2.20	4 3,000 750.00 2.24	89 107,060 1,202.92 2.94	138 252,178 1,827.38 1.04	70 133,706 1,910.09 1.47	298 466,564 1,555.65 3.44	47 58,450 1,243.62 1.72	22 39,465 1,793.86 5.90	15 16 17 18
812 462,050 1.36	1,227 792,428 3.02	1,507 1,159,041 3.47	954 808,349 2.39	518 637,473 1.50	651 676,823 1.70	2,143 1,461,524 1.03	1,289 777,888 2.36	1,555 1,358,923 3.91	960 795,923 2.81	537 799,371 1.75	400 598,315 1.26	1,525 1,198,967 0.91	250 149,244 0.53	1,676 1,350,951 3.86	19 20 21
5 1	257 92	6 1	19 13	11 7	15 7	3 3	16 1	5 1	42 19	82 28	40 18	157 21	5 1	16 1	22 23
281 9.0	69 0.2	260	77 3.2	93 8.0	775 42.0	16 3.0	52 1.0	33 1.0	958 100.4	275 91.2	230 43.1	329 199.1	1,327 35.1	49	24
11 0.1	2 0.5	20 0.8	28 0.1	156 1.6	33 1.3	2 0.5	40 1.3	8 0.5	2,595 0.1	151 1.4	75 1.7	114 0.8	271 1.4	25 1.5	25
3 65	301 6,161 2,860	10 606	21 475	12 312	14 486	2 (1)	19 368	5 155	43 1,017	87 1,746	34 1,024	160 2,901	3 92	16 389	55
3,580 29	276,630 109,529	10,805	18,375	16,600	16,810	(1)	19,435	5,650	45,490	79,570	28,272	156,698	4,000	14,350	56
33 36 33	33 36 77	77 32 36	32 35 50	35 38 10 56	51 38 10 (1)	(1) (1) (1)	33 33 41	17 29 33	33 29 21 33	38 21 13 38	64 29 35 64	27 29 35 (1)	44 25 25 37	25 63 64 65 66 67	
(1) (1) (1)					(1) (1) (1)				(1) (1) (1)	11,373 3,096 2	(1) (1) (1)	35,713 12,773 64	(1) (1) (1)		68 69 70 71

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁴Includes siphons and farm pipe lines reported.

⁵Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — NEBRASKA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Merrick	Morrill	Nance	Nuckolls	Perkins	Phelps	Platte	Polk	Red Willow
FARM VALUES, 1940^a									
1 Land and buildings, all farms.....dollars..	11,362,177	9,107,910	8,097,524	9,938,123	9,705,440	13,067,534	20,119,434	13,253,753	7,938,200
2 Land and buildings, irrigated farms.....dollars..	982,014	4,958,759	334,715	62,360	47,480	1,546,805	588,106	86,125	1,139,265
Operated by—									
3 (a) Owners and managers.....dollars..	541,040	2,401,064	240,295	(²)	35,800	845,685	260,606	(²)	734,115
4 (b) Tenants.....dollars..	440,974	2,557,695	94,420	(²)	10,680	701,120	327,500	(²)	405,150
5 Average, land and buildings, per farm.....dollars..	11,831.49	8,404.68	23,908.21	10,393.33	15,826.67	15,438.05	12,784.91	17,225.00	13,725.08
6 per acre in farms.....dollars..	49.67	20.39	33.01	50.62	13.96	47.92	58.32	59.60	37.87
7 Buildings, irrigated farms reporting value.....number..	83	583	14	6	3	97	45	5	80
8 Total reported.....dollars..	315,500	1,002,050	72,465	13,600	10,500	282,990	130,740	21,980	211,300
9 Average, per irrigated farm reporting.....dollars..	3,801.20	1,718.78	5,176.07	2,266.67	3,500.00	2,917.42	2,905.33	4,396.00	2,678.75
10 per acre on all irrigated farms.....dollars..	15.96	4.12	7.15	11.04	3.09	8.77	12.97	15.21	7.12
11 Buildings, nonirrigated farms reporting value.....number..	1,132	396	932	1,327	787	999	1,971	1,344	907
12 Total reported.....dollars..	2,605,825	660,410	1,645,355	2,006,170	1,534,921	2,114,265	5,302,695	3,059,868	1,473,600
13 Average, per nonirrigated farm reporting.....dollars..	2,301.97	1,667.70	1,765.40	1,511.81	1,950.34	2,116.38	2,690.36	2,276.69	1,624.70
14 per acre on all nonirrigated farms.....dollars..	9.91	1.23	6.27	5.80	2.92	7.17	12.88	11.38	3.65
15 Implements and machinery, irrigated farms reporting value.....number..	81	570	13	6	3	98	45	5	80
16 Total reported.....dollars..	116,447	705,614	20,611	7,950	11,200	111,635	40,015	10,350	85,725
17 Average, per irrigated farm reporting.....dollars..	1,437.62	1,237.92	1,585.46	1,325.00	3,733.33	1,139.13	889.22	2,070.00	1,071.56
18 per acre, on all irrigated farms.....dollars..	5.89	2.90	2.03	6.45	3.29	3.46	3.97	7.16	2.85
19 Implements and machinery, nonirrigated farms reporting value.....number..	1,103	393	879	1,301	811	962	1,930	1,321	868
20 Total reported.....dollars..	815,605	362,525	575,777	863,247	1,209,867	908,586	1,550,918	1,167,321	693,702
21 Average, per acre, on all nonirrigated farms.....dollars..	3.10	0.67	2.20	2.49	2.30	3.06	3.77	4.34	1.72
ENTERPRISES AND IRRIGATION WORKS									
JANUARY 1									
22 Enterprises.....1940.....number.....	62	48	3	7	3	51	18	6	53
23 ..1930.....number.....	16	24	.....	4	.....	8	4	1	12
24 ..1920.....number.....	.....	48	.....	.....	.....	.....	.....	.....	9
25 Average size of enterprise based on									
irrigable area.....1940.....acres.....	68	2,206	85	73	167	2,382	51	60	113
26 ..1930.....acres.....	81	4,686	.....	.....	.....	.....	.....	.....	356
27 ..1920 ^b.....acres.....	.....	2,096	.....	.....	.....	.....	.....	.....	548
28 Diversion dams.....1940.....number.....	.....	32	.....	.....	.....	.....	1	2	1
29 Main canals and laterals.....1940.....length, miles.....	.....	454.5	.....	.....	.....	152.1	.....	.....	16.0
30 ..1930.....length, miles.....	.....	666	.....	.....	.....	.....	.....	.....	19
31 ..1920.....length, miles.....	.....	568	.....	.....	.....	.....	.....	.....	29
32 ..1940.....capacity, c.f.s. ⁴	4	907	12	13	.....	3	10	8	78
33 ..1930.....capacity, c.f.s. ⁴.....	.....	2,008	.....	.....	.....	.....	.....	.....	92
34 ..1920.....capacity, c.f.s. ⁴.....	.....	1,386	.....	.....	.....	.....	.....	.....	66
35 Pipe lines ⁵.....1940.....length, miles.....	0.1	2.1	0.5	.....	.....	0.2	.....	0.1	0.3
36 Storage dams.....1940.....number.....	.....	3	.....	4	.....	.....	.....	.....	.....
37 Reservoirs.....1940.....number.....	2	3	.....	4	.....	.....	.....	.....	.....
38 ..1930.....number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39 ..1920.....number.....	.....	2	.....	.....	.....	.....	.....	.....	1
40 ..1940.....capacity, acre-feet.....	(²)	238	.....	284	.....	.....	.....	.....	.....
41 ..1930.....capacity, acre-feet.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42 ..1920.....capacity, acre-feet.....	.....	4	.....	.....	.....	.....	.....	.....	10
43 Wells, flowing.....1940.....number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44 ..1930.....number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
45 ..1920.....number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
46 ..1940.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
47 ..1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
48 ..1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
49 Wells, pumped.....1940.....number.....	77	13	.....	2	3	61	15	3	49
50 ..1930.....number.....	20	.....	.....	.....	.....	.....	.....	.....	14
51 ..1920.....number.....	.....	.....	.....	.....	.....	.....	.....	.....	11
52 ..1940.....yield, g.p.m.....	69,145	13,750	.....	(²)	3,900	54,814	8,905	2,250	34,330
53 ..1930.....yield, g.p.m.....	23,530	.....	.....	.....	.....	.....	.....	.....	11,030
54 ..1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	4,700
55 Pumping plants.....1940.....number.....	71	16	4	7	3	54	19	7	56
56 ..1930.....number.....	17	.....	.....	.....	.....	.....	.....	.....	11
57 ..1920.....number.....	.....	.....	.....	.....	.....	.....	.....	.....	7
58 Prime movers.....1940.....capacity, hp.....	1,320	416	92	107	142	838	264	138	1,125
59 ..1930.....capacity, hp.....	289	.....	.....	.....	.....	.....	.....	.....	263
60 ..1920.....capacity, hp.....	.....	.....	.....	.....	.....	.....	.....	.....	312
61 Pumps.....1940.....capacity, g.p.m.....	71,025	17,350	4,900	6,230	3,900	57,294	12,475	5,100	52,580
62 ..1930.....capacity, g.p.m.....	23,330	.....	.....	.....	.....	.....	.....	.....	14,550
63 ..1920.....capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	18,403
64 Pumping lift, from all sources.....1940.....average, feet.....	24	38	13	18	72	29	30	60	30
65 ..1930.....average, feet.....	16	.....	.....	.....	.....	.....	.....	.....	33
66 ..1920.....average, feet.....	.....	.....	.....	.....	.....	.....	.....	.....	28
67 from pumped wells.....1940.....average, feet.....	24	44	.....	(²)	72	30	36	96	34
PAY ROLL AND NUMBER OF EMPLOYEES									
1939^c									
68 Enterprises reporting pay roll.....number.....	.....	13	.....	.....	.....	1	.....	.....	1
69 Irrigated area in these enterprises.....acres.....	.....	75,442	.....	.....	.....	(²)	.....	.....	(²)
70 Wages and salaries paid and payable.....dollars.....	.....	50,168	.....	.....	.....	(²)	.....	.....	(²)
71 Persons employed during week ending April 29.....number.....	.....	156	.....	.....	.....	(²)	.....	.....	(²)

*Census of Agriculture.

¹Data between census years not comparable (see headnote).²Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - NEBRASKA

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Rock	Saline	Saunders	Scotts Bluff	Seward	Sheridan	Sherman	Sioux	Stanton	Thayer	Valley	Webster	York	All other counties ¹	
4,511,720	22,460,700	32,982,329	22,212,331	21,292,156	15,818,178	6,151,058	8,114,079	12,104,603	13,197,493	8,194,248	6,827,317	17,181,787	306,662,057	1
286,560	217,870	234,905	21,048,141	278,440	1,699,210	503,280	3,244,817	245,080	65,140	2,111,145	123,750	233,150	913,395	2
272,520	177,030	158,945	9,671,465	183,320	(²)	252,020	2,033,073	170,780	41,800	973,785	87,425	192,900	647,895	3
13,060	40,840	75,960	11,376,876	95,120	(²)	251,260	1,211,744	74,300	23,340	1,137,360	36,325	40,250	265,500	4
14,279.00	15,562.41	19,575.42	12,244.41	10,709.23	42,460.25	7,189.71	12,432.25	17,505.71	9,305.71	10,662.35	8,839.29	16,653.57	14,973.59	5
6.47	68.51	98.87	61.36	73.78	8.06	25.32	12.46	64.70	50.38	39.62	30.16	53.33	25.40	6
20	13	12	1,689	26	40	70	259	13	7	188	13	14	59	7
53,750	57,500	68,855	4,203,987	48,700	148,850	140,550	561,335	45,135	17,300	464,950	37,900	42,800	180,145	8
2,687.50	4,423.08	5,737.92	2,518.51	1,873.08	3,716.25	2,007.86	2,283.15	3,471.92	2,471.43	2,473.14	2,915.38	3,057.14	3,053.31	9
1.22	18.08	26.98	12.25	12.80	0.70	7.07	2.27	11.92	13.38	8.73	9.24	9.79	5.01	10
545	1,973	2,548	162	1,900	1,137	1,078	434	1,172	1,579	959	1,187	1,781	30,249	11
807,136	5,398,942	7,782,130	264,190	4,211,679	2,688,410	1,770,065	642,390	3,487,960	3,086,390	1,714,392	1,584,480	3,915,021	74,825,622	12
1,480.98	2,736.41	3,054.21	1,630.80	2,148.82	2,364.48	1,642.01	1,551.67	2,984.61	1,954.65	1,787.69	1,334.86	2,198.22	2,473.66	13
1.30	15.26	16.89	2.11	11.84	1.87	5.51	0.73	13.38	8.73	5.78	4.57	10.98	7.54	14
19	14	11	1,594	25	40	68	255	14	7	195	13	14	59	15
23,950	14,210	17,061	2,777,228	22,400	75,395	37,121	350,059	19,525	6,950	188,100	13,100	20,380	79,657	16
1,260.53	1,015.00	1,551.00	1,742.30	896.00	1,884.88	545.90	1,372.78	1,394.64	992.86	964.62	1,007.69	1,456.71	1,350.12	17
0.54	4.47	7.18	8.10	5.94	0.36	1.87	1.34	5.15	5.38	3.53	3.19	4.66	2.22	18
542	1,934	2,461	132	1,893	1,117	1,035	408	1,137	1,521	923	1,139	1,744	29,524	19
352,997	1,717,521	2,107,570	92,648	1,346,686	1,139,600	484,954	341,855	947,841	1,141,812	532,576	673,384	1,494,732	25,526,269	20
0.57	4.86	4.57	0.74	3.78	0.79	1.51	0.39	3.63	3.23	1.79	1.94	4.19	2.57	21
13	13	12	124	26	10	5	52	7	5	14	13	15	21	22
1	1	.....	26	.....	.....	2	34	.....	.....	1	1	2	4	23
.....	.....	.....	28	.....	.....	.....	54	.....	.....	.....	.....	.....	44	24
26	40	29	1,792	43	118	3,009	834	111	44	1,830	37	61	213	25
.....	.....	.....	8,584	.....	.....	.....	1,088	.....	.....	.....	.....	.....	.....	26
.....	.....	.....	8,987	.....	.....	.....	876	.....	.....	.....	.....	.....	466	27
11	4	.....	17	.....	.....	.....	51	.....	.....	2	1	1	3	28
1.0	.....	.....	898.0	.....	1.0	64.0	317.4	1.0	.....	80.4	.....	1.1	6.0	29
.....	.....	.....	1,230	.....	.....	.....	268	.....	.....	.....	.....	.....	14	30
.....	.....	.....	1,039	.....	.....	.....	232	.....	.....	.....	.....	.....	90	31
15	39	14	2,614	26	9	4	147	11	12	149	9	19	65	32
.....	.....	.....	4,201	.....	.....	.....	776	.....	.....	.....	.....	.....	20	33
.....	.....	.....	4,754	.....	.....	.....	558	.....	.....	.....	.....	.....	298	34
1.6	0.1	0.5	15.1	.....	0.8	3.3	1.3	.....	2.9	5.7	0.9	0.2	3.2	35
.....	.....	.....	8	.....	1	.....	23	.....	.....	.....	1	.....	.....	36
.....	.....	.....	8	.....	1	.....	24	.....	.....	.....	1	.....	.....	37
.....	.....	.....	5	.....	.....	.....	8	.....	.....	.....	.....	.....	7	38
.....	.....	.....	4	.....	.....	.....	8	.....	.....	.....	.....	.....	6	39
.....	.....	.....	75,171	.....	(²)	.....	1,172	.....	.....	.....	(²)	.....	76	40
.....	.....	.....	77,950	.....	.....	.....	339	.....	.....	.....	.....	.....	.....	41
.....	.....	.....	75,165	.....	.....	.....	132	.....	.....	.....	.....	.....	13,100	42
.....	.....	.....	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	370	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
2	.....	8	64	.....	6	.....	7	4	.....	7	8	8	5	49
.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	43	50
(²)	.....	1,670	69,620	.....	4,323	.....	7,870	4,600	.....	4,200	4,985	4,430	1,510	51
.....	.....	.....	950	.....	.....	.....	.....	.....	.....	.....	.....	.....	29,260	52
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,200	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
4	13	14	102	13	11	4	10	8	5	12	11	16	24	55
.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	97	56
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	57
97	251	110	2,165	192	217	32	217	242	125	239	179	215	284	58
.....	.....	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,736	59
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	227	60
2,760	12,500	4,030	111,623	13,100	10,123	1,360	11,050	11,200	5,000	14,640	8,200	11,470	17,203	61
.....	.....	.....	950	.....	.....	.....	.....	.....	.....	.....	.....	.....	85,604	62
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,535	63
21	23	20	24	26	33	11	48	34	17	53	39	30	37	64
.....	.....	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	26	65
(²)	.....	.....	28	11	49	.....	57	50	.....	78	45	49	40	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
.....	.....	.....	14	.....	.....	1	71	.....	.....	2	.....	.....	.....	68
.....	.....	.....	198,937	.....	.....	(²)	26,488	.....	.....	(²)	.....	.....	.....	69
.....	.....	.....	123,141	.....	.....	(²)	21,318	.....	.....	(²)	.....	.....	.....	70
.....	.....	.....	242	.....	.....	(²)	56	.....	.....	(²)	.....	.....	.....	71

⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁵Includes siphons and farm pipe lines reported.
⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms.
⁷Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - NEVADA

STATE TABLE 1.-IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	* 70,273,280	70,285,440	70,285,440	70,285,440	70,285,440	70,285,440	70,285,440
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	3,573	3,696	3,442	3,163	2,689	2,184	1,277
Land in all farms.....acres....	3,785,106	3,621,769	4,080,906	2,357,163	2,714,757	2,565,647	1,661,416
Farms irrigated: ¹							
Farms.....number...	3,264	2,927	3,031	2,718	2,406	1,906	1,167
Increase or decrease (-) over preceding census....percent..	² 7.7	.....	11.5	13.0	26.2	63.3	.....
Proportion of all farms.....percent..	91.4	79.2	88.0	85.9	89.5	87.3	91.4
Land in farms.....acres....	3,624,536	(³)	3,102,085	(³)	(³)	(³)	(³)
Proportion of all farm land.....percent..	95.8	(³)	76.0	(³)	(³)	(³)	(³)
Area irrigated.....acres....	⁴ 755,636	⁵ 253,286	⁶ 390,192	(⁷)	(⁷)	504,168	224,403
Increase or decrease (-) over preceding census....percent..	² 93.7	.....	.....	.....	.....	124.7	.....
Proportion of total land area of State.....percent..	1.1	0.4	0.6	.....	.....	0.7	0.3
Proportion of all farm land.....percent..	20.0	7.0	9.6	.....	.....	19.7	13.5
Value of irrigated farms (land and buildings).....dollars..	46,392,883	(³)	59,956,787	(³)	(³)	(³)	(³)
Average per farm.....dollars..	14,213.51	(³)	19,781.19	(³)	(³)	(³)	(³)
Average per acre.....dollars..	12.80	(³)	19.33	(³)	(³)	(³)	(³)
Value of farm implements and machinery ⁸.....dollars..	3,612,624	(³)	4,041,264	(³)	(³)	(³)	(³)
Average per farm ⁹.....dollars..	1,106.81	(³)	1,333.31	(³)	(³)	(³)	(³)
Average per acre ⁹.....dollars..	1.00	(³)	1.30	(³)	(³)	(³)	(³)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	1,464	(³)	1,245	1,015	1,347	(³)	(³)
Farms irrigated.....number...	4,291	(³)	(³)	(³)	(³)	(³)	(³)
Area irrigated.....acres....	739,863	(³)	486,648	561,447	701,833	(³)	(³)
Area existing works were capable of supplying with water.....acres....	841,304	(³)	736,249	704,708	840,962	(³)	(³)
Area irrigable.....acres....	915,689	(³)	983,717	⁹ 1,382,036	⁹ 1,232,142	(³)	(³)
Additional area existing works were capable of supplying with water.....acres....	101,441	(³)	249,601	143,261	139,129	(³)	(³)
Additional irrigable area in enterprises not supplied with water.....acres....	175,826	(³)	497,069	⁹ 820,589	⁹ 530,309	(³)	(³)
Investment in irrigation enterprises.....dollars..	16,906,790	(³)	15,457,931	14,754,280	6,721,924	1,537,559	1,700,975
Increase or decrease (-) over preceding census....percent..	² 9.4	(³)	4.8	119.5	337.2	-9.6	.....
Average per acre based on area works were capable of supplying with water.....dollars..	20.10	(³)	21.00	20.94	7.99	(³)	(³)
Increase or decrease (-) over preceding census....percent..	² -4.3	(³)	0.3	162.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	18,129,554	(³)	18,489,603	22,648,747	12,188,756	(³)	(³)
Average per acre based on irrigable area in enterprises.....dollars..	19.80	(³)	18.80	⁹ 16.39	⁹ 9.89	(³)	(³)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	0.48	(³)	0.91	0.79	0.97	(³)	(³)

¹ Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ² Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³ Not available. ⁴ Irrigated land from which crops were harvested plus 324,893 acres of irrigated land used only for pasture. ⁵ Irrigated land from which crops were harvested. ⁶ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷ Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸ Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁰ The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	Number	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Owners and managers.....	3,573	3,785,106	435,855	430,743	324,893	47,594,984	12.57	9,340,357	2.47	3,721,263	0.98
Tenants.....	3,057	3,553,026	401,828	396,635	304,272	43,109,839	12.13	8,560,012	2.41	3,368,075	0.95
Total.....	516	232,080	34,027	33,908	20,621	4,484,545	19.32	760,345	3.36	353,188	1.52
Irrigated farms, total.....	3,264	3,624,536	435,154	430,743	324,893	46,392,883	12.80	8,971,907	2.48	3,612,624	1.00
Owners and managers.....	2,811	3,426,873	401,176	396,635	304,272	42,128,655	12.29	8,225,577	2.40	3,274,427	0.96
Tenants.....	453	197,663	33,978	33,908	20,621	4,264,228	21.57	746,330	3.78	338,197	1.71
Wholly irrigated farms.....	2,955	2,984,198	414,172	414,172	303,687	42,821,754	14.35	8,135,432	2.73	3,417,344	1.15
Owners and managers.....	2,533	2,790,185	390,350	380,350	285,003	38,733,951	13.88	7,422,302	2.66	3,090,917	1.11
Tenants.....	422	194,013	33,822	33,822	18,684	4,087,803	21.07	713,130	3.68	326,427	1.68
Partly irrigated farms.....	309	640,338	20,882	16,571	21,206	3,571,129	5.58	836,475	1.31	195,280	0.30
Owners and managers.....	278	636,688	20,826	16,485	19,269	3,394,704	5.33	803,275	1.26	183,510	0.29
Tenants.....	31	3,650	156	86	1,937	176,425	48.34	33,200	9.10	11,770	3.22
Nonirrigated farms, total.....	309	160,570	701	.....	.....	1,201,501	7.48	368,450	2.29	108,639	0.68

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION - NEVADA

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939.					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-feet	Dollars	Dollars
Total.....	1,464	915,689	841,304	739,863	486,648	561,447	52.0	627,502	678,791	569,881	3.4	0.88	0.26
Primary sources:													
Streams, gravity.....	746	726,400	663,018	578,163	394,415	466,812	45.6	491,238	541,443	457,080	3.1	0.81	0.26
Streams, pumped.....	11	855	805	852	821	2,647	-20.6	595	630	573	2.6	1.98	0.77
Streams, gravity and pumped.....	6	2,950	2,895	2,780	.....	720	.....	1,380	2,780	1,380	1.2	0.36	0.30
Wells, pumped.....	74	2,415	1,493	568	2,117	295	-73.2	556	511	507	1.8	7.93	4.44
Wells, flowing.....	100	3,323	3,062	2,604	1,132	811	130.0	1,511	2,244	1,170	6.8	0.43	0.06
Wells, pumped and flowing.....	9	360	360	237	177	65	33.9	188	181	132	3.6	2.06	0.57
Lakes, gravity.....	2	(²)	(²)	(²)	.....	445	.....	(²)	(²)	(²)	(²)	(²)	(²)
Lakes, pumped.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springs.....	233	59,728	58,462	54,945	61,987	21,987	-11.4	49,562	34,889	29,826	1.7	0.58	0.33
Springs and streams.....	181	79,402	72,355	63,415	.....	.....	.....	49,899	61,338	47,822	3.0	0.53	0.18
Stored storm water.....	1	(²)	(²)	(²)	20	17,348	.....	.....	.....	.....	.....	.....	.....
City water.....	1	(²)	(²)	(²)	.....	14	.....	.....	(²)	.....	.....	.....	.....
Sewage.....	1	(²)	(²)	(²)	.....	88	.....	.....	(²)	.....	.....	.....	.....
Streams, gravity; wells, pumped...	27	10,349	10,234	9,837	2,260	4,957	335.3	8,197	9,177	7,537	2.0	0.61	0.30
Streams, gravity; wells, flowing...	9	2,621	2,532	2,502	2,274	82	10.0	2,480	2,431	2,409	2.2	0.60	0.27
Streams, pumped; wells, pumped...	3	1,145	1,106	1,105	.....	.....	.....	705	705	705	3.0	1.16	0.39
Waste water, seepage or drainage...	5	423	162	157	.....	.....	.....	131	32	6	3.3	2.33	0.70
Other mixed.....	45	25,563	24,665	22,781	21,152	45,176	7.7	20,978	22,313	20,652	3.8	0.26	0.07
Other and not reported.....	.....	.....	.....	.....	293	.....	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:³													
Streams, gravity and/or storage...	7	143,453	123,240	84,204	.....	.....	.....	84,104	84,204	84,104	3.5	1.04	0.30
Streams, pumped.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wells, pumped.....	4	905	605	518	.....	.....	.....	518	518	518	1.8	1.96	1.07
Wells, flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered.

²Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

³Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	16,906,790	100.0	20.10	15,457,931	100.0	21.00	-0.90	388,722	0.43	474,422	0.91	-0.43	460,317	0.79
Primary sources:														
Streams, gravity.....	11,357,470	67.3	17.13	13,710,031	88.7	22.73	-5.60	551,351	0.41	396,499	0.85	-0.44	384,358	0.65
Streams, pumped.....	10,635	0.1	13.21	45,000	0.3	43.86	-30.65	630	1.88	821	7.01	-5.13	897	1.76
Streams, gravity and pumped.....	27,103	0.2	9.36	.....	.....	.....	.....	2,780	0.25	.....	.....	.....	720	0.76
Wells, pumped.....	56,249	0.3	37.68	142,761	0.9	20.19	17.49	534	8.21	2,075	4.82	3.39	236	12.10
Wells, flowing.....	134,168	0.8	43.82	147,612	0.9	99.00	-55.18	2,244	0.35	942	4.08	-3.73	157	6.56
Wells, pumped and flowing.....	22,927	0.1	63.69	10,760	0.1	56.93	6.76	181	1.67	177	5.26	-3.59	65	61.77
Lakes, gravity.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	130	19.63
Lakes, pumped.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springs.....	361,127	2.1	6.18	614,206	4.0	8.93	-2.75	34,889	0.55	59,664	0.77	-0.22	17,840	1.74
Springs and streams.....	1,071,769	6.3	14.81	.....	.....	.....	.....	61,338	0.47	.....	.....	.....	.....	.....
Stored storm water.....	(³)	(³)	(³)	2,100	(⁴)	105.00	(⁵)	(³)	(³)	20	2.50	(³)	15,548	0.37
City water.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	.....	.....
Sewage.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	80	0.44
Streams, gravity; wells, pumped...	98,398	0.6	9.61	119,903	0.8	7.03	2.58	9,177	0.55	1,940	2.29	-17.4	1,246	1.57
Streams, gravity; wells, flowing...	22,035	0.1	8.70	45,975	0.3	9.32	-0.62	2,431	0.59	2,104	0.77	-0.18	82	1.46
Streams, pumped; wells, pumped...	21,100	0.1	19.08	.....	.....	.....	.....	705	1.16	.....	.....	.....	.....	.....
Waste water, seepage or drainage...	747	(⁴)	4.61	.....	.....	.....	.....	32	2.09	.....	.....	.....	.....	.....
Other mixed.....	207,591	1.2	8.42	618,477	4.0	19.19	-10.77	22,313	0.25	19,887	1.96	-1.11	38,958	1.54
Other and not reported.....	.....	.....	.....	1,106	(⁴)	3.69	.....	.....	.....	293	3.34	.....	.....	.....
Supplemental sources:⁵														
Streams, gravity and/or storage...	3,441,466	20.4	27.92	.....	.....	.....	.....	84,204	0.45	.....	.....	.....	.....	.....
Streams, pumped.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wells, pumped.....	71,885	0.4	118.82	.....	.....	.....	.....	518	1.96	.....	.....	.....	.....	.....
Wells, flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation.

²Based on area works were capable of supplying with water.

³Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁴Less than one-tenth of 1 percent.

⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION — NEVADA

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE, 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930				1940		1930		
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises		Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises		
AREA IRRIGATED	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued					
Total.....	739,863	84,722	486,648	561,447	52.0						
Individual and partnership.....	138,996	7,848	316,918	355,901	38.5						
Cooperative, incorporated.....	137,066		32,267	69,877	2 588.33						
Cooperative, unincorporated.....	85,039	65,000	5,855	5,990	(²)						
Irrigation district.....	2,940	5,855	54,040	41,324	6.3						
Commercial.....	(²)	11,874	6,148	5,321	186.4						
Bureau of Reclamation ³	57,471	220	17,607	12							
U. S. Office of Indian Affairs ³	17,607	22	6,744	22							
State.....	4 744		71,200								
City and/or sewage.....	(⁴)										
Other.....	(⁴)										
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER											
Total.....	841,304	123,845	736,249	704,708	14.3						
Individual and partnership.....	489,808	8,735	502,308	453,900	-2.5						
Cooperative, incorporated.....	158,764		56,891	85,483	2 348.7						
Cooperative, unincorporated.....	96,517	73,900	80,000								
Irrigation district.....	3,820										

¹ Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ² Data for 2 "Commercial" enterprises are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³ U. S. Dept. of the Interior. ⁴ Data for 2 "Other" enterprises are included with "State" enterprises in the 1940 Census. ⁵ For 1920 relates to total area. Irrigable area for that year was not reported. ⁶ For explanation of areas, see text, p. 389.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940, AND AREA IRRIGATED, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
	Number	Number	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Number	Acres	Acres	Acres	Acres
Total.....	1,464	91	915,689	841,304	15.30	0.43	23.89	0.46	4,291	739,863	459,863	5,298	274,702
Individual and partnership.....	1,362	9	510,352	489,808	4.21	0.34	35.27	1.35	1,518	438,996	256,562	3,331	179,103
Cooperative, incorporated.....	39	32	158,364	158,764	13.00	0.42			4 972	137,066	4 76,324	150	60,592
Cooperative, unincorporated.....	88	32	96,517	96,517	8.46	0.32			420	85,039	61,881	100	23,058
Irrigation district.....	5 2	2	3,820	3,820	22.05	1.09	10.82	0.31	24	2,940	2,100		840
Commercial.....	2	2	(⁴)	(⁴)	(⁴)	(⁴)			(⁴)	(⁴)	(⁴)		
U. S. Bureau of Reclamation.....	3	3	87,500	56,788	98.38	0.99	44.92	0.68	729	57,471	47,954	1,717	7,800
U. S. Office of Indian Affairs.....	14	11	57,392	24,853	46.53	1.40			623	17,607	14,518		3,089
State.....	2		6 744	6 744	23.13	2.87			5	6 744	6 524		220
City and/or sewage.....			(⁵)	(⁵)	(⁵)	(⁵)			(⁵)	(⁵)	(⁵)		(⁵)
Other.....	2		(⁶)	(⁶)	(⁶)	(⁶)			(⁶)	(⁶)	(⁶)		(⁶)

¹ Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ² Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³ Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴ Data for 2 "Commercial" enterprises are included with "Cooperative, incorporated" enterprises in the 1940 Census. ⁵ Data for less than 3 enterprises shown with permission of the enterprises involved. ⁶ Data for 2 "Other" enterprises are included with "State" enterprises in the 1940 Census. ⁷ For explanation of areas and investment, see text, p. 389.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE, 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ⁴	Estimated investment required to complete works	
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment						Investment in water rights		
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Dollars	
Total.....	16,906,790	13,393,439	3,513,351	15,827,567	1,079,223	15,457,831	14,754,280	9.4	15.92	28.37	349,560	1,222,761
Individual and partnership.....	2,350,895	2,278,510	440,885	2,175,332	175,583	4,530,708	4,014,570	-48.1	4.65	50.47		168,673
Cooperative, incorporated.....	2,776,276	2,407,776		2 2,306,626	2 469,450	936,400	1,019,047	2 209.9	2 15.17		4,708	
Cooperative, unincorporated.....	828,733	828,733		816,233	12,500				8.59		816	
Irrigation district.....	888,934	84,217	804,717	883,934	5,000		1,246,611		22.05	10.89	810	
Commercial.....	(²)	(²)		(²)	(²)	227,000	340,559	(²)	(²)			
U. S. Bureau of Reclamation.....	8,838,237	6,570,488	2,267,749	8,421,527	416,710	7,767,759	7,953,537	13.8	98.38	55.03	109,074	212,816
U. S. Office of Indian Affairs.....	1,206,505	1,206,505		1,206,505		360,214	178,536	234.9	48.53		234,152	841,275
State.....	4 17,210			4 17,210		11,000			4 23.13			
City and/or sewage.....				(⁴)			420		(⁴)			
Other.....	(⁴)	(⁴)		(⁴)		5 1,624,850			(⁴)			

¹ Only for enterprises serving 5 or more farms. ² Data for 2 "Commercial" enterprises are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³ Part of investment reported in California. ⁴ Data for 2 "Other" enterprises are included with "State" enterprises in the 1940 Census. ⁵ Includes 1 "Irrigation district" and 1 Carey Act enterprise. ⁶ For explanation of investment, see text, p. 389.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter- prises 1940	Area		Total indebt- ness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter- prises 1940	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrig- able 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
Total.....	Number 13	Acres 247,142	Acres 205,692	Dollars 3,934,315	Dollars 14.79	Dollars 14.12	Number	Dollars	Dollars	Dollars	Acres 320,187	Dollars 391,703	Dollars 207,292
Partnership.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12,645	2,712	494
Cooperative, incorporated.....	6	22,574	19,974	32,997	2.47	2.22	.....	.....	.....	.....	75,438	72,432	65,102
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57,331	17,350	9,641
Irrigation district.....	2	77,720	77,720	493,000	5.17	5.89	.....	.....	.....	.....	84,524	61,738	57,845
Commercial.....	.....	(5)	(5)	(5)	(5)	(5)	.....	.....	.....	.....	(5)	(5)	(5)
Bureau of Reclamation ⁵	3	146,848	107,998	3,408,318	17.87	17.08	.....	.....	.....	.....	75,704	225,123	74,125
Office of Indian Affairs ⁶.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,545	12,348	85
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$16.73. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$22.63. ⁵Data for 2 "Commercial" enterprises are included with "Cooperative, incorporated" enterprises in the 1940 Census. ⁶Data for less than 3 enterprises shown with permission of the enterprises involved. ⁷U. S. Dept. of the Interior. ⁸Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁹For explanation of areas and investment, see text, p. 389.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939,
BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
Total.....	Acres 688,722	Dollars 293,959	Acres 84,722	Dollars 38,705	Dollars 0.43	Dollars 0.46	Number 65	Dollars 160,642	Number 275
Individual and partnership.....	417,568	140,632	7,948	10,632	0.34	1.35	4	876	11
Cooperative, incorporated.....	2 137,066	2 56,943	.....	.....	2 0.42	.....	26	2 29,326	2 85
Cooperative, unincorporated.....	61,664	19,550	.....	.....	0.32	.....	22	13,456	29
Irrigation district.....	2,940	3,207	65,000	19,972	1.09	0.31	2	1,375	10
Commercial.....	(2)	(2)	.....	.....	(2)	.....	2	(2)	(2)
U. S. Bureau of Reclamation ⁵	57,471	56,629	11,874	8,101	0.99	0.68	3	35,280	72
U. S. Office of Indian Affairs ⁶	11,929	16,657	.....	.....	1.40	.....	6	70,329	68
State.....	484	241	.....	.....	2.87	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	(4)	(4)	.....	.....	(4)	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 2 "Commercial" enterprises are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³Data for less than 3 enterprises shown with permission of the enterprises involved. ⁴Data for 2 "Other" enterprises are included with "State" enterprises in the 1940 Census. ⁵For explanation of areas and investment, see text, p. 389.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver- sion	Stor- age	Capa- city at main head- ing	Length ¹		Num- ber	Capa- city	Length	Num- ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capacity	Number	Rated capacity
Total.....	Number 1,896	Number 122	Sec.-ft. 22,930	Miles 2,845	Miles 52.2	.....	Ac.-ft. 696,005	Miles 104.7	.....	G. v. m. 39,835	.....	.....	.....	.....	.....	.....
Individual and partnership.....	3 1,675	105	3 13,973	3 1,591	41.6	3 185	3 31,314	3 75.4	319	35,444	3 165	3 45,055	3 183	3 1,732	3 187	3 91,848
Cooperative, incorporated.....	4 157	7	4 2,927	4 393	3.8	4 7	4 83,470	4 3.6	.....	.....	.....	.....	.....	.....	.....	.....
Cooperative, unincorporated.....	43	5	1,492	240	6.1	3	3,551	3.4	3	4,391	2	5,883	2	100	2	5,883
Irrigation district.....	1	1	90	16	0.5	1	80,000	0.4	.....	.....	.....	.....	.....	.....	.....	.....
Commercial.....	(4)	.....	(4)	(4)	(4)	.....	(4)	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ⁵	4	2	3,400	480	.....	2	452,670	19.2	.....	.....	.....	.....	6	422	6	43,084
Office of Indian Affairs ⁶	16	2	1,048	125	0.2	2	45,000	2.6	.....	.....	.....	.....	1	8	1	250
State.....	(3)	.....	(3)	(3)	.....	.....	.....	.....	.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	(3)	.....	.....	(3)	(3)	(3)	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³Data for 2 "State" and 2 "Other" enterprises are included with "Individual and partnership" enterprises. ⁴Data for 2 "Commercial" enterprises are included with "Cooperative, incorporated" enterprises in the 1940 Census. ⁵U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number		Number	Number	Number	Number
Total.....	1,896	122	1,640	118	Earth and rock.....	1,077	110	.....	71
Concrete or masonry.....	95	8	132	20	Other and mixed.....	1,603	4	1,321	22
Timber.....	84	.....	148	.....	Not reported.....	37	.....	39	5

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	196	100.0	141,065	100.0	31	Total, 1940.....	192	100.0	2,262	100.0
Electric motor.....	42	21.4	83,774	59.4	22	Centrifugal pump.....	84	43.7	825	36.5
Centrifugal.....	27	13.7	57,700	41.0	20	Electric.....	25	13.0	224	9.9
Turbine.....	7	3.6	15,283	10.8	38	Internal-combustion.....	56	29.1	487	21.6
Plunger.....	3	1.5	10	.....	19	Other.....	3	1.6	114	5.0
Other.....	5	2.6	10,781	7.6	18	Turbine pump.....	22	11.5	568	25.1
Internal-combustion engine.....	95	48.5	25,088	17.8	34	Electric.....	7	3.6	308	13.6
Centrifugal.....	57	29.1	15,452	11.0	22	Internal-combustion.....	15	7.9	260	11.5
Turbine.....	16	8.2	8,200	5.8	39	Other.....	.....	.....	.....	.....
Plunger.....	19	9.7	1,006	0.7	65	Plunger pump.....	52	27.1	106	4.7
Other.....	3	1.5	430	0.3	116	Electric.....	2	1.0	1	(¹)
Other kinds of motive power.....	34	17.3	5,338	3.8	28	Internal-combustion.....	18	9.4	65	2.9
Centrifugal.....	3	1.5	4,750	3.4	29	Other.....	32	16.7	40	1.8
Turbine.....	.....	.....	.....	.....	.....	Other and mixed types of pumps.....	34	17.7	763	33.7
Plunger.....	31	15.8	588	0.4	28	Electric.....	12	6.2	507	22.3
Other.....	.....	.....	.....	.....	.....	Internal-combustion.....	14	7.3	248	11.0
Mixed kinds of motive power.....	25	12.8	26,865	19.0	35	Other.....	8	4.2	8	0.4
Centrifugal.....	14	7.2	8,965	6.3	30	Total, 1930.....	³ 157	.....	2,671	.....
Turbine.....	2	1.0	17,775	12.6	42	Increase or decrease (-) 1930-1940.....	35	.....	-409	.....
Plunger.....	9	4.6	135	0.1	39					
Other.....	.....	.....	.....	.....	.....
Total, 1930.....	173	.....	115,648	.....	31					
Increase or decrease (-) 1930-1940..	23	.....	25,417	.....	.....			

¹ Less than one-tenth of 1 percent.

² Includes one waterwheel for which the capacity was not reported.

³ Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 104.7	Miles ³ 90.6	Percent 15.6	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	12.0	10.2	17.6
1 to 12 inches.....	4.3	9.5	-54.7	13 to 24 inches.....	.....	0.5	-80.0
13 to 24 inches.....	.....	2.1	109.5	Over 24 inches.....	0.1	.....	.....
Over 24 inches.....	4.4	.....	.....	Clay and other:			
Metal:				1 to 12 inches.....	4.8	8.3	-42.2
1 to 12 inches.....	69.1	54.2	27.5	13 to 24 inches.....	1.0	.....	.....
13 to 24 inches.....	6.2	4.0	115.0	Over 24 inches.....	0.4	.....	.....
Over 24 inches.....	2.4	.....	.....		

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

³ Includes 1.8 miles pipe lines not segregated by size.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	37	41	58	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	241,984	353,238	¹ 537,417	(a) Enterprises reporting lands drained and/or needing drainage....percent..	54.2	³ 35.7	¹ 6.1
Area irrigated in these enterprises.....acres...	180,044	(²)	(²)	(b) All irrigation enterprises.....percent..	13.2	25.9	6.1
Area for which drains have been installed.....acres...	97,576	126,249	34,175	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	21,153	26,348	98,249	(a) Irrigable area reporting.....percent..	48.5	43.2	¹ 24.6
				(b) Irrigated area reporting.....percent..	65.9	(²)	(²)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ² Not available. ³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	1,064,515	626,560	926,308	944,576	598,020	727,037	119,939	28,560	199,271
Area irrigated by these enterprises.....acres.....	207,997	156,588	212,323	183,346	150,417	122,627	24,651	6,171	89,696
Average water per acre irrigated.....acre-feet..	5.1	4.0	4.4	5.2	4.0	5.9	4.9	4.6	2.2
Total water delivered to irrigators.....acre-feet..	1,852,409	224,035	170,911	623,875	211,435	157,638	1,228,534	12,600	13,273
Area irrigated by these enterprises.....acres.....	623,381	72,380	60,044	150,016	68,396	49,494	473,365	3,984	10,550
Average water per acre irrigated.....acre-feet..	3.0	3.1	2.8	4.2	3.1	3.2	2.6	3.2	1.3
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	18,947	.....	.....	.....	.....	.....	18,947	.....	.....
Area irrigated by these enterprises.....acres.....	4,121	.....	.....	.....	.....	.....	4,121	.....	.....
Average water per acre irrigated.....acre-feet..	4.6	.....	.....	.....	.....	.....	4.6	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	289,950	.....	.....	91,645	.....	.....	198,305	.....	.....
Area irrigated by these enterprises.....acres.....	82,074	.....	.....	17,074	.....	.....	65,000	.....	.....
Average water per acre irrigated.....acre-feet..	3.5	.....	.....	5.4	.....	.....	3.1	.....	.....
Total water delivered to irrigators.....acre-feet..	291,033	.....	.....	239,535	.....	.....	51,498	.....	.....
Area irrigated by these enterprises.....acres.....	84,104	.....	.....	72,200	.....	.....	11,904	.....	.....
Average water per acre irrigated.....acre-feet..	3.5	.....	.....	3.3	.....	.....	4.3	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	947	.....	.....	.....	.....	.....	947	.....	.....
Area irrigated by these enterprises.....acres.....	518	.....	.....	.....	.....	.....	518	.....	.....
Average water per acre irrigated.....acre-feet..	1.8	.....	.....	.....	.....	.....	1.8	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	739,863	100.0	84,722	486,648	100.0	561,447	100.0
Appropriation ²	576,468	77.9	19,717	261,572	53.7	366,106	65.2
Underground.....	4,829	0.7	5	2,192	0.5	1,244	0.2
Appropriation and underground.....	11,186	1.5	.....	.....	.....	.....	.....
Adjudicated by court ³	122,705	16.6	65,000	161,920	33.3	161,175	28.7
Other mixed and not reported.....	24,675	3.3	.....	60,964	12.5	32,922	5.9

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²"Appropriation" includes water rights published in the 1930 and 1920 census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State." ³Riparian rights are not recognized in Nevada, except those adjudicated by Courts prior to 1885. A total of 22,839 acres reported as having "Riparian" rights in 1939, owing to misapprehension as to their legal status, is included in the reported total of 122,705 acres having rights "Adjudicated by court."

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 57,471 acres which were irrigated in 1939 within the Newlands Project. An area totaling 11,874 acres was irrigated with a supplemental supply from the Humboldt Project and is reported as receiving a primary supply through another enterprise. The Bureau was also prepared in 1940 to provide a supplemental supply of water to 28,010 acres in the Truckee Storage Project which is reported as receiving a primary supply through another enterprise.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 relates principally to expendi-

tures on the above projects and reflects the construction costs incurred by the Bureau of Reclamation and comparatively minor expenditures by an irrigation district in addition to the outlays of Federal funds. The investment includes expenditures for the construction of Boca Dam storage facilities in California to serve supplemental water for lands in Nevada since the costs of the facilities will be repaid by the latter lands. Excluded from the investment of the Bureau of Reclamation in Nevada are the construction costs incurred by the Bureau of Reclamation at Boulder Dam, where none of the costs will be repaid by irrigators in Nevada.

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED

PRIMARY ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number...	1,453	27	1,255	88	55	24	4
2	Irrigated farms, 1939.....number...	4,291	.....	1,255	223	560	1,151	1,102
3	Area irrigated, 1939.....acres....	739,863	.....	443,747	79,394	83,426	66,216	67,080
4	(a) From which crops were harvested.....acres....	459,863	.....	251,119	45,183	55,226	51,237	57,098
5	(b) On which crops failed.....acres....	5,298	.....	3,318	68	95	100	1,717
6	(c) Irrigated pasture.....acres....	274,702	.....	189,310	34,143	28,105	14,879	8,265
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	13,393,439	25,293	1,882,129	890,036	1,454,807	1,668,070	7,473,104
8	(a) Cost of irrigation works and equipment.....dollars..	12,868,726	24,968	1,708,104	842,099	1,249,029	1,651,922	7,392,604
9	(b) Investment in water rights.....dollars..	524,713	325	174,025	47,937	205,778	16,148	80,500
10	Area works were capable of supplying with water.....acres....	841,304	1,262	488,411	100,398	90,349	83,653	77,231
11	Average investment per acre irrigated.....dollars..	18.10	.....	4.24	11.21	17.44	25.19	111.41
12	Average investment per acre which the works could supply with water.....dollars..	15.92	20.04	3.85	8.87	16.10	19.94	96.76
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number..	1,320	12	1,153	80	51	21	3
14	(a) Area irrigated in these enterprises.....acres....	688,722	.....	405,324	73,747	81,678	61,193	66,780
15	(b) Cost of maintenance and operation.....dollars..	293,859	135	140,417	17,149	25,527	44,812	65,819
16	(c) Average cost per irrigated acre reporting.....dollars..	0.43	.....	0.35	0.23	0.31	0.73	0.99
17	Total annual charges ².....dollars..	304,084	.....	580	28,427	44,009	231,068	3.46
18	Average charge per irrigated acre reporting.....dollars..	1.51	.....	0.32	0.36	0.83	73,139	3.13
19	Area against which charges were assessed.....acres....	218,138	.....	1,788	83,745	59,466	73,139	3.13
20	Average annual charge per acre assessed.....dollars..	1.39	.....	0.32	0.34	0.74	82,629	.....
21	Total charges collected ².....dollars..	128,223	.....	23	21,405	24,166	.....	.....
INDEBTEDNESS AND ARREARAGE, 1939								
22	Enterprises reporting indebtedness ².....number..	9	.....	.....	.....	3	4	2
23	(a) Area irrigated in these enterprises.....acres....	72,812	.....	.....	.....	6,000	66,812	.....
24	(b) Indebtedness.....dollars..	1,194,066	.....	.....	.....	23,500	1,170,566	.....
25	(c) Average indebtedness per acre irrigated.....dollars..	16.40	.....	.....	.....	3.92	17.52	.....
26	(d) Cost of irrigation works and equipment.....dollars..	7,088,751	.....	.....	.....	124,217	6,964,534	.....
27	(e) Investment in water rights.....dollars..	91,899	.....	.....	.....	10,000	81,899	.....
28	(f) Total investment.....dollars..	7,180,649	.....	.....	.....	134,217	7,046,432	.....
29	(g) Maintenance and operation.....dollars..	75,795	.....	.....	.....	4,310	71,485	.....
30	(h) Total annual charges ².....dollars..	245,417	.....	.....	.....	5,959	239,458	.....
31	(i) Total charges collected ².....dollars..	99,744	.....	.....	.....	4,381	95,363	.....
32	(j) Area against which annual charges were assessed.....acres....	80,745	.....	.....	.....	7,508	73,237	.....
33	(k) Average indebtedness per acre assessed.....dollars..	14.79	.....	.....	.....	3.13	15.98	.....
34	(l) Average charges per acre assessed.....dollars..	3.04	.....	.....	.....	0.79	3.27	.....
35	(m) Average charges per acre irrigated.....dollars..	3.37	.....	.....	.....	0.99	3.58	.....
TYPE, 1940								
36	Individual and partnership.....number..	1,356	27	1,243	78	7	1	.....
37	Cooperative (incorporated and unincorporated).....number..	75	.....	7	7	45	15	1
38	Irrigation district.....number..	1	.....	.....	.....	1	.....	.....
39	Commercial.....number..	2	.....	.....	.....	.....	2	.....
40	U. S. Bureau of Reclamation.....number..	1	.....	.....	.....	.....	.....	1
41	U. S. Office of Indian Affairs.....number..	14	.....	2	2	2	6	2
42	All other.....number..	4	.....	3	1	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
43	Enterprises reporting pay roll.....number..	60	.....	.....	2	36	19	3
44	Wages and salaries paid and payable for 1939.....dollars..	110,809	.....	.....	18,835	.....	87,651	4,323
45	Persons employed during week ending April 29, 1939.....number..	245	.....	.....	78	.....	108	59
SOURCE OF WATER SUPPLY, 1939								
46	Streams, gravity.....number..	746	6	616	57	43	20	4
47	Streams, pumped.....number..	11	.....	10	1	.....	.....	.....
48	Wells, pumped.....number..	74	13	61	.....	.....	.....	.....
49	Wells, pumped and flowing; or wells flowing.....number..	109	1	106	1	1	.....	.....
50	Lakes, gravity or pumped.....number..	2	.....	.....	.....	.....	.....	.....
51	Streams and springs; or springs.....number..	414	5	377	19	10	3	.....
52	Mixed, streams and wells.....number..	45	2	37	6	.....	.....	.....
53	Other mixed or stored storm water.....number..	52	.....	46	4	1	.....	.....
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number..	11	² 1	5	1	.....	3	² 1
2	Irrigated farms, 1939.....number..	462	.....	5	3	.....	138	316
3	Area irrigated, 1939.....acres....	84,722	.....	648	.....	.....	19,074	65,000
CAPITAL INVESTMENT, 1940								
4	Total capital investment in all enterprises.....dollars..	3,513,351	1,066,179	72,385	.....	.....	1,570,070	804,717
5	(a) Cost of irrigation works and equipment.....dollars..	2,958,841	1,066,179	64,585	.....	.....	1,028,360	799,717
6	(b) Investment in water rights.....dollars..	554,510	.....	7,800	.....	.....	541,710	5,000
7	Area works were capable of supplying with water.....acres....	123,845	28,210	735	.....	.....	21,000	73,900
8	Average investment per acre irrigated.....dollars..	41.47	.....	111.71	.....	.....	82.31	12.38
9	Average investment per acre which the works could supply with water.....dollars..	28.37	37.79	98.48	.....	.....	74.77	10.89

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - NEVADA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
27	665	324	358	70	9	1,297	90	53	12	21	1
.....	711	419	1,234	1,115	812	1,584	483	926	569	729	2
.....	21,161	54,554	258,171	213,289	192,688	361,722	96,920	128,456	95,294	57,471	3
.....	15,374	37,774	152,210	129,156	125,349	212,346	63,567	84,617	51,379	47,954	4
.....	647	642	1,987	85	1,937	2,955	241	365	20	1,717	5
.....	5,140	16,138	103,974	84,048	65,402	146,421	33,112	43,474	43,895	7,800	6
25,293	536,879	428,109	2,364,119	2,730,685	7,236,354	1,066,632	693,673	2,102,608	2,960,038	6,570,488	7
24,968	541,116	405,911	2,121,695	2,538,748	7,236,288	940,425	670,893	1,978,894	2,708,026	6,570,488	8
325	47,763	22,198	262,424	191,937	66	126,207	22,780	123,714	252,012	.....	9
1,262	28,971	64,743	285,538	242,463	218,327	394,929	103,583	161,179	114,825	66,788	10
.....	27.83	7.85	9.23	12.80	37.55	2.95	7.16	16.37	31.06	114.33	11
20.04	20.33	6.61	8.35	11.26	33.14	2.70	6.70	13.05	25.78	98.38	12
12	590	303	343	64	8	1,176	80	51	12	21	13
.....	19,156	50,701	247,845	197,332	173,688	338,321	72,204	125,432	95,294	57,471	14
135	35,276	31,096	86,748	58,393	82,211	103,504	27,142	56,812	49,772	56,629	15
.....	1.84	0.61	0.35	0.30	0.47	0.31	0.38	0.45	0.52	0.99	16
.....	408	207	33,189	51,677	218,603	2,888	6,375	48,972	28,827	217,022	17
.....	3.89	0.32	0.96	0.56	2.94	0.21	0.22	0.68	0.98	3.78	18
.....	105	747	38,680	97,993	80,613	13,589	30,934	75,223	34,557	63,830	19
.....	3.89	0.28	0.86	0.53	2.71	0.21	0.21	0.65	0.83	3.40	20
.....	220	128	19,287	34,332	74,256	1,510	5,033	36,185	11,370	74,125	21
.....	.....	.....	3	5	21	.....	1	6	1	21	22
.....	.....	.....	2,880	12,461	57,471	.....	.....	15,341	.....	57,471	23
.....	.....	.....	2,163	51,334	1,140,569	.....	.....	53,497	.....	1,140,569	24
.....	.....	.....	0.75	4.12	19.85	.....	.....	3.49	.....	19.85	25
.....	.....	.....	112,862	405,401	6,570,488	.....	.....	518,263	.....	6,570,488	26
.....	.....	.....	16	91,882	.....	.....	.....	91,898	.....	.....	27
.....	.....	.....	112,878	497,283	6,570,488	.....	.....	610,161	.....	6,570,488	28
.....	.....	.....	5,297	13,869	56,629	.....	.....	19,166	.....	56,629	29
.....	.....	.....	5,830	22,565	217,022	.....	.....	28,395	.....	217,022	30
.....	.....	.....	5,170	20,449	74,125	.....	.....	25,619	.....	74,125	31
.....	.....	.....	3,043	13,872	63,830	.....	.....	16,915	.....	63,830	32
.....	.....	.....	0.71	3.70	17.87	.....	.....	3.16	.....	17.87	33
.....	.....	.....	1.92	1.63	3.40	.....	.....	1.68	.....	3.40	34
.....	.....	.....	2.02	1.81	3.78	.....	.....	1.85	.....	3.78	35
27	656	320	316	34	3	1,271	67	17	1	.....	36
.....	2	4	35	29	5	18	17	32	8	.....	37
.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	38
.....	.....	.....	.....	2	.....	.....	.....	2	.....	.....	39
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	40
.....	4	.....	6	4	.....	6	4	1	3	.....	41
.....	3	.....	1	.....	.....	2	2	.....	.....	.....	42
.....	1	3	29	25	2	13	17	23	6	21	43
.....	421	.....	43,750	66,638	.....	4,328	11,046	47,776	46,201	1,458	44
.....	1	.....	119	125	.....	41	25	70	52	57	45
6	211	202	260	61	6	643	54	38	10	1	46
.....	7	4	.....	.....	.....	11	.....	.....	.....	.....	47
13	80	1	.....	.....	.....	71	3	.....	.....	.....	48
1	103	3	2	.....	.....	106	1	2	.....	.....	49
.....	2	.....	.....	.....	.....	2	.....	.....	.....	.....	50
5	239	93	69	6	2	387	17	8	2	.....	51
2	17	10	15	1	.....	33	10	2	.....	.....	52
.....	26	11	12	2	1	44	5	3	.....	.....	53
ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
21	2	4	.....	2	2	3	2	2	4	.....	1
.....	2	6	.....	82	372	3	4	49	406	.....	2
.....	648	.....	.....	84,074	.....	135	2,513	.....	82,074	.....	3
1,066,179	72,385	.....	.....	2,374,787	.....	1,000	139,885	.....	3,372,466	.....	4
1,066,179	64,585	.....	.....	1,828,077	.....	1,000	132,085	.....	2,825,756	.....	5
.....	7,800	.....	.....	546,710	.....	.....	7,800	.....	546,710	.....	6
28,210	735	.....	.....	94,900	.....	135	2,600	.....	121,110	.....	7
.....	111.71	.....	.....	28.25	.....	7.41	55.60	.....	41.09	.....	8
37.79	98.48	.....	.....	25.02	.....	7.41	53.80	.....	27.85	.....	9

³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁴ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - NEVADA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
10	Enterprises reporting maintenance and operation.....number...	10	.....	5	1	.....	3	2
11	(a) Area irrigated in these enterprises.....acres.....	84,722	.....	648	.....	.....	19,074	65,000
12	(b) Cost of maintenance and operation.....dollars.....	38,705	.....	1,077	.....	.....	17,656	19,972
13	(c) Average cost per irrigated acre reporting.....dollars.....	0.46	.....	1.65	.....	.....	0.93	0.31
14	Total annual charges ².....dollars.....	87,619	.....	.....	.....	.....	30,534	57,085
15	Average charge per irrigated acre reporting.....dollars.....	1.04	.....	.....	.....	.....	1.60	0.88
16	Area against which charges were assessed.....acres.....	102,049	.....	.....	.....	.....	21,874	80,175
17	Average annual charge per acre assessed.....dollars.....	0.86	.....	.....	.....	.....	1.40	0.71
18	Total charges collected ².....dollars.....	79,069	.....	.....	.....	.....	24,517	54,552
INDEBTEDNESS AND ARREARAGE, 1939								
19	Enterprises reporting indebtedness ⁴.....number.....	4	2	.....	.....	.....	2	2
20	(a) Area irrigated in these enterprises.....acres.....	82,074	.....	.....	.....	.....	17,074	65,000
21	(b) Indebtedness.....dollars.....	2,740,249	1,066,179	.....	.....	.....	1,203,570	470,500
22	(c) Average indebtedness per acre irrigated.....dollars.....	33.39	.....	.....	.....	.....	70.49	7.24
23	(d) Cost of irrigation works and equipment.....dollars.....	2,825,756	1,066,179	.....	.....	.....	959,860	799,717
24	(e) Investment in water rights.....dollars.....	546,710	.....	.....	.....	.....	541,710	5,000
25	(f) Total investment.....dollars.....	3,372,466	1,066,179	.....	.....	.....	1,501,570	804,717
26	(g) Maintenance and operation.....dollars.....	36,788	.....	.....	.....	.....	16,816	19,972
27	(h) Total annual charges ².....dollars.....	85,619	.....	.....	.....	.....	28,534	57,085
28	(i) Total charges collected ².....dollars.....	77,129	.....	.....	.....	.....	22,577	54,552
29	(j) Area against which annual charges were assessed.....acres.....	100,049	.....	.....	.....	.....	19,874	80,175
30	(k) Average indebtedness per acre assessed.....dollars.....	16.73	.....	.....	.....	.....	60.56	5.87
31	(l) Average charges per acre assessed.....dollars.....	0.86	.....	.....	.....	.....	1.44	0.71
32	(m) Average charges per acre irrigated.....dollars.....	1.04	.....	.....	.....	.....	1.67	0.88
TYPE, 1940								
33	Individual and partnership.....number.....	6	.....	5	1	.....	.....	.....
34	Cooperative (incorporated and unincorporated).....number.....	2	.....	.....	.....	.....	2	.....
35	Irrigation district.....number.....	1	.....	.....	.....	.....	.....	1
36	U. S. Bureau of Reclamation.....number.....	2	1	.....	.....	.....	1	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
37	Enterprises reporting pay roll.....number.....	5	2	.....	.....	.....	3	2
38	Wages and salaries paid and payable for 1939.....dollars.....	49,833	27,916	.....	.....	.....	11,744	10,173
39	Persons employed during week ending April 29, 1939.....number.....	30	11	.....	.....	.....	11	8
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939								
40	Wells, pumped or flowing.....number.....	4	.....	3	1	.....	.....	.....
41	Streams, gravity or storage.....number.....	7	1	2	.....	.....	3	1

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Data for less than 3 enterprises shown with permission of the enterprises involved.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Salmon Falls Creek		Feet	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Deerees F.	Deerees F.
San Jacinto.....	Elko.....	5,200	7.17	-0.72	2.22	+0.70	1.40	-0.40	3.05	-0.04	0.50	-0.98	46.0	+2.2
Humboldt River														
Battle Mountain.....	Lander.....	4,513	3.57	-2.47	0.93	-0.70	1.28	-0.59	1.01	-0.86	0.35	-0.32	51.0	+1.0
Lovelock.....	Perching.....	3,977	4.78	+0.55	1.61	+0.52	1.76	+0.34	0.44	-0.63	0.97	+0.32	53.2	+2.0
Paradise Valley.....	Humboldt.....	4,650	6.62	-2.19	2.53	-0.01	2.14	-1.16	1.11	-0.90	0.84	-0.12	(²)	(²)
Truckee River														
Reno.....	Washoe.....	4,532	5.79	-1.84	0.59	-1.39	2.45	-1.08	0.81	-0.58	1.94	+1.21	53.4	+0.5
Tahoe, Calif.....	Placer.....	6,230	18.45	-12.74	4.93	-3.98	8.75	-8.58	1.96	-2.01	2.61	+1.83	44.3	+2.0
Carson River														
Carson City.....	Ormsby.....	4,075	6.31	-3.06	1.27	-1.61	2.94	-1.74	0.97	-0.21	1.13	+0.50	51.0	+1.6
Fallon.....	Churchill.....	3,965	5.87	+1.15	1.25	+0.02	2.69	+1.24	0.79	-0.57	1.14	+0.46	51.8	+1.1
Walker River														
Bridgeport, Calif. (near).....	Mono.....	6,440	6.87	-3.15	1.63	-0.63	2.84	-1.75	0.69	-1.39	1.71	+0.62	45.9	(²)
Yerington.....	Lyon.....	4,375	5.18	+0.63	0.50	-0.47	1.35	-0.05	2.74	+1.31	0.59	-0.16	51.2	+1.4
Meadow Valley Wash														
Caliente.....	Lincoln.....	4,407	³ 9.47	³ +3.76	³ 1.29	³ +0.50	2.52	-0.32	1.52	+0.45	4.14	⁴ +3.13	55.0	(²)
Ruby Valley														
Arthur.....	Elko.....	6,500	17.69	-0.18	5.85	+1.47	5.88	-0.65	3.08	-1.08	2.88	+0.08	(²)	(²)
Snake Valley														
Lehman Caves Nat'l Monument.....	White Pine.....	7,250	13.46	(²)	4.92	(²)	2.96	(²)	1.76	(²)	3.82	(²)	48.2	(²)
Goshute and Steptoe Valleys														
Kimberly.....	White Pine.....	7,250	14.13	+0.94	2.81	-0.39	4.66	-0.13	2.68	+0.16	3.98	+1.30	47.1	+1.0
Big Smoky Valley														
Austin.....	Lander.....	6,594	13.17	+1.07	3.80	+1.19	4.25	+0.39	2.28	-1.43	2.84	+0.92	47.4	+0.2
Ralston, Monitor, and Hot Creek Valleys														
Goldfield.....	Esmeralda.....	5,700	8.79	+2.38	0.54	-0.54	2.76	+0.92	1.85	+0.14	3.64	+1.86	51.5	+0.3
Pahrangat Valley														
Alamo.....	Lincoln.....	4,130	8.02	+1.87	1.63	+0.04	2.15	+0.45	1.26	-0.08	2.98	+1.46	58.2	+1.9
Amargosa and Las Vegas Area														
Beatty.....	Nye.....	3,310	6.52	+1.69	1.42	+0.19	1.71	-0.16	1.27	+0.22	2.12	+1.44	61.2	+2.7
Las Vegas.....	Clark.....	2,033	7.63	+3.01	0.86	-0.14	3.05	+1.51	0.73	+0.16	2.99	+1.48	66.6	+1.6
Searchlight.....	Clark.....	3,445	18.20	+10.41	1.98	+0.84	2.82	+0.40	1.32	+0.62	12.08	+8.55	63.0	-0.5
Smith Creek and Dixie Valley														
Mina.....	Mineral.....	4,350	3.21	-0.34	0.59	+0.01	1.13	+0.13	0.69	-0.52	0.80	+0.04	53.6	-0.2
Smoke Creek														
Gerlach.....	Washoe.....	3,980	3.80	-0.41	1.58	+0.32	0.97	-0.41	0.63	-0.40	0.62	+0.08	52.4	+1.8

¹Departure from normal. ²Data not available. ³Does not include data for October 1938. ⁴Does not include data for August 1939.

CENSUS OF IRRIGATION — NEVADA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED					COST OF IRRIGATION WORKS AND EQUIPMENT						
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
.....	2	4	.....	2	2	3	2	2	3	.....	10
.....	648	.....	.....	84,074	.....	135	2,513	.....	82,074	.....	11
.....	1,077	.....	.....	37,628	.....	210	1,707	.....	36,788	.....	12
.....	1.66	.....	.....	0.45	.....	1.66	0.68	.....	0.45	.....	13
.....	.....	.....	.....	87,619	.....	.....	.....	87,619	.....	.....	14
.....	.....	.....	.....	1.04	.....	.....	.....	1.04	.....	.....	15
.....	.....	.....	.....	102,049	.....	.....	.....	102,049	.....	.....	16
.....	.....	.....	.....	0.86	.....	.....	.....	0.86	.....	.....	17
.....	.....	.....	.....	79,069	.....	.....	.....	79,069	.....	.....	18
.....	2 ¹	.....	.....	2 ¹	2 ²	.....	.....	.....	4	.....	19
.....	1,066,179	.....	.....	5,200	76,874	.....	.....	.....	82,074	.....	20
.....	.....	.....	.....	2,000	1,672,070	.....	.....	.....	2,740,249	.....	21
.....	1,066,179	.....	.....	0.38	21.75	.....	.....	.....	33.39	.....	22
.....	.....	.....	.....	175,000	1,584,577	.....	.....	.....	2,825,756	.....	23
.....	1,066,179	.....	.....	125,000	421,710	.....	.....	.....	546,710	.....	24
.....	.....	.....	.....	300,000	2,006,287	.....	.....	.....	3,372,466	.....	25
.....	.....	.....	.....	8,715	28,073	.....	.....	.....	36,788	.....	26
.....	.....	.....	.....	20,433	65,186	.....	.....	.....	85,619	.....	27
.....	.....	.....	.....	22,577	54,552	.....	.....	.....	77,129	.....	28
.....	.....	.....	.....	8,000	92,049	.....	.....	.....	100,049	.....	29
.....	.....	.....	.....	0.25	18.16	.....	.....	.....	16.73	.....	30
.....	.....	.....	.....	2.55	0.71	.....	.....	.....	0.86	.....	31
.....	.....	.....	.....	3.93	0.85	.....	.....	.....	1.04	.....	32
.....	2	4	.....	.....	.....	3	2	1	.....	.....	33
.....	.....	.....	.....	2	.....	.....	.....	1	1	.....	34
.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	35
.....	1	.....	.....	.....	1	.....	.....	.....	2	.....	36
.....	2 ¹	.....	.....	2	2	.....	.....	1	4	.....	37
.....	27,916	.....	.....	21,917	.....	.....	.....	49,833	.....	.....	38
.....	11	.....	.....	19	.....	.....	.....	30	.....	.....	39
.....	1	1	3	.....	.....	1	2	1	.....	.....	40
.....	1	1	1	.....	.....	2	.....	1	4	.....	41

³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation.—The average annual precipitation in Nevada for the calendar year of 1939 was 8.48 inches, a departure of -0.39 inches or 95.6 percent of normal, as reported by the U. S. Weather Bureau. The average snow fall was 28.3 inches. The precipitation was unevenly distributed, most stations in or near Sierra Nevada having large deficiencies and most stations in the south and east portions having excesses above normal. The greatest monthly amount fell at Searchlight, most of it in connection with a tropical disturbance which affected southern California and extreme southern Nevada. The number of days with precipitation was slightly above normal. Days clear, partly cloudy, and cloudy had approximately normal distribution.

There was sufficient water carried over in storage to offset the deficiencies of precipitation over the western mountains and the year was quite favorable for agriculture and range activities.

The average precipitation for the water year (October 1938 through September 1939) at 20 stations listed in State table 18 with complete records, and which are representative of the major drainage basins in Nevada was 8.58 inches, a departure of -3.40 from the average normal precipitation at these stations.

Temperature.—The year 1939 averages 2.0° warmer than normal. Only six years in the 51 years of record have been warmer. January, March, April, May, August, November and December were abnormally warm, December being the third warmest of record. February was the fifth coldest of record. The remaining months had temperatures not far from normal. Total precipitation was somewhat below normal. July, September and October had favorable amounts, March and April had about normal precipitation and the remaining months had totals below normal. The temperature distribution was fairly uniform over the State, all stations having temperature within one degree of normal or higher.

CENSUS OF IRRIGATION - NEVADA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER				
		Snake River				
		Total ²	Salmon Falls Creek	Bruneau River	East Fork Owyhee River ³	
		(2)	(3)	(4)		
IRRIGATED FARMS AND AREAS						
1	Irrigated farms.....1939..number.....	4,291	247	13	24	172
2	Area irrigated.....1939..acres.....	739,863	64,115	7,221	8,416	20,896
3	(a) Cropland harvested.....1939..acres.....	459,863	46,397	6,201	3,809	12,444
4	(b) Crop failure.....1939..acres.....	5,298	1,167	.....	44	222
5	(c) Pasture.....1939..acres.....	274,702	16,551	1,020	4,563	8,230
6	Area irrigated.....1929..acres.....	486,048	47,457	9,719	3,119	33,639
7	.....1919..acres.....	561,447	83,929	.....	1,297	57,632
8	Increase or decrease (-), 1929-1939.....percent.....	52.0	35.1	-25.7	169.8	.....
9	Irrigable area in enterprises.....1940..acres.....	915,689	100,008	10,750	8,896	46,827
10	.....1930..acres.....	983,717	63,358	12,457	4,866	45,055
11	.....1920 ⁴ ..acres.....	1,382,036	196,398	.....	2,708	143,690
12	Excess of irrigable area over the area irrigated.....1940..acres.....	175,826	35,893	3,529	480	25,931
13	.....1930..acres.....	497,069	15,901	2,738	1,747	11,416
14	.....1920 ⁴ ..acres.....	820,589	112,469	.....	1,411	86,058
15	Area works were capable of supplying with water...1940..acres.....	841,304	71,081	8,930	8,896	21,410
16	.....1930..acres.....	736,249	51,571	12,307	3,279	35,005
17	.....1920..acres.....	704,708	114,510	.....	2,125	62,385
18	Increase or decrease (-), 1930-1940.....percent.....	14.3	37.8	-27.4	171.3	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	101,441	6,966	1,709	480	514
20	.....1930..acres.....	249,601	4,114	2,588	160	1,366
21	.....1920..acres.....	143,261	30,581	.....	828	4,759
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	87.9	90.2	80.9	94.6	97.6
23	.....1929..percent....	66.1	92.0	79.0	95.1	96.1
24	.....1919..percent....	79.7	73.3	.....	61.0	92.4
CAPITAL INVESTED TO JANUARY 1						
25	Total investment in irrigation enterprises.....1940..dollars....	16,906,790	960,899	138,116	45,935	686,999
26	(a) Cost of irrigation works and equipment.....1940..dollars....	15,827,567	922,342	101,080	44,935	686,678
27	(b) Investment in water rights (reported).....1940..dollars....	1,079,223	38,557	37,036	1,000	321
28	Total investment in irrigation enterprises.....1930..dollars....	15,457,931	453,192	81,345	48,867	322,880
29	.....1920..dollars....	14,754,280	628,737	.....	42,210	192,772
30	Increase or decrease (-), 1930-1940.....percent.....	9.4	112.0	69.8	-6.0	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	20.10	13.52	15.47	5.16	32.09
32	.....1930..dollars....	21.00	8.79	6.61	14.90	9.22
33	.....1920..dollars....	20.94	5.49	.....	19.86	3.09
34	Average investment per acre irrigated.....1939..dollars....	22.85	14.99	19.13	5.46	32.88
35	Estimated final investment in existing enterprises.....1940..dollars....	18,129,584	1,365,129	138,116	47,665	1,086,999
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	19.80	13.65	12.85	5.36	23.21
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
		Primary	Supplemental	Primary	Supplemental	
		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation...1939..number....	1,341	12	87	1	9
38	Area irrigated in these enterprises.....1939..acres.....	688,722	84,722	61,850	(⁴)	5,956
39	Cost of maintenance and operation.....1939..dollars....	293,859	38,705	24,438	(⁴)	2,877
40	Average cost, per acre irrigated.....1939..dollars....	0.43	0.46	0.40	(⁴)	0.48
41	Total annual charges (reported) ⁵.....1939..dollars....	304,084	87,619	5,116	.....	.....
42	Average annual charge per acre irrigated.....1939..dollars....	1.51	1.04	0.78	.....	.....
43	Area against which charges were assessed.....1939..acres.....	218,138	102,049	6,518	.....	.....
44	Average annual charge per acre assessed.....1939..dollars....	1.39	0.86	0.78	.....	.....
45	Total charges collected ⁵.....1939..dollars....	128,223	79,069	.....	.....	.....
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars....	1,194,066	2,740,249	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939						
47	Enterprises reporting water delivered.....1939..number....	1,123	11	32	.....	10
48	Area irrigated by these enterprises.....1939..acres.....	627,502	84,622	32,153	.....	7,186
49	Water delivered.....1939..acre-feet..	1,871,256	291,980	218,970	.....	21,403
50	Average water delivered per acre irrigated.....1939..acre-feet..	3.0	3.5	6.8	.....	3.0
51	Average cost of water per acre irrigated.....1939..dollars....	0.76	1.05	0.49	.....	0.48
52	Average cost of water per acre-foot delivered..1939..dollars....	0.25	0.30	0.07	.....	0.16
DRAINAGE OF IRRIGATED LAND						
53	Enterprises reporting land drained or needing drainage.....1939..number....	37	.....	.....	.....	.....
54	Irrigable area in these enterprises.....1939..acres.....	244,984	.....	.....	.....	.....
55	Irrigated area in these enterprises.....1939..acres.....	180,044	.....	.....	.....	.....
56	Area for which drains have been installed.....1939..acres.....	97,576	.....	.....	.....	.....
57	Additional area needing drainage.....1939..acres.....	21,153	.....	.....	.....	.....

⁴ 1930 and 1920 data are totals for the Owyhee River; therefore, percentages are not shown.
⁵ Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State total.
⁶ Data for 2 enterprises in Goose Creek Drainage Basin (1) (number refers to separate map) are included with Snake River Drainage Basin total.
⁷ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - NEVADA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

COLUMBIA RIVER—Con.		HUMBOLDT RIVER										
Snake River—Continued		Upper Humboldt River							Middle Humboldt River			
South Fork Owyhee River	Total	Total	Direct	Lamoille and Rabbit Creeks	North Fork Humboldt River	South Fork Humboldt River	Maggie Creek	Pine Creek	Total			
(5)			(6)	(7)	(8)	(9)	(10)	(11)				
36	499	252	92	44	17	77	4	18	139			
26,802	285,026	169,723	54,066	32,752	28,565	35,233	9,901	9,206	93,597			
23,163	177,503	96,061	25,410	24,074	16,802	21,824	2,261	5,590	59,809			
901	833	451	326	100	25	.....	.....	.....	357	
2,738	106,690	73,211	28,330	8,578	11,638	13,409	7,640	3,616	33,431			
.....	138,426	.....	.....	.....	9,090	33,795	.....	2,703	.....		
.....	197,778	.....	.....	.....	7,940	33,052	.....	3,250	.....		
.....	105.9	.....	.....	.....	214.2	4.3	.....	240.6	.....		
32,535	333,575	187,800	57,464	40,876	33,090	35,473	9,901	10,996	106,414			
.....	343,563	.....	.....	.....	9,311	37,442	.....	4,419	.....		
.....	348,573	.....	.....	.....	28,697	48,338	.....	3,530	.....		
5,733	48,549	18,077	3,398	8,124	4,525	240	.....	1,790	12,817		
.....	205,137	.....	.....	.....	221	3,647	.....	1,716	.....		
.....	150,795	.....	.....	.....	20,757	15,286	.....	280	.....		
31,015	327,932	186,478	56,314	40,876	33,070	35,473	9,901	10,844	102,241			
.....	287,501	.....	.....	.....	7,682	37,442	.....	4,359	.....		
.....	231,251	.....	.....	.....	10,470	41,261	.....	3,250	.....		
.....	14.1	.....	.....	.....	330.5	-5.3	.....	148.8	.....		
4,213	42,906	16,755	2,248	8,124	4,505	240	.....	1,638	8,644		
.....	149,075	.....	.....	.....	.....	3,647	.....	1,656	.....		
.....	33,473	.....	.....	.....	2,530	8,209	.....	.....	.....
86.4	86.9	91.0	96.0	80.1	86.4	99.3	100.0	84.9	91.5			
.....	48.1	.....	.....	.....	.....	90.3	.....	62.0	.....		
.....	85.5	.....	.....	.....	75.8	80.1	.....	100.0	.....		
89,739	2,948,109	783,543	563,759	24,349	136,757	14,360	4,300	40,018	570,486			
89,539	2,212,307	596,603	386,342	24,300	134,257	14,335	4,300	33,069	441,144			
200	735,802	186,940	177,417	49	2,500	25	.....	6,949	129,342		
.....	2,559,497	.....	.....	.....	20,145	345,400	.....	20,252	.....		
.....	1,751,566	.....	.....	.....	57,403	288,162	.....	2,809	.....		
.....	15.2	.....	.....	.....	578.9	-95.8	.....	97.6	.....		
2.89	8.99	4.20	10.01	0.60	4.14	0.40	0.43	3.69	5.58			
.....	8.90	.....	.....	.....	2.62	9.22	.....	4.65	.....		
.....	7.57	.....	.....	.....	5.48	6.98	.....	0.86	.....		
3.35	10.34	4.62	10.43	0.74	4.79	0.41	0.43	4.35	6.10			
92,239	3,051,727	784,943	565,159	24,349	136,757	14,360	4,300	40,018	592,534			
2.84	9.15	4.18	9.84	0.60	4.13	0.40	0.43	3.64	5.57			
Primary	Sup.	Primary	Sup.								Primary	Sup.
Enterprises		Enterprises									Enterprises	
30	1	339	3	228	71	44	17	77	3	16	98	2
25,802	(4)	253,004	17,079	165,144	50,777	32,752	27,565	35,233	9,901	8,916	68,962	(4)
5,947	(4)	56,946	16,966	39,659	13,362	8,881	7,143	5,070	400	5,003	15,300	(4)
0.23	(4)	0.22	0.99	0.24	0.26	0.27	0.26	0.14	0.04	0.56	0.22	(4)
50	6,497	28,534	1,193	943	250	1,000	20,433
0.25	0.40	1.67	0.29	0.38	0.15	0.21	3.93
200	16,834	19,874	4,827	3,196	1,631	4,751	8,000
0.25	0.39	1.44	0.25	0.30	0.15	0.21	2.55
.....	4,502	22,577	723	723	22,577
.....	1,203,570	2,000
5	296	3	188	49	42	5	73	3	16	94	2
1,255	243,936	17,079	138,368	37,013	32,162	16,107	34,944	9,901	8,241	83,862	(4)
2,977	600,013	78,502	388,552	115,157	104,652	60,288	74,807	18,443	15,205	138,165	(4)
2.4	2.5	4.6	2.8	3.1	3.3	3.7	2.1	1.9	1.8	1.6	(4)
0.38	0.27	1.66	0.27	0.38	0.27	0.30	0.14	0.04	0.56	0.23	(4)
0.16	0.11	0.37	0.10	0.12	0.08	0.08	0.07	0.02	0.30	0.14	(4)
.....	5
.....	32,603	(4)	2
.....	13,336	(4)
.....	15,000
.....	330

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NEVADA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major- basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drain- age basin)	HUMBOLDT RIVER — Continued				
	Middle Humboldt River—Continued				
	Direct	Reese River	Little Humboldt River	Lower Humboldt River	
	(12)	(13)	(14)	(15)	
IRRIGATED FARMS AND AREAS					
1	Irrigated farms.....1939..number.....	48	55	36	108
2	Area irrigated.....1939..acres.....	61,621	15,093	16,883	21,706
3	(a) Cropland harvested.....1939..acres.....	37,614	10,410	11,785	21,633
4	(b) Crop failure.....1939..acres.....	157	200	.....	25
5	(c) Pasture.....1939..acres.....	23,850	4,483	5,098	48
6	Area irrigated.....1929..acres.....	.....	2,952	3,785	.....
7	.....1919..acres.....	.....	11,178	6,350	.....
8	Increase or decrease (-), 1929-1939.....percent.....	.....	411.3	346.1	.....
9	Irrigable area in enterprises.....1940..acres.....	69,502	17,616	19,296	39,361
10	.....1930..acres.....	.....	3,364	31,370	.....
11	.....1920 ¹ ..acres.....	.....	40,769	6,790	.....
12	Excess of irrigable area over the area irrigated.....1940..acres.....	7,861	2,523	2,443	17,655
13	.....1930..acres.....	.....	412	27,585	.....
14	.....1920 ¹ ..acres.....	.....	29,591	440	.....
15	Area works were capable of supplying with water...1940..acres.....	67,699	15,670	18,872	39,213
16	.....1930..acres.....	.....	3,324	31,370	.....
17	.....1920..acres.....	.....	10,898	6,350	.....
18	Increase or decrease (-), 1930-1940.....percent.....	.....	371.4	-39.8	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	6,078	577	1,989	17,507
20	.....1930..acres.....	.....	372	27,585	.....
21	.....1920..acres.....	.....	.....	.....	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	91.0	96.3	89.5	55.4
23	.....1929..percent.....	.....	88.8	12.1	.....
24	.....1919..percent.....	.....	.....	100.0	.....
CAPITAL INVESTED TO JANUARY 1					
25	Total investment in irrigation enterprises.....1940..dollars.....	471,797	41,899	56,790	1,594,080
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	345,381	36,973	56,790	1,174,560
27	(b) Investment in water rights (reported).....1940..dollars.....	126,416	2,926	.....	419,520
28	Total investment in irrigation enterprises.....1930..dollars.....	.....	42,975	40,740	.....
29	.....1920..dollars.....	.....	79,120	2,544	.....
30	Increase or decrease (-), 1930-1940.....percent.....	.....	-2.5	39.4	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	6.97	2.67	3.01	40.65
32	.....1930..dollars.....	.....	12.93	1.30	.....
33	.....1920..dollars.....	.....	7.26	0.40	.....
34	Average investment per acre irrigated.....1939..dollars.....	7.66	2.78	3.36	73.44
35	Estimated final investment in existing enterprises.....1940..dollars.....	472,845	61,899	57,790	1,674,250
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	6.80	3.51	2.99	42.54
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary Supplemental		Primary Supplemental	
		Enterprises			
37	Enterprises reporting maintenance and operation...1939..number.....	39	2	35	2 ¹
38	Area irrigated in these enterprises.....1939..acres.....	38,961	(³)	13,118	16,883
39	Cost of maintenance and operation.....1939..dollars.....	5,621	(³)	5,459	4,220
40	Average cost, per acre irrigated.....1939..dollars.....	0.14	(³)	0.42	0.25
41	Total annual charges (reported) ^{4 5}.....1939..dollars.....	250	20,433	750	4,304
42	Average annual charge per acre irrigated.....1939..dollars.....	0.15	3.93	0.24	0.59
43	Area against which charges were assessed.....1939..acres.....	1,631	8,000	3,120	7,256
44	Average annual charge per acre assessed.....1939..dollars.....	0.15	2.55	0.24	0.59
45	Total charges collected ⁶.....1939..dollars.....	.....	22,577	.....	3,779
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	.....	2,000	.....	1,201,570
WATER DELIVERED TO IRRIGATORS, 1939					
47	Enterprises reporting water delivered.....1939..number.....	39	2	23	32
48	Area irrigated by these enterprises.....1939..acres.....	58,545	(³)	13,185	12,132
49	Water delivered.....1939..acre-feet.....	88,050	(³)	24,639	25,476
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.5	(³)	1.9	2.1
51	Average cost of water per acre irrigated.....1939..dollars.....	0.15	(³)	0.41	0.31
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.10	(³)	0.22	0.15
DRAINAGE OF IRRIGATED LAND					
53	Enterprises reporting land drained or needing drainage.....1939..number.....	.....	2	.....	3
54	Irrigable area in these enterprises.....1939..acres.....	.....	(³)	.....	31,138
55	Irrigated area in these enterprises.....1939..acres.....	.....	(³)	.....	11,874
56	Area for which drains have been installed.....1939..acres.....	.....	.....	.....	15,000
57	Additional area needing drainage.....1939..acres.....	.....	(³)	.....	.....

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data for less than 3 enterprises shown with permission of the enterprises involved.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — NEVADA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

PYRAMID LAKE						Carson River ²	LAI'ONTAN	WALKER LAKE		
Total	Direct	Truckee River					Truckee-Carson Rivers	Total		
		Total	Direct	Truckee Canal	Steamboat and Washoe Valleys					
	(16)		(17)	(18)	(19)	(20)	(21)			
710	82	628	524	67	37	273	720	411	1	
47,751	2,921	44,827	30,567	5,754	8,506	34,994	54,254	73,421	2	
30,495	1,188	29,307	20,908	4,601	3,598	21,465	44,797	36,272	3	
473	.....	473	131	172	170	158	1,545	66	4
16,783	1,736	15,047	9,528	781	4,738	13,371	7,912	37,583	5	
39,028	.....	39,028	30,417	.....	3,214	72,872	.....	75,869	6
20,002	.....	20,002	14,606	.....	3,152	70,980	.....	113,364	7
22.4	.....	13.9	0.5	.....	164.7	.....	.....	-2.6	8
55,731	5,488	50,243	31,228	8,762	10,253	36,398	86,066	86,669	9	
47,770	.....	47,770	38,971	.....	3,230	167,851	.....	175,788	10
34,659	.....	34,659	28,040	.....	3,298	226,641	.....	357,937	11
7,980	2,564	5,416	661	3,008	1,747	1,404	31,812	12,748	12	
8,742	.....	8,742	8,554	.....	16	94,979	.....	99,919	13
14,657	.....	14,657	13,434	.....	146	155,661	.....	244,573	14
52,419	4,250	48,169	31,228	6,688	10,253	35,893	66,768	84,167	15	
43,424	.....	43,424	34,625	.....	3,230	121,784	.....	78,305	16
20,920	.....	20,920	15,436	.....	3,218	99,645	.....	139,207	17
20.7	.....	10.9	-9.8	.....	217.4	.....	.....	7.5	18
4,668	1,326	3,342	661	934	1,747	899	12,514	10,246	19	
4,396	.....	4,396	4,208	.....	16	48,912	.....	2,436	20
918	.....	918	830	.....	66	28,665	.....	25,943	21
91.1	68.8	93.1	97.9	86.0	83.0	97.5	81.3	87.8	22	
89.9	.....	89.9	87.8	.....	99.5	59.8	.....	96.9	23
95.6	.....	95.6	94.6	.....	97.9	71.2	.....	81.4	24
2,810,348	95,926	2,714,422	2,008,629	648,517	57,276	388,942	6,168,815	1,696,862	25	
2,783,415	95,926	2,687,489	1,991,752	648,517	47,220	386,105	6,168,815	1,678,290	26	
26,933	.....	26,933	16,877	.....	10,056	2,837	.....	18,572	27
1,814,690	.....	1,814,690	1,572,525	.....	161,400	7,208,111	.....	1,476,954	28
594,187	.....	594,187	465,900	.....	42,070	8,024,300	.....	1,661,484	29
54.9	.....	49.6	27.7	.....	-64.5	.....	.....	14.9	30
53.61	22.57	56.35	64.32	96.97	5.59	10.84	92.39	20.16	31	
41.79	.....	41.79	45.42	.....	49.97	59.19	.....	18.86	32
28.40	.....	28.40	31.48	.....	13.07	80.53	.....	11.94	33
58.85	32.81	60.55	65.71	112.71	6.73	11.11	113.70	22.96	34	
3,170,419	321,176	2,849,243	2,143,050	648,517	57,676	458,372	6,207,165	1,759,462	35	
56.89	58.52	56.71	68.63	74.01	5.63	12.59	72.12	20.30	36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
69	10	59	39	2	18	96	3	8	55	3
44,664	1,563	43,101	29,736	5,754	7,611	31,691	2,313	54,251	73,251	65,000
44,182	3,126	41,056	34,096	5,671	1,289	9,065	1,457	55,956	22,968	19,972
0.99	2.00	0.95	1.15	0.99	0.17	0.29	0.63	1.03	0.31	0.31
56,546	2,956	53,590	31,449	21,731	410	2,298	2,000	199,540	13,556	57,085
1.63	4.51	1.60	1.25	3.78	0.16	0.14	1.00	3.76	0.25	0.88
35,275	685	34,620	25,666	6,392	2,562	16,861	2,000	61,687	60,899	80,175
1.60	4.51	1.55	1.23	3.40	0.16	0.14	1.00	3.23	0.22	0.71
31,508	31,508	23,906	7,422	180	1,467	1,940	66,703	11,255	54,552
129,240	1,066,179	129,240	14,798	1,066,179	113,942	500	1,026,627	22,500	470,500
73	13	60	37	2	21	85	3	4	59	3
16,809	2,924	43,865	29,955	5,754	8,176	31,404	2,313	53,274	69,645	65,000
186,290	6,715	187,575	156,427	19,483	11,665	143,062	2,378	181,455	173,283	210,450
4.2	3.0	4.3	5.2	3.4	1.4	4.6	1.0	3.4	2.5	3.2
1.39	2.00	1.36	1.19	3.78	0.16	0.29	1.13	3.75	0.29	0.88
0.33	0.67	0.32	0.23	1.12	0.12	0.06	1.10	1.10	0.12	0.27
8	8	6	2	2	2	8
33,666	33,666	24,904	8,762	(5)	83,615	76,166
30,562	30,562	24,808	5,754	(5)	53,013	66,563
12,512	12,512	8,113	4,399	(5)	41,301	27,800
6,206	6,206	6,006	200	(5)	3,800	8,975

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁶ Data for 1930 and 1920 include a portion of the Newland Project, U. S. Bureau of Reclamation, therefore percent of increase or decrease not shown.

CENSUS OF IRRIGATION - NEVADA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	WALKER LAKE—Continued							
	Direct (22)	Walker River						West Walker River (24)
		Total	Direct		West Walker River			
			Primary	Supplemental	Primary	Supplemental		
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....1939..number.....	77	394	222			100	
2	Area irrigated.....1939..acres.....	3,646	70,275	44,133			18,967	
3	(a) Cropland harvested.....1939..acres.....	814	35,458	23,180			10,415	
4	(b) Crop failure.....1939..acres.....		66	60				
5	(c) Pasture.....1939..acres.....	2,832	34,751	20,913			8,552	
6	Area irrigated.....1929..acres.....		75,899	72,057				
7	.....1919..acres.....		113,364	94,240				
8	Increase or decrease (-), 1929-1939.....percent.....		-7.4	-38.8				
9	Irrigable area in enterprises.....1940..acres.....	7,371	79,298	49,881			22,042	
10	.....1930..acres.....		175,768	170,420				
11	.....1920 ² ..acres.....		357,937	294,990				
12	Excess of irrigable area over the area irrigated..1940..acres.....	3,725	9,023	5,748			3,075	
13	.....1930..acres.....		99,919	98,363				
14	.....1920 ² ..acres.....		244,573	200,750				
15	Area works were capable of supplying with water..1940..acres.....	5,154	79,013	49,596			22,042	
16	.....1930..acres.....		78,305	74,000				
17	.....1920..acres.....		139,207	98,500				
18	Increase or decrease (-), 1930-1940.....percent.....		0.9	-33.0				
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,508	8,738	5,463			3,075	
20	.....1930..acres.....		2,436	1,943				
21	.....1920..acres.....		25,843	4,260				
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	70.7	88.9	89.0			86.0	
23	.....1929..percent.....		96.9	97.4				
24	.....1919..percent.....		81.4	95.7				
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars....	218,179	1,478,683	879,400			501,872	
26	(a) Cost of irrigation works and equipment.....1940..dollars....	215,679	1,462,611	865,051			500,554	
27	(b) Investment in water rights (reported).....1940..dollars....	2,500	16,072	14,349			1,318	
28	Total investment in irrigation enterprises.....1930..dollars....		1,476,954	1,446,454				
29	.....1920..dollars....		1,661,484	1,466,889				
30	Increase or decrease (-), 1930-1940.....percent.....		0.1	-39.2				
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	42.33	18.71	17.73			22.77	
32	.....1930..dollars....		18.86	19.55				
33	.....1920..dollars....		11.94	14.89				
34	Average investment per acre irrigated.....1939..dollars....	59.84	21.04	19.93			26.46	
35	Estimated final investment in existing enterprises..1940..dollars....	272,179	1,487,283	888,000			501,872	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	36.93	18.76	17.80			22.77	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
			Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
			Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation..1939..number.....	2	53	3	30	1	15	1
38	Area irrigated in these enterprises.....1939..acres.....	(4)	69,739	65,000	43,787	(4)	18,957	(4)
39	Cost of maintenance and operation.....1939..dollars....	(4)	18,967	19,972	7,367	(4)	7,195	(4)
40	Average cost, per acre irrigated.....1939..dollars....	(4)	0.27	0.31	0.17	(4)	0.40	(4)
41	Total annual charges (reported) ⁵.....1939..dollars....	89	13,467	57,085	5,338	38,546	8,129	14,352
42	Average annual charge per acre irrigated.....1939..dollars....	0.03	0.26	0.88	0.15	0.88	0.55	0.90
43	Area against which charges were assessed.....1939..acres.....	3,498	57,401	80,175	39,764	54,137	17,637	20,158
44	Average annual charge per acre assessed.....1939..dollars....	0.03	0.23	0.71	0.13	0.71	0.46	0.71
45	Total charges collected ⁵.....1939..dollars....	85	11,170	54,552	5,251	36,836	5,919	13,715
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars....		22,500	470,500		317,696	22,500	118,293
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	3	56	3	33	1	15	1
48	Area irrigated by these enterprises.....1939..acres.....	3,646	65,999	65,000	44,133	(4)	16,526	(4)
49	Water delivered.....1939..acre-feet.....	6,754	166,529	210,450	97,994	(4)	56,922	(4)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.9	2.5	3.2	2.2	(4)	3.4	(4)
51	Average cost of water per acre irrigated.....1939..dollars....	0.03	0.30	0.88	0.18	(4)	0.50	(4)
52	Average cost of water per acre-foot delivered..1939..dollars....	0.01	0.12	0.27	0.08	(4)	0.14	(4)
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....		8		6		2	
54	Irrigable area in these enterprises.....1939..acres.....		76,166		68,226		(4)	
55	Irrigated area in these enterprises.....1939..acres.....		66,563		60,363		(4)	
56	Area for which drains have been installed.....1939..acres.....		27,860		25,620		(4)	
57	Additional area needing drainage.....1939..acres.....		8,975		7,775		(4)	

¹Data for 1920 and 1930 Censuses are for Steptoe Creek only; therefore, percentages of increase or decrease are not shown.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Percent not shown when more than 1,000.

CENSUS OF IRRIGATION — NEVADA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

WALKER LAKE—Con.	COLORADO RIVER							INDEPENDENT BASINS							
Walker River—Con.	Virgin River							Las Vegas Valley	Thousand Spring Creek	Clover Valley	Ruby Valley	Goshute and Steptoe Valleys ¹	Deep Creek		
East Walker River	Total	Direct	Muddy River												
			Total	Direct	Total	Direct	Meadow Valley Wash								
(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)					
12	660	16	533	124	409	230	179	111	14	20	29	62	14	1	
7,175	13,860	52	11,263	2,304	8,959	4,099	4,860	2,565	2,775	13,290	29,033	9,253	1,220	2	
1,883	10,607	28	9,409	2,181	7,228	3,717	3,511	1,170	2,715	4,231	14,775	5,325	1,135	3	
6	111	.....	95	.....	95	16	79	16	.....	.....	.....	73	40	4
5,286	3,162	24	1,759	123	1,636	366	1,270	1,379	60	9,059	14,258	3,855	45	5	
.....	12,308	240	2,070	.....	.....	.....	.....	.....	.....	.....	.....	4,557	.....	6
.....	8,546	.....	7,865	.....	.....	.....	.....	.....	.....	.....	.....	3,708	.....	7
.....	12.8	-78.3	444.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
7,375	19,425	234	15,699	3,462	12,237	5,490	6,747	3,492	9,259	14,205	32,407	11,028	1,234	9	
.....	21,292	915	2,780	.....	.....	.....	.....	.....	.....	.....	.....	8,279	.....	10
.....	21,342	.....	17,259	.....	.....	.....	.....	.....	.....	.....	.....	12,069	.....	11
200	5,545	182	4,436	1,158	3,278	1,391	1,887	927	6,484	915	3,374	1,775	14	12	
.....	8,984	675	710	.....	.....	.....	.....	.....	.....	.....	.....	3,722	.....	13
.....	12,796	.....	9,394	.....	.....	.....	.....	.....	.....	.....	.....	8,361	.....	14
7,375	17,047	194	13,684	2,812	10,872	5,150	5,722	3,169	4,893	14,070	32,407	10,524	1,234	15	
.....	14,849	415	2,280	.....	.....	.....	.....	.....	.....	.....	.....	7,468	.....	16
.....	10,338	.....	9,460	.....	.....	.....	.....	.....	.....	.....	.....	3,628	.....	17
.....	14.8	-53.3	500.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18
200	3,167	142	2,421	508	1,913	1,051	862	604	2,118	780	3,374	1,271	14	19	
.....	2,541	175	210	.....	.....	.....	.....	.....	.....	.....	.....	2,911	.....	20
.....	1,792	.....	1,585	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21
97.3	81.4	26.8	82.3	81.9	82.4	79.6	84.9	80.9	56.7	94.5	89.6	87.9	98.3	22	
.....	82.9	57.8	90.8	.....	.....	.....	.....	.....	.....	.....	.....	61.0	.....	23
.....	82.7	.....	83.1	.....	.....	.....	.....	.....	.....	.....	.....	102.2	.....	24
97,411	597,038	3,677	472,662	68,649	404,013	293,727	110,286	120,699	296,215	7,340	7,620	45,144	13,806	25	
97,006	493,817	3,677	370,585	67,633	302,952	213,201	89,751	119,555	296,180	7,170	7,620	42,139	13,806	26	
405	103,221	.....	102,077	1,016	101,061	80,526	20,535	1,144	35	170	.....	3,005	.....	27
.....	223,631	37,850	41,000	.....	.....	.....	.....	.....	.....	.....	.....	222,870	.....	28
.....	415,953	.....	357,542	.....	.....	.....	.....	.....	.....	.....	.....	189,986	.....	29
.....	167.0	-90.3	(5)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
13.21	35.02	18.95	34.54	24.41	37.16	57.03	19.27	38.09	60.54	0.52	0.24	4.29	11.19	31	
.....	15.06	91.20	17.98	.....	.....	.....	.....	.....	.....	.....	.....	29.84	.....	32
.....	40.24	.....	37.80	.....	.....	.....	.....	.....	.....	.....	.....	52.37	.....	33
13.58	49.01	70.71	41.97	29.80	45.10	71.66	22.69	47.06	106.74	0.55	0.26	4.88	11.32	34	
97,411	678,973	5,292	543,912	68,649	475,263	307,377	167,886	129,769	296,215	7,340	7,635	46,384	13,806	35	
13.21	34.95	22.62	34.65	19.83	38.84	55.99	24.88	37.16	31.99	0.52	0.24	4.21	11.19	36	
Primary	Sup.														
Enterprises	Enterprises														
8	1	210	15	96	5	91	9	82	99	12	20	25	59	14	37
6,995	(4)	13,109	40	10,823	2,282	8,541	3,779	4,762	2,246	2,775	13,290	28,963	8,939	1,220	38
4,105	(4)	22,194	195	18,008	6,625	11,983	4,780	7,203	3,391	2,887	1,840	2,571	6,419	1,387	39
0.59	(4)	1.69	4.88	1.72	2.90	1.40	1.26	1.51	1.51	1.04	0.14	0.09	0.72	1.14	40
.....	4,187	15,787	15,787	5,372	10,415	9,030	1,385	41
.....	0.79	2.64	2.64	2.62	2.65	2.83	1.89	42
.....	5,880	6,078	6,078	2,053	4,025	3,191	834	43
.....	0.71	2.60	2.60	2.62	2.59	2.83	1.66	44
.....	4,001	10,079	10,079	1,253	8,826	8,504	322	45
.....	34,511	15,699	15,699	463	15,236	15,236	46
8	1	160	12	92	4	88	11	77	56	9	9	21	53	14	47
5,340	(4)	11,340	45	10,069	1,286	8,783	4,099	4,684	1,226	2,460	5,752	28,108	6,970	1,220	48
11,613	(4)	55,593	38	47,951	6,352	41,599	20,270	21,329	7,604	13,266	4,900	30,943	15,869	5,106	49
2.2	(4)	4.9	0.8	4.8	4.9	4.7	4.9	4.6	5.4	0.9	1.1	2.3	4.2	50
0.69	(4)	1.99	4.94	1.90	1.71	1.94	2.55	1.43	2.63	1.15	0.15	0.08	0.88	1.14	51
0.32	(4)	0.41	5.82	0.40	0.35	0.41	0.51	0.31	0.42	0.21	0.17	0.07	0.39	0.27	52
.....	3	3	3	(4)	2	53
.....	905	905	905	(4)	(4)	54
.....	552	552	552	(4)	(4)	55
.....	20	20	20	(4)	(4)	56
.....	360	360	360	(4)	(4)	57

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NEVADA

DRAINAGE BASIN TABLE I— AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	INDEPENDENT BASINS—Continued					
	Snake Valley	Spring Valley	Crescent, Diamond, Grass, and Newark Valleys	Big Smoky Valley	Ralston, Monitor, and Hot Creek Valleys	Railroad Valley
	(36)	(37)	(38)	(39)	(40)	(41)
IRRIGATED FARMS AND AREAS						
1 Irrigated farms.....1939..number....	15	22	55	27	38	37
2 Area irrigated.....1939..acres.....	2,938	10,932	19,998	6,316	7,681	9,753
3 (a) Cropland harvested.....1939..acres.....	1,414	4,529	11,726	3,134	1,948	6,817
4 (b) Crop failure.....1939..acres.....	28	87	96	17	.....	20
5 (c) Pasture.....1939..acres.....	1,496	6,316	8,176	3,165	5,733	2,916
6 Area irrigated.....1929..acres.....	.....	.....	.....	.....	.....	.....
7 .....1919..acres.....	.....	.....	.....	.....	.....	.....
8 Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	.....	.....	.....
9 Irrigable area in enterprises.....1940..acres.....	4,962	12,804	21,064	6,557	9,332	10,439
10 .....1930..acres.....	.....	.....	.....	.....	.....	.....
11 .....1920 ¹ ..acres.....	.....	.....	.....	.....	.....	.....
12 Excess of irrigable area over the area irrigated.....1940..acres.....	2,024	1,872	1,066	241	1,651	686
13 .....1930..acres.....	.....	.....	.....	.....	.....	.....
14 .....1920 ¹ ..acres.....	.....	.....	.....	.....	.....	.....
15 Area works were capable of supplying with water.....1940..acres.....	4,042	11,564	20,911	6,557	9,217	10,218
16 .....1930..acres.....	.....	.....	.....	.....	.....	.....
17 .....1920..acres.....	.....	.....	.....	.....	.....	.....
18 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	.....
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,104	632	913	241	1,536	465
20 .....1930..acres.....	.....	.....	.....	.....	.....	.....
21 .....1920..acres.....	.....	.....	.....	.....	.....	.....
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	75.1	94.5	95.6	96.3	83.3	95.4
23 .....1929..percent.....	.....	.....	.....	.....	.....	.....
24 .....1919..percent.....	.....	.....	.....	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars.....	42,406	64,205	154,566	84,334	134,095	24,118
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	25,696	63,245	133,565	74,269	73,170	21,735
27 (b) Investment in water rights (reported).....1940..dollars.....	16,710	960	21,001	10,065	60,925	2,383
28 Total investment in irrigation enterprises.....1930..dollars.....	.....	.....	.....	.....	.....	.....
29 .....1920..dollars.....	.....	.....	.....	.....	.....	.....
30 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	.....
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	10.79	5.55	7.39	12.86	14.55	2.36
32 .....1930..dollars.....	.....	.....	.....	.....	.....	.....
33 .....1920..dollars.....	.....	.....	.....	.....	.....	.....
34 Average investment per acre irrigated.....1939..dollars.....	14.37	5.87	7.73	13.35	17.46	2.47
35 Estimated final investment in existing enterprises.....1940..dollars.....	52,136	114,805	158,191	91,084	136,545	26,118
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	10.75	8.97	7.51	13.89	14.63	2.50
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
37 Enterprises reporting maintenance and operation.....1939..number....	17	20	45	24	1	24
38 Area irrigated in these enterprises.....1939..acres.....	2,938	8,393	19,606	6,209	(²)	7,609
39 Cost of maintenance and operation.....1939..dollars.....	2,410	5,090	7,058	2,559	(²)	3,178
40 Average cost, per acre irrigated.....1939..dollars.....	0.82	0.61	0.36	0.41	(²)	0.42
41 Total annual charges (reported) ^{3 4}.....1939..dollars.....	.....	.....	.....	.....	.....	1,400
42 Average annual charge per acre irrigated.....1939..dollars.....	.....	.....	.....	.....	.....	0.23
43 Area against which charges were assessed.....1939..acres.....	.....	.....	.....	.....	.....	6,000
44 Average annual charge per acre assessed.....1939..dollars.....	.....	.....	.....	.....	.....	0.23
45 Total charges collected ⁵.....1939..dollars.....	.....	.....	.....	.....	.....	.....
46 Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	.....	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number....	16	22	30	22	1	4
48 Area irrigated by these enterprises.....1939..acres.....	2,938	10,932	13,796	5,520	(²)	5,468
49 Water delivered.....1939..acre-feet..	5,778	17,918	45,605	15,454	(²)	14,354
50 Average water delivered per acre irrigated.....1939..acre-feet..	2.0	1.6	3.3	2.8	(²)	2.6
51 Average cost of water per acre irrigated.....1939..dollars.....	0.82	0.61	0.40	0.45	(²)	0.48
52 Average cost of water per acre-foot delivered.....1939..dollars.....	0.42	0.37	0.12	0.16	(²)	0.18
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number....	.....	1	.....	3	.....	.....
54 Irrigable area in these enterprises.....1939..acres.....	.....	(²)	.....	955	.....	.....
55 Irrigated area in these enterprises.....1939..acres.....	.....	(²)	.....	785	.....	.....
56 Area for which drains have been installed.....1939..acres.....	.....	(²)	.....	.....	.....	.....
57 Additional area needing drainage.....1939..acres.....	.....	(²)	.....	130	.....	.....

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - NEVADA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

INDEPENDENT BASINS—Continued											
White River	Pahrangat Valley	Amargosa River	Fish Lake Valley	Smith Creek and Dixie Valley	Sonoma-Clear Creeks	Black Rock Desert	Quinn River	Cowhead and Warner Lakes	Surprise Valley	Smoke Creek	Honey Lake
(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)
92	65	17	13	42	8	53	97	4	16	13	18
5,727	6,302	1,246	3,179	4,449	1,073	6,895	18,777	660	2,458	904	1,063
4,126	3,303	207	899	3,647	728	5,413	12,896	290	1,630	644	795
32	5	125	.....	24	10	295	93	.....	.....	.....	.....
1,569	2,994	914	2,280	778	335	1,187	5,788	370	828	260	268
.....	.....	.....	.....	.....	.....	.....	8,518	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	9,935	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	120.4	.....	.....	.....	.....
7,284	7,135	1,715	4,402	5,148	1,440	10,318	21,638	660	2,604	1,037	1,145
.....	.....	.....	.....	.....	.....	.....	11,060	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	19,635	.....	.....	.....	.....
1,557	833	469	1,223	699	367	3,423	2,861	.....	146	133	82
.....	.....	.....	.....	.....	.....	.....	2,542	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	9,700	.....	.....	.....	.....
6,359	7,135	1,699	3,767	5,028	1,440	8,672	20,814	660	2,604	1,037	1,145
.....	.....	.....	.....	.....	.....	.....	10,927	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	13,452	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	90.5	.....	.....	.....	.....
632	833	453	588	579	367	1,777	2,037	.....	146	133	82
.....	.....	.....	.....	.....	.....	.....	2,409	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	3,517	.....	.....	.....	.....
90.1	88.3	73.3	84.4	88.5	74.5	79.5	90.2	100.0	94.4	87.2	92.8
.....	.....	.....	.....	.....	.....	.....	78.0	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	73.9	.....	.....	.....	.....
86,655	51,280	49,120	30,475	54,133	26,090	59,064	41,150	2,110	14,681	19,274	27,896
71,260	50,200	45,350	27,975	51,251	20,420	56,669	39,800	2,110	12,778	18,172	27,896
15,395	1,080	3,770	2,500	2,882	5,670	2,395	1,350	.....	1,903	1,102	.....
.....	.....	.....	.....	.....	.....	.....	68,858	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	50,548	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	40.2	.....	.....	.....	.....
13.63	7.19	28.91	8.09	10.77	18.12	6.81	1.98	3.20	5.64	18.59	24.36
.....	.....	.....	.....	.....	.....	.....	6.30	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	3.76	.....	.....	.....	.....
15.13	8.14	39.42	9.59	12.17	24.32	8.57	2.19	3.20	5.97	21.32	26.24
86,805	51,280	49,120	32,400	55,433	26,090	63,109	59,850	2,110	14,681	19,274	27,896
11.92	7.19	28.64	7.36	10.77	18.12	6.12	2.77	3.20	5.64	18.59	24.36
Primary	Sup.										
Enterprises											
17	1	8	19	12	27	7	34	29	14	8	13
5,395	(2)	6,142	1,246	3,179	4,114	973	5,446	15,922	(2)	2,358	793
2,490	(2)	1,850	866	1,165	2,721	685	5,325	3,533	(2)	657	445
0.46	(2)	0.30	0.69	0.37	0.66	0.71	0.98	0.22	(2)	0.28	0.56
1,568	.....	1,124	.....	.....	100	.....	.....	.....	.....	252	252
0.71	.....	0.31	.....	.....	0.10	.....	.....	.....	.....	0.51	0.51
2,248	.....	3,770	.....	.....	980	.....	.....	.....	.....	490	490
0.71	.....	0.30	.....	.....	0.10	.....	.....	.....	.....	0.51	0.51
1,850	.....	759	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
13	1	8	14	13	41	6	31	30	3	15	12
3,293	(2)	6,297	1,205	3,179	4,449	959	6,255	18,721	660	2,458	904
6,109	(2)	17,794	11,459	1,248	15,663	1,300	18,414	32,282	522	4,883	2,316
1.9	(2)	2.8	9.5	0.4	3.5	1.4	2.9	1.7	0.8	2.0	2.6
0.62	(2)	0.31	0.63	0.37	0.66	0.70	1.06	0.22	0.22	0.28	0.56
0.34	(2)	0.11	0.07	0.93	0.19	0.52	0.36	0.13	0.27	0.14	0.20
.....
.....	.....	(2)	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	(2)	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	(2)	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	(2)	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - NEVADA

DRAINAGE BASIN TABLE II- ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER				
		Snake River				
		Total ²	Salmon Falls Creek	Bruneau River	East Fork Owyhee River*	South Fork Owyhee River
		(2)	(3)	(4)	(5)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1						
1 Enterprises.....1940. number.....	31,488	94	11	25	21	35
2 Average size of enterprise based on area works were capable of supplying with water.....1940. acres.....	565	756	812	356	1,020	886
3 Diversion dams.....1940. total number.....	1,896	310	79	78	54	99
4 1930. total number.....	1,640	296	21	60	214	.....
5 1920. total number.....	1,523	247	.....	31	181	.....
6 (a) Concrete and masonry.....1940. number.....	95	1	.....	.....	1	.....
7 (b) Timber.....1940. number.....	84	3	.....	.....	.....	3
8 (c) Earth and rock.....1940. number.....	1,077	224	51	66	24	83
9 (d) Other, mixed, and not reported.....1940. number.....	640	82	28	12	29	13
10 Main canals and laterals.....1940. total length, miles.....	2,897.2	449.2	65.0	33.2	93.0	258.0
11 1930. total length, miles.....	4,155	321	112	51	156	.....
12 1920. total length, miles.....	4,368	539	.....	34	335	.....
13 (a) Earth.....1940. length, miles.....	2,845	423	39	33	93	258
14 (b) Lined.....1940. length, miles.....	52.2	26.2	26.0	0.2	.....	.....
15 1940. capacity, c.f.s. ⁴	22,930	1,380	224	110	635	394
16 1930. capacity, c.f.s. ⁴	16,986	1,022	366	117	539	.....
17 1920. capacity, c.f.s. ⁴	10,554	680	.....	55	525	.....
18 Pipe lines ⁵.....1940. total length, miles.....	104.7	1.1	.....	.....	0.3	0.8
19 1930. total length, miles.....	90.6	0.6	.....	0.5	0.1	.....
20 1920. total length, miles.....	33.0	0.7	.....	0.6	0.1	.....
21 (a) Concrete.....1940. length, miles.....	8.7	0.3	.....	.....	0.3	.....
22 (b) Metal.....1940. length, miles.....	77.7	0.8	.....	.....	.....	0.8
23 (c) Wood-stave.....1940. length, miles.....	12.1	.....	.....	.....	.....	.....
24 (d) Other.....1940. length, miles.....	6.2	.....	.....	.....	.....	.....
25 Storage dams.....1940. total number.....	122	2	.....	.....	1	1
26 1930. total number.....	118	1	.....	.....	1	.....
27 1920. total number.....	82	3	.....	1	2	.....
28 (a) Concrete and masonry.....1940. number.....	8	2	.....	.....	1	1
29 (b) Earth and rock.....1940. number.....	110	.....	.....	.....	.....	.....
30 (c) Other, mixed, and not reported.....1940. number.....	4	.....	.....	.....	.....	.....
31 Reservoirs.....1940. total number.....	200	2	.....	.....	61	1
32 (a) 1-99 acre-feet capacity.....1940. number.....	168	.....	.....	.....	.....	.....
33 (b) 100-999 acre-feet capacity.....1940. number.....	14	.....	.....	.....	.....	.....
34 (c) 1,000 and over acre-feet capacity.....1940. number.....	18	2	.....	.....	1	1
35 1940. total capacity, ac.-ft. ⁷	696,005	(⁸)	.....	.....	32,000	(⁸)
36 1930. total capacity, ac.-ft.....	209	2	.....	1	1	.....
37 1920. total capacity, ac.-ft.....	529,369	1,360	.....	160	1,200	.....
38 Wells, flowing.....1940. number.....	322	.....	.....	.....	.....	.....
39 1930. number.....	274	.....	.....	.....	.....	.....
40 1920. number.....	123	.....	.....	.....	.....	.....
41 1940. yield, g.p.m.....	39,835	.....	.....	.....	.....	.....
42 1930. yield, g.p.m.....	19,131	.....	.....	.....	.....	.....
43 1920. yield, g.p.m.....	21,942	.....	.....	.....	.....	.....
44 Wells, pumped.....1940. number.....	167	1	.....	.....	.....	1
45 1930. number.....	147	1	.....	.....	1	.....
46 1920. number.....	129	1	.....	.....	1	.....
47 1940. yield, g.p.m.....	50,938	(⁸)	.....	.....	.....	(⁸)
48 1930. yield, g.p.m.....	54,162	20	.....	.....	20	.....
49 1920. yield, g.p.m.....	6,796	25	.....	.....	25	.....
50 Pumping plants.....1940. total number.....	192	2	.....	.....	.....	2
51 1930. total number.....	157	1	.....	.....	1	.....
52 Prime movers.....1940. capacity, hp.....	2,292	(⁸)	.....	.....	.....	(⁸)
53 1930. capacity, hp.....	2,671	20	.....	.....	20	.....
54 1920. capacity, hp.....	409	6	.....	.....	6	.....
55 (a) Electric.....1940. number.....	46	.....	.....	.....	.....	.....
56 1940. capacity, hp.....	1,040	.....	.....	.....	.....	.....
57 (b) Internal-combustion.....1940. number.....	103	2	.....	.....	.....	2
58 1940. capacity, hp.....	1,060	(⁸)	.....	.....	.....	(⁸)
59 (c) Other.....1940. number.....	43	.....	.....	.....	.....	.....
60 1940. capacity, hp.....	162	.....	.....	.....	.....	.....
61 Pumps.....1940. total number.....	196	2	.....	.....	.....	2
62 1930. number.....	173	1	.....	.....	1	.....
63 1920. number.....	72	1	.....	.....	1	.....
64 1940. capacity, g.p.m.....	141,065	(⁸)	.....	.....	.....	(⁸)
65 1930. capacity, g.p.m.....	115,648	30	.....	.....	30	.....
66 1920. capacity, g.p.m.....	35,266	350	.....	.....	350	.....
67 (a) Centrifugal.....1940. number.....	101	2	.....	.....	.....	2
68 1940. capacity, g.p.m.....	86,857	(⁸)	.....	.....	.....	(⁸)
69 1940. average capacity, g.p.m.....	860	(⁸)	.....	.....	.....	(⁸)
70 (b) Turbine.....1940. number.....	25	.....	.....	.....	.....	.....
71 1940. capacity, g.p.m.....	41,258	.....	.....	.....	.....	.....
72 1940. average capacity, g.p.m.....	1,650	.....	.....	.....	.....	.....
73 (c) Plunger.....1940. number.....	62	.....	.....	.....	.....	.....
74 1940. capacity, g.p.m.....	1,739	.....	.....	.....	.....	.....
75 1940. average capacity, g.p.m.....	28	.....	.....	.....	.....	.....
76 (d) Other.....1940. number.....	3	.....	.....	.....	.....	.....
77 1940. capacity, g.p.m.....	11,211	.....	.....	.....	.....	.....
78 Pumping lift, from all sources.....1940. average, feet.....	31	(⁸)	.....	.....	.....	(⁸)
79 1930. average, feet.....	31	10	.....	.....	10	.....
80 1920. average, feet.....	22	30	.....	.....	30	.....
81 from pumped wells.....1940. average, feet.....	31	(⁸)	.....	.....	.....	(⁸)
82 from surface sources.....1940. average, feet.....	31	(⁸)	.....	.....	.....	(⁸)

¹ 1930 and 1920 data are totals for the Owyhee River.
² Data for unidentified basins for the 1930 and 1920 Censuses are included only in State total.
³ Data for 2 enterprises in Goose Creek Drainage Basin (1) (number refers to separate map) are included with Snake River Drainage Basin total.
⁴ Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.
⁵ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — NEVADA

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WORKS, 1940, 1930, AND 1920

HUMBOLDT RIVER														PYRAMID LAKE	
Total	Upper Humboldt River							Middle Humboldt River					Total	Direct	
	Total	Direct	Lamoille and Rabbit Creeks	North Fork Humboldt River	South Fork Humboldt River	Maggie Creek	Pine Creek	Total	Direct	Reese River	Little Humboldt River	Lower Humboldt River			
	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)	(14)	(15)		(16)		
398	233	73	44	18	77	3	18	110	46	27	35	15	82	13	1
916	800	771	929	1,837	461	3,300	602	929	1,410	580	539	2,614	639	327	2
750	439	130	58	60	77	22	72	298	75	90	133	13	77	4	3
618	.....	.....	.....	51	30	.....	23	.....	.....	27	27	.....	65	.....	4
715	.....	.....	.....	47	161	.....	.....	.....	.....	47	6	.....	54	.....	5
38	7	3	1	2	.....	.....	1	23	10	.....	13	8	15	1	6
14	4	.....	.....	.....	1	.....	3	8	8	.....	.....	2	7	.....	7
309	158	65	19	38	6	.....	28	148	13	65	70	3	41	3	8
369	270	62	38	40	70	.....	20	119	44	25	50	.....	14	.....	9
569.0	197.0	91.0	23.0	55.0	13.0	5.0	10.0	304.0	86.0	79.0	139.0	68.0	315.0	21.1	10
1,303	.....	.....	.....	41	300	.....	71	.....	.....	23	41	.....	350	.....	11
1,573	.....	.....	.....	131	383	.....	1	.....	.....	241	4	.....	172	.....	12
568	196	90	23	55	13	5	10	304	86	79	139	68	310	21	13
1.0	1.0	1.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.0	0.1	14
8,481	4,956	1,413	1,378	313	1,383	254	235	2,827	1,733	382	712	698	3,199	146	15
5,253	.....	.....	.....	83	587	.....	76	.....	.....	57	260	.....	3,137	.....	16
1,204	.....	.....	.....	48	297	.....	.....	.....	.....	155	.....	.....	2,465	.....	17
12.3	6.7	.....	.....	0.5	0.2	.....	6.0	3.0	2.7	.....	0.3	2.6	6.5	1.6	18
15.3	.....	.....	.....	.....	.....	.....	1.5	.....	.....	6.2	1.0	.....	0.7	.....	19
15.7	.....	.....	.....	0.4	.....	.....	.....	.....	.....	.....	.....	.....	0.9	.....	20
0.7	.....	.....	.....	.....	.....	.....	.....	0.5	0.5	.....	.....	0.2	0.6	0.6	21
9.3	6.7	.....	.....	0.5	0.2	.....	6.0	2.2	2.2	.....	.....	0.4	2.3	1.0	22
2.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.0	3.1	.....	23
0.3	.....	.....	.....	.....	.....	.....	.....	0.3	.....	.....	0.3	.....	0.5	.....	24
13	2	2	.....	.....	.....	.....	.....	7	7	.....	.....	4	16	.....	25
13	.....	.....	.....	.....	1	.....	2	.....	.....	.....	1	.....	5	.....	26
12	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....	1	1	.....	27
3	.....	.....	.....	.....	.....	.....	.....	5	5	.....	.....	3	15	.....	28
9	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29
1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
19	2	2	.....	.....	.....	.....	.....	14	14	.....	.....	3	16	2	31
14	.....	.....	.....	.....	.....	.....	.....	12	12	.....	.....	2	15	2	32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
5	2	2	.....	.....	.....	.....	.....	2	2	.....	.....	1	1	.....	34
241,062	(8)	(8)	.....	.....	.....	.....	.....	49,849	49,849	.....	.....	179,180	5,197	(8)	35
21	.....	.....	.....	.....	2	.....	3	.....	.....	1	1	.....	2	.....	36
105,611	.....	.....	.....	.....	2,150	.....	4	.....	.....	200	50	.....	1,100	.....	37
7	2	2	.....	.....	.....	.....	.....	5	3	1	1	.....	.....	.....	38
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	39
12	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	40
203	(8)	(8)	.....	.....	.....	.....	.....	153	137	(8)	(8)	.....	.....	.....	41
65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	81	.....	42
895	.....	.....	.....	.....	.....	.....	.....	.....	.....	190	.....	.....	.....	.....	43
28	7	7	.....	.....	.....	.....	.....	19	16	1	2	2	5	.....	44
28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	45
18	.....	.....	.....	1	1	.....	1	.....	.....	4	(8)	(8)	1	.....	46
4,770	375	375	.....	.....	.....	.....	.....	3,010	2,610	(8)	(8)	(8)	4,020	.....	47
13,035	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,125	.....	48
2,540	.....	.....	.....	.....	100	.....	10	.....	.....	.....	.....	.....	250	.....	49
29	6	6	.....	.....	.....	.....	.....	21	16	1	4	2	5	.....	50
28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	51
189	14	14	.....	.....	.....	.....	.....	138	112	(8)	23	(8)	44	.....	52
627	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47	.....	53
71	.....	.....	.....	8	5	.....	10	.....	.....	.....	.....	.....	6	.....	54
5	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	55
40	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	(8)	14	.....	56
18	1	1	.....	.....	.....	.....	.....	16	11	1	4	1	.....	.....	57
139	(8)	(8)	.....	.....	.....	.....	.....	131	105	(8)	23	(8)	.....	.....	58
6	1	1	.....	.....	.....	.....	.....	5	5	.....	.....	.....	1	.....	59
10	(8)	(8)	.....	.....	.....	.....	.....	7	7	.....	.....	.....	(8)	.....	60
39	6	6	.....	.....	.....	.....	.....	21	16	1	4	2	5	.....	61
29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	62
19	.....	.....	.....	1	1	.....	1	.....	.....	3	.....	.....	1	.....	63
4,950	355	355	.....	.....	.....	.....	.....	3,210	2,810	(8)	380	(8)	4,020	.....	64
11,770	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,350	.....	65
22,495	.....	.....	.....	.....	100	.....	10	.....	.....	.....	.....	.....	250	.....	66
15	2	2	.....	.....	.....	.....	.....	12	8	.....	4	1	5	.....	67
3,712	(8)	(8)	.....	.....	.....	.....	.....	2,042	1,662	.....	380	(8)	4,020	.....	68
247	(8)	(8)	.....	.....	.....	.....	.....	170	208	.....	95	(8)	804	.....	69
1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	70
(8)	.....	.....	.....	.....	.....	.....	.....	(8)	(8)	.....	.....	.....	.....	.....	71
(8)	.....	.....	.....	.....	.....	.....	.....	(8)	(8)	.....	.....	.....	.....	.....	72
13	4	4	.....	.....	.....	.....	.....	8	7	1	.....	1	.....	.....	73
488	35	35	.....	.....	.....	.....	.....	418	398	(8)	.....	(8)	.....	.....	74
38	9	9	.....	.....	.....	.....	.....	52	57	(8)	.....	(8)	.....	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77
37	36	36	.....	.....	.....	.....	.....	38	42	(8)	15	(8)	10	.....	78
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	.....	79
30	.....	.....	.....	30	12	.....	.....	.....	.....	.....	.....	.....	8	.....	80
37	36	36	.....	.....	.....	.....	.....	38	43	(8)	(8)	(8)	10	.....	81
38	35	35	.....	.....	.....	.....	.....	38	38	.....	.....	.....	.....	.....	82

⁵ Includes siphons and farm pipe lines reported.
⁶ Data for less than 3 enterprises shown with permission of the enterprise involved.
⁷ Total capacity of all reservoirs regardless of size.
⁸ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — NEVADA

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	PYRAMID LAKE—Continued				Carson River ^o	LAHONTAN Truckee-Carson Rivers
	Truckee River					
	Total	Direct	Truckee Canal	Steamboat and Washoe Valleys		
	(17)	(18)	(19)	(20)	(21)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1						
1 Enterprises.....1940..number.....	69	45	1 ²	22	109	10
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	698	694	3,344	466	329	6,677
3 Diversion dams.....1940..total number.....	73	38	2	33	91	3
4 1930..total number.....	65	31		3	52	
5 1920..total number.....	54	23		6	128	
6 (a) Concrete and masonry.....1940..number.....	14	9	2	3	15	
7 (b) Timber.....1940..number.....	7	5		2	22	1
8 (c) Earth and rock.....1940..number.....	38	16		22	26	1
9 (d) Other, mixed, and not reported.....1940..number.....	14	8		6	28	1
10 Main canals and laterals.....1940..total length, miles.....	293.9	206.8	70.0	17.1	134.0	414.0
11 1930..total length, miles.....	350	306		5	667	
12 1920..total length, miles.....	172	145		17	510	
13 (a) Earth.....1940..length, miles.....	289	203	70	16	192	414
14 (b) Lined.....1940..length, miles.....	4.9	3.8		1.1	2.0	
15 1940..capacity, c.f.s. ²	3,053	2,415		638	1,414	2,088
16 1930..capacity, c.f.s. ²	3,137	2,939		45	4,247	
17 1920..capacity, c.f.s. ²	2,465	426		2,001	3,853	
18 Pipe lines ³.....1940..total length, miles.....	4.9	0.6	3.8	0.5	10.3	15.4
19 1930..total length, miles.....	0.7	0.6			21.3	
20 1920..total length, miles.....	0.9	0.7			4.1	
21 (a) Concrete.....1940..length, miles.....					1.5	0.6
22 (b) Metal.....1940..length, miles.....	1.3	0.5	0.3	0.5	8.8	4.3
23 (c) Wood-stave.....1940..length, miles.....	3.1	0.1	3.0			6.0
24 (d) Other.....1940..length, miles.....	0.5		0.5			4.5
25 Storage dams.....1940..total number.....	16	4		12	5	1
26 1930..total number.....	5			2	14	
27 1920..total number.....	5	2		1	12	
28 (a) Concrete and masonry.....1940..number.....	1			1		
29 (b) Earth and rock.....1940..number.....	15	4		11	5	1
30 (c) Other, mixed, and not reported.....1940..number.....						
31 Reservoirs.....1940..total number.....	14	2		12	3	1
32 (a) 1-99 acre-feet capacity.....1940..number.....	13	2		11	1	
33 (b) 100-999 acre-feet capacity.....1940..number.....					1	
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	1			1	1	1
35 1940..total capacity, ac.-ft. ⁴	5,163	(⁵)		5,126	3,201	273,600
36 1930..total number.....	2			1	16	
37 1930..total capacity, ac.-ft.....	1,100			1,000	296,913	
38 Wells, flowing.....1940..number.....					1	3
39 1930..number.....	3				34	
40 1920..number.....					3	
41 1940..yield, g.p.m.....					(⁵)	17
42 1930..yield, g.p.m.....	81				244	
43 1920..yield, g.p.m.....					22	
44 Wells, pumped.....1940..number.....	5	5			16	
45 1930..number.....	2	1			13	
46 1920..number.....	1				1	
47 1940..yield, g.p.m.....	4,020	4,020			22,453	
48 1930..yield, g.p.m.....	1,125	225			18,910	
49 1920..yield, g.p.m.....	250				50	
50 Pumping plants.....1940..total number.....	5	5			27	6
51 1930..total number.....	3	2			31	
52 Prime movers.....1940..capacity, hp.....	44	44			803	422
53 1930..capacity, hp.....	47	22			1,130	
54 1920..capacity, hp.....	6				134	
55 (a) Electric.....1940..number.....	4	4			17	6
56 1940..capacity, hp.....	14	14			471	422
57 (b) Internal-combustion.....1940..number.....					8	
58 1940..capacity, hp.....					248	
59 (c) Other.....1940..number.....	1	1			2	
60 1940..capacity, hp.....	(⁵)	(⁵)			(⁵)	
61 Pumps.....1940..total number.....	5	5			27	6
62 1930..number.....	3	2			32	
63 1920..number.....	1				13	
64 1940..capacity, g.p.m.....	4,020	4,020			58,903	43,084
65 1930..capacity, g.p.m.....	1,350	450			73,465	
66 1920..capacity, g.p.m.....	250				1,650	
67 (a) Centrifugal.....1940..number.....	5	5			16	3
68 1940..capacity, g.p.m.....	4,020	4,020			23,975	32,313
69 1940..average capacity, g.p.m.....	804	804			1,498	10,771
70 (b) Turbine.....1940..number.....					11	
71 1940..capacity, g.p.m.....					34,928	
72 1940..average capacity, g.p.m.....					3,175	
73 (c) Plunger.....1940..number.....						
74 1940..capacity, g.p.m.....						
75 1940..average capacity, g.p.m.....						
76 (d) Other.....1940..number.....						3
77 1940..capacity, g.p.m.....						10,771
78 Pumping lift, from all sources.....1940..average, feet.....	10	10			29	24
79 1930..average, feet.....	20	10			32	
80 1920..average, feet.....	8				12	
81 from pumped wells.....1940..average, feet.....	10	10			30	
82 from surface sources.....1940..average, feet.....					29	24

^o Data for 1930 and 1920 include a portion of the Newland Project, U. S. Bureau of Reclamation.

¹ Data for less than 3 enterprises shown with permission of the enterprises involved.

² Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

³ Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - NEVADA

WORKS, 1940, 1930, AND 1920—Continued

WALKER LAKE						COLORADO RIVER							INDEPENDENT BASINS			
Total	Direct	Walker River				Total	Direct	Virgin River					Las Vegas Valley	Thousand Spring Creek	Clover Valley	
		Total	Direct	West Walker River	East Walker River			Total	Direct	Muddy River						
										Total	Direct	Meadow Valley Wash				
(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)						
67	3	64	35	18	11	224	16	102	6	96	11	85	106	12	20	1
1,256	1,718	1,235	1,417	1,225	670	76	12	134	469	113	468	67	30	408	704	2
53	1	52	30	10	12	32	.....	79	2	77	5	72	3	7	15	3
43	.....	43	38	.....	.....	51	.....	2	.....	.....	.....	.....	.....	.....	.....	4
70	.....	70	44	.....	.....	35	.....	35	.....	.....	.....	.....	.....	.....	.....	5
9	.....	9	7	2	.....	3	.....	2	.....	2	2	.....	1	.....	.....	6
1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	7
25	1	24	7	8	9	63	.....	61	.....	61	2	59	2	7	13	8
18	.....	18	15	.....	3	16	.....	16	2	14	1	13	.....	.....	.....	9
287.7	15.1	272.6	170.0	62.6	40.0	138.0	0.7	129.2	13.0	116.2	17.0	99.2	8.1	51.0	10.0	10
265	.....	265	259	.....	.....	144	3	27	.....	.....	.....	.....	.....	.....	.....	11
655	.....	655	495	.....	.....	196	.....	187	.....	.....	.....	.....	.....	.....	.....	12
261	15	266	164	62	40	137	.....	129	13	116	17	99	8	51	10	13
6.7	0.1	6.6	6.0	0.6	.....	1.0	0.7	0.2	.....	0.2	.....	0.2	0.1	.....	.....	14
1,747	143	1,604	1,043	431	130	292	1	274	23	251	53	198	17	187	390	15
1,315	.....	1,315	1,250	.....	.....	179	5	58	.....	.....	.....	.....	.....	.....	.....	16
1,267	.....	1,267	515	.....	.....	141	.....	119	.....	.....	.....	.....	.....	.....	.....	17
3.1	2.7	0.4	0.4	.....	.....	7.6	.....	5.2	0.1	5.1	0.3	4.8	2.4	6.1	0.8	18
2.7	.....	2.7	0.2	.....	.....	4.1	0.1	.....	.....	.....	.....	.....	.....	.....	.....	19
.....	.....	.....	.....	.....	.....	7.2	.....	4.4	.....	.....	.....	.....	.....	.....	.....	20
.....	.....	.....	.....	.....	.....	2.5	.....	2.3	.....	2.3	0.3	2.0	0.2	0.2	.....	21
2.7	2.7	.....	.....	.....	.....	5.1	.....	2.9	0.1	2.8	.....	2.8	2.2	4.4	0.3	22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.0	.....	23
0.4	.....	0.4	0.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.5	.....	24
5	1	4	1	3	.....	14	.....	13	3	10	3	7	1	2	.....	25
2	.....	2	2	.....	.....	9	.....	5	.....	.....	.....	.....	.....	.....	.....	26
14	.....	14	.....	.....	.....	5	.....	5	.....	.....	.....	.....	.....	.....	.....	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
5	1	4	1	3	.....	14	.....	13	3	10	3	7	1	2	.....	29
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
5	1	4	1	3	.....	24	.....	15	3	12	3	9	9	2	.....	31
3	.....	3	.....	3	.....	22	.....	13	3	10	1	9	9	.....	.....	32
.....	.....	.....	.....	.....	.....	2	.....	2	.....	2	2	.....	.....	.....	.....	33
2	11	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	34
93,280	13,000	80,280	(5)	280	.....	1,783	.....	1,765	2	1,763	1,701	62	18	(5)	.....	35
3	.....	3	2	.....	.....	15	2	.....	.....	.....	.....	.....	.....	.....	.....	36
92,002	.....	92,002	92,000	.....	.....	2,442	4	.....	.....	.....	.....	.....	.....	.....	.....	37
14	.....	14	1	13	.....	108	1	.....	.....	.....	.....	.....	107	.....	.....	38
16	.....	16	16	.....	.....	15	6	.....	.....	.....	.....	.....	.....	.....	.....	39
26	.....	26	.....	.....	.....	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
785	.....	785	(5)	735	.....	15,746	(5)	.....	.....	.....	.....	15,736	.....	.....	.....	41
576	.....	576	576	.....	.....	2,911	661	.....	.....	.....	.....	.....	.....	.....	.....	42
242	.....	242	.....	.....	.....	18,872	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
3	.....	3	3	.....	.....	47	13	11	.....	11	1	10	23	1	3	44
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
71	.....	71	50	.....	.....	7	.....	5	.....	.....	.....	.....	.....	.....	.....	46
900	.....	900	900	.....	.....	5,614	171	1,666	.....	1,666	(5)	916	3,777	(5)	130	47
.....	.....	.....	.....	.....	.....	112	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
5	.....	5	.....	.....	.....	705	.....	230	.....	.....	.....	.....	.....	.....	.....	49
3	.....	3	3	.....	.....	50	15	12	1	11	2	9	23	1	2	50
65	.....	65	65	.....	.....	5	4	.....	.....	.....	.....	.....	.....	.....	.....	51
.....	.....	.....	.....	.....	.....	296	17	89	(5)	56	(5)	48	190	(5)	(5)	52
2	.....	2	.....	.....	.....	39	35	.....	.....	.....	.....	.....	.....	.....	.....	53
2	.....	2	.....	.....	.....	72	.....	43	.....	.....	.....	.....	.....	.....	.....	54
(5)	.....	(5)	(5)	.....	.....	10	.....	5	.....	5	1	4	5	.....	.....	55
(5)	1	(5)	(5)	.....	.....	40	.....	21	.....	21	(5)	13	19	.....	.....	56
(5)	.....	(5)	(5)	.....	.....	28	6	5	.....	4	.....	4	17	.....	.....	57
.....	.....	.....	.....	.....	.....	247	10	67	(5)	34	.....	34	170	(5)	(5)	58
.....	.....	.....	.....	.....	.....	12	9	2	.....	2	1	1	1	.....	.....	59
3	.....	3	3	.....	.....	9	7	(5)	.....	(5)	.....	(5)	(5)	.....	(5)	60
.....	.....	.....	.....	.....	.....	49	15	11	.....	10	1	9	23	1	3	61
2	.....	2	.....	.....	.....	5	4	.....	.....	.....	.....	.....	.....	.....	.....	62
6,900	.....	6,900	6,900	.....	.....	9,042	221	4,064	(5)	2,064	(5)	1,364	4,757	(5)	(5)	63
.....	.....	.....	.....	.....	.....	4,562	4,450	.....	.....	.....	.....	.....	.....	.....	.....	64
.....	.....	.....	.....	.....	.....	4,878	.....	2,245	.....	.....	.....	.....	.....	.....	.....	65
3	.....	3	3	.....	.....	32	6	8	.....	7	.....	6	18	.....	.....	66
6,900	.....	6,900	6,900	.....	.....	8,047	120	4,048	(5)	2,048	(5)	1,348	3,879	(5)	(5)	67
2,300	.....	2,300	2,300	.....	.....	251	20	506	(5)	293	(5)	225	216	(5)	(5)	68
.....	.....	.....	.....	.....	.....	(5)	.....	.....	.....	.....	.....	.....	.....	.....	.....	69
.....	.....	.....	.....	.....	.....	(5)	.....	.....	.....	.....	.....	(5)	.....	.....	.....	70
.....	.....	.....	.....	.....	.....	13	9	1	.....	1	.....	1	3	.....	.....	71
.....	.....	.....	.....	.....	.....	135	101	(5)	.....	(5)	.....	(5)	28	.....	(5)	72
.....	.....	.....	.....	.....	.....	10	11	(5)	.....	(5)	.....	(5)	9	.....	(5)	73
.....	.....	.....	.....	.....	.....	(5)	2	.....	.....	(5)	.....	(5)	2	.....	.....	74
10	.....	10	10	.....	.....	21	17	21	(5)	21	(5)	20	23	(5)	(5)	75
.....	.....	.....	.....	.....	.....	14	14	.....	.....	.....	.....	.....	.....	.....	.....	76
10	.....	10	.....	.....	.....	21	.....	15	.....	.....	.....	.....	.....	.....	.....	77
5	.....	5	5	.....	.....	22	19	22	.....	22	(5)	21	23	(5)	(5)	78
13	.....	13	13	.....	.....	14	11	17	(5)	18	.....	18	.....	.....	.....	79

⁴Total capacity of all reservoirs regardless of size.
⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - NEVADA

DRAINAGE BASIN TABLE II- ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	INDEPENDENT BASINS—Continued							
	Ruby Valley (33)	Goshute and Steptoe Valleys ¹ (34)	Deep Creek (35)	Snake Valley (36)	Spring Valley (37)	Crescent, Diamond, Grass, and Newark Valleys (38)	Big Smoky Valley (39)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	26	63	14	19	22	49	27
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	1,246	167	88	213	526	427	243
3	Diversion dams.....1940..total number.....	41	45	20	23	20	110	39
4	.....1930..total number.....	.....	69	.....	.....	.....	.....	.....
5	.....1920..total number.....	.....	14	.....	.....	.....	.....	.....
6	(a) Concrete and masonry.....1940..number.....	.....	.....	.....	.....	.....	.....	.....
7	(b) Timber.....1940..number.....	.....	.....	.....	.....	.....	.....	.....
8	(c) Earth and rock.....1940..number.....	.....	.....	.....	.....	.....	.....	.....
9	(d) Other, mixed, and not reported.....1940..number.....	36	45	20	20	10	105	20
10	Main canals and laterals.....1940..total length, miles.....	7.0	41.0	18.0	12.0	8.0	20.0	60.0
11	.....1930..total length, miles.....	.....	69	.....	.....	.....	.....	.....
12	.....1920..total length, miles.....	.....	61	.....	.....	.....	.....	.....
13	(a) Earth.....1940..length, miles.....	7	41	18	12	8	20	51
14	(b) Lined.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	9.0
15	.....1940..capacity, c.f.s. ²	433	180	16	134	285	549	212
16	.....1930..capacity, c.f.s. ².....	.....	68	.....	.....	.....	.....	.....
17	.....1920..capacity, c.f.s. ².....	.....	47	.....	.....	.....	.....	.....
18	Pipe lines ³.....1940..total length, miles.....	.....	4.5	0.4	2.3	5.0	4.3	1.0
19	.....1930..total length, miles.....	.....	5.8	.....	.....	.....	.....	.....
20	.....1920..total length, miles.....	.....	.....	.....	.....	.....	.....	.....
21	(a) Concrete.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....
22	(b) Metal.....1940..length, miles.....	.....	4.5	0.4	2.3	5.0	4.3	1.0
23	(c) Wood-stave.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....
24	(d) Other.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....
25	Storage dams.....1940..total number.....	.....	18	2	.....	1	1	3
26	.....1930..total number.....	.....	13	.....	.....	.....	.....	.....
27	.....1920..total number.....	.....	1	.....	.....	.....	.....	.....
28	(a) Concrete and masonry.....1940..number.....	.....	.....	1	.....	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	.....	16	1	.....	1	1	3
30	(c) Other, mixed, and not reported.....1940..number.....	.....	2	.....	.....	.....	.....	.....
31	Reservoirs.....1940..total number.....	.....	29	7	4	4	2	3
32	(a) 1-99 acre-feet capacity.....1940..number.....	.....	28	7	4	4	2	2
33	(b) 100-999 acre-feet capacity.....1940..number.....	.....	1	.....	.....	.....	.....	1
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	.....	.....	.....	.....	.....	.....	.....
35	.....1940..total capacity, ac.-ft. ⁴.....	.....	800	27	19	9	(⁵)	620
36	.....1930..total capacity, ac.-ft. ⁴.....	.....	26	.....	.....	.....	.....	.....
37	.....1920..total capacity, ac.-ft. ⁴.....	.....	56	.....	.....	.....	.....	.....
38	Wells, flowing.....1940..number.....	.....	1	2	.....	.....	4	18
39	.....1930..number.....	.....	2	.....	.....	.....	.....	.....
40	.....1920..number.....	.....	.....	.....	.....	.....	.....	.....
41	.....1940..yield, g.p.m.....	.....	(⁵)	(⁵)	.....	.....	950	855
42	.....1930..yield, g.p.m.....	.....	33	.....	.....	.....	.....	.....
43	.....1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	.....	6	1	2	4	2	1
45	.....1930..number.....	.....	16	.....	.....	.....	.....	.....
46	.....1920..number.....	.....	4	.....	.....	.....	.....	.....
47	.....1940..yield, g.p.m.....	.....	815	(⁵)	(⁵)	130	(⁵)	(⁵)
48	.....1930..yield, g.p.m.....	.....	6,268	.....	.....	.....	.....	.....
49	.....1920..yield, g.p.m.....	.....	503	.....	.....	.....	.....	.....
50	Pumping plants.....1940..total number.....	.....	6	1	2	3	2	1
51	.....1930..total number.....	.....	13	.....	.....	.....	.....	.....
52	Prime movers.....1940..capacity, hp.....	.....	22	(⁵)	(⁵)	7	(⁵)	(⁵)
53	.....1930..capacity, hp.....	.....	242	.....	.....	.....	.....	.....
54	.....1920..capacity, hp.....	.....	17	.....	.....	.....	.....	.....
55	(a) Electric.....1940..number.....	.....	.....	.....	.....	.....	.....	.....
56	.....1940..capacity, hp.....	.....	.....	.....	.....	.....	.....	.....
57	(b) Internal-combustion.....1940..number.....	.....	6	(⁵)	1	2	(⁵)	1
58	.....1940..capacity, hp.....	.....	22	(⁵)	(⁵)	7	(⁵)	(⁵)
59	(c) Other.....1940..number.....	.....	.....	.....	.....	.....	(⁵)	1
60	.....1940..capacity, hp.....	.....	.....	.....	.....	.....	.....	.....
61	Pumps.....1940..total number.....	.....	6	1	3	4	2	1
62	.....1930..number.....	.....	16	.....	.....	.....	.....	.....
63	.....1920..number.....	.....	4	.....	.....	.....	.....	.....
64	.....1940..capacity, g.p.m.....	.....	815	(⁵)	(⁵)	100	(⁵)	(⁵)
65	.....1930..capacity, g.p.m.....	.....	6,338	.....	.....	.....	.....	.....
66	.....1920..capacity, g.p.m.....	.....	1,203	.....	.....	.....	.....	.....
67	(a) Centrifugal.....1940..number.....	.....	1	1	1	1	.....	.....
68	.....1940..capacity, g.p.m.....	.....	(⁵)	(⁵)	(⁵)	(⁵)	.....	.....
69	.....1940..average capacity, g.p.m.....	.....	(⁵)	(⁵)	(⁵)	(⁵)	.....	.....
70	(b) Turbine.....1940..number.....	.....	.....	.....	.....	.....	(⁵)	1
71	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁵)	.....
72	.....1940..average capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁵)	.....
73	(c) Plunger.....1940..number.....	.....	5	.....	2	1	.....	1
74	.....1940..capacity, g.p.m.....	.....	315	.....	(⁵)	(⁵)	(⁵)	.....
75	.....1940..average capacity, g.p.m.....	.....	63	.....	(⁵)	(⁵)	(⁵)	.....
76	(d) Other.....1940..number.....	.....	.....	.....	.....	2	.....	.....
77	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	(⁵)	.....	(⁵)
78	Pumping lift, from all sources.....1940..average, feet.....	.....	66	(⁵)	(⁵)	112	(⁵)	(⁵)
79	.....1930..average, feet.....	.....	22	.....	.....	.....	.....	.....
80	.....1920..average, feet.....	.....	23	.....	.....	.....	.....	.....
81	from pumped wells.....1940..average, feet.....	.....	.....	.....	(⁵)	112	(⁵)	(⁵)
82	from surface sources.....1940..average, feet.....	.....	66	(⁵)	(⁵)	.....	(⁵)	.....

¹Data for 1920 and 1930 Censuses are for Steptoe Creek only.
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
³Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — NEVADA

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WORKS, 1940, 1930, AND 1920—Continued

INDEPENDENT BASINS—Continued														
Ralston, Monitor, and Hot Creek Valleys (40)	Railroad Valley (41)	White River (42)	Pahrangat Valley (43)	Amargosa River (44)	Fish Lake Valley (45)	Smith Creek and Dixie Valley (46)	Sonoma- Clear Creeks (47)	Black Rock Desert (48)	Quinn River (49)	Cowhead and Warner Lakes (50)	Surprise Valley (51)	Smoke Creek (52)	Honey Lake (53)	
34	24	22	9	19	15	41	8	37	39	3	15	12	14	1
271	426	289	793	89	251	123	180	234	534	220	174	86	82	2
23	18	7	6	2	3	70	9	22	35	2	11	2		3
									65					4
									5					5
									2					6
2			3		2	1	2	2	2					7
12	1		4		1	45	4	11	55		11	2		8
9	17					17	1	3	16					9
59.0	17.0	14.0	29.0	4.0	2.3	75.0	10.0	81.0	55.0		6.0	8.0	3.0	10
									74					11
									38					12
59	17	14	29	4	1	75	10	81	55		6	8	3	13
					1.3									14
117	115	109	72	79	52	150	59	241	850		41	12	39	15
									306					16
									98					17
1.6	1.2	3.0	0.6	0.6		12.5	1.8	2.2						18
									4.4					19
	1.2		0.5	0.6										20
1.6		3.0	0.1			12.5	1.8	2.2					0.5	21
														22
														23
														24
2	1	5	3	7		9		4		1	1	1	5	25
									2					26
									1					27
2	1	5	3	6		8		4		1	1	1	5	28
						1								29
														30
7	8	14	3	8	2	22		6		1	2	1	5	31
7	5	13	1	8	2	20		3			1	1	5	32
	3					2		2		1	1			33
		1	2					1						34
71	746	4,237	3,361	6	(5)	358		4,341		(5)	(5)	(5)	127	35
									2					36
									1,003					37
														38
											15	62		39
														40
						4,490		12,430			30	3,069		41
														42
														43
					1	7		6	16			4	7	44
									4					45
									10					46
				(5)	1,490	653	(5)	55	3,798			466	1,249	47
									850					48
									50					49
2				1	8	4	2	6	17			4	8	50
(5)				(5)	68	21	(5)	6	3					51
									117			19	42	52
									51					53
									4					54
													(5)	55
														56
2				(5)	1	3	(5)	2	12			1	3	57
(5)					65	20	(5)		111		(5)		26	58
					2	1	(5)		5			3	3	59
					(5)		(5)		6			3	3	60
3					1	8	(5)	2	6			4	8	61
									17					62
									3					63
(5)				(5)	1,850	883	(5)	60	5					64
									3,898			476	1,489	65
									1,700					66
														67
				1	(5)	1	(5)	1	7			1	3	68
				(5)	(5)		(5)		1,550		(5)		1,210	69
									221		(5)		403	70
						3	(5)	1	5				1	71
					1,160		(5)		2,170				250	72
					387		(5)		434				250	73
					4				5			3	4	74
(5)					290	(5)			60			26	39	75
(5)					72	(5)			36			9	10	76
														77
(5)				(5)	34	17	(5)	30	43			20	34	78
									43					79
									25					80
(5)				(5)	30	(5)	(5)	40	43			16	36	81
					60	17		25				32	28	82

⁴Total capacity of all reservoirs regardless of size.
⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁶Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - NEVADA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

ITEM (For definitions and explanations, see text)	STATE TOTAL	Churchill	Clark	Douglas	
				Primary	Supplemental
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a					
1 All farms.....1940..number.....	3,573	597	362	127	
2 1930..number.....	3,442	614	294	135	
3 Irrigated farms.....1940..number.....	3,264	562	328	125	
4 1930..number.....	3,031	581	248	128	
5 Increase or decrease (-), 1930-1940.....percent.....	7.7	-3.3	32.3	-2.3	
Operated by—					
6 (a) Owners and managers.....1940..number.....	2,811	456	277	118	
7 1930..number.....	2,656	497	216	123	
8 (b) Tenants.....1940..number.....	453	106	51	7	
9 1930..number.....	375	94	32	5	
10 Land in all farms.....1940..acres.....	3,785,106	101,806	24,406	132,838	
11 Land in irrigated farms.....1940..acres.....	3,624,536	99,152	21,753	131,458	
12 Average per farm.....1940..acres.....	1,110	176	66	1,052	
13 (a) Operated by owners and managers.....1940..acres.....	3,426,873	83,910	17,234	128,829	
14 Average per farm.....1940..acres.....	1,219	181	62	1,092	
15 (b) Operated by tenants.....1940..acres.....	197,663	15,242	4,519	2,629	
16 Average per farm.....1940..acres.....	436	144	89	376	
17 Approximate land area.....1940..acres.....	70,273,280	3,140,480	5,073,280	463,360	
IRRIGATED AND IRRIGABLE AREAS					
18 Area irrigated.....1939..acres.....	739,863	56,594	9,060	30,881	
19 (a) Cropland harvested.....1939..acres.....	459,863	46,701	7,112	18,223	
20 (b) Crop failure.....1939..acres.....	5,298	1,619	16	150	
21 (c) Pasture.....1939..acres.....	274,702	8,274	1,932	12,508	
22 Area irrigated.....1929..acres.....	486,648	50,990	8,051	17,516	
23 1919..acres.....	561,447	41,739	5,206	23,412	
24 Increase or decrease (-), 1929-1939.....percent.....	52.0	11.0	12.5	76.3	
25 Irrigable area in enterprises.....1940..acres.....	915,689	89,414	12,769	32,206	
26 1930..acres.....	983,717	131,082	15,877	20,519	
27 1920 ² ..acres.....	1,382,036	171,681	10,512	43,191	
28 Excess of irrigable area over the area irrigated..1940..acres.....	175,826	32,820	3,709	1,325	
29 1930..acres.....	497,069	80,092	7,626	3,003	
30 Area works were capable of supplying with water..1940..acres.....	841,304	69,492	11,416	31,780	
31 1930..acres.....	736,249	85,534	9,478	20,132	
32 1920..acres.....	704,708	65,661	6,282	24,472	
33 Increase or decrease (-), 1930-1940.....percent.....	14.3	-18.8	20.4	57.9	
34 Excess, capability of works over area irrigated..1940..acres.....	101,441	12,898	2,356	899	
35 1930..acres.....	249,601	34,544	1,427	2,616	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	20.4	57.1	41.6	23.5	
37 1929..percent.....	15.7	59.0	35.4	12.0	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	87.9	81.4	79.4	97.2	
39 1929..percent.....	66.1	59.6	84.9	87.0	
CAPITAL INVESTED TO JANUARY 1					
40 Total investment in all enterprises.....1940..dollars.....	16,906,790	6,378,327	484,501	334,516	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	15,827,567	6,377,677	401,541	332,441	
42 (b) Investment in water rights (reported).....1940..dollars.....	1,079,223	650	82,960	2,075	
43 Total investment in all enterprises.....1930..dollars.....	15,457,931	6,909,969	262,097	177,602	
44 1920..dollars.....	14,754,280	7,774,129	352,332	94,311	
45 Increase or decrease (-), 1930-1940.....percent.....	9.4	-7.7	84.9	88.4	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	20.10	91.79	42.44	10.53	
47 1930..dollars.....	21.00	80.79	27.65	8.82	
48 1920..dollars.....	20.94	118.40	56.09	3.85	
49 Average investment per acre irrigated.....1939..dollars.....	22.85	112.70	53.48	10.83	
50 Estimated final investment in existing enterprises..1940..dollars.....	18,129,554	6,416,977	508,836	340,346	
51 1930..dollars.....	18,489,603	7,834,849	537,762	177,602	
52 1920..dollars.....	22,648,747	13,809,936	515,332	109,311	
53 Increase or decrease (-), 1930-1940.....percent.....	-1.9	-18.1	-5.4	91.6	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	19.80	71.77	39.85	10.57	
55 1930..dollars.....	18.80	59.77	33.87	8.66	
56 1920 ² ..dollars.....	16.39	80.44	49.02	2.53	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
57 Enterprises reporting maintenance and operation..1939..number.....	Primary		Supplemental		
	Enterprises				
58 Area irrigated in these enterprises.....1939..acres.....	1,327	10	11	1307	3
59 Cost of maintenance and operation.....1939..dollars.....	688,722	84,722	56,273	8,407	2,313
60 Average cost, per acre irrigated.....1939..dollars.....	293,859	38,705	57,724	15,156	1,457
61 1929..dollars.....	0.43	0.46	1.03	1.80	0.63
62 Total annual charges (reported) ⁴.....1939..dollars.....	0.91	.....	2.41	4.23	0.95
63 Average annual charge per acre irrigated.....1939..dollars.....	304,084	87,619	206,080	14,402	2,000
64 Area against which charges were assessed.....1939..acres.....	1.51	1.04	3.76	2.75	1.00
65 Average annual charge per acre assessed.....1939..dollars.....	218,138	102,049	63,611	5,244	2,000
66 Total charges collected ⁴.....1939..dollars.....	1.39	0.86	3.24	2.75	1.00
67 Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	128,223	79,069	68,937	9,757	1,940
	1,194,066	2,740,249	1,061,009	15,699	.....
WATER DELIVERED TO IRRIGATORS					
68 Enterprises reporting water delivered.....1939..number.....	Primary		Supplemental		
69 Area irrigated in these enterprises.....1939..acres.....	Enterprises				
70 Water delivered in these enterprises.....1939..acre-feet.....	1,116	9	19	84	71
71 Average water delivered per acre irrigated.....1939..acre-feet.....	627,502	84,622	55,614	6,696	27,490
72 Average cost of water per acre irrigated.....1939..dollars.....	1,871,256	291,980	190,830	34,418	115,159
	3.0	3.5	3.4	5.1	4.2
	0.76	1.05	3.73	2.41	0.25
DRAINAGE OF IRRIGATED LAND					
73 Enterprises reporting land drained or needing drainage.....1939..number.....	Primary		Supplemental		
74 Irrigable area in these enterprises.....1939..acres.....	Enterprises				
75 Irrigated area in these enterprises.....1939..acres.....	36	.....	.....	3	2
76 Area for which drains have been installed.....1939..acres.....	244,994	.....	86,252	905	(¹)
77 Additional area needing drainage.....1939..acres.....	180,044	.....	54,745	552	(¹)
	97,576	.....	42,694	20	(¹)
	21,153	.....	3,860	360	(¹)

^aCensus of Agriculture.
¹Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.
²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³Less than one-tenth of 1 percent.

CENSUS OF IRRIGATION - NEVADA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

Elko		Esmeralda		Eureka		Humboldt		Lander		Lincoln		Lyon		Nye		Ormsby	
491	25	59	226	54	217	342	141	28	1								
518	24	75	195	44	155	339	142	33	2								
461	20	54	186	47	160	326	131	22	3								
153	14	60	159	40	134	321	111	25	4								
1.8	42.9	-10.0	17.0	17.5	34.3	1.6	18.0	-21.1	5								
436	18	72	172	44	151	252	118	21	6								
418	14	54	140	36	121	259	105	22	7								
25	2	2	14	3	29	74	13	1	8								
36	.....	6	19	4	13	62	5	6	9							
1,715,186	16,289	256,200	420,525	204,029	47,226	179,691	81,315	19,746	10								
1,696,998	16,114	255,120	397,601	185,027	44,739	178,134	83,114	19,486	11								
3,681	806	4,724	2,138	3,937	249	547	637	896	12								
1,071,436	(1)	(1)	370,832	181,417	39,202	147,517	74,128	(1)	13								
3,834	(1)	(1)	2,156	4,123	260	585	628	(1)	14								
25,562	(1)	(1)	26,769	3,610	5,537	30,917	9,286	(1)	15								
1,022	(1)	(1)	1,912	1,203	191	418	711	(1)	16								
10,969,600	2,284,800	2,676,480	6,309,280	3,597,440	6,815,360	1,287,680	11,560,950	90,240	17								
269,989	3,217	34,967	75,639	31,103	11,122	76,923	29,344	1,785	18								
199,048	912	16,375	57,250	18,264	6,798	40,854	14,778	1,277	19								
1,613	.....	45	543	209	109	186	151	8	20							
109,328	2,305	18,547	17,846	12,630	4,224	35,883	14,712	509	21								
172,337	1,449	15,836	35,688	10,333	8,771	81,361	12,522	1,117	22								
202,724	1,685	5,086	27,894	10,400	5,826	110,902	11,354	3,146	23								
56.7	122.0	120.8	111.9	201.0	26.8	-5.5	136.7	26.0	24								
333,010	4,567	42,629	86,572	31,654	13,791	88,049	36,248	1,864	25								
248,137	1,946	31,439	109,608	22,475	13,344	189,835	29,734	1,650	26								
434,582	9,316	5,404	15,331	28,637	20,366	332,810	70,601	7,410	27								
63,021	1,350	7,662	10,933	551	2,669	11,126	6,604	79	28								
75,800	497	15,603	73,920	12,142	4,573	108,474	17,212	233	29								
298,349	3,870	42,324	81,938	31,654	12,766	86,314	33,087	1,785	30								
186,756	1,749	31,080	103,375	22,145	10,099	95,972	26,046	1,635	31								
263,403	2,290	5,134	31,695	10,245	10,752	136,475	14,169	4,718	32								
59.8	121.3	36.2	-20.7	42.9	26.4	-10.1	27.0	9.2	33								
28,360	653	7,357	6,299	551	1,644	9,391	3,443	.....	34							
14,419	300	15,244	67,687	11,812	1,328	14,611	13,524	218	35								
15.9	20.0	13.7	19.0	16.8	24.9	43.1	35.5	9.2	36								
13.2	12.1	10.1	10.9	8.7	32.2	48.8	17.3	15.3	37								
90.5	83.1	82.6	92.3	98.3	87.1	89.1	89.6	100.0	38								
92.3	82.8	51.0	34.5	45.7	86.9	84.8	48.1	86.7	39								
2,014,514	36,185	218,708	196,575	136,030	163,817	1,940,815	296,835	12,889	40								
1,795,401	32,385	190,669	192,320	133,801	142,476	1,924,111	218,252	42,759	41								
219,113	3,800	28,039	4,255	2,229	21,341	16,704	78,583	130	42								
2,053,491	38,550	248,337	470,805	137,450	72,329	2,048,900	311,118	42,900	43								
1,447,201	26,849	25,211	271,719	79,332	124,536	1,740,387	260,220	54,777	44								
-1.9	-6.1	-11.9	-58.2	-1.0	126.5	-5.3	-4.6	(5)	45								
6.75	9.35	5.17	2.40	4.30	12.83	22.49	8.97	24.03	46								
11.00	22.04	7.99	4.55	6.21	7.16	21.35	11.94	26.24	47								
5.49	11.72	4.91	8.57	7.74	11.58	12.78	18.37	11.61	48								
7.46	11.25	6.25	2.60	4.37	14.73	25.23	10.01	24.03	49								
2,420,644	39,760	222,381	220,820	136,030	221,417	1,949,415	326,485	105,489	50								
2,273,641	40,550	251,287	493,667	138,550	103,329	2,532,900	346,268	42,900	51								
1,475,376	26,849	25,211	314,719	79,332	141,936	2,934,907	303,445	55,777	52								
6.5	-1.9	-11.5	-55.3	-1.8	114.3	-23.0	-5.7	118.2	53								
7.27	8.71	5.22	2.55	4.30	16.06	22.14	9.01	57.13	54								
9.16	20.84	7.99	4.50	6.16	7.74	13.34	11.64	26.00	55								
3.39	2.88	4.67	6.94	2.77	6.97	8.82	4.30	7.53	56								
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.								
Enterprises	1	Enterprises	1	Enterprises	1	Enterprises	1	Enterprises	1								
354	15	50	118	42	88	63	95	8	57								
263,435	(1)	3,200	34,530	51,648	(1)	30,943	10,844	75,765	(1)	1,562	58						
67,442	(1)	1,241	11,069	14,855	(1)	10,324	8,888	21,183	(1)	9,381	59						
0.26	(1)	0.39	0.32	0.29	(1)	0.33	0.82	0.32	(1)	0.34	(1)	0.47	60				
0.30	1.12	0.62	0.71	0.85	2.03	0.41	1.45	1.05	61				
0,559	750	2,509	28,658	57,085	1,400	160	62				
0.53	0.24	0.57	0.52	0.88	0.23	0.42	63				
12,976	3,120	4,804	61,869	80,175	6,000	1,100	64				
0.51	0.24	0.54	0.16	0.71	0.23	0.42	65				
723	1,081	16,358	54,552	450	66				
.....	102,090	470,300	67				
242	16	50	112	1	40	84	68	1	51	1	68	68				
198,588	3,210	31,956	67,145	(1)	28,212	10,941	72,647	(1)	20,321	(1)	1,288	69				
638,897	1,329	77,836	105,062	(1)	63,618	38,929	190,143	(1)	63,001	(1)	17,908	70				
3.2	0.4	2.4	1.6	(1)	2.3	3.6	2.6	(1)	3.1	(1)	13.9	71				
0.28	0.38	0.32	0.32	(1)	0.31	0.78	0.51	(1)	0.39	(1)	0.42	72				
(1)	2	5	2	0	73				
(1)	2,420	(1)	82,291	74				
(1)	2,247	(1)	70,585	75				
(1)	(1)	30,876	76				
(1)	460	(1)	9,115	77				

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.
⁶ Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - NEVADA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)	Pershing		Washoe		White Pine		All other counties	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS²								
1 All farms.....1940..number....	108		516		189		91	
2 ..1930..number....	119		474		189		97	
3 Irrigated farms.....1940..number....	102		475		172		73	
4 ..1930..number....	104		393		170		87	
5 Increase or decrease (-), 1930-1940.....percent....	-1.9		20.9		1.2		-16.1	
Operated by—								
6 (a) Owners and managers.....1940..number....	81		406		138		71	
7 ..1930..number....	91		347		151		72	
8 (b) Tenants.....1940..number....	21		69		34		2	
9 ..1930..number....	13		46		19		15	
10 Land in all farms.....1940..acres....	88,032		295,347		145,448		53,722	
11 ..1930..acres....	84,896		214,767		142,697		52,880	
12 Average per farm.....1940..acres....	832		452		830		724	
13 (a) Operated by owners and managers.....1940..acres....	67,463		184,786		117,489		(1)	
14 Average per farm.....1940..acres....	833		455		851		(1)	
15 (b) Operated by tenants.....1940..acres....	17,433		29,981		25,208		(1)	
16 Average per farm.....1940..acres....	830		435		741		(1)	
17 Approximate land area.....1940..acres....	3,635,520		4,019,840		5,691,520		2,537,440	
IRRIGATED AND IRRIGABLE AREAS								
18 Area irrigated.....1939..acres....	28,965		46,564		29,419		3,991	
19 (a) Cropland harvested.....1939..acres....	24,685		28,766		17,701		1,119	
20 (b) Crop failure.....1939..acres....	177		161		317		.....
21 (c) Pasture.....1939..acres....	4,103		17,637		11,401		2,872	
22 Area irrigated.....1929..acres....	6,753		43,765		17,071		2,788	
23 ..1919..acres....	53,628		28,801		24,270		5,384	
24 Increase or decrease (-), 1929-1939.....percent....	328.9		6.4		72.3		43.1	
25 Irrigable area in enterprises.....1940..acres....	47,348		51,960		35,807		7,801	
26 ..1930..acres....	76,364		51,758		25,367		14,562	
27 ..1920 ² ..acres....	62,795		78,274		47,841		13,285	
28 Excess of irrigable area over the area irrigated.....1940..acres....	18,383		5,396		6,388		3,810	
29 ..1930..acres....	69,611		7,993		8,316		11,774	
30 Area works were capable of supplying with water.....1940..acres....	47,165		50,722		33,143		5,499	
31 ..1930..acres....	63,160		48,727		22,419		7,942	
32 ..1920..acres....	61,940		31,610		27,932		7,930	
33 Increase or decrease (-), 1930-1940.....percent....	-25.3		4.1		47.8		-30.8	
34 Excess, capability of works over area irrigated.....1940..acres....	18,200		4,158		3,724		1,508	
35 ..1930..acres....	56,407		4,962		5,348		5,154	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	34.1		21.7		20.6		7.5	
37 ..1929..percent....	7.4		10.6		13.9		12.3	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	61.4		91.8		88.8		72.6	
39 ..1929..percent....	10.7		89.8		76.1		35.1	
CAPITAL INVESTED TO JANUARY 1								
40 Total investment in all enterprises.....1940..dollars....	1,948,870		2,223,347		254,832		236,029	
41 (a) Cost of irrigation works and equipment.....1940..dollars....	1,397,780		2,193,359		219,366		233,229	
42 (b) Investment in water rights (reported).....1940..dollars....	551,090		29,988		35,466		2,800	
43 Total investment in all enterprises.....1930..dollars....	805,697		1,108,347		336,485		433,854	
44 ..1920..dollars....	550,952		658,775		1,079,189		214,361	
45 Increase or decrease (-), 1930-1940.....percent....	141.9		100.6		-24.3		-45.6	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	41.32		43.83		7.69		42.92	
47 ..1930..dollars....	12.76		22.75		15.01		54.63	
48 ..1920..dollars....	8.89		20.84		38.64		27.03	
49 Average investment per acre irrigated.....1939..dollars....	67.28		47.75		8.66		59.14	
50 Estimated final investment in existing enterprises.....1940..dollars....	2,030,040		2,583,418		316,467		290,029	
51 ..1930..dollars....	810,697		1,520,392		419,805		965,404	
52 ..1920..dollars....	554,952		832,725		1,245,988		222,951	
53 Increase or decrease (-), 1930-1940.....percent....	150.4		69.9		-24.6		-70.0	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	42.87		49.72		8.84		37.18	
55 ..1930..dollars....	10.62		29.38		16.54		66.30	
56 ..1920 ² ..dollars....	8.84		10.64		26.04		16.77	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57 Enterprises reporting maintenance and operation.....1939..number....	Primary		Supplemental		Primary		Supplemental	
	Enterprises		Enterprises		Enterprises		Enterprises	
58 Area irrigated in these enterprises.....1939..acres....	38	2	105	.....	127	1	4
59 Cost of maintenance and operation.....1939..dollars....	23,147	(1)	43,184	.....	25,846	(1)	3,857
60 Average cost, per acre irrigated.....1939..dollars....	3,252	(1)	39,920	.....	17,639	(1)	4,901
61 ..1929..dollars....	0.14	(1)	0.92	.....	0.68	(1)	1.27
62 Total annual charges (reported) ^{3 4}.....1939..dollars....	1.80	.....	1.29	.....	1.30	.....	3.57
63 Average annual charge per acre irrigated.....1939..dollars....	4,404	28,534	35,347	.....	1,588	.....	89
64 Area against which charges were assessed.....1939..acres....	0.53	1.67	1.20	.....	0.71	.....	0.03
65 Average annual charge per acre assessed.....1939..dollars....	8,236	19,874	29,871	.....	2,248	.....	3,498
66 Total charges collected ².....1939..dollars....	0.53	1.44	1.18	.....	0.71	.....	0.03
67 Indebtedness to December 31 (reported) ⁴.....1939..dollars....	3,779	22,577	24,086	.....	1,950	.....	85
	1,203,570		1,086,179		
WATER DELIVERED TO IRRIGATORS								
68 Enterprises reporting water delivered.....1939..number....	40		118		112		5	
69 Area irrigated in these enterprises.....1939..acres....	28,962		45,920		24,321		3,991	
70 Water delivered in these enterprises.....1939..acre-feet....	88,636		187,007		49,875		8,008	
71 Average water delivered per acre irrigated.....1939..acre-feet....	3.1		4.1		2.1		2.0	
72 Average cost of water per acre irrigated.....1939..dollars....	0.56		0.95		0.79		0.26	
DRAINAGE OF IRRIGATED LAND								
73 Enterprises reporting land drained or needing drainage.....1939..number....	3		6		2		
74 Irrigable area in these enterprises.....1939..acres....	31,138		24,904		(1)		
75 Irrigated area in these enterprises.....1939..acres....	11,874		24,808		(1)		
76 Area for which drains have been installed.....1939..acres....	15,000		8,113		(1)		
77 Additional area needing drainage.....1939..acres....		6,006		(1)		

¹Census of Agriculture. ²Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census. ³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - NEVADA

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

ITEM (For definitions and explanations, see text)	THE STATE	Churchill	Clark	Douglas	Elko	Esmeralda	Eureka	Humboldt
FARM VALUES, 1940*								
1 Land and buildings, all farms.....dollars..	47,594,384	3,942,982	1,829,468	5,042,259	10,202,071	310,210	1,613,449	2,780,815
2 Land and buildings, irrigated farms.....dollars..	46,392,883	3,860,467	1,658,910	5,029,984	10,095,351	304,210	1,606,598	2,634,283
Operated by—								
3 (a) Owners and managers.....dollars..	42,128,655	3,197,747	1,418,350	4,914,184	9,805,751	(¹)	(¹)	2,481,083
4 (b) Tenants.....dollars..	4,264,228	662,720	240,560	115,800	289,600	(¹)	(¹)	153,200
5 Average, land and buildings, per farm.....dollars..	14,213.51	6,869.16	5,057.65	40,239.81	21,898.81	15,210.50	29,751.81	14,162.81
6 per acre in farms.....dollars..	12.80	38.93	76.26	38.26	5.95	18.88	6.30	6.63
7 Buildings, irrigated farms reporting value.....number...	3,079	556	262	125	443	20	52	156
8 Total reported.....dollars..	8,971,907	861,480	447,115	951,747	1,502,287	78,185	146,900	468,080
9 Average, per irrigated farm reporting.....dollars..	2,913.90	1,549.42	1,706.55	7,613.98	3,391.17	3,909.25	2,825.00	3,000.51
10 per acre on all irrigated farms.....dollars..	2.48	8.69	20.53	7.24	0.89	4.85	0.58	1.18
11 Buildings, nonirrigated farms reporting value.....number...	246	33	25	2	23	1	4	34
12 Total reported.....dollars..	368,460	23,460	82,910	(¹)	12,300	(¹)	2,400	24,790
13 Average, per nonirrigated farm reporting.....dollars..	1,497.76	710.91	3,316.40	(¹)	534.78	(¹)	600.00	729.12
14 per acre on all nonirrigated farms.....dollars..	2.29	8.84	31.25	(¹)	0.68	(²)	2.22	1.08
15 Implements and machinery, irrigated farms reporting value.....number...	2,961	538	287	118	435	17	48	168
16 Total reported.....dollars..	3,612,624	423,008	203,521	340,124	696,824	37,000	64,495	275,971
17 Average, per irrigated farm reporting.....dollars..	1,220.07	786.26	709.13	2,882.41	1,601.89	2,176.47	1,343.65	1,642.68
18 per acre, on all irrigated farms.....dollars..	1.00	4.27	9.36	2.59	0.41	2.30	0.25	0.69
19 Implements and machinery, nonirrigated farms reporting value.....number...	177	25	21	.....	11	1	4	27
20 Total reported.....dollars..	108,639	12,020	16,900	.....	4,600	(¹)	1,550	17,858
21 Average, per acre, on all nonirrigated farms.....dollars..	0.68	4.53	6.37	.....	0.25	(¹)	1.44	0.78
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22 Enterprises.....1940...number.....	2,1475	25	140	89	364	20	56	137
23 1930...number.....	2,1247	24	67	47	378	13	60	141
24 1920...number.....	1,015	14	37	78	367	7	24	63
25 Average size of enterprise based on irrigable area.....1940...acres.....	621	3,577	91	362	915	228	761	632
26 1930...acres.....	789	5,462	237	437	656	150	524	777
27 1920 ³ ...acres.....	1,362	12,263	284	554	1,184	1,331	225	720
28 Diversion dams.....1940...number.....	1,896	8	10	80	731	3	210	206
29 Main canals and laterals.....1940...length, miles.....	2,897.2	442.0	38.8	119.0	708.2	2.3	40.0	289.0
30 1930...length, miles.....	4,155	540	100	70	1,344	23	186	356
31 1920...length, miles.....	4,368	381	126	93	1,798	5	3	98
32 1940...capacity, c.f.s. ⁴	22,930	2,108	94	1,268	7,062	56	1,049	2,431
33 1930...capacity, c.f.s. ⁴	16,986	3,507	117	457	3,446	24	601	1,692
34 1920...capacity, c.f.s. ⁴	10,554	3,141	110	460	1,297	31	18	307
35 Pipe lines ⁵.....1940...length, miles.....	104.7	16.4	2.5	8.3	9.5	.....	8.2	2.8
36 Storage dams.....1940...number.....	122	4	7	6	7	.....	4	3
37 Reservoirs.....1940...number.....	200	14	15	4	7	2	5	11
38 1930...number.....	209	2	22	9	15	7	3	16
39 1920...number.....	194	8	13	7	21	.....	.....	16
40 1940...capacity, acre-feet..	696,005	273,683	1,721	83,201	74,735	(¹)	58	4,391
41 1930...capacity, acre-feet..	529,369	294,100	135	2,800	54,565	5	4	14,231
42 1920...capacity, acre-feet..	504,428	350,009	214	.....	40,068	.....	.....	7,452
43 Wells, flowing.....1940...number.....	322	44	108	1	2	.....	4	28
44 1930...number.....	274	29	62	5	.....	2	.....	32
45 1920...number.....	123	6	53	2	.....	.....	.....	20
46 1940...yield, g.p.m.....	39,635	1,182	15,746	(¹)	(¹)	.....	950	12,463
47 1930...yield, g.p.m.....	19,131	1,035	8,272	120	.....	1,550	.....	1,750
48 1920...yield, g.p.m.....	21,942	615	18,872	22	.....	.....	.....	400
49 Wells, pumped.....1940...number.....	167	4	38	12	12	7	1	34
50 1930...number.....	147	9	8	9	8	11	.....	19
51 1920...number.....	129	.....	2	.....	9	.....	.....	13
52 1940...yield, g.p.m.....	50,938	653	5,758	17,228	785	1,490	(¹)	6,788
53 1930...yield, g.p.m.....	54,162	1,515	2,132	17,125	495	365	.....	10,980
54 1920...yield, g.p.m.....	6,798	.....	475	.....	645	.....	.....	1,050
55 Pumping plants.....1940...number.....	192	10	42	23	11	8	1	37
56 1930...number.....	157	11	13	20	8	9	.....	19
57 1920...number.....	64	1	3	7	9	.....	.....	7
58 Prime movers.....1940...capacity, hp.....	2,262	443	256	735	32	68	(¹)	252
59 1930...capacity, hp.....	2,671	315	96	704	40	35	.....	427
60 1920...capacity, hp.....	409	6	41	108	32	.....	.....	22
61 Pumps.....1940...capacity, g.p.m.....	141,065	43,967	8,328	53,678	785	1,850	(¹)	7,088
62 1930...capacity, g.p.m.....	115,648	34,810	6,883	34,670	505	370	.....	11,830
63 1920...capacity, g.p.m.....	35,266	.....	4,633	.....	1,720	.....	.....	20,200
64 Pumping lift, from all sources.....1940...average, feet.....	31	19	21	31	28	34	(¹)	40
65 1930...average, feet.....	31	15	13	28	35	42	.....	37
66 1920...average, feet.....	22	6	28	16	23	.....	.....	26
67 from pumped wells.....1940...average, feet.....	31	.....	22	32	30	30	(¹)	40
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶								
68 Enterprises reporting pay roll.....number.....	66	71	2	11	1	.....	.....	71
69 Irrigated area in these enterprises.....acres.....	169,818	53,449	(¹)	15,452	(¹)	.....	.....	2,834
70 Wages and salaries paid and payable.....dollars..	160,642	1,394	(¹)	2,607	(¹)	.....	.....	4,563
71 Persons employed during week ending April 29.....number.....	275	53	(¹)	6	.....	.....	.....	5

*Census of Agriculture.

¹Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

²Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁵Includes siphons and farm pipe lines reported.

⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms.

⁷Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION — NEVADA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

ITEM (For definitions and explanations, see text)	Lander	Lincoln	Lyon	Nye	Ormsby	Pershing	Washoe	White Pine	All other counties
FARM VALUES, 1940*									
1 Land and buildings, all farms.....dollars..	1,012,752	1,002,523	4,544,355	1,040,612	460,132	2,733,260	6,884,162	1,807,344	387,990
2 Land and buildings, irrigated farms.....dollars..	980,552	949,643	4,518,555	1,007,492	438,032	2,656,530	8,519,912	1,773,094	359,270
Operated by—									
3 (a) Owners and managers.....dollars..	909,552	806,343	3,908,905	918,792	(1)	2,283,730	7,328,912	1,505,596	(1)
4 (b) Tenants.....dollars..	71,000	143,300	609,650	88,700	(1)	372,800	1,191,000	267,498	(1)
5 Average, land and buildings, per farm.....dollars..	20,862.81	5,275.79	13,860.60	7,690.78	19,910.55	26,044.41	17,936.66	10,308.69	4,921.51
6 per acre in farms.....dollars..	5.30	21.23	25.32	12.08	22.48	31.29	39.67	12.43	6.79
7 Buildings, irrigated farms reporting value.....number..	47	163	320	130	22	97	457	163	66
8 Total reported.....dollars..	128,565	224,850	877,785	165,415	133,832	275,650	2,367,592	289,729	42,695
9 Average, per irrigated farm reporting.....dollars..	2,735.43	1,379.45	2,743.08	1,272.42	6,083.27	2,841.75	5,160.73	1,838.83	646.89
10 per acre on all irrigated farms.....dollars..	0.69	5.03	4.92	1.98	6.87	3.25	11.02	2.10	0.81
11 Buildings, nonirrigated farms reporting value.....number..	6	23	13	4	6	5	38	15	14
12 Total reported.....dollars..	4,900	10,950	11,850	2,500	9,570	19,400	137,485	13,110	6,150
13 Average, per nonirrigated farm reporting.....dollars..	816.67	476.09	911.54	625.00	1,595.00	3,880.00	3,618.03	874.00	439.29
14 per acre on all nonirrigated farms.....dollars..	0.26	4.40	9.43	2.08	36.81	6.19	1.71	4.77	7.30
15 Implements and machinery, irrigated farms reporting value.....number..	46	160	305	123	20	99	372	165	60
16 Total reported.....dollars..	98,278	92,727	416,903	98,888	40,725	194,410	453,006	160,550	16,194
17 Average, per irrigated farm reporting.....dollars..	2,136.48	579.54	1,366.90	803.97	2,036.25	1,963.74	1,217.76	973.03	269.90
18 per acre, on all irrigated farms.....dollars..	0.53	2.07	2.34	1.19	2.09	2.29	2.11	1.13	0.31
19 Implements and machinery, nonirrigated farms reporting value.....number..	7	17	10	4	2	6	23	11	8
20 Total reported.....dollars..	3,625	8,685	5,045	4,425	(1)	14,850	8,781	4,650	2,500
21 Average, per acre, on all nonirrigated farms.....dollars..	0.19	3.49	4.01	3.68	(1)	4.74	0.11	1.69	2.97
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
22 Enterprises.....1940.....number.....	44	93	74	105	12	43	124	143	6
23 .....1930.....number.....	43	36	28	108	11	47	126	105	13
24 .....1920.....number.....	41	49	40	95	20	16	87	50	27
25 Average size of enterprise based on irrigable area.....1940.....acres.....	719	148	1,190	345	155	1,101	419	250	1,300
26 .....1930.....acres.....	523	371	6,780	275	150	1,625	411	242	.....
27 .....1920.....acres.....	698	416	8,320	743	370	3,925	900	957	492
28 Diversion dams.....1940.....number.....	181	78	63	55	2	75	89	102	3
29 Main canals and laterals.....1940.....length, miles.....	109.0	128.2	316.6	184.0	5.0	145.0	248.0	92.0	30.1
30 .....1930.....length, miles.....	108	85	337	205	9	140	389	218	45
31 .....1920.....length, miles.....	198	120	572	169	30	156	316	210	93
32 .....1940.....capacity, c.f.s. ³	513	270	1,577	726	173	1,464	1,799	686	1,654
33 .....1930.....capacity, c.f.s. ³	319	113	2,210	235	135	1,398	936	217	1,579
34 .....1920.....capacity, c.f.s. ³	39	47	1,097	423	133	266	2,612	282	291
35 Pipe lines.....1940.....length, miles.....	1.5	5.7	3.8	4.1	2.4	13.5	4.2	16.9	4.9
36 Storage dams.....1940.....number.....	1	10	3	13	.....	10	27	25	2
37 Reservoirs.....1940.....number.....	1	12	3	32	.....	13	28	52	51
38 .....1930.....number.....	1	10	2	17	5	16	20	63	1
39 .....1920.....number.....	.....	6	3	13	5	3	29	7	3
40 .....1940.....capacity, acre-feet..	(1)	3,423	280	5,527	.....	229,065	5,752	1,007	13,000
41 .....1930.....capacity, acre-feet..	200	3,923	92,000	12,067	13	49,072	3,145	3,107	2
42 .....1920.....capacity, acre-feet..	.....	354	1,500	1,354	50,060	32,003	16,626	4,783	5
43 Wells, flowing.....1940.....number.....	3	.....	14	38	.....	.....	77	3	.....
44 .....1930.....number.....	4	.....	16	27	27	.....	67	3	.....
45 .....1920.....number.....	1	.....	26	9	1	.....	3	.....	.....
46 .....1940.....yield, g.p.m.....	120	.....	785	5,345	.....	.....	3,099	65	.....
47 .....1930.....yield, g.p.m.....	65	.....	576	2,595	121	.....	2,294	753	.....
48 .....1920.....yield, g.p.m.....	25	.....	242	410	.....	.....	.....	1,356	.....
49 Wells, pumped.....1940.....number.....	1	9	5	2	2	4	22	14	.....
50 .....1930.....number.....	1	.....	2	20	2	15	12	25	6
51 .....1920.....number.....	5	5	21	7	1	2	1	10	53
52 .....1940.....yield, g.p.m.....	(1)	216	2,925	(1)	(1)	3,385	5,790	2,110	.....
53 .....1930.....yield, g.p.m.....	30	.....	1,650	1,710	135	7,100	2,965	6,500	1,460
54 .....1920.....yield, g.p.m.....	10	230	5	360	50	910	250	2,788	25
55 Pumping plants.....1940.....number.....	1	8	5	4	2	4	23	13	.....
56 .....1930.....number.....	3	.....	2	14	2	13	15	23	5
57 .....1920.....number.....	4	5	3	8	3	2	9	9	1
58 Prime movers.....1940.....capacity, hp.....	(1)	40	75	28	(1)	87	111	48	.....
59 .....1930.....capacity, hp.....	21	.....	63	112	8	312	182	298	58
60 .....1920.....capacity, hp.....	10	31	2	35	20	17	12	73	.....
61 Pumps.....1940.....capacity, g.p.m.....	(1)	714	8,925	840	(1)	3,385	6,055	2,080	.....
62 .....1930.....capacity, g.p.m.....	415	.....	1,650	1,945	85	5,450	8,945	6,620	1,460
63 .....1920.....capacity, g.p.m.....	10	245	.....	350	1,650	915	1,850	3,668	25
64 Pumping lift, from all sources.....1940.....average, feet.....	(1)	19	16	49	(1)	25	24	70	.....
65 .....1930.....average, feet.....	10	.....	34	28	66	28	21	43	50
66 .....1920.....average, feet.....	.....	16	10	19	10	78	11	21	17
67 from pumped wells.....1940.....average, feet.....	(1)	19	18	(1)	(1)	25	23	89	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶									
68 Enterprises reporting pay roll.....number.....	.....	6	16	2	.....	4	19	2	51
69 Irrigated area in these enterprises.....acres.....	.....	4,042	40,886	(1)	.....	6,139	28,964	(1)	3,498
70 Wages and salaries paid and payable.....dollars..	.....	1,470	18,123	(1)	.....	11,757	76,636	(1)	36,209
71 Persons employed during week ending April 29.....number..	.....	.....	37	.....	.....	14	93	(1)	22

* Census of Agriculture.
¹ Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁴ Includes siphons and farm pipe lines reported.
⁵ Data for less than 3 enterprises shown with permission of the enterprise involved.
⁶ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - NEW MEXICO

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	^a 77,767,040	78,401,920	78,401,920	78,401,920	78,401,920	78,401,920	78,401,920
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	34,105	41,369	31,404	29,844	35,676	12,311	4,458
Land in all farms.....acres.....	38,860,427	34,397,205	30,822,034	24,409,633	11,270,021	5,130,878	787,882
Farms irrigated: ¹							
Farms.....number.....	15,811	17,093	14,347	11,390	12,795	9,128	3,085
Increase or decrease (-) over preceding census....percent..	² 10.2	19.1	26.0	-11.0	40.2	195.9	.....
Proportion of all farms.....percent..	46.4	41.3	45.7	38.2	35.9	74.1	69.2
Land in farms.....acres....	7,408,997	⁽³⁾	5,024,868	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Proportion of all farm land.....percent..	19.1	⁽³⁾	16.3	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Area irrigated.....acres....	⁴ 436,402	⁶ 314,319	⁸ 371,269	⁽⁷⁾	⁽⁷⁾	203,893	91,745
Increase or decrease (-) over preceding census....percent..	² 17.5	.....	.....	.....	.....	122.2	.....
Proportion of total land area of State.....percent..	0.6	0.4	0.5	.....	.....	0.3	0.1
Proportion of all farm land.....percent..	1.1	0.9	1.2	.....	.....	4.0	11.6
Value of irrigated farms (land and buildings).....dollars..	82,619,776	⁽³⁾	87,868,916	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per farm.....dollars.....	5,226.46	⁽³⁾	6,124.55	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per acre.....dollars.....	11.15	⁽³⁾	17.49	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Value of farm implements and machinery ⁶.....dollars..	6,937,641	⁽³⁾	5,291,569	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per farm ⁹.....dollars.....	438.79	⁽³⁾	368.83	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per acre ⁹.....dollars.....	0.94	⁽³⁾	1.05	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number.....	2,503	⁽³⁾	1,965	2,391	2,786	⁽³⁾	⁽³⁾
Farms irrigated.....number.....	31,683	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Area irrigated.....acres.....	554,039	⁽³⁾	527,033	538,377	461,718	⁽³⁾	⁽³⁾
Area existing works were capable of supplying with water.....acres....	731,990	⁽³⁾	656,669	696,119	644,970	⁽³⁾	⁽³⁾
Area irrigable.....acres.....	807,656	⁽³⁾	741,245	⁹ 961,879	⁹ 1,102,297	⁽³⁾	⁽³⁾
Additional area existing works were capable of supplying with water.....acres....	177,951	⁽³⁾	129,636	157,742	183,252	⁽³⁾	⁽³⁾
Additional irrigable area in enterprises not supplied with water.....acres....	253,617	⁽³⁾	214,212	⁹ 423,502	⁹ 640,579	⁽³⁾	⁽³⁾
Investment in irrigation enterprises.....dollars..	32,735,997	⁽³⁾	19,834,380	18,210,412	9,154,897	4,165,312	511,937
Increase or decrease (-) over preceding census....percent..	⁶ 65.0	⁽³⁾	8.9	98.9	119.8	713.6	.....
Average per acre based on area works were capable of supplying with water.....dollars.....	44.72	⁽³⁾	30.20	26.16	14.19	⁽³⁾	⁽³⁾
Increase or decrease (-) over preceding census....percent..	² 48.1	⁽³⁾	15.4	84.4	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	36,773,139	⁽³⁾	21,942,450	20,440,646	11,640,091	⁽³⁾	⁽³⁾
Average per acre based on irrigable area in enterprises.....dollars.....	45.53	⁽³⁾	- 29.60	⁹ 21.25	⁹ 10.56	⁽³⁾	⁽³⁾
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	2.11	⁽³⁾	2.15	2.41	1.36	⁽³⁾	⁽³⁾

¹ Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ² Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³ Not available. ⁴ Irrigated land from which crops were harvested plus 27,051 acres of irrigated land used only for pasture. ⁵ Irrigated land from which crops were harvested. ⁶ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷ Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸ Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁰ The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	34,105	38,860,427	1,572,507	409,351	27,051	187,525,814	4.83	28,253,456	0.73	15,212,674	0.39
Owners and managers.....	28,294	34,674,858	1,161,076	312,488	22,775	157,640,909	4.55	24,169,785	0.70	12,340,615	0.36
Tenants.....	5,811	4,185,569	411,431	96,863	4,276	29,884,905	7.14	4,083,671	0.98	2,872,059	0.69
Irrigated farms, total.....	15,811	7,408,997	448,203	409,351	27,051	82,619,776	11.15	14,976,063	2.02	6,937,641	0.94
Owners and managers.....	13,396	6,501,491	343,317	312,488	22,775	67,593,251	10.40	12,774,932	1.96	5,725,157	0.88
Tenants.....	2,415	907,506	104,886	96,863	4,276	15,026,525	16.56	2,201,131	2.43	1,212,484	1.34
Wholly irrigated farms.....	14,111	5,259,705	375,753	375,753	20,997	69,341,215	13.18	13,075,756	2.49	6,132,181	1.17
Owners and managers.....	11,919	4,825,825	285,125	285,125	17,442	57,260,430	11.87	11,210,579	2.32	5,035,730	1.04
Tenants.....	2,192	433,880	90,628	90,628	3,555	12,080,785	27.84	1,865,177	4.30	1,096,451	2.53
Partly irrigated farms.....	1,700	2,149,292	72,450	33,598	6,054	13,278,561	6.18	1,900,307	0.88	805,460	0.37
Owners and managers.....	1,477	1,675,666	58,192	27,363	5,333	10,332,821	6.17	1,564,353	0.93	689,427	0.41
Tenants.....	223	473,626	14,258	6,235	721	2,945,740	6.22	335,954	0.71	116,033	0.24
Nonirrigated farms, total.....	18,294	31,451,430	1,124,304	.....	.....	104,906,038	3.34	13,277,393	0.42	8,275,033	0.26

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed.

² Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION — NEW MEXICO

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	2,503	807,656	731,990	554,039	527,033	538,377	5.1	474,184	519,593	457,876	3.0	2.82	0.92
Primary sources:													
Streams, gravity.....	1,021	482,792	435,022	343,684	430,089	432,478	-20.1	271,984	325,018	268,350	2.4	1.60	0.68
Streams, pumped.....	47	6,136	5,903	3,887	6,856	1,890	-43.3	3,875	3,869	3,869	3.0	2.08	0.69
Streams, gravity and pumped.....	8	110,875	110,675	70,129	.....	.....	.....	70,129	70,089	70,089	6.6	6.76	1.03
Wells, pumped.....	1,026	108,015	102,953	75,556	30,425	15,709	148.3	74,341	70,741	70,236	2.6	4.26	1.61
Wells, flowing.....	115	14,953	13,944	11,533	21,838	30,030	-47.2	11,512	4,457	4,457	2.4	1.05	0.44
Wells, pumped and flowing.....	52	13,986	13,704	11,729	5,855	6,556	100.3	11,729	10,876	10,876	2.5	2.69	1.10
Lakes, gravity.....	2	410	410	374	385	1,945	-2.9	374	374	374	3.4	0.31	0.09
Lakes, pumped.....	1												
Springs.....	86	6,712	5,204	3,136	5,595	10,791	-43.9	1,673	1,976	1,188	2.3	1.46	0.63
Springs and streams.....	12	5,016	4,986	3,973	.....	.....	.....	2,346	2,655	2,328	1.5	0.39	0.27
Stored storm water.....	8	1,344	961	650	1,720	6,448	-62.2	619	640	613	2.0	1.92	0.97
City water.....	2	139	139	114	157	40	-27.4	4	4	4	5.0	1.25	0.25
Sewage.....	1												
Streams, gravity; wells, pumped...	32	3,420	3,401	2,565	1,015	2,026	152.7	2,474	2,536	2,457	2.4	2.89	1.18
Streams, gravity; wells, flowing...	2												
Streams, pumped; wells, pumped...	4	2,578	2,578	2,423	.....	.....	.....	2,423	2,423	2,423	2.0	0.80	0.40
Waste water, seepage or drainage...	5	537	537	376	.....	.....	.....	162	167	162	2.7	0.71	0.26
Other mixed.....	27	40,743	31,573	23,910	19,501	29,787	22.6	20,539	23,768	20,442	2.4	1.10	0.45
Other and not reported.....	.....	.....	.....	.....	3,587	677	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:²													
Streams, gravity and/or storage...	2	132	132	92	20	.....	360.0	66	64	38	1.1	0.53	0.49
Streams, pumped.....	1												
Wells, pumped.....	48	5,783	5,780	5,031	.....	.....	.....	5,031	5,019	5,019	1.5	2.01	1.32
Wells, flowing.....	1												

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars	
Total.....	32,735,997	100.0	44.72	19,834,380	100.0	30.20	14.52	516,916	2.11	493,229	2.15	-0.04	336,387	2.41
Primary sources:														
Streams, gravity.....	17,320,656	52.9	39.82	16,314,802	82.2	30.20	9.62	322,341	1.38	419,977	1.87	-0.49	257,818	1.65
Streams, pumped.....	83,892	0.3	14.21	334,111	1.7	33.18	-18.97	3,869	2.08	6,848	2.01	0.07	1,132	1.30
Streams, gravity and pumped.....	10,411,418	31.8	94.07	.....	.....	.....	.....	70,089	3.74	.....	.....	.....	.....	.....
Wells, pumped.....	2,312,580	7.1	22.46	1,312,396	6.6	38.75	-16.29	70,741	4.27	27,586	6.44	-2.17	12,388	7.51
Wells, flowing.....	420,372	1.3	30.15	877,281	4.4	37.55	-7.40	4,457	1.05	4,648	2.17	-1.12	14,394	2.15
Wells, pumped and flowing.....	401,119	1.2	29.27	251,863	1.3	36.61	-7.34	10,876	2.69	5,855	3.00	-0.31	4,601	8.90
Lakes, gravity.....	1,500	(5)	3.66	30,800	0.2	52.65	-48.99	374	0.31	365	4.17	-3.86	1,945	1.41
Lakes, pumped.....														
Springs.....	108,467	0.3	20.84	70,155	0.4	9.89	10.95	1,976	1.32	4,013	1.55	-0.23	7,452	1.92
Springs and streams.....	49,980	0.2	10.02	.....	.....	.....	.....	2,655	0.56	.....	.....	.....	.....	.....
Stored storm water.....	29,119	0.1	30.30	56,421	0.3	15.17	15.13	640	2.03	1,650	1.91	0.12	6,207	1.67
City water.....	675	(5)	4.86	375	(5)	2.39	2.47	4	1.25	.....	.....	.....	40	1.25
Sewage.....														
Streams, gravity; wells, pumped...	73,933	0.2	22.41	86,301	0.4	92.30	-69.89	2,535	2.89	655	1.13	1.76	1,319	39.77
Streams, gravity; wells, flowing...	3,925	(5)	38.48	2,500	(5)	6.94	31.54	1	10.00	360	0.83	9.17	500	1.00
Streams, pumped; wells, pumped...	30,625	0.1	11.88	.....	.....	.....	.....	2,423	0.80	.....	.....	.....	.....	.....
Waste water, seepage or drainage...	2,100	(5)	3.91	.....	.....	.....	.....	167	0.80	.....	.....	.....	.....	.....
Other mixed.....	1,378,932	4.2	43.67	458,825	2.3	17.76	25.91	23,768	0.63	17,723	1.65	-1.02	28,534	4.84
Other and not reported.....	.....	.....	.....	33,550	0.2	9.22	.....	.....	.....	3,529	3.62	.....	57	4.91
Supplemental sources:⁴														
Streams, gravity and/or storage...	2,131	(5)	16.14	5,000	(5)	250.00	-233.86	64	0.59	20	38.15	-37.56	.....	.....
Streams, pumped.....														
Wells, pumped.....	104,573	0.3	18.09	.....	.....	.....	.....	5,019	2.01	.....	.....	.....	.....	.....
Wells, flowing.....														

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION - NEW MEXICO

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				
	1940		1930	1920			1940		1930	1920	
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	Increase or decrease (-) 1930-40 primary enterprises		Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	Increase or decrease (-) 1930-40 primary enterprises
AREA IRRIGATED	Acres	Acres	Acres	Acres	Percent	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued	Acres	Acres	Acres	Acres	Percent
Total.....	554,039	5,123	527,033	538,377	5.1	Bureau of Reclamation ³	115,695	111,035	96,751	4.2	
Individual and partnership....	151,366	5,123	130,738	151,351	15.8	Office of Indian Affairs ³	58,951	41,989	11,372	40.4	
Cooperative, incorporated.....	45,030	.....	233,286	264,610	-27.9	State.....	(²)	20	77	.....
Cooperative, unincorporated....	123,156	.....	22,000	15,008	294.0	City and/or sewage.....	(²)	600	600	.....
Irrigation district.....	86,675	.....	16,192	19,871	3.98	Other.....	.....	6,030	7,610	.....
Commercial.....	² 22,637	.....	103,090	77,678	-4.9	IRRIGABLE AREA⁴					
Bureau of Reclamation ³	98,064	.....	20,824	9,072	30.2	Total.....	807,656	5,915	741,245	961,879	9.0
Office of Indian Affairs ³	27,111	.....	20	77	.....	Individual and partnership....	208,686	5,915	165,264	313,170	26.3
State.....	(²)	.....	.....	600	.....	Cooperative, incorporated....	69,361	.....	324,300	404,028	-34.6
City and/or sewage.....	(²)	.....	883	110	.....	Cooperative, unincorporated...	142,743	.....	43,500	28,520	220.0
Other.....	.....	.....	.....	.....	.....	Irrigation district.....	139,212	.....	33,392	67,050	35.3
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						Commercial.....	² 45,196	.....	113,035	127,226	11.4
Total.....	731,990	5,912	656,669	696,119	11.5	Bureau of Reclamation ³	125,889	.....	55,704	13,570	37.5
Individual and partnership....	199,699	5,912	155,802	215,618	28.2	Office of Indian Affairs ³	76,569	.....	20	77	.....
Cooperative, incorporated.....	57,699	.....	276,581	305,540	-30.7	State.....	(²)	.....	600	600	.....
Cooperative, unincorporated....	133,845	.....	37,000	24,808	260.8	City and/or sewage.....	(²)	.....	6,030	7,638	.....
Irrigation district.....	133,512	.....	28,212	33,743	15.5	Other.....	.....	.....	.....	.....	.....
Commercial.....	² 32,589	.....	.....	.....	.....		

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²Data for 1 "City and/or sewage" are included with "Commercial" enterprises in the 1940 Census. ³U. S. Dept. of the Interior. ⁴For 1920 relates to total area. Irrigable area for that year was not reported. *For explanation of areas, see text, p. 418.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939;
BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ⁴				
	Total ✓	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area ✓	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
	Number	Number	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Number	Acres	Acres	Acres	Acres
Total.....	2,503	509	807,656	731,990	43.97	2.09	17.40	2.00	31,683	554,039	512,441	21,069	20,529
Individual and partnership.....	2,015	51	208,686	199,699	21.98	0.77	17.40	2.00	2,922	151,366	140,044	2,967	8,355
Cooperative, incorporated.....	83	79	69,361	57,699	30.42	2.97	.....	.....	2,557	45,030	39,812	3,530	1,688
Cooperative, unincorporated....	361	336	142,743	133,845	22.26	0.85	.....	.....	9,831	123,156	107,834	8,179	7,143
Irrigation district.....	11	11	139,212	133,512	83.23	3.41	.....	.....	9,452	86,675	83,598	2,157	920
Commercial.....	5	5	⁴ 45,196	⁴ 32,589	⁴ 25.13	⁴ 0.42	.....	.....	⁴ 204	⁴ 22,637	⁴ 21,801	⁴ 40	⁴ 796
U. S. Bureau of Reclamation ⁵	⁶ 2	2	125,889	115,695	67.08	2.12	.....	.....	3,111	98,064	92,602	4,096	1,366
U. S. Office of Indian Affairs..	25	24	76,569	58,951	57.22	2.02	.....	.....	3,606	27,111	26,750	100	261
State.....	.....	.....	.....	.....	(⁴)	(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
City and/or sewage.....	1	1	(⁴)	(⁴)	(⁴)	(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 1 "City and/or sewage" enterprise are included with "Commercial" enterprises in the 1940 Census. ⁵Data for less than 3 enterprises shown with permission of the enterprises involved. *For explanation of areas and investment, see text, p. 418.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ⁴	Estimated investment required to complete works	
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment								Investment in water rights
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Dollars	
Total.....	32,735,997	32,629,293	106,704	32,290,856	445,141	19,834,380	18,210,412	65.0	44.58	18.05	735,844	4,037,142
Individual and partnership.....	4,531,158	4,424,454	106,704	4,491,305	39,853	3,814,458	5,589,372	18.8	22.16	18.05	2,261	58,268
Cooperative, incorporated.....	1,950,969	1,950,969	.....	1,755,381	195,588	.....	.....	.....	33.81	.....	135,718	107,925
Cooperative, unincorporated....	3,022,191	3,022,191	.....	2,979,069	43,122	3,016,075	3,558,863	64.9	22.58	.....	54,439	75,730
Irrigation district.....	11,165,731	11,165,731	.....	11,112,222	53,509	1,289,180	914,479	766.1	82.53	.....	30,235	8,000
Commercial.....	² 931,994	² 931,994	.....	² 818,925	² 113,069	1,543,000	1,877,842	² 39.6	² 28.60	.....	² 35,000	² 35,000
U. S. Bureau of Reclamation ⁵	7,760,844	7,760,844	.....	7,760,844	.....	8,684,489	5,020,230	-10.6	67.08	.....	144,263	352,969
U. S. Office of Indian Affairs....	3,373,110	3,373,110	.....	3,373,110	.....	1,231,928	691,194	173.8	57.22	.....	368,926	3,399,250
State.....	.....	.....	.....	.....	.....	5,000	18,544	.....	.....	.....	.....	.....
City and/or sewage.....	(²)	(²)	.....	(²)	(²)	.....	276,299	.....	(²)	.....	.....	(²)
Other.....	.....	.....	.....	.....	.....	250,250	263,589	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 1 "City and/or sewage" enterprise are included with "Commercial" enterprises in the 1940 Census. *For explanation of investment, see text, p. 418.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter-prises 1940	Area		Total indebted-ness 1940	Average per acre assessed 1939	Average per acre works were capable of supplying with water	Enter-prises 1940	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri-gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	57	417,978	366,615	16,715,813	48.68	45.60	6	560,392	520,067	30.40	483,407	966,767	1,037,433
Partnership.....	2	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	.....	.....	(⁴)	.....	8,603	12,157	1,303
Cooperative, incorporated...	8	34,214	25,730	779,302	27.18	30.29	2	537,410	502,296	79.72	53,888	44,999	52,417
Cooperative, unincorporated...	11	12,275	12,075	9,134	0.79	0.76	1				113,904	98,712	28,737
Irrigation district.....	7	135,273	129,573	9,294,472	69.23	71.73	2	22,982	17,859	1.14	135,404	525,300	637,788
Commercial.....	4	44,916	32,416	127,861	5.70	3.94	1				22,536	21,612	15,784
Bureau of Reclamation ⁶	7	125,889	115,695	5,383,640	45.65	46.53	.....	.....	.....	.....	117,935	216,022	301,404
Office of Indian Affairs ⁶	23	65,411	51,126	1,121,404	39.12	21.93	.....	.....	.....	.....	31,137	47,965	.....
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(⁵)	(⁵)	(⁵)
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. No supplemental enterprises reported indebtedness in this State. ²In payment of principal, interest, and/or other funded obligations. ³Data for 2 "Partnership" enterprises are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁴Data for "Partnership" enterprises are included with "Cooperative" enterprises in the 1940 Census. ⁵Data for 1 "City and/or sewage" enterprise are included with "Commercial" enterprises in the 1940 Census. ⁶U. S. Dept. of the Interior. ⁷Data for less than 3 enterprises shown with permission of the enterprises involved. ⁸Represents indebtedness of irrigation districts to the U. S. Government. ⁹Represents construction costs of irrigation works less cancellations and repayments. ¹⁰For explanation of areas and investment, see text, p. 418.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary Enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	516,916	1,082,768	5,083	10,142	2.09	2.00	275	718,210	1,773
Individual and partnership.....	133,998	388,142	5,083	10,142	2.97	2.00	22	5,302	221
Cooperative, incorporated.....	42,097	32,232	.....	.....	0.77	.....	29	41,792	255
Cooperative, unincorporated.....	108,934	93,090	.....	.....	0.85	.....	115	43,000	441
Irrigation district.....	84,365	287,753	.....	.....	3.41	.....	8	214,127	231
Commercial.....	22,587	9,479	.....	.....	0.42	.....	4	11,802	114
U. S. Bureau of Reclamation ⁶	98,064	207,905	.....	.....	2.12	.....	2	109,171	115
U. S. Office of Indian Affairs ⁶	26,871	54,167	.....	.....	2.02	.....	24	233,016	496
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	(²)	(²)	.....	.....	(²)	.....	1	(²)	(²)
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 1 "City and/or sewage" enterprise are included with "Commercial" enterprises in the 1940 Census. ³For explanation of areas and investment, see text, p. 418.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Number	Capacity	Length	Number	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles		Ac.-ft.	Miles		G. p. m.		G. p. m.	H. P.		G. p. m.	
Total.....	1,072	141	16,821	4,567	80.9	502	3,280,550	36.5	268	181,076	1,487	1,143,276	1,558	40,110	1,559	1,309,005
Individual and partnership.....	576	60	2,906	851	10.1	415	7,525	17.3	255	170,416	1,487	1,143,276	1,549	39,929	1,551	1,289,640
Cooperative, incorporated.....	67	20	2,788	438	21.4	24	14,313	2.1	.....	1	.....	.....	1	25	1	1,600
Cooperative, unincorporated.....	309	14	3,585	1,295	4.2	15	24,543	5.6	1	300	.....	.....	4	66	3	1,515
Irrigation district.....	14	6	3,703	935	0.2	6	280,228	6.7	.....	.....	.....	.....	4	90	4	16,250
Commercial.....	8	4	827	101	0.1	4	99,139	0.1	5	10,000	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ⁶	4	4	2,400	378	24.9	5	2,834,000	0.1	.....	.....	.....	.....	.....	.....	.....	.....
Office of Indian Affairs ⁶	94	33	612	566	20.0	33	20,802	4.6	7	360	.....	.....	.....	.....	.....	.....
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	(²)	.....	(²)	(²)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³Data for 1 "City and/or sewage" enterprise are included with "Commercial" enterprises in the 1940 Census. ⁴U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number		Number	Number	Number	Number
Total.....	1,072	141	665	69	Earth and rock.....	475	124	525	29
Concrete or masonry.....	121	7	56	12	Other and mixed.....	1 365	6	1 525	23
Timber.....	102	1	59	.....	Not reported.....	9	3	25	5

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity									
											Number	Percent	G. p. m.	Percent	Feet	Number	Percent	Hp.	Percent
											1,559	100.0	1,309,005	100.0	44	1,558	100.0	40,110	100.0
Total, 1940.....	1,559	100.0	1,309,005	100.0	44	Total, 1940.....	1,558	100.0	40,110	100.0									
Electric motor.....	403	25.8	299,719	22.9	46	Centrifugal pump.....	549	35.2	12,600	31.4									
Centrifugal.....	141	9.0	113,969	8.7	27	Electric.....	151	9.7	2,040	5.1									
Turbine.....	257	16.5	182,928	14.0	58	Internal-combustion.....	393	25.2	10,359	25.8									
Plunger.....	2	0.1	22	(¹)	28	Other.....	5	0.3	201	0.5									
Other.....	3	0.2	2,800	0.2	47	Turbine pump.....	814	52.2	24,497	61.1									
Internal-combustion engine.....	933	59.8	849,360	64.9	44	Electric.....	284	18.2	5,080	12.7									
Centrifugal.....	389	25.0	344,388	26.3	30	Internal-combustion.....	530	34.0	19,417	48.4									
Turbine.....	512	32.8	495,157	37.8	56	Other.....	.....	.....	.....	.....					
Plunger.....	22	1.4	1,015	0.1	44	Plunger pump.....	86	5.6	191	0.5									
Other.....	10	0.6	8,800	0.7	40	Electric.....	1	0.1	11	(¹)									
Other kinds of motive power.....	46	3.0	9,547	0.7	39	Internal-combustion.....	31	2.0	95	0.2									
Centrifugal.....	3	0.2	3,065	0.6	32	Other.....	54	3.5	85	0.2									
Turbine.....	.....	.....	.....	.....	.....	Other and mixed types of pumps.....	109	7.0	2,822	7.0				
Plunger.....	40	2.6	465	(¹)	39	Electric.....	38	2.4	579	1.4									
Other.....	3	0.2	1,017	0.1	43	Internal-combustion.....	65	4.2	2,197	5.5									
Mixed kinds of motive power.....	177	11.4	150,379	11.5	41	Other.....	6	0.4	46	0.1									
Centrifugal.....	59	3.8	45,500	3.5	29	Total, 1930.....	² 702	.....	14,483	.....								
Turbine.....	96	6.2	103,925	7.9	46	Increase or decrease (-) 1930-1940.....	856	.....	25,627	.....								
Plunger.....	20	1.3	404	(¹)	54														
Other.....	2	0.1	1,150	0.1	28														
Total, 1930.....	738	.....	555,063	.....	40												
Increase or decrease (-) 1930-1940..	821	.....	753,942	.....	4												

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
	Miles	Miles			Percent	Miles		Miles	Percent
Total.....	36.5	15.2	140.1	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	1.3	2.1	-38.1
1 to 12 inches.....	1.4	0.7	100.0	13 to 24 inches.....	0.6	.....	.....
13 to 24 inches.....	1.5	.....	.....	Over 24 inches.....	1.5	1.4	50.0
Over 24 inches.....	5.8	.....	.....	Clay and other:			
Metal:				1 to 12 inches.....	3.0	0.8	275.0
1 to 12 inches.....	13.1	9.1	44.0	13 to 24 inches.....	.....	.....	.....
13 to 24 inches.....	4.6	0.9	822.2	Over 24 inches.....	.....	0.2	.....
Over 24 inches.....	3.7	.....	.....		

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include those of the Elephant Butte Irrigation District of the Rio Grande Project and the Carlsbad Irrigation District of the Carlsbad Project.

The investment attributed to the Bureau of Reclamation in State table 7 relates to construction costs incurred by the Government for irrigation facilities which are charged to lands in New Mexico served by the Rio Grande Project and those of the Carlsbad Project. Excluded from this total are drainage costs and the outlay for Elephant Butte Dam, which is to be repaid from power revenues arising from the operation of a power plant at the dam, and Caballo Dam, both of which serve the Rio Grande Project in New Mexico and Texas. Caballo Dam, which regulates the stream flow, was constructed as a

part of canalization project for the Rio Grande under an agreement with Mexico.

The reduction in the amount of the Bureau of Reclamation investment in New Mexico from 1930 to 1940, despite the construction of such works as Alamogordo Dam of the Carlsbad Project and Caballo Dam on the Rio Grande, results from the elimination of drainage costs from the irrigation outlays and from new contracts with the Secretary of the Interior by which the greater part of the costs of Elephant Butte Dam will be repaid by power revenues. Elephant Butte Dam was formerly charged into the irrigation costs of the Rio Grande Project repayable by water users. Neither the tabulations as to areas or investment include the Tucumcari Project being constructed in northeastern New Mexico. This project will be served from Comchas Dam on the Canadian River constructed by the Corps of Engineers.

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number...	155	237	293
Area irrigable in these enterprises.....acres....	331,233	225,730	¹ 212,353
Area irrigated in these enterprises.....acres....	231,795	(²)	(²)
Area for which drains have been installed.....acres....	240,644	60,907	74,783
Additional area needing drainage.....acres....	8,732	49,572	60,277
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	103.8	³ 27.0	¹ 35.2
(b) All irrigation enterprises.....percent..	43.4	11.6	13.9
Ratio of area drained plus area needing drainage to—			
(a) Irrigable area reporting.....percent..	75.3	48.9	¹ 63.6
(b) Irrigated area reporting.....percent..	107.6	(²)	(²)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census.
² Not available.
³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,179,011	1,306,639	1,007,575	947,783	750,545	688,428	1,231,228	556,094	319,147
Area irrigated by these enterprises.....acres....	342,012	224,878	199,859	153,357	120,532	126,090	188,655	104,346	73,769
Average water per acre irrigated.....acre-feet..	6.4	5.8	5.0	6.2	6.2	5.5	6.5	5.3	4.3
Total water delivered to irrigators.....acre-feet..	1,167,655	266,413	274,746	441,408	263,413	212,359	726,247	3,000	62,387
Area irrigated by these enterprises.....acres....	369,456	127,984	160,996	158,447	125,784	119,013	211,009	2,200	41,983
Average water per acre irrigated.....acre-feet..	3.2	2.1	1.7	2.8	2.1	1.8	3.4	1.4	1.5
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	271,031	.....	.....	6,562	.....	.....	264,469	.....	.....
Area irrigated by these enterprises.....acres....	104,728	.....	.....	2,688	.....	.....	102,040	.....	.....
Average water per acre irrigated.....acre-feet..	2.6	.....	.....	2.4	.....	.....	2.6	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Area irrigated by these enterprises.....acres....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average water per acre irrigated.....acre-feet..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total water delivered to irrigators.....acre-feet..	72	.....	.....	.....	.....	.....	72	.....	.....
Area irrigated by these enterprises.....acres....	66	.....	.....	.....	.....	.....	66	.....	.....
Average water per acre irrigated.....acre-feet..	1.1	.....	.....	.....	.....	.....	1.1	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	7,660	.....	.....	.....	.....	.....	7,660	.....	.....
Area irrigated by these enterprises.....acres....	5,031	.....	.....	.....	.....	.....	5,031	.....	.....
Average water per acre irrigated.....acre-feet..	1.5	.....	.....	.....	.....	.....	1.5	.....	.....

¹ Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Total.....	Acres	Percent	Acres	Acres	Percent	Acres	Percent
	554,039	100.0	5,123	527,033	100.0	538,377	100.0
Appropriation ²	450,542	81.3	5,041	382,538	72.6	331,057	61.5
Underground.....	35,590	6.4	82	44,820	8.5	52,325	9.7
Appropriation and underground.....	1,238	0.2	.....	.....	.....	.....	.....
Adjudicated by court.....	58,863	10.7	.....	92,335	17.5	91,807	17.1
Other mixed and not reported.....	7,806	1.4	.....	7,340	1.4	63,188	11.7

¹ Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).
² "Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," "Certificate or license from State," and "Riparian."

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....	2,451	67	1,673	206	290	180	33	2
2	Irrigated farms, 1939.....	31,683	.....	1,673	521	3,558	8,229	6,929	10,173
3	Area irrigated, 1939.....	554,039	.....	120,123	23,781	71,578	109,984	88,250	140,323
4	(a) From which crops were harvested.....	512,441	.....	111,817	21,773	63,661	85,692	85,366	134,132
5	(b) On which crops failed.....	21,069	.....	1,920	507	5,015	7,842	1,430	4,355
6	(c) Irrigated pasture.....	20,529	.....	6,386	1,501	2,902	6,460	1,464	1,836
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....	32,629,293	73,254	3,660,050	569,631	3,465,872	3,767,938	7,631,709	13,460,839
8	(a) Cost of irrigation works and equipment.....	32,187,969	72,629	3,631,175	563,276	3,325,495	3,508,790	7,625,765	13,460,839
9	(b) Investment in water rights.....	441,324	625	28,875	6,355	140,377	259,148	5,944	.....
10	Area works were capable of supplying with water.....	731,990	4,386	161,174	28,283	69,304	136,488	123,439	188,916
11	Average investment per acre irrigated.....	58.89	.....	30.47	23.95	48.42	34.26	86.48	95.93
12	Average investment per acre which the works could supply with water.....	44.58	16.70	22.71	20.14	38.81	27.61	61.83	71.25
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....	1,999	4	1,383	179	244	156	31	2
14	(a) Area irrigated in these enterprises.....	516,916	.....	106,663	21,107	64,554	98,169	86,100	140,323
15	(b) Cost of maintenance and operation.....	1,082,768	170	343,869	45,328	57,237	112,452	106,823	416,889
16	(c) Average cost per irrigated acre reporting.....	2.09	.....	3.22	2.15	0.89	1.15	1.24	2.97
17	Total annual charges ²	966,767	60	.....	.....	58,863	140,942	151,944	614,958
18	Average charge per irrigated acre reporting.....	2.47	.....	.....	.....	0.91	1.42	1.73	4.38
19	Area against which charges were assessed.....	483,407	208	.....	.....	66,661	118,766	102,255	195,497
20	Average annual charge per acre assessed.....	2.00	0.29	.....	.....	0.88	1.19	1.49	3.15
21	Total charges collected ²	1,037,433	.....	.....	.....	10,668	85,314	76,008	865,443
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ⁴	57	.....	.....	.....	11	25	19	2
23	(a) Area irrigated in these enterprises.....	259,117	.....	.....	.....	11,778	34,377	72,639	140,323
24	(b) Indebtedness.....	16,715,813	.....	.....	.....	762,789	754,183	3,742,413	11,456,428
25	(c) Average indebtedness per acre irrigated.....	64.51	.....	.....	.....	64.76	21.94	51.52	81.64
26	(d) Cost of irrigation works and equipment.....	24,168,770	.....	.....	.....	1,417,222	2,564,979	6,725,730	13,460,839
27	(e) Investment in water rights.....	320,637	.....	.....	.....	76,034	240,659	1,944	.....
28	(f) Total investment.....	24,489,407	.....	.....	.....	1,493,256	2,805,636	6,727,674	13,460,839
29	(g) Maintenance and operation.....	591,615	.....	.....	.....	6,547	73,420	94,759	416,889
30	(h) Total annual charges ²	860,424	.....	.....	.....	9,244	93,730	142,492	614,958
31	(i) Total charges collected ²	998,896	.....	.....	.....	764	58,314	74,375	865,443
32	(j) Area against which annual charges were assessed.....	342,484	.....	.....	.....	12,334	47,359	87,294	195,497
33	(k) Average indebtedness per acre assessed.....	48.68	.....	.....	.....	58.27	15.91	42.87	58.60
34	(l) Average charges per acre assessed.....	2.51	.....	.....	.....	0.75	1.98	1.63	3.15
35	(m) Average charges per acre irrigated.....	3.33	.....	.....	.....	0.82	2.77	1.96	4.38
36	Enterprises reporting arrearage ⁴	6	.....	.....	.....	3	3	.....	.....
37	(a) Area assessed in these enterprises.....	18,106	.....	.....	.....	3,986	14,120	.....	.....
38	(b) Total arrearage.....	560,392	.....	.....	.....	555,505	4,887	.....	.....
39	(c) Average arrearage per acre assessed.....	30.40	.....	.....	.....	136.86	0.35	.....	.....
40	(d) Indebtedness.....	879,252	.....	.....	.....	702,829	176,423	.....	.....
TYPE, 1940									
41	Individual and partnership.....	1,963	61	1,660	191	44	7	.....	.....
42	Cooperative (incorporated and unincorporated).....	444	6	13	14	238	157	16	.....
43	Irrigation district.....	11	.....	.....	.....	2	6	2	.....
44	Commercial.....	5	.....	.....	.....	3	1	1	.....
45	U. S. Bureau of Reclamation.....	2	.....	.....	.....	.....	.....	.....	1
46	U. S. Office of Indian Affairs.....	25	.....	.....	1	2	9	13	.....
47	All other.....	1	.....	.....	.....	1	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....	205	.....	.....	.....	86	90	27	2
49	Wages and salaries paid and payable for 1939.....	718,210	.....	.....	.....	44,545	151,197	204,919	317,549
50	Persons employed during week ending April 29, 1939.....	1,773	.....	.....	.....	462	578	434	299
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....	1,021	10	464	90	262	167	27	1
52	Streams, pumped.....	47	1	43	3	.....	.....	.....	.....
53	Wells, pumped.....	1,026	46	895	77	8	.....	.....	.....
54	Wells, pumped and flowing; or wells flowing.....	167	1	141	22	3	.....	.....	.....
55	Lakes, gravity or pumped.....	3	.....	2	1	.....	.....	.....	.....
56	Streams and springs; or springs.....	98	2	62	7	14	13	.....	.....
57	Mixed, streams and wells.....	46	5	36	1	2	.....	1	1
58	Other mixed or stored storm water.....	43	2	30	5	1	.....	5	.....

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.²Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION — NEW MEXICO

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
67	1,627	467	260	24	5	² 1	2,101	247	74	26	3	1
.....	3,164	4,509	8,778	3,754	8,798	2,680	11,318	2,574	2,670	3,917	11,204	2
.....	53,196	79,305	157,445	77,489	106,071	78,533	176,012	74,428	56,922	86,623	159,854	3
.....	50,102	71,606	138,308	72,762	106,592	73,071	156,330	67,860	51,864	82,704	153,663	4
.....	1,116	4,305	8,756	2,537	259	4,096	10,963	1,494	2,320	1,937	4,356	5
.....	1,978	3,394	10,381	2,190	1,220	1,368	8,719	5,074	2,718	2,182	1,836	6
73,254	1,871,773	2,068,695	4,222,573	6,410,209	13,908,445	4,074,344	2,383,627	1,855,755	2,604,926	8,637,646	17,147,339	7
72,629	1,848,893	2,011,413	4,166,230	6,180,915	13,833,445	4,074,344	2,332,566	1,838,011	2,370,241	8,499,812	17,147,339	8
825	22,780	57,282	56,343	229,294	75,000	.....	51,061	17,744	234,685	137,834	.....	9
4,386	84,584	95,324	187,946	110,179	158,931	90,640	222,113	88,597	79,568	127,741	213,971	10
.....	35.19	26.09	26.82	82.72	128.00	52.84	13.54	24.93	45.76	99.49	107.27	11
16.70	22.13	21.70	22.47	58.18	87.04	45.78	10.73	20.95	32.74	67.62	80.14	12
4	1,338	394	233	24	5	1	1,691	211	70	24	3	13
.....	45,157	67,464	140,202	77,489	108,071	78,533	147,148	68,809	55,862	85,223	159,854	14
170	164,620	149,395	190,446	107,807	306,616	163,714	267,195	133,987	99,147	121,359	461,060	15
.....	3.65	2.21	1.36	1.39	2.84	2.08	1.82	1.95	1.77	1.42	2.88	16
60	9,058	29,380	99,516	127,949	537,398	163,406	56,264	23,841	49,144	169,944	667,574	17
.....	1.86	1.00	1.01	1.76	4.97	2.08	0.68	0.86	1.40	1.97	4.18	18
208	4,921	30,281	110,642	85,996	158,479	92,880	86,720	28,536	44,270	103,329	220,552	19
0.29	1.84	0.97	0.90	1.49	3.39	1.76	0.65	0.84	1.11	1.64	3.03	20
.....	12,303	7,181	22,431	85,985	623,239	286,294	9,105	7,350	30,501	109,924	880,553	21
3	1,705	8	25	15	5	1	10	3	22	19	3	22
.....	936	73,717	897,427	1,445,393	11,631,112	2,667,228	4,390	23,835	422,375	2,092,373	14,172,840	24
4.22	43.24	46.71	28.13	107.62	33.96	1.84	5.75	22.72	28.22	88.66	88.66	25
.....	5,736	198,878	1,927,587	4,128,780	13,833,445	4,074,344	15,335	30,261	1,137,893	5,837,942	17,147,339	26
.....	5,736	198,914	1,953,179	4,348,789	13,908,445	4,074,344	15,371	30,261	1,328,185	5,968,251	17,147,339	28
803	1,061	38,335	81,066	306,616	163,714	1,638	2,472	19,757	106,668	461,060	29	
.....	839	1,316	45,268	112,197	537,398	163,406	2,032	5,334	26,911	158,573	667,574	30
.....	407	7,274	81,682	623,239	286,294	407	2,427	9,230	106,279	880,553	31	
242	1,075	26,801	63,007	158,479	92,880	2,042	4,163	26,169	89,538	220,552	32	
.....	3.87	67.75	31.84	22.94	73.39	28.72	1.98	5.73	16.11	22.88	64.26	33
.....	3.47	1.22	1.69	1.78	3.39	1.76	1.00	1.28	1.03	1.77	3.03	34
.....	3.78	1.31	2.39	2.18	4.97	2.08	1.06	1.29	1.47	2.15	4.18	35
.....	.....	.....	4	2	.....	.....	.....	1	2	3	.....	36
.....	.....	.....	18,106	.....	.....	.....	.....	5,587	.....	12,519	.....	37
.....	.....	.....	560,392	.....	.....	.....	.....	9,423	.....	550,969	.....	38
.....	.....	.....	30.40	.....	.....	.....	.....	1.69	.....	43.21	.....	39
.....	.....	.....	879,252	.....	.....	.....	.....	33,651	.....	845,601	.....	40
61	1,519	294	88	1	.....	.....	1,734	199	29	1	.....	41
6	106	167	152	12	1	.....	362	45	28	9	.....	42
.....	.....	1	4	5	1	.....	3	1	.....	6	1	43
.....	.....	.....	1	1	2	.....	1	.....	1	3	.....	44
.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	2	45
.....	.....	4	15	5	.....	.....	1	2	15	7	.....	46
.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	47
.....	28	61	90	20	5	1	109	32	38	23	3	48
.....	3,064	29,291	178,189	138,133	235,566	133,947	17,249	15,704	98,497	233,987	352,773	49
.....	116	295	785	241	241	95	512	167	302	474	318	50
10	585	215	188	19	3	1	884	69	45	21	.....	51
1	35	8	3	.....	.....	.....	44	2	1	.....	.....	52
46	788	160	31	1	.....	.....	921	93	12	.....	.....	53
1	90	57	19	.....	.....	.....	97	62	8	.....	.....	54
.....	2	.....	1	.....	.....	.....	3	.....	.....	.....	.....	55
2	81	12	3	.....	.....	.....	91	4	3	.....	.....	56
5	24	8	6	2	1	.....	32	11	.....	2	1	57
2	22	7	9	2	1	.....	29	6	5	3	.....	58

¹Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
²Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - NEW MEXICO

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	52	.....	44	8	.....	.....	.....	.....
2	Irrigated farms, 1939.....number...	63	.....	44	19	.....	.....	.....	.....
3	Area irrigated, 1939.....acres....	5,123	.....	4,239	884	.....	.....	.....	.....
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	106,704	.....	93,448	13,266	.....	.....	.....	.....
5	(a) Cost of irrigation works and equipment.....dollars..	102,887	.....	91,422	11,465	.....	.....	.....	.....
6	(b) Investment in water rights.....dollars..	3,817	.....	2,026	1,791	.....	.....	.....	.....
7	Area works were capable of supplying with water.....acres....	5,912	.....	4,830	1,082	.....	.....	.....	.....
8	Average investment per acre irrigated.....dollars..	20.83	.....	22.04	15.00	.....	.....	.....	.....
9	Average investment per acre which the works could supply with water...dollars..	18.05	.....	19.35	12.25	.....	.....	.....	.....
MAINTENANCE AND OPERATION, 1939									
10	Enterprises reporting maintenance and operation.....number...	49	.....	41	8	.....	.....	.....	.....
11	(a) Area irrigated in these enterprises.....acres....	5,083	.....	4,199	884	.....	.....	.....	.....
12	(b) Cost of maintenance and operation.....dollars..	10,142	.....	8,713	1,429	.....	.....	.....	.....
13	(c) Average cost per irrigated acre reporting.....dollars..	2.00	.....	2.08	1.62	.....	.....	.....	.....
TYPE, 1940									
14	Individual and partnership.....number...	52	.....	44	8	.....	.....	.....	.....
15	All other.....number.....	.....	.....	.....	.....	.....	.....	.....	.....
SOURCE OF SUPPLEMENTAL WATER SUPPLY 1939									
16	Streams, pumped.....number...	1	.....	1	.....	.....	.....	.....	.....
17	Wells, pumped or flowing.....number...	49	.....	42	7	.....	.....	.....	.....
18	Streams, gravity or storage.....number...	2	.....	1	1	.....	.....	.....	.....

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Rio Grande River														
Taos.....	Taos.....	6,983	7.28	-5.81	2.09	+0.02	1.83	-0.65	0.78	-2.67	2.58	-2.51	46.9	-0.7
Albuquerque.....	Bernalillo..	5,314	7.76	-0.30	1.01	-0.72	1.69	+0.52	1.00	-0.69	4.06	+0.59	55.8	+0.5
Socorro.....	Socorro....	4,600	8.14	-1.91	0.64	-1.45	1.83	+0.29	0.60	-0.96	5.07	+0.21	58.2	+0.5
Agricultural College.....	Dona Ana....	3,863	4.66	-4.20	0.69	-1.19	0.88	-0.25	0.35	-0.86	2.74	-1.90	59.3	-1.7
Pecos River														
Las Vegas.....	San Miguel..	6,400	14.82	-3.22	1.00	-1.31	4.65	+2.79	2.79	-2.35	6.38	-2.35	53.2	+3.2
Fort Sumner.....	De Baca....	4,028	17.95	+0.92	2.03	-1.52	3.99	+2.11	5.19	+0.45	6.74	-0.12	58.6	+0.5
Roswell.....	Chaves.....	3,566	12.70	-2.24	1.22	-1.71	2.02	+0.18	2.11	-1.54	7.35	+0.83	60.4	+0.9
Alamogordo.....	Otero.....	4,338	11.28	-0.21	1.56	-0.97	2.15	+0.44	0.50	-1.24	7.07	+1.56	61.5	+0.6
Carlsbad.....	Eddy.....	3,120	7.77	-5.82	1.55	-1.16	1.01	-0.31	1.52	-1.90	3.69	-2.42	64.0	+1.1
Colorado River														
Crown Point.....	McKinley....	6,800	7.20	-4.42	1.11	-1.01	2.15	+0.17	1.30	-0.58	2.58	-3.00	50.4	-0.1
Shiprock.....	San Juan....	4,950	6.82	-0.84	0.52	-0.86	1.48	-0.03	0.35	-1.16	4.47	+1.21	(²)	(²)
Redrock.....	Grant.....	(²)	9.16	-2.86	1.65	-1.01	2.79	+0.50	0.34	-0.73	4.38	-1.62	(²)	(²)
Arkansas River														
Raton (near).....	Colfax.....	6,660	12.24	-4.25	2.90	+0.57	1.80	+0.21	3.81	-1.36	3.73	-3.67	49.0	-0.1
Tucumcari.....	Quay.....	4,100	12.56	-5.54	2.17	-0.60	1.81	+0.35	3.82	-2.20	4.76	-3.09	58.1	+0.1
Clayton.....	Union.....	5,049	12.84	-3.81	2.16	-0.24	2.46	+0.93	5.06	-1.00	3.16	-3.50	53.7	+0.3
Estancia Valley														
Ancho.....	Lincoln.....	6,112	15.85	+3.01	2.16	-0.45	2.13	+0.46	2.67	+0.41	8.99	+2.59	(²)	(²)
Salt Lake and Rita Creek														
Quemado (near).....	Catron.....	6,879	9.72	-4.31	0.83	-1.71	4.71	+2.46	0.96	-1.04	3.22	-4.02	48.2	+1.0
Mimbres Valley														
Fort Bayard.....	Grant.....	6,152	12.11	-4.48	2.13	-1.04	2.56	-0.26	0.73	-1.07	6.69	-2.11	55.6	+0.4
Columbus.....	Luna.....	4,054	8.40	-1.62	1.18	-0.84	0.64	-0.98	0.77	-0.36	5.81	+0.56	63.5	+0.7
Animas River														
Lordsburg.....	Hidalgo.....	4,245	8.30	-1.50	1.51	-0.75	1.19	-0.86	0.42	-0.44	5.18	+0.55	(²)	(²)
Rodeo.....	Hidalgo.....	(²)	7.64	-3.80	2.49	+0.10	0.97	-1.05	0.23	-0.69	3.95	-2.16	(²)	(²)

¹Departure from normal.

²Not available.

CENSUS OF IRRIGATION — NEW MEXICO

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
.....	28	22	2	.....	.....	.....	50	2	.....	.....	.....	1
.....	35	28	.....	.....	.....	.....	63	.....	.....	.....	.....	2
.....	1,104	4,019	.....	.....	.....	.....	5,123	.....	.....	.....	.....	3
.....	41,339	65,365	.....	.....	.....	.....	106,704	.....	.....	.....	.....	4
.....	40,315	62,572	.....	.....	.....	.....	102,887	.....	.....	.....	.....	5
.....	1,024	2,793	.....	.....	.....	.....	3,817	.....	.....	.....	.....	6
.....	1,370	4,542	.....	.....	.....	.....	5,912	.....	.....	.....	.....	7
.....	37.44	16.26	.....	.....	.....	.....	20.83	.....	.....	.....	.....	8
.....	30.17	14.39	.....	.....	.....	.....	18.05	.....	.....	.....	.....	9
.....	25	22	2	.....	.....	.....	47	2	.....	.....	.....	10
.....	1,064	4,019	.....	.....	.....	.....	5,083	.....	.....	.....	.....	11
.....	2,295	7,847	.....	.....	.....	.....	10,142	.....	.....	.....	.....	12
.....	2.16	1.95	.....	.....	.....	.....	2.00	.....	.....	.....	.....	13
.....	28	22	2	.....	.....	.....	50	2	.....	.....	.....	14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	16
.....	25	22	2	.....	.....	.....	47	2	.....	.....	.....	17
.....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	18

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation.—The average annual precipitation in New Mexico for the calendar year 1939 was 13.22 inches, which was 1.21 inches below normal, as reported by the U. S. Weather Bureau. The monthly distribution was very uneven, with excesses of 0.01 inch to 0.81 inch for January, March, April, and September, while the remaining months had deficiencies ranging from 0.02 inch to 0.66 inch. Precipitation for the southern portion of the State was near normal, while most of the deficiency occurred in the northern portion of the State. The wettest month was July, with a State average of 2.45 inches; and the driest was February, with an average of 0.61 inch, although, June, November, and December were almost as dry. The greatest monthly deficiency occurred in August, with a departure of 0.66 inch, and the greatest excess in January, with a departure of 0.81 inch.

The average precipitation for the water year (October 1938 through September 1939) at the 21 stations shown in State table 18, and which are representative of the agricultural areas in the major drainage basins of New Mexico, was 10.25 inches, indicating an average deficiency of -2.72 inches at these stations.

Temperature.—The average temperature for the State was 52.7°, which was normal. January, August, October, and November averaged slightly below normal, while February was 8.2° below normal and had the lowest average for that month for the entire 48 years of record, and the lowest of record for any month except January 1919. March, April, May, June, July, and September averaged from 0.2° to 1.8° above normal, while December was 3.9° above the average and the warmest December since 1933. July was

the warmest month with a mean temperature of 72.5°. The highest temperature recorded in the State was 111° at Tularosa in Otero County on June 13, and at Carlsbad in Eddy County on June 15. The lowest was -40° at Gavilan in Rio Arriba County on February 3. Freezing temperature occurred at some station in the State during every month. Considerable damage from frost occurred early in April in the southern Rio Grande and Pecos Valleys when most of the early fruit was killed in those areas.

The greatest annual snowfall was 132 inches at Irvin's Ranch in the Sangre de Cristo Mountains, while maximum totals in other regions were as follows: San Juan Mountains, 104 inches at Selsor Ranch; Sacramentos, 89 inches at White Tail; Sandias, 78 inches at Sandia Park; Datil Mountains, 52 inches at Datil; Jemez, 70 inches at Lee Ranch; Zuni Mountains, 86 inches at McGaffey Ranger Station; and Manzanos, 96 inches at Tajique (near). Snow cover at the end of the year averaged approximately 1.5 inches.

Several local duststorms occurred during the spring months, but none were very severe and the damage from them was negligible. A flash flood in September in Santa Fe County caused damage to a highway bridge estimated at \$5,000. Heavy hailstorms in May in Tarrant, Dona Ana, and Eddy Counties; in June in San Miguel, Union, Lincoln, Harding, and Guadalupe Counties; in July in San Miguel and Tarrant Counties; and in August in Harding, Sandoval, Otero, Eddy, Union, and Valencia Counties resulted in considerable damage to crops, buildings, and livestock with an estimated total loss of \$395,775.

CENSUS OF IRRIGATION - NEW MEXICO

DRAINAGE BASIN TABLE I.-AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	GULF OF MEXICO			
		Total	Mississippi River		(2)
			Arkansas River		
			Total	Cimarron River	
IRRIGATED FARMS AND AREAS					
1	Irrigated farms.....1939..number.....	31,683	28,306	1,783	34
2	Area irrigated.....1939..acres.....	554,039	485,594	64,104	5,380
3	(a) Cropland harvested.....1939..acres.....	512,441	451,361	60,638	4,569
4	(b) Crop failure.....1939..acres.....	21,069	18,399	1,238	66
5	(c) Pasture.....1939..acres.....	20,529	15,834	2,228	745
6	Area irrigated.....1929..acres.....	527,033	451,779	71,335	2,670
7	.....1919..acres.....	538,377	465,188	95,942	5,757
8	Increase or decrease (-), 1929-1939.....percent.....	5.1	7.5	-10.1	101.5
9	Irrigable area in enterprises.....1940..acres.....	807,656	694,939	97,542	6,315
10	.....1930..acres.....	741,245	644,813	119,506	4,484
11	.....1920 ³ ..acres.....	961,879	840,398	193,635	14,173
12	Excess of irrigable area over the area irrigated.....1940..acres.....	253,617	209,345	33,438	935
13	.....1930..acres.....	214,212	193,034	48,171	1,814
14	.....1920 ³ ..acres.....	423,502	375,210	97,693	8,416
15	Area works were capable of supplying with water...1940..acres.....	731,990	636,522	78,591	5,615
16	.....1930..acres.....	656,669	563,213	112,761	4,464
17	.....1920..acres.....	696,119	608,651	149,330	12,383
18	Increase or decrease (-), 1930-1940.....percent.....	11.5	13.0	-30.3	25.8
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	177,951	150,928	14,487	235
20	.....1930..acres.....	129,636	111,434	41,426	1,794
21	.....1920..acres.....	157,742	143,463	53,388	6,626
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	75.7	76.3	81.6	95.8
23	.....1929..percent.....	80.3	80.2	63.3	59.8
24	.....1919..percent.....	77.3	76.4	64.2	46.5
CAPITAL INVESTED TO JANUARY 1					
25	Total investment in irrigation enterprises.....1940..dollars.....	32,735,997	28,184,354	1,961,305	148,480
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	32,290,856	27,965,325	1,865,082	146,260
27	(b) Investment in water rights (reported).....1940..dollars.....	445,141	219,029	96,213	2,220
28	Total investment in irrigation enterprises.....1930..dollars.....	19,834,380	17,468,739	1,948,170	61,605
29	.....1920..dollars.....	18,210,412	15,769,438	5,347,927	308,147
30	Increase or decrease (-), 1930-1940.....percent.....	65.0	61.4	0.7	141.0
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	44.72	44.28	24.96	26.44
32	.....1930..dollars.....	30.20	31.00	17.28	13.80
33	.....1920..dollars.....	26.16	25.91	35.81	24.89
34	Average investment per acre irrigated.....1939..dollars.....	59.09	58.04	30.60	28.31
35	Estimated final investment in existing enterprises.....1940..dollars.....	36,773,139	30,744,722	1,995,365	148,680
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	45.53	44.24	20.46	23.54
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	2,001	49	1,580	34
38	Area irrigated in these enterprises.....1939..acres.....	516,916	5,083	452,507	4,380
39	Cost of maintenance and operation.....1939..dollars.....	1,082,768	10,142	898,799	7,859
40	Average cost, per acre irrigated.....1939..dollars.....	2.09	2.00	1.99	1.79
41	Total annual charges (reported) ⁵.....1939..dollars.....	966,767	.....	872,851	.....
42	Average annual charge per acre irrigated.....1939..dollars.....	2.47	.....	2.54	.....
43	Area against which charges were assessed.....1939..acres.....	483,407	.....	434,129	.....
44	Average annual charge per acre assessed.....1939..dollars.....	2.00	.....	2.01	.....
45	Total charges collected ⁵.....1939..dollars.....	1,037,433	.....	982,855	.....
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	16,715,813	.....	16,258,254	.....
WATER DELIVERED TO IRRIGATORS, 1939					
47	Enterprises reporting water delivered.....1939..number.....	1,946	51	1,527	35
48	Area irrigated by these enterprises.....1939..acres.....	474,194	5,097	421,015	4,408
49	Water delivered.....1939..acre-feet.....	1,438,686	7,732	1,271,587	7,068
50	Average water delivered per acre irrigated.....1939..acre-feet.....	3.0	1.5	3.0	1.6
51	Average cost of water per acre irrigated.....1939..dollars.....	2.80	2.00	2.78	1.79
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.82	1.32	0.82	1.12
DRAINAGE OF IRRIGATED LAND					
53	Enterprises reporting land drained or needing drainage.....1939..number.....	155	.....	140	.....
54	Irrigable area in these enterprises.....1939..acres.....	331,233	.....	313,520	.....
55	Irrigated area in these enterprises.....1939..acres.....	231,795	.....	220,456	.....
56	Area for which drains have been installed.....1939..acres.....	240,614	.....	239,986	.....
57	Additional area needing drainage.....1939..acres.....	8,732	.....	5,430	.....

¹Data for 2 enterprises in San Augustine Drainage Basin (48) (number refers to separate map) and for 1 enterprise in Sacramento-Salt Lakes Drainage Basin (53) are included with State totals. Data for unidentified basins for the 1930 and 1920 Censuses are included only in State total.
²Data for 1 enterprise in Ute Creek Drainage Basin (10) (number refers to separate map) are included with Canadian River "Direct" Drainage Basin (3).
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - NEW MEXICO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

GULF OF MEXICO--Continued										
Mississippi River--Continued										
Arkansas River--Continued										
Canadian River										
Total	Direct ² (3)	Vermejo River (4)	Cimarron River (5)	Ocate Creek (6)	Mora River				Carrizo Creek (11)	North Canadian River (12)
					Total	Direct (7)	Coyote Creek (8)	Sapello Creek (9)		
1,749	73	169	175	21	1,304	798	156	350	3	4
58,724	2,477	8,906	20,549	1,012	25,381	16,440	2,384	6,557	59	340
56,069	2,400	8,906	19,729	963	23,714	15,184	2,339	6,191	17	340
1,172	20	.....	.....	20	1,090	725	25	340	42	.....
1,483	57	.....	820	29	577	531	20	26	.....	.....
68,665	1,610	8,574	16,007	1,102	34,956	.....	.....	.....	.....	.....
90,185	1,757	23,678	31,967	4,861	17,057	.....	.....	.....	.....	.....
-14.5	5.39	3.9	28.4	-8.2	-27.4	.....	.....	.....	.....	.....
91,227	3,711	14,690	43,335	1,114	27,697	17,285	2,422	7,980	215	465
115,022	1,790	15,704	34,357	5,800	44,071	.....	.....	.....	.....	.....
179,462	2,389	23,978	70,318	13,908	36,670	.....	.....	.....	.....	.....
32,503	1,234	5,784	22,786	102	2,316	855	38	1,423	156	125
46,357	180	7,130	18,350	4,688	9,115	.....	.....	.....	.....	.....
89,277	632	300	38,351	9,047	19,613	.....	.....	.....	.....	.....
72,976	3,621	10,006	30,835	1,012	26,822	17,120	2,422	7,280	215	465
108,297	1,790	15,704	31,677	5,800	43,056	.....	.....	.....	.....	.....
136,947	2,199	23,878	45,628	13,095	29,528	.....	.....	.....	.....	.....
-32.6	102.3	-36.3	.....	-2.7	-37.7	.....	.....	.....	.....	.....
14,252	1,144	1,100	10,286	.....	1,441	680	38	723	156	125
39,632	180	7,130	15,670	4,688	8,100	.....	.....	.....	.....	.....
46,762	442	200	13,661	8,234	12,471	.....	.....	.....	.....	.....
80.5	68.4	89.0	66.6	100.0	94.6	96.0	98.4	90.1	27.4	73.1
63.4	89.9	54.6	50.5	19.0	81.2	.....	.....	.....	.....	.....
65.9	79.9	99.2	70.1	37.1	57.8	.....	.....	.....	.....	.....
1,812,825	375,286	231,800	1,057,462	5,749	125,633	82,030	3,600	40,003	3,570	13,325
1,718,832	374,590	231,700	972,527	5,700	117,465	76,025	3,550	37,890	3,550	13,300
93,993	636	100	84,835	49	8,168	6,005	50	2,113	20	25
1,886,565	43,900	340,985	719,700	230,350	236,645	.....	.....	.....	.....	.....
5,039,780	39,625	1,248,537	2,188,908	319,529	262,575	.....	.....	.....	.....	.....
-3.9	754.9	-32.0	46.9	-97.5	-46.9	.....	.....	.....	.....	.....
24.84	103.64	23.17	34.29	5.68	4.68	4.79	1.49	5.49	16.60	28.66
17.42	24.53	21.71	22.72	39.72	5.50	.....	.....	.....	.....	.....
36.80	18.02	52.29	47.97	24.40	8.89	.....	.....	.....	.....	.....
30.87	151.51	26.03	51.46	5.68	4.95	4.99	1.51	6.10	60.51	39.19
1,846,685	376,786	231,800	1,087,462	5,749	127,993	82,290	3,600	42,103	3,570	13,325
20.24	101.53	15.78	25.09	5.16	4.62	4.76	1.49	5.28	16.60	28.66
95	20	2	7	6	56	36	5	15	1	3
55,822	2,202	(4)	20,549	1,012	23,084	14,780	2,384	5,920	(4)	135
26,773	1,642	(4)	14,301	465	4,252	2,539	315	1,398	(4)	112
0.48	0.75	(4)	0.70	0.46	0.18	0.17	0.13	0.24	(4)	0.83
41,871	470	18,045	18,017	51	5,288	2,070	315	2,903	.....	.....
0.83	0.65	2.12	0.88	0.50	0.26	0.17	0.13	0.51	.....	.....
59,771	719	14,284	22,834	204	21,730	12,743	2,384	6,603	.....	.....
0.70	0.65	1.26	0.79	0.25	0.24	0.16	0.13	0.44	.....	.....
35,078	.....	18,363	15,980	.....	735	135	.....	600	.....	.....
218,187	.....	72,500	145,687	.....	.....	.....	.....	.....	.....	.....
92	28	3	7	5	44	27	4	13	1	4
54,980	2,447	8,906	20,549	910	21,824	14,190	2,214	5,420	(4)	340
60,719	3,083	10,986	26,021	711	19,096	13,389	1,975	3,722	(4)	810
1.1	1.3	1.2	1.3	0.8	0.9	0.9	0.9	0.7	(4)	2.4
0.77	0.75	2.03	0.88	0.46	0.15	0.14	0.07	0.21	.....	0.83
0.89	0.59	1.65	0.69	0.58	0.17	0.14	0.08	0.30	.....	0.38
(4)	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
(4)	.....	(4)	.....	.....	(4)	(4)	.....	.....	.....	.....
(4)	.....	(4)	.....	.....	.....	.....	.....	.....	.....	.....
(4)	.....	(4)	.....	.....	.....	.....	.....	.....	.....	.....

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - NEW MEXICO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	GULF OF MEXICO—Continued								
	Total	Direct (14)	Rio Grande						Embudo River (20)
			Conejos River (15)	Costilla Creek (16)	Latir Creek and Red River (17)	Rio Hondo (18)	Rio Pueblo de Taos (19)		
								San Antonio River (15)		Costilla Creek (16)	Latir Creek and Red River (17)	Rio Hondo (18)	Rio Pueblo de Taos (19)
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number....	26,174	13,666	52	280	353	303	1,644	1,239
2	Area irrigated.....1939..acres....	408,692	163,062	763	2,863	6,312	3,370	16,320	9,432
3	(a) Cropland harvested.....1939..acres....	378,520	155,262	702	2,525	5,502	2,960	13,149	8,331
4	(b) Crop failure.....1939..acres....	17,012	5,056	23	40	810	47	2,630	114
5	(c) Pasture.....1939..acres....	13,160	2,762	38	298	.....	363	541	987
6	Area irrigated.....1929..acres....	380,444	136,114	.....	4,003	.....	.....	15,856	.....
7	.....1919..acres....	369,246	103,844	.....	4,417	.....	.....	11,780	.....
8	Increase or decrease (-), 1929-1939.....percent....	7.4	19.8	.....	-28.5	.....	.....	2.9	.....
9	Irrigable area in enterprises.....1940..acres....	572,398	246,274	793	3,879	7,559	4,709	22,992	9,951
10	.....1930..acres....	525,307	164,672	.....	10,112	.....	.....	21,352	.....
11	.....1920 ¹ ..acres....	646,763	172,747	.....	7,385	.....	.....	12,443	.....
12	Excess of irrigable area over the area irrigated.....1940..acres....	163,706	83,192	30	1,016	1,247	1,339	6,672	519
13	.....1930..acres....	144,863	28,558	.....	6,109	.....	.....	5,486	.....
14	.....1920 ¹ ..acres....	277,517	68,903	.....	2,968	.....	.....	663	.....
15	Area works were capable of supplying with water.....1940..acres....	533,880	226,873	793	3,879	7,554	4,709	22,245	9,743
16	.....1930..acres....	450,452	158,486	.....	7,606	.....	.....	16,730	.....
17	.....1920..acres....	459,321	123,464	.....	4,803	.....	.....	11,791	.....
18	Increase or decrease (-), 1930-1940.....percent....	18.5	43.2	.....	-49.0	.....	.....	33.0	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres....	125,188	63,791	30	1,016	1,242	1,339	5,925	311
20	.....1930..acres....	70,008	22,372	.....	3,603	.....	.....	874	.....
21	.....1920..acres....	90,075	19,620	.....	386	.....	.....	11	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	76.6	71.9	96.2	79.8	83.6	71.6	73.4	96.8
23	.....1929..percent....	84.5	85.9	.....	82.6	.....	.....	94.8	.....
24	.....1919..percent....	80.4	84.1	.....	92.0	.....	.....	99.9	.....
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	25,816,016	14,120,570	9,650	108,155	159,235	17,000	164,928	50,901
26	(a) Cost of irrigation works and equipment.....1940..dollars....	25,696,197	14,118,406	9,280	102,437	152,575	16,000	160,649	50,786
27	(b) Investment in water rights (reported).....1940..dollars....	119,819	2,164	370	5,718	6,660	1,000	4,279	115
28	Total investment in irrigation enterprises.....1930..dollars....	15,510,569	7,892,453	.....	910,360	.....	.....	78,879	.....
29	.....1920..dollars....	10,421,511	3,605,725	.....	11,471	.....	.....	19,982	.....
30	Increase or decrease (-), 1930-1940.....percent....	66.4	78.9	.....	-88.1	.....	.....	109.1	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	48.36	62.24	12.17	27.88	21.08	3.61	7.41	5.22
32	.....1930..dollars....	34.43	49.80	.....	119.69	.....	.....	4.71	.....
33	.....1920..dollars....	22.69	29.20	.....	2.39	.....	.....	1.69	.....
34	Average investment per acre irrigated.....1939..dollars....	63.17	86.59	12.65	37.78	25.23	5.04	10.11	5.40
35	Estimated final investment in existing enterprises.....1940..dollars....	28,327,965	15,233,975	9,650	108,155	209,235	17,000	497,228	61,341
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	49.49	61.86	12.17	27.88	27.68	3.61	21.63	6.16
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary		Sup.		Primary		Sup.	
		Enterprises		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number....	1,198	34	150	1	10	5	22	45
38	Area irrigated in these enterprises.....1939..acres....	381,372	4,380	161,988	(3)	763	1,751	5,837	11,933
39	Cost of maintenance and operation.....1939..dollars....	825,086	7,859	441,798	(8)	426	1,625	4,310	3,744
40	Average cost, per acre irrigated.....1939..dollars....	2.16	1.79	2.73	(6)	0.56	0.93	0.74	0.31
41	Total annual charges (reported) ⁴.....1939..dollars....	830,980	.....	646,419	.....	135	2,276	4,511	1,041
42	Average annual charge per acre irrigated.....1939..dollars....	2.83	.....	4.03	.....	0.24	1.35	0.78	0.32
43	Area against which charges were assessed.....1939..acres....	374,358	.....	220,387	.....	572	2,666	7,361	3,306
44	Average annual charge per acre assessed.....1939..dollars....	2.22	.....	2.93	.....	0.24	0.85	0.61	0.31
45	Total charges collected ⁵.....1939..dollars....	947,777	.....	866,050	.....	88	391	5,044	90
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars....	16,040,067	.....	11,719,382	.....	.....	8,769	.....	86,828
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number....	1,107	35	132	1	4	11	4	15
48	Area irrigated by these enterprises.....1939..acres....	351,533	4,408	148,177	(3)	573	1,957	5,814	1,190
49	Water delivered.....1939..acre-feet....	1,181,686	7,068	683,598	(8)	1,812	4,072	7,720	2,050
50	Average water delivered per acre irrigated.....1939..acre-feet....	3.4	1.6	4.6	(8)	3.2	2.1	1.3	1.7
51	Average cost of water per acre irrigated.....1939..dollars....	3.07	1.79	4.23	(8)	0.26	1.50	0.78	0.30
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.91	1.12	0.92	(8)	0.08	0.72	0.58	0.17
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number....	135	.....	12	.....	6	.....	1	.....
54	Irrigable area in these enterprises.....1939..acres....	298,608	.....	222,178	.....	218	.....	(3)	.....
55	Irrigated area in these enterprises.....1939..acres....	211,467	.....	148,645	.....	190	.....	(3)	.....
56	Area for which drains have been installed.....1939..acres....	239,943	.....	205,457	.....	216	.....	(3)	.....
57	Additional area needing drainage.....1939..acres....	4,290	.....	1,645	.....	2	.....	(3)	.....

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Percent not shown when more than 1,000.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - NEW MEXICO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

GULF OF MEXICO-Continued																	
Rio Grande-Continued																	
Rio Chama			Rio Puerco					Pecos River									
Total	Direct	Caliante River	Santa Cruz River	Tesuque Creek	Jemez Creek	Total	Direct	San Jose River	Alamosa River	Total	Direct	Gallinas River					
													(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1,532	1,210	322	1,372	823	281	1,281	317	964	90	3,258	2,237	223	1				
21,593	18,030	3,563	6,818	6,164	2,542	13,438	3,843	9,595	751	155,244	111,806	7,792	2				
17,931	14,786	3,145	6,433	5,581	2,426	9,389	2,927	6,462	718	147,611	106,728	6,893	3				
2,161	1,831	330	.....	391	80	3,164	631	2,533	12	2,482	1,475	399	4			
1,501	1,413	88	.....	385	36	885	285	600	21	5,151	3,603	500	5			
25,950	.....	.....	8,405	3,588	.....	15,202	.....	.....	.....	129,121	45,508	4,078	6
26,166	.....	.....	9,171	3,012	.....	14,309	.....	.....	.....	119,040	62,430	4,097	7
-16.8	.....	.....	-18.9	71.8	.....	-11.6	.....	.....	.....	20.2	145.7	91.1	8
30,419	25,641	4,778	7,063	7,574	5,104	26,759	5,876	20,883	771	198,561	141,559	9,792	9				
35,049	.....	.....	12,604	5,496	.....	35,128	.....	.....	.....	154,203	57,094	4,177	10
42,235	.....	.....	9,863	3,411	.....	42,877	.....	.....	.....	225,400	102,200	41,810	11
8,826	7,611	1,215	235	1,410	2,562	13,321	2,033	11,288	20	43,317	29,753	2,000	12				
9,099	.....	.....	4,199	1,908	.....	19,826	.....	.....	.....	25,062	11,586	99	13
16,069	.....	.....	692	399	.....	26,568	.....	.....	.....	106,360	39,770	37,713	14
25,940	21,862	4,078	7,053	7,154	4,354	24,243	4,890	19,353	771	188,569	136,289	9,792	15				
30,450	.....	.....	10,094	4,873	.....	22,245	.....	.....	.....	151,588	56,271	4,177	16
30,237	.....	.....	9,221	3,183	.....	25,991	.....	.....	.....	160,658	77,794	24,201	17
-14.8	.....	.....	-30.1	46.8	.....	9.0	.....	.....	.....	24.4	142.2	134.4	18
4,347	3,832	515	235	990	1,812	10,805	1,047	9,758	20	33,325	24,483	2,000	19				
4,500	.....	.....	1,689	1,285	.....	7,043	.....	.....	.....	22,467	10,763	99	20
4,071	.....	.....	50	171	.....	11,682	.....	.....	.....	41,618	15,364	20,104	21
83.2	82.5	.....	96.7	86.2	58.4	55.4	78.6	49.6	97.4	82.3	82.0	79.6	22			
85.2	.....	.....	83.3	73.6	.....	68.3	.....	.....	.....	85.2	80.9	97.6	23
86.5	.....	.....	99.5	94.6	.....	55.1	.....	.....	.....	74.1	80.3	16.9	24
124,114	98,672	25,442	493,323	119,765	156,184	922,005	47,672	874,333	12,970	9,357,216	7,146,814	1,022,764	25				
122,754	97,484	25,270	493,290	119,141	155,689	876,970	46,525	830,445	12,570	9,305,650	7,121,519	1,022,550	26				
1,360	1,188	172	33	624	485	45,035	1,147	43,888	400	51,566	27,295	214	27				
133,858	.....	.....	510,745	80,842	.....	548,233	.....	.....	.....	4,977,130	2,002,793	43,850	28
141,891	.....	.....	18,281	16,864	.....	88,109	.....	.....	.....	5,263,454	3,294,504	519,566	29
-7.3	.....	.....	-3.4	48.1	.....	68.2	.....	.....	.....	88.0	256.9	(2)	30
4.78	4.51	6.24	69.95	16.74	35.87	38.03	9.75	45.18	16.82	49.62	52.45	104.45	31				
4.40	.....	.....	50.60	16.59	.....	24.65	.....	.....	.....	32.83	35.59	10.50	32
4.69	.....	.....	1.98	5.30	.....	3.39	.....	.....	.....	32.76	42.35	21.47	33
5.75	5.47	7.14	72.36	19.43	61.44	68.61	12.40	91.12	17.27	60.27	63.94	131.26	34				
144,639	117,147	27,492	493,323	300,340	311,684	1,257,045	51,712	1,205,333	12,970	9,671,380	7,412,458	1,067,764	35				
4.75	4.57	5.75	69.95	39.65	61.07	46.98	8.80	57.72	16.62	48.71	52.36	109.04	36				
										Primary		Sup.		Primary		Sup.	
										Enterprises							
102	74	28	18	29	16	16	9	7	6	758	33	368	31	10	37		
18,779	15,669	3,110	6,790	5,933	2,506	10,648	2,843	7,805	751	143,208	4,361	102,757	4,157	7,738	38		
8,348	7,118	1,230	1,999	6,403	1,913	15,556	897	14,659	1,157	331,859	7,849	230,420	7,479	9,758	39		
0.44	0.45	0.40	0.29	1.08	0.76	1.46	0.32	1.88	1.54	2.32	1.80	2.24	1.80	1.26	40		
7,405	6,505	900	12,656	6,523	1,606	30,048	908	29,140	277	109,778	92,710	8,421	41		
0.43	0.45	0.31	1.86	1.10	0.68	2.83	0.32	3.74	0.50	1.89	2.03	1.10	42		
18,024	15,079	2,945	6,996	5,944	3,007	18,418	4,226	14,192	554	66,656	51,734	7,979	43		
0.41	0.43	0.31	1.81	1.10	0.53	1.63	0.21	2.05	0.50	1.65	1.79	1.06	44		
1,054	1,044	10	11,058	674	210	18,712	407	18,305	42,424	38,160	198	45		
720	432	288	147,500	64,248	93,071	376,399	118	376,281	3,534,278	3,509,728	46		
96	67	29	16	19	11	16	8	8	6	754	34	432	32	8	47		
14,743	12,038	2,705	6,428	4,521	334	7,899	2,277	5,612	751	148,461	4,389	108,202	4,185	7,487	48		
21,285	18,151	3,134	8,743	6,305	723	7,714	2,160	5,554	1,443	423,636	7,048	333,723	6,609	9,189	49		
1.4	1.5	1.2	1.4	1.4	2.2	1.0	0.9	1.0	1.9	2.9	1.6	3.1	1.6	1.2	50		
0.32	0.33	0.28	1.89	1.04	0.63	3.76	0.25	4.95	1.69	2.58	1.80	2.57	1.80	1.04	51		
0.22	0.22	0.24	1.39	0.74	0.29	3.84	0.26	5.00	0.88	0.90	1.12	0.83	1.14	0.85	52		
3	2	1	1	4	107	54	53		
2,040	(3)	(3)	(3)	939	68,112	59,221	54		
1,597	(3)	(3)	(3)	889	55,232	47,638	55		
.....	(3)	(3)	(3)	10	34,112	27,083	56		
400	(3)	(3)	(3)	367	1,546	1,242	57		

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NEW MEXICO

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

Table with multiple columns: ITEM, GULF OF MEXICO—Continued (Rio Grande, Pecos River, Colorado River, Brazos River), COLORADO RIVER (San Juan River). Rows include irrigated farms, capital invested, maintenance and operation, and water delivered.

1 For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

2 Percent not shown when more than 1,000.

3 Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - NEW MEXICO

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

COLORADO RIVER-Continued						INDEPENDENT BASINS									
San Juan River-Continued		Little Colorado River	Upper Gila River			Salt Lake and Rito Creek	Estancia Valley	Rio Tularosa ^o	Fresnal River	Mimbres Valley	Animas Valley				
La Plata River	Chaco River	Zuni River	Total	Direct	San Francisco River								(47)	(49)	(51)	(52)	(54)	(55)
(38)	(39)	(42)		(44)	(45)										
74	120	492	356	226	130	13	164	139	81	255	11	1			
4,007	700	3,305	10,358	8,166	2,192	149	1,430	2,857	834	12,836	343	2			
2,887	700	3,305	8,982	7,011	1,971	55	970	2,670	768	11,490	285	3			
946	.....	.....	18	.....	18	1	460	287	20	461	2	4
174	.....	.....	1,358	1,155	203	93	.....	.....	46	885	46	5
4,222	.....	5,684	9,373	7,824	1,442	.....	.....	2,500	1,835	9,042	.....	6
5,830	.....	.....	9,983	6,424	3,162	.....	.....	4,547	1,798	12,557	.....	7
-5.1	.....	-41.9	10.5	4.4	52.0	.....	.....	18.3	-54.6	42.0	.....	8
4,808	1,750	11,260	18,725	9,344	9,381	232	4,775	3,103	947	20,081	647	9			
5,628	.....	9,850	10,647	8,539	1,716	.....	.....	2,500	1,884	10,457	.....	10
9,445	.....	.....	14,936	7,027	6,986	.....	.....	6,086	3,598	24,243	.....	11
801	1,050	7,955	8,367	1,178	7,189	83	3,345	146	113	7,245	304	12			
1,406	.....	4,166	1,474	715	274	.....	.....	.....	49	1,415	.....	13
3,615	.....	.....	4,953	603	3,824	.....	.....	1,548	1,800	11,686	.....	14
4,808	850	7,910	18,537	9,198	9,339	164	3,259	3,103	840	18,405	642	15			
5,468	.....	9,350	10,442	8,539	1,611	.....	.....	2,500	1,870	10,240	.....	16
5,830	.....	.....	10,493	6,587	3,383	.....	.....	4,877	2,331	19,554	.....	17
-12.1	.....	-15.4	77.5	7.7	479.7	.....	.....	24.1	-55.1	79.7	.....	18
801	150	4,605	8,179	1,032	7,147	15	1,829	146	6	5,569	299	19			
1,246	.....	3,666	1,069	169	.....	.....	.....	.....	35	1,198	.....	20
.....	.....	.....	510	163	221	.....	.....	330	533	6,997	.....	21
83.3	82.4	41.8	55.9	88.8	23.5	90.9	43.9	95.3	99.3	69.7	53.4	22			
77.2	.....	60.8	89.8	91.6	89.5	.....	.....	100.0	98.1	88.3	.....	23
100.0	.....	.....	95.1	97.5	93.5	.....	.....	93.2	77.1	64.2	.....	24
68,544	83,054	829,370	188,045	148,887	39,158	3,195	90,990	337,870	98,797	306,986	22,282	25			
66,100	83,054	829,370	178,943	142,573	36,370	3,195	90,735	173,982	60,526	301,132	21,130	26			
2,444	.....	.....	9,102	6,314	2,788	.....	255	163,888	38,271	5,854	1,152	27
52,595	.....	631,131	121,940	102,050	19,315	.....	.....	20,000	57,370	260,071	.....	28
47,975	.....	.....	70,423	47,182	9,809	.....	.....	33,900	297,724	318,062	.....	29
30.3	.....	31.4	54.2	45.9	102.7	.....	.....	(^b)	72.2	18.0	.....	30
14.26	97.71	104.85	10.14	16.19	4.19	19.48	27.92	108.88	117.62	16.68	34.71	31			
9.62	.....	67.50	11.68	11.95	11.99	.....	.....	8.00	30.68	25.40	.....	32
8.23	.....	.....	6.71	7.16	2.90	.....	.....	6.95	127.72	16.27	.....	33
17.11	118.65	250.94	18.15	18.23	17.86	21.44	63.63	114.26	118.46	23.92	64.96	34			
68,744	219,604	1,133,370	194,825	155,017	39,808	3,720	97,640	402,870	104,012	312,258	24,582	35			
14.30	125.49	100.65	10.40	16.59	4.24	16.03	20.45	129.83	109.83	15.55	37.99	36			
									Primary	Sup.	Primary	Sup.			
									Enterprises	Enterprises	Enterprises	Enterprises			
15	³ 1	²	142	83	59	10	6	9	8	2	172	6	9	7	37
4,007	700	(⁴)	10,266	8,151	2,115	126	1,241	2,677	686	(⁴)	12,192	64	340	605	38
3,739	19	(⁴)	14,134	11,308	2,826	263	645	2,939	2,664	(⁴)	69,936	168	2,852	2,022	39
0.93	0.03	(⁴)	1.38	1.39	1.34	2.08	0.52	1.10	3.88	(⁴)	5.74	2.62	8.39	3.34	40
3,804	21	212	8,786	7,805	981	305	3,035	2,081	1,064	41
1.15	0.03	0.09	1.37	1.42	1.07	0.27	1.23	3.45	0.94	42
3,626	700	2,485	6,505	5,574	931	1,140	2,471	603	1,133	43
1.05	0.03	0.09	1.35	1.40	1.05	0.27	1.23	3.45	0.94	44
1,000	1,422	1,422	11,381	4,054	2,105	45
.....	24,701	532	532	1,633	46
12	(⁴)	146	84	62	13	8	10	6	2	179	7	9	7	47
2,415	(⁴)	9,371	7,310	2,061	149	1,366	2,716	741	(⁴)	12,228	68	312	605	48
3,893	(⁴)	28,648	23,006	5,642	380	1,843	7,421	2,326	(⁴)	26,890	69	831	486	49
1.6	(⁴)	3.1	3.1	2.7	2.6	1.3	2.7	3.1	(⁴)	2.2	1.0	2.7	0.8	50
0.88	(⁴)	1.39	1.42	1.27	2.08	0.46	1.28	3.23	(⁴)	5.83	2.62	9.20	3.94	51
0.55	(⁴)	0.45	0.45	0.46	0.82	0.34	0.47	1.03	(⁴)	2.65	2.58	3.45	4.16	52
(⁴)	(⁴)	(⁴)	53
(⁴)	(⁴)	(⁴)	54
(⁴)	(⁴)	(⁴)	55
(⁴)	(⁴)	(⁴)	56
.....	(⁴)	(⁴)	57

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

^bAnnual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

^cAnnual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

^dData for 1 enterprise in Tularosa Valley Drainage Basin (50) (number refers to separate map) are included with Rio Tularosa Drainage Basin (51).

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	STATE TOTAL ¹	GULF OF MEXICO					
		Mississippi River					
		Arkansas River					
		Total	Cimarron River (2)	Canadian River			Vermejo River (4)
Total	Direct ² (3)						
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1 Enterprises.....1940..number.....	2,505	1,999	146	28	118	29	3
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	292	318	538	201	618	125	3,335
3 Diversion dams.....1940..total number.....	1,072	827	131	30	101	29	2
4 1930..total number.....	665	512	88	3	85	4	1
5 1920..total number.....	1,423	1,254	309	45	264	4	23
6 (a) Concrete and masonry.....1940..number.....	121	101	17	5	12	3	
7 (b) Timber.....1940..number.....	102	93	5		5		
8 (c) Earth and rock.....1940..number.....	475	362	74	4	70	24	2
9 (d) Other, mixed, and not reported..1940..number.....	374	271	35	21	14	2	
10 Main canals and laterals.....1940..total length, miles.....	4,647.9	3,614.6	464.4	66.1	398.3	57.0	75.0
11 1930..total length, miles.....	4,466	3,802	587	29	558	16	116
12 1920..total length, miles.....	5,932	5,139	1,136	162	974	12	150
13 (a) Earth.....1940..length, miles.....	4,567	3,542	441	66	375	57	77
14 (b) Lined.....1940..length, miles.....	80.9	72.6	23.4	0.1	23.3		
15 1940..capacity, c.f.s. ³	16,821	14,152	3,315	194	3,121	159	1,213
16 1930..capacity, c.f.s. ³	17,479	15,400	5,584	84	5,500	27	3,012
17 1920..capacity, c.f.s. ³	23,432	17,990	8,463	352	8,111	53	2,357
18 Pipe lines ⁵.....1940..total length, miles.....	36.5	25.5	1.5	0.1	1.4		1.3
19 1930..total length, miles.....	15.2	14.6	3.0		3.0		1.0
20 1920..total length, miles.....	60.8	49.5	15.0	0.2	14.8		1.1
21 (a) Concrete.....1940..length, miles.....	8.7	8.5					
22 (b) Metal.....1940..length, miles.....	21.4	14.6	1.4	0.1	1.3		1.3
23 (c) Wood-stave.....1940..length, miles.....	3.4	1.9	0.1		0.1		
24 (d) Other.....1940..length, miles.....	3.0	0.5					
25 Storage dams.....1940..total number.....	141	87	25	1	24	2	9
26 1930..total number.....	69	51	24	2	22	1	9
27 1920..total number.....	153	130	69	8	61	2	10
28 (a) Concrete and masonry.....1940..number.....	7	7	1		1		
29 (b) Earth and rock.....1940..number.....	124	70	18	1	17	2	9
30 (c) Other, mixed, and not reported..1940..number.....	10	10	6		6		
31 Reservoirs.....1940..total number.....	502	300	25	1	24	2	9
32 (a) 1-99 acre-foot capacity.....1940..number.....	437	261	5	1	4	1	
33 (b) 100-999 acre-foot capacity.....1940..number.....	38	19	13		13		9
34 (c) 1,000 and over acre-foot capacity.....1940..number.....	27	20	7		7	1	
35 1940..total capacity, ac.-ft. ⁶	3,280,550	3,260,829	105,644	(?)	105,639	(?)	8,700
36 1930..total number.....	240	168	25	2	23	2	9
37 1930..total capacity, ac.-ft. ⁶	2,945,220	2,932,997	147,969	926	147,043	380	18,340
38 Wells, flowing.....1940..number.....	268	258					
39 1930..number.....	340	339					
40 1920..number.....	556	551					
41 1940..yield, g.p.m.....	181,076	180,398					
42 1930..yield, g.p.m.....	223,257	222,257					
43 1920..yield, g.p.m.....	376,222	375,302					
44 Wells, pumped.....1940..number.....	1,487	1,220	3	1	2	1	
45 1930..number.....	680	330					
46 1920..number.....	461	373	7	2	5		2
47 1940..yield, g.p.m.....	1,143,276	1,033,280	112	(?)	(?)	(?)	
48 1930..yield, g.p.m.....	481,898	252,720					
49 1920..yield, g.p.m.....	265,618	218,674	3,347	36	3,311		
50 Pumping plants.....1940..total number.....	1,558	1,285	5	2	3	1	1
51 1930..total number.....	702	354					
52 1940..capacity, hp.....	40,110	35,983	39	(?)	8	(?)	(?)
53 1930..capacity, hp.....	14,493	7,475					
54 1920..capacity, hp.....	8,488	6,405	98	32	66		50
55 (a) Electric.....1940..number.....	474	346					
56 1940..capacity, hp.....	7,710	5,896					
57 (b) Internal-combustion.....1940..number.....	1,019	903	2	(?)	1	(?)	1
58 1940..capacity, hp.....	32,068	29,801	(?)	(?)	(?)	(?)	(?)
59 (c) Other.....1940..number.....	65	36	3	(?)	2	(?)	(?)
60 1940..capacity, hp.....	332	286	5	(?)	(?)	(?)	(?)
61 Pumps.....1940..total number.....	1,559	1,291	5	2	3	1	1
62 1930..number.....	738	382					
63 1920..number.....	491	395	11	4	7		2
64 1940..capacity, g.p.m.....	1,309,005	1,193,409	1,712	(?)	206	(?)	(?)
65 1930..capacity, g.p.m.....	555,063	324,763					
66 1920..capacity, g.p.m.....	304,789	257,335	2,054	532	1,522		
67 (a) Centrifugal.....1940..number.....	592	532					
68 1940..capacity, g.p.m.....	511,922	481,037					
69 1940..average capacity, g.p.m.....	865	904					
70 (b) Turbine.....1940..number.....	865	694	1	(?)	1		
71 1940..capacity, g.p.m.....	781,410	697,820	(?)	(?)			
72 1940..average capacity, g.p.m.....	903	1,006	(?)	(?)			
73 (c) Plunger.....1940..number.....	81	48	4	1	3	(?)	(?)
74 1940..capacity, g.p.m.....	1,906	1,285	212	(?)	206	(?)	(?)
75 1940..average capacity, g.p.m.....	23	27	53	(?)	69	(?)	(?)
76 (d) Other.....1940..number.....	18	17					
77 1940..capacity, g.p.m.....	13,767	13,267					
78 Pumping lift, from all sources.....1940..average, feet.....	44	41	40	(?)	49	(?)	(?)
79 1930..average, feet.....	40						
80 1920..average, feet.....	40	52	52	36	60		100
81 from pumped wells.....1940..average, feet.....	46	42	52	(?)	(?)	(?)	(?)
82 from surface sources.....1940..average, feet.....	25	21	23	(?)	28	(?)	(?)

¹Data for 2 enterprises in San Augustine Drainage Basin (48) (number refers to separate map) and for 1 enterprise in Sacramento-Salt Lakes Drainage Basin (53) are included with State total. Data for unidentified basins for the 1930 and 1920 Censuses are included only in State total.
²Data for 1 enterprise in Ute Creek Drainage Basin (10) (number refers to separate map) are included with Canadian River "Direct" Drainage Basin (3).
³Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.

CENSUS OF IRRIGATION — NEW MEXICO

WORKS, 1940, 1930, AND 1920

GULF OF MEXICO—Continued												
Mississippi River—Continued								Rio Grande				
Arkansas River—Continued								Total	Direct	Conejos River		Costilla Creek
Canadian River—Continued										San Antonio River		
Cimarron River (5)	Ocate Creek (6)	Mora River				Carrizo Creek (11)	North Canadian River (12)					
		Total	Direct	Coyote Creek (8)	Sapello Creek (9)							
(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
7	6	65	40	5	20	4	4	1,503	180	10	15	1
4,405	169	413	428	481	364	54	116	955	1,260	79	259	2
11	6	50	32	4	14		2	696	114	3	13	3
9	2	58	.....	.....	.....	.....	.....	421	23	.....	4	4
60	27	108	.....	.....	.....	.....	.....	945	48	.....	48	5
6	3	1	.....	2	.....	.....	81	33	.....	2	6
1	4	.....	.....	.....	.....	.....	.....	88	3	.....	3	7
3	2	36	23	4	9	2	1	288	60	2	4	8
1	11	8	.....	3	.....	.....	236	18	1	4	9
65.0	11.0	184.2	117.1	13.0	54.1	4.1	2.0	3,149.5	1,461.9	8.0	47.0	10
145	35	212	.....	.....	.....	.....	.....	3,215	1,004	.....	39	11
332	93	272	.....	.....	.....	.....	.....	4,003	848	.....	43	12
47	11	179	113	13	53	4	2	3,101	1,444	8	47	13
18.0	5.2	4.1	.....	1.1	0.1	.....	48.5	17.9	.....	.....	14
1,181	45	503	333	37	133	5	15	10,836	5,389	26	290	15
989	117	1,060	.....	.....	.....	.....	.....	9,816	4,349	.....	270	16
2,035	1,217	1,076	.....	.....	.....	.....	.....	9,527	3,007	.....	139	17
.....	0.1	.....	.....	0.1	.....	.....	23.9	13.3	0.1	.....	18
.....	11.6	0.5	.....	.....	19
4.8	1.5	.....	.....	.....	.....	.....	.....	34.5	2.3	.....	.....	20
.....	8.5	5.2	.....	.....	21
.....	13.1	7.3	0.1	.....	22
.....	0.1	.....	.....	0.1	.....	.....	1.8	0.5	.....	.....	23
.....	0.5	0.3	.....	.....	24
6	2	1	.....	1	2	3	62	29	.....	1	25
4	4	.....	.....	.....	.....	.....	27	1	.....	1	26
9	3	12	.....	.....	.....	.....	.....	61	5	.....	.....	27
1	6	2	.....	.....	28
3	1	1	.....	.....	2	.....	52	25	.....	1	29
2	1	.....	3	4	2	.....	.....	30
6	2	1	.....	1	2	3	271	40	1	1	31
.....	2	1	.....	1	1	.....	255	37	1	.....	32
.....	1	3	6	.....	.....	.....	33
6	13	3	.....	1	34
93,650	(?)	(?)	(?)	(?)	1,125	3,155,183	2,655,464	(?)	(?)	35
4	3	.....	.....	.....	.....	.....	143	3	.....	1	36
96,400	24,800	.....	.....	.....	.....	.....	2,785,028	2,638,866	.....	15,739	37
.....	258	7	.....	.....	38
.....	339	.....	.....	.....	39
.....	551	.....	.....	.....	40
.....	180,398	153	.....	.....	41
.....	222,257	.....	.....	.....	42
.....	375,302	.....	.....	.....	43
.....	1	840	54	1	.....	44
.....	330	.....	.....	.....	45
.....	1	.....	.....	.....	.....	.....	366	26	.....	.....	46
.....	(?)	721,853	6,133	(?)	.....	47
.....	252,720	.....	.....	.....	48
.....	3,300	.....	.....	.....	.....	.....	215,327	11,356	.....	.....	49
.....	1	905	76	1	.....	50
.....	(?)	354	2	.....	.....	51
.....	25,094	517	(?)	.....	52
.....	7,475	46	.....	.....	53
.....	5	.....	.....	.....	.....	.....	6,307	336	.....	.....	54
10	331	7	.....	.....	55
.....	5,671	81	.....	.....	56
.....	545	46	.....	.....	57
.....	19,343	404	.....	.....	58
.....	1	29	23	.....	.....	59
.....	(?)	80	32	(?)	.....	60
.....	1	906	73	1	.....	61
.....	382	2	.....	.....	62
1	2	.....	.....	.....	.....	.....	384	30	.....	.....	63
.....	(?)	862,117	26,420	(?)	.....	64
.....	324,763	2,080	.....	.....	65
1,500	10	.....	.....	.....	.....	.....	255,281	14,828	.....	.....	66
.....	384	38	.....	.....	67
.....	356,912	16,407	.....	.....	68
.....	929	432	.....	.....	69
.....	482	3	.....	.....	70
.....	503,585	9,500	.....	.....	71
.....	1,045	3,167	.....	.....	72
.....	1	36	31	1	.....	73
.....	(?)	553	503	(?)	.....	74
.....	(?)	15	16	(?)	.....	75
.....	4	1	.....	.....	76
.....	1,067	(?)	.....	.....	77
.....	(?)	38	16	(?)	.....	78
.....	29	30	.....	.....	79
22	35	.....	.....	.....	.....	.....	35	33	.....	.....	80
.....	(?)	40	18	(?)	.....	81
.....	21	12	.....	.....	82

⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁵ Includes siphons and farm pipe lines reported.
⁶ Total capacity of all reservoirs regardless of size.
⁷ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — NEW MEXICO

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	GULF OF MEXICO—Continued						
	Rio Grande—Continued						
	Latir Creek and Red River (17)	Rio Hondo (18)	Rio Pueblo de Taos (19)	Embudo River (20)	Rio Chama		
					Total (21)	Direct (22)	Caliente River (23)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1 Enterprises.....1940..number.....	7	11	29	54	128	92	36
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	1,079	426	737	180	203	238	113
3 Diversion dams.....1940..total number.....	4	8	36	34	110	69	41
4 ..1930..total number.....			18		91		
5 ..1920..total number.....			40		187		
6 (a) Concrete and masonry.....1940..number.....		2		2	2	1	1
7 (b) Timber.....1940..number.....	2		9	2	4	3	1
8 (c) Earth and rock.....1940..number.....	1	4	8	10	55	40	15
9 (d) Other, mixed, and not reported.....1940..number.....	1	2	21	20	49	25	24
10 Main canals and laterals.....1940..total length, miles.....	45.1	33.0	163.3	126.0	314.0	236.0	78.0
11 ..1930..total length, miles.....			134		347		
12 ..1920..total length, miles.....			87		378		
13 (a) Earth.....1940..length, miles.....	45	33	151	126	314	236	78
14 (b) Lined.....1940..length, miles.....	0.1		12.3				
15 ..1940..capacity, c.f.s. ¹	160	92	221	282	559	436	123
16 ..1930..capacity, c.f.s. ¹			348		789		
17 ..1920..capacity, c.f.s. ¹			434		832		
18 Pipe lines ².....1940..total length, miles.....				0.2	0.1	0.1	
19 ..1930..total length, miles.....							
20 ..1920..total length, miles.....							
21 (a) Concrete.....1940..length, miles.....							
22 (b) Metal.....1940..length, miles.....				0.1	0.1	0.1	
23 (c) Wood-stave.....1940..length, miles.....				0.1			
24 (d) Other.....1940..length, miles.....							
25 Storage dams.....1940..total number.....	1		4		1	1	
26 ..1930..total number.....					2		
27 ..1920..total number.....					2		
28 (a) Concrete and masonry.....1940..number.....			2				
29 (b) Earth and rock.....1940..number.....	1		2				
30 (c) Other, mixed, and not reported.....1940..number.....					1	1	
31 Reservoirs.....1940..total number.....	1		4	1	1	1	
32 (a) 1-99 acre-feet capacity.....1940..number.....			3	1			
33 (b) 100-999 acre-feet capacity.....1940..number.....	1		1				
34 (c) 1,000 and over acre-feet capacity.....1940..number.....					1	1	
35 ..1940..total capacity, ac.-ft. ⁴	(5)		201	(5)	(5)	(5)	
36 ..1930..total number.....					3		
37 ..1930..total capacity, ac.-ft.....					601		
38 Wells, flowing.....1940..number.....							
39 ..1930..number.....							
40 ..1920..number.....							
41 ..1940..yield, g.p.m.....							
42 ..1930..yield, g.p.m.....							
43 ..1920..yield, g.p.m.....							
44 Wells, pumped.....1940..number.....							
45 ..1930..number.....							
46 ..1920..number.....							
47 ..1940..yield, g.p.m.....							
48 ..1930..yield, g.p.m.....							
49 ..1920..yield, g.p.m.....							
50 Pumping plants.....1940..total number.....					1	1	
51 ..1930..total number.....							
52 Prime movers.....1940..capacity, hp.....					(5)	(5)	
53 ..1930..capacity, hp.....							
54 ..1920..capacity, hp.....							
55 (a) Electric.....1940..number.....							
56 ..1940..capacity, hp.....							
57 (b) Internal-combustion.....1940..number.....					1	1	
58 ..1940..capacity, hp.....					(5)	(5)	
59 (c) Other.....1940..number.....							
60 ..1940..capacity, hp.....							
61 Pumps.....1940..total number.....					1	1	
62 ..1930..number.....							
63 ..1920..number.....							
64 ..1940..capacity, g.p.m.....					(5)	(5)	
65 ..1930..capacity, g.p.m.....							
66 ..1920..capacity, g.p.m.....							
67 (a) Centrifugal.....1940..number.....					1	1	
68 ..1940..capacity, g.p.m.....					(5)	(5)	
69 ..1940..average capacity, g.p.m.....					(5)	(5)	
70 (b) Turbine.....1940..number.....							
71 ..1940..capacity, g.p.m.....							
72 ..1940..average capacity, g.p.m.....							
73 (c) Plunger.....1940..number.....							
74 ..1940..capacity, g.p.m.....							
75 ..1940..average capacity, g.p.m.....							
76 (d) Other.....1940..number.....							
77 ..1940..capacity, g.p.m.....							
78 Pumping lift, from all sources.....1940..average, feet.....					(5)	(5)	
79 ..1930..average, feet.....							
80 ..1920..average, feet.....							
81 from pumped wells.....1940..average, feet.....							
82 from surface sources.....1940..average, feet.....					(5)	(5)	

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.
³Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION — NEW MEXICO

433

WORKS, 1940, 1930, AND 1920—Continued

GULF OF MEXICO—Continued												
Rio Grande—Continued												
Santa Cruz River (23)	Tesuque Creek (24)	Jemez Creek (25)	Rio Puerco				Pecos River					
			Total	Direct	San Jose River (27)	Alamosa River (28)	Total	Direct	Gallinas River (30)	Rio Hondo (31)	Rio Penasco (32)	
19	34	17	23	12	11	6	970	504	11	407	48	1
371	210	256	1,054	408	1,759	128	194	270	890	91	111	2
12	33	19	28	15	13	9	271	71	11	125	64	3
10	15		39				159	20	15	75	24	4
11	18		30				368	169	38	99	16	5
	4		2		2		37	9	3	21	4	6
			2	1	1		63	4		20	39	7
6	9	8	15	9	6	7	9.9	36	4	59		8
6	20	11	9	5	4	2	72	22	4	25	21	9
75.0	108.3	46.0	184.8	71.0	113.8	25.0	512.1	263.7	64.6	127.4	56.4	10
102	75		262				762	320	44	230	55	11
55	56		257				1,512	524	92	383	270	12
75	108	46	181	71	110	25	498	251	64	127	56	13
	0.3		3.8		3.8		14.1	12.7	0.6	0.4	0.4	14
100	127	68	356	133	223	51	3,115	2,178	298	361	278	15
166	98		537				2,017	1,071	243	317	167	16
134	72		215				2,894	1,418	276	547	245	17
	1.5	0.4				0.1	8.2	3.4		4.5	0.3	18
	1.7						2.3	0.4		0.3		19
0.1							18.2	5.5	0.5	11.0	0.5	20
							3.3	0.5		2.7	0.1	21
	1.2					0.1	4.2	2.2		1.8	0.2	22
	0.1	0.4					0.7	0.7				23
	0.2											24
1	3	1	6		6		15	12	1	2		25
1			8				2	2	1			26
			9				16	2	5	2		27
1			1		1							28
	3	1	5		5		14	12		2		29
							1		1			30
1	4	3	6		6	1	212	198	2	12		31
	4	1	4		1	1	206	194		12		32
			4		4							33
			1		1		6	4	2			34
(⁵)	20	75	55,447		55,447	(⁵)	222,560	198,539	(⁵)	21		35
10,000			6				122	3	2	5		36
			53,130				54,955	50,400	70	204		37
							251	178		73		38
							339	2		76		39
							549	286		176	51	40
							180,245	122,260		57,985		41
							222,257	1,800		46,707		42
							375,275	198,415		125,606	30,132	43
		2				2	781	446		334	1	44
							319	2		111	1	45
							245	96	1	79	10	46
		(⁵)				(⁵)	713,267	431,035		281,632	(⁵)	47
							252,271	4,900		81,031	600	48
							153,429	70,598	3	46,585	7,210	49
		2				2	823	488		334	1	50
		(⁵)				(⁵)	338	111		26		51
							24,513	16,764		7,739	(⁵)	52
							7,405	769		1,673	20	53
							4,455	2,379		1,041	216	54
							322	151		171		55
						(⁵)	5,565	3,190		2,375		56
		2					496	335		160	1	57
		(⁵)					18,901	13,532		5,359	(⁵)	58
							5	2		3		59
							47	(⁵)		5		60
		2				2	827	492		334	1	61
							369	26		130	1	62
							256	106	1	79	11	63
		(⁵)				(⁵)	832,687	536,335		295,752	(⁵)	64
							322,234	50,688		80,131	600	65
							193,036	96,448	3	57,275	9,000	66
							343	125		218		67
		(⁵)					338,305	153,425		184,860		68
		(⁵)					986	1,227		848		69
							477	366		110	1	70
						(⁵)	493,285	382,900		109,785	(⁵)	71
						(⁵)	1,034	1,046		998	(⁵)	72
							4	1		3		73
							40	(⁵)		30		74
							10	(⁵)		10		75
							3			3		76
							1,057			1,057		77
		(⁵)				(⁵)	40	47		29	(⁵)	78
							26			24	40	79
		(⁵)				(⁵)	28		75	21	29	80
			96				41			29	(⁵)	81
							25	25				82

⁴Total capacity of all reservoirs regardless of size.
⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — NEW MEXICO

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	GULF OF MEXICO—Con.			COLORADO RIVER				
	Colorado River (Texas)	Brazos River	Total	San Juan River				
				Total	Direct	Los Pinos River	Animas River	
				(33)	(34)	(35)	(36)	(37)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	42	308	223	64	21	7	20
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	81	67	309	665	1,030	40	749
3	Diversion dams.....1940..total number.....			177	70	43		14
4	.....1930..total number.....			102	40	10		10
5	.....1920..total number.....			76	44	11	4	14
6	(a) Concrete and masonry.....1940..number.....			10	7	3		
7	(b) Timber.....1940..number.....			3	1			1
8	(c) Earth and rock.....1940..number.....			84	6	5		1
9	(d) Other, mixed, and not reported.....1940..number.....			80	56	35		12
10	Main canals and laterals.....1940..total length, miles.....	0.5	0.2	864.5	583.6	387.9		141.6
11	.....1930..total length, miles.....			544	351	94	2	190
12	.....1920..total length, miles.....			501	360	109	8	177
13	(a) Earth.....1940..length, miles.....			859	579	364		141
14	(b) Lined.....1940..length, miles.....	0.5	0.2	5.5	4.6	3.9		0.6
15	.....1940..capacity, c.f.s. ²		1	2,343	1,584	767	8	64 ⁵
16	.....1930..capacity, c.f.s. ²			1,839	1,115	345	3	568
17	.....1920..capacity, c.f.s. ²			1,820	1,403	240	32	923
18	Pipe lines ³.....1940..total length, miles.....		0.1	5.2	4.2	3.4		0.7
19	.....1930..total length, miles.....			0.3	0.3			0.3
20	.....1920..total length, miles.....			2.5				
21	(a) Concrete.....1940..length, miles.....			0.1				
22	(b) Metal.....1940..length, miles.....		0.1	3.6	2.7	2.7		
23	(c) Wood-stave.....1940..length, miles.....			1.5	1.5	0.7		0.7
24	(d) Other.....1940..length, miles.....							
25	Storage dams.....1940..total number.....			35	17	11		
26	.....1930..total number.....			10	3			
27	.....1920..total number.....			13	11	1		
28	(a) Concrete and masonry.....1940..number.....							
29	(b) Earth and rock.....1940..number.....			35	17	11		
30	(c) Other, mixed, and not reported.....1940..number.....							
31	Reservoirs.....1940..total number.....	1		50	17	11		
32	(a) 1-99 acre-foot capacity.....1940..number.....	1		25				
33	(b) 100-999 acre-foot capacity.....1940..number.....	1		18	17	11		
34	(c) 1,000 and over acre-foot capacity.....1940..number.....			7				
35	.....1940..total capacity, ac.-ft. ⁴	(⁵)		18,929	8,950	6,850		
36	.....1930..total number.....			8	3			
37	.....1920..total capacity, ac.-ft.....			11,194	2,096			
38	Wells, flowing.....1940..number.....			10	7			
39	.....1930..number.....							
40	.....1920..number.....			4	4			
41	.....1940..yield, g.p.m.....			678	360			
42	.....1930..yield, g.p.m.....							
43	.....1920..yield, g.p.m.....			845	845			
44	Wells, pumped.....1940..number.....	47	330	19	1			
45	.....1930..number.....							
46	.....1920..number.....			1	1			
47	.....1940..yield, g.p.m.....	39,605	271,710	1,424	(⁵)			
48	.....1930..yield, g.p.m.....							
49	.....1920..yield, g.p.m.....							
50	Pumping plants.....1940..total number.....	47	328	26	1			
51	.....1930..total number.....				(⁵)			
52	Prime movers.....1940..capacity, hp.....	1,302	9,548	146	(⁵)			
53	.....1930..capacity, hp.....							
54	.....1920..capacity, hp.....			9	5			
55	(a) Electric.....1940..number.....			15				
56	.....1940..capacity, hp.....			225				
57	(b) Internal-combustion.....1940..number.....	47	309	12	1			
58	.....1940..capacity, hp.....	1,302	9,122	121	(⁵)			
59	(c) Other.....1940..number.....		4	14				
60	.....1940..capacity, hp.....		201	25				
61	Pumps.....1940..total number.....	47	333	21	1			
62	.....1930..number.....							
63	.....1920..number.....			4	2			
64	.....1940..capacity, g.p.m.....	41,355	288,225	3,085	(⁵)			
65	.....1930..capacity, g.p.m.....							
66	.....1920..capacity, g.p.m.....			675				
67	(a) Centrifugal.....1940..number.....	7	141	5	1			
68	.....1940..capacity, g.p.m.....	1,950	122,175	2,460	(⁵)			
69	.....1940..average capacity, g.p.m.....	279	866	492	(⁵)			
70	(b) Turbine.....1940..number.....	33	178					
71	.....1940..capacity, g.p.m.....	38,985	153,750					
72	.....1940..average capacity, g.p.m.....	1,181	864					
73	(c) Plunger.....1940..number.....	7	1	15				
74	.....1940..capacity, g.p.m.....	420	(⁵)	125				
75	.....1940..average capacity, g.p.m.....	60	(⁵)	8				
76	(d) Other.....1940..number.....		13	1				
77	.....1940..capacity, g.p.m.....		12,200	(⁵)				
78	Pumping lift, from all sources.....1940..average, feet.....	55	46	52	(⁵)			
79	.....1930..average, feet.....							
80	.....1920..average, feet.....			94	170			
81	from pumped wells.....1940..average, feet.....	55	46	(⁵)				
82	from surface sources.....1940..average, feet.....			50				

¹Data for less than 3 enterprises shown with permission of the enterprises involved.

²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

³Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — NEW MEXICO

435

WORKS, 1940, 1930, AND 1920—Continued

COLORADO RIVER—Continued						INDEPENDENT BASINS						
San Juan River—Continued		Little Colorado River	Upper Gila River			Salt Lake and Rito Creek	Estancia Valley	Rio Tularosa ^a	Fresnal River	Mimbres Valley	Animas Valley	
La Plata River	Chaco River	Zuni River	Total	Direct	San Francisco River							
(38)	(39)	(42)	(44)	(45)	(47)	(49)	(51)	(52)	(54)	(55)		
15	1	3	156	89	67	16	11	12	15	208	16	1
321	850	2,637	119	103	139	10	296	259	50	88	36	2
9	4	1	106	49	57	3	4	16	6	37		3
14		5	57	23	33			1	5	38		4
11			32	4	26			6	33	45		5
	4		3	3				2	4	4		6
			2		2			5	1			7
		1	77	33	44	3	4	7	1	13		8
9			24	13	11			2		20		9
43.0	11.1	32.2	248.7	146.7	102.0	2.0	18.1	24.8	25.7	87.0	9.2	10
42		61	132	81	46			14	29	61		11
49			141	77	56			116	73	91		12
43	11	32	248	146	102	2		23	25	87		13
	0.1	0.2	0.7	0.7			0.1	1.8	0.7			14
149	15	56	703	480	223	10	48	37	61	162		15
138		85	639	537	94			40	20	153		16
186			417	299	88			240	205	3,168		17
0.1			1.0	0.7	0.3			2.5	2.0	1.3		18
			2.5	0.3					7.7	1.1		19
			0.1	0.1						0.1		20
			0.9	0.6	0.3				2.0	1.2		21
								2.5				22
												23
												24
	6	7	11	8	3	6	4	4		5		25
1		4	3		2					1		26
1			2					3		5		27
	6	7	11	8	3	6	4	4		5		28
												29
	6	7	26	22	4	5	4	4		139		30
			25	22	3	5	4	4		138		31
	6		1		1					1		32
		7										33
	2,100	9,305	674	67	607	56	64	205		467		34
1		4	1		1					58		35
150		8,497	601		601					1,005		36
	7		3	3								37
	360		318	318						1		38
												39
										75		40
1			18	13	5	5	8		4	213	18	41
										154		42
(^b)			1,264	1,241	23	342	1,565		1,450	94,843	10,372	43
										68,096		44
								119		46,825		45
1			25	17	8	5	7		4	214	17	46
(^b)			138	70	68	10	37		57	152		47
			4					9		3,566	311	48
										3,115		49
										2,065		50
										126		51
(^b)	1		11	7	4	5	1		(^b)	1,802		52
			113	49	64	10	(^b)		(^b)	79	17	53
			14	10	4		6			1,750	311	54
			25	21	4		7			9		55
1			20	14	6	5	7		4	14		56
										213	18	57
			2		1					159		58
(^b)			2,925	1,362	1,543	522	715		1,450	90		59
										98,602	11,222	60
			675		275					69,978		61
										46,660		62
(^b)	1		4	(^b)	(^b)	3				43	9	63
(^b)			2,300	(^b)	(^b)	510				22,915	5,000	64
			575	(^b)	(^b)	170				533	556	65
							1			159	7	66
							(^b)		1,450	75,468	6,022	67
							(^b)		362	475	860	68
			15	11	4	2	6			11		69
			125	82	43	(^b)	65			219	(^b)	70
			8	7	11	(^b)	11			20	(^b)	71
			1	1								72
(^b)			54	62	31	36	50		118	64	38	73
										67		74
			17		20					57		75
(^b)			56	60	30	36	50			64	38	76
			50	66	32				130	60	44	77

⁴Total capacity of all reservoirs regardless of size.
⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
^aData for 1 enterprise in Tularosa Valley Drainage Basin (50) (number refers to separate map) are included with Rio Tularosa Drainage Basin (51).

CENSUS OF IRRIGATION - NEW MEXICO

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL	COUNTY TOTALS			
		Bernalillo	Catron	Chaves	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS *					
1 All farms.....1940..number.....	34,105	1,646	641	979	
2 ..1930..number.....	31,404	1,248	438	883	
3 Irrigated farms.....1940..number.....	15,811	1,031	141	645	
4 ..1930..number.....	14,347	874	66	587	
5 Increase or decrease (-), 1930-1940.....percent.....	10.2	18.0	113.6	9.9	
Operated by—					
6 (a) Owners and managers.....1940..number.....	13,396	921	118	426	
7 ..1930..number.....	11,477	798	54	362	
8 (b) Tenants.....1940..number.....	2,415	110	23	219	
9 ..1930..number.....	2,870	76	12	225	
10 Land in all farms.....1940..acres.....	38,860,427	135,327	1,992,108	2,638,707	
11 ..1930..acres.....	7,408,997	47,741	1,044,889	416,817	
12 Average per farm.....1940..acres.....	469	46	7,411	646	
13 (a) Operated by owners and managers.....1940..acres.....	6,501,491	43,048	1,028,907	339,462	
14 Average per farm.....1940..acres.....	485	47	8,720	797	
15 (b) Operated by tenants.....1940..acres.....	907,506	4,693	15,982	77,355	
16 Average per farm.....1940..acres.....	376	43	695	353	
17 Approximate land area.....1940..acres.....	77,767,040	744,320	4,414,720	3,900,160	
IRRIGATED AND IRRIGABLE AREAS					
18 Area irrigated.....1939..acres.....	554,039	20,586	2,563	72,957	
19 (a) Cropland harvested.....1939..acres.....	512,441	20,511	2,159	68,554	
20 (b) Crop failure.....1939..acres.....	21,069	28	19	898	
21 (c) Pasture.....1939..acres.....	20,529	49	385	3,505	
22 Area irrigated.....1929..acres.....	527,033	15,718	1,474	51,302	
23 ..1919..acres.....	538,377	14,536	.....	42,259
24 Increase or decrease (-), 1929-1939.....percent.....	5.1	31.0	73.9	42.2	
25 Irrigable area in enterprises.....1940..acres.....	807,656	29,489	9,990	86,574	
26 ..1930..acres.....	741,245	19,861	1,778	59,739	
27 ..1920 ¹ ..acres.....	961,879	19,056	.....	57,785
28 Excess of irrigable area over the area irrigated.....1940..acres.....	253,617	8,901	7,427	13,617	
29 ..1930..acres.....	214,212	4,143	304	8,437	
30 Area works were capable of supplying with water.....1940..acres.....	731,990	29,404	9,845	83,542	
31 ..1930..acres.....	656,669	19,323	1,673	58,623	
32 ..1920..acres.....	696,119	15,218	.....	47,433
33 Increase or decrease (-), 1930-1940.....percent.....	11.5	52.2	488.5	42.5	
34 Excess, capability of works over area irrigated.....1940..acres.....	177,951	8,816	7,282	10,585	
35 ..1930..acres.....	129,636	3,605	199	7,321	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	7.5	43.1	0.2	17.5	
37 ..1929..percent.....	10.5	37.0	3.5	14.6	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	75.7	70.0	26.0	87.3	
39 ..1929..percent.....	80.3	81.3	88.1	87.5	
CAPITAL INVESTED TO JANUARY 1					
40 Total investment in all enterprises.....1940..dollars.....	32,735,997	2,365,233	43,833	2,188,653	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	32,290,856	2,365,136	41,045	2,172,403	
42 (b) Investment in water rights (reported).....1940..dollars.....	445,141	97	2,788	16,250	
43 Total investment in all enterprises.....1930..dollars.....	19,834,980	118,277	19,315	1,971,272	
44 ..1920..dollars.....	18,210,412	165,784	.....	1,323,948
45 Increase or decrease (-), 1930-1940.....percent.....	65.0	(²)	126.9	11.0	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	44.72	80.44	4.45	26.20	
47 ..1930..dollars.....	30.20	6.12	11.55	33.63	
48 ..1920..dollars.....	26.16	10.89	.....	27.91
49 Average investment per acre irrigated.....1939..dollars.....	59.09	114.88	17.10	30.00	
50 Estimated final investment in existing enterprises.....1940..dollars.....	36,773,139	2,433,623	44,933	2,198,023	
51 ..1930..dollars.....	21,942,450	118,277	19,915	1,971,772	
52 ..1920..dollars.....	20,440,646	165,784	.....	1,334,688
53 Increase or decrease (-), 1930-1940.....percent.....	67.6	(²)	126.6	11.5	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	45.53	82.53	4.50	25.39	
55 ..1930..dollars.....	29.60	5.96	11.20	33.01	
56 ..1920 ¹ ..dollars.....	21.25	8.70	.....	23.10
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
Enterprises					
57 Enterprises reporting maintenance and operation.....1939..number.....	2,018	49	24	80	33
58 Area irrigated in these enterprises.....1939..acres.....	516,916	5,083	20,472	2,465	4,361
59 Cost of maintenance and operation.....1939..dollars.....	1,082,768	10,142	63,901	3,204	7,849
60 Average cost, per acre irrigated.....1939..dollars.....	2.09	2.00	3.12	1.30	1.80
61 ..1929..dollars.....	2.15	3.17	2.80
62 Total annual charges (reported) ³ 4.....1939..dollars.....	966,767	116,017	981	16,500
63 Average annual charge per acre irrigated.....1939..dollars.....	2.47	5.70	1.07	1.28
64 Area against which charges were assessed.....1939..acres.....	483,407	29,199	931	11,134
65 Average annual charge per acre assessed.....1939..dollars.....	2.00	3.97	1.05	1.48
66 Total charges collected ⁵.....1939..dollars.....	1,037,433	144,809	11,917
67 Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	16,715,813	2,204,791	3,550
WATER DELIVERED TO IRRIGATORS					
68 Enterprises reporting water delivered.....1939..number.....	1,960	51	25	86	34
69 Area irrigated in these enterprises.....1939..acres.....	474,184	5,097	18,974	2,432	4,369
70 Water delivered in these enterprises.....1939..acre-feet.....	1,438,686	7,732	121,354	6,359	7,048
71 Average water delivered per acre irrigated.....1939..acre-feet.....	3.0	1.5	6.4	2.6	1.6
72 Average cost of water per acre irrigated.....1939..dollars.....	2.80	2.00	6.07	1.24	1.80
DRAINAGE OF IRRIGATED LAND					
73 Enterprises reporting land drained or needing drainage.....1939..number.....	162	3	87
74 Irrigable area in these enterprises.....1939..acres.....	331,233	28,933	27,333
75 Irrigated area in these enterprises.....1939..acres.....	231,795	20,190	25,163
76 Area for which drains have been installed.....1939..acres.....	240,614	28,933	20,585
77 Additional area needing drainage.....1939..acres.....	8,732	311

* Census of Agriculture.

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

²Percent not shown when more than 1,000.

³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

Irrigation data omitted from any of the counties listed are included under "All other counties"]

Colfax	Dona Ana	Eddy	Grant	Guadalupe	Hidalgo	Lea	Lincoln	Luna	McKinley		
659	1,574	855	618	476	228	549	640	308	1,996	1	
798	2,128	1,054	576	596	335	610	569	235	996	2	
215	1,476	505	283	185	76	75	166	157	440	3	
280	2,000	860	233	169	84	93	184	124	238	4	
-23.2	-26.2	-41.3	21.5	9.5	-9.5	-19.4	-9.8	26.6	84.9	5	
147	1,005	314	202	158	58	62	125	120	434	6	
198	1,154	285	123	143	61	.....	130	100	237	7	
68	471	191	81	27	18	13	41	37	6	8	
112	846	575	110	25	23	.....	54	24	1	9	
1,865,677	424,350	1,616,449	1,217,768	963,025	754,621	1,948,537	2,003,681	829,439	1,078,115	10	
1,069,197	211,492	354,698	529,709	31,890	40,956	159,207	94,451	96,744	112,256	11	
4,973	143	702	1,872	172	539	2,123	569	616	255	12	
634,983	182,549	319,526	516,334	29,712	39,382	149,097	91,447	82,917	107,321	13	
4,320	182	1,018	2,556	188	679	2,405	729	691	247	14	
434,214	28,943	35,172	13,375	2,178	1,574	10,110	3,304	13,827	4,935	15	
6,386	61	184	165	81	87	778	81	374	832	16	
2,409,600	2,434,560	2,664,320	2,540,800	1,918,720	2,206,080	2,811,520	3,109,760	1,892,480	3,491,840	17	
31,344	76,523	54,971	7,521	3,007	2,976	1,967	4,608	10,893	4,005	18	
30,377	71,245	53,189	6,452	2,674	2,428	1,616	4,506	10,038	4,003	19	
20	4,017	905	4	153	2	17	92	469	.....	20	
947	1,261	868	1,065	180	546	134	10	386	.....	21	
33,414	75,275	52,432	6,783	3,431	3,623	.....	4,761	6,937	6,814	22	
66,187	52,265	51,353	6,987	3,206	2,840	.....	6,128	11,323	5,189	23	
-6.2	1.7	4.8	11.4	-12.4	-17.9	.....	-3.2	57.0	-28.5	24	
61,038	97,338	79,144	8,550	3,112	3,350	3,405	4,651	18,078	13,010	25	
70,025	79,000	61,870	7,935	3,935	3,823	.....	4,842	8,245	9,850	26	
117,715	86,023	87,661	7,781	5,102	3,340	.....	11,699	34,786	9,057	27	
29,694	20,815	24,173	1,029	105	374	1,438	243	7,185	3,005	28	
36,612	3,725	9,438	1,162	505	200	.....	81	1,308	4,166	29	
43,854	87,983	72,847	8,421	3,011	3,345	3,390	4,724	16,420	8,760	30	
64,346	77,500	60,579	7,592	3,796	3,823	.....	4,804	8,071	9,350	31	
90,881	65,057	59,784	7,243	4,800	2,940	.....	6,341	21,143	7,229	32	
-31.8	13.5	20.3	10.9	-20.7	-12.5	.....	-1.7	103.4	-6.3	33	
12,510	11,440	17,876	900	4	369	1,423	116	5,527	4,755	34	
30,932	2,225	8,147	839	365	200	.....	43	1,134	3,666	35	
2.9	36.2	15.5	1.4	9.4	7.3	1.2	4.9	11.3	3.6	36	
2.9	44.8	15.1	2.6	17.8	36.2	.....	1.8	12.5	5.2	37	
71.5	87.0	75.5	89.3	99.9	89.0	58.0	97.5	66.3	45.7	38	
51.9	97.1	86.6	88.9	90.4	94.8	.....	99.1	85.9	60.8	39	
1,661,205	3,841,764	5,530,699	134,643	256,866	70,051	45,173	46,946	276,431	912,424	40	
1,575,677	3,841,601	5,501,466	129,660	252,666	66,683	45,085	45,758	271,427	912,424	41	
85,528	163	29,233	4,983	4,200	3,368	88	1,188	5,004	.....	42	
1,646,780	6,517,241	2,642,110	50,305	121,450	69,850	.....	31,980	261,191	631,131	43	
4,526,888	2,485,908	2,952,707	54,162	87,195	31,935	.....	51,939	422,450	697,280	44	
0.9	-41.1	109.3	167.7	111.5	0.3	.....	46.8	5.8	44.6	45	
37.88	43.67	75.92	15.99	85.31	20.94	13.33	9.94	16.84	104.16	46	
25.59	84.09	43.61	6.63	31.99	18.27	.....	6.66	32.36	67.50	47	
49.81	38.21	49.39	7.48	18.17	10.86	.....	8.19	19.98	96.46	48	
53.00	50.20	100.61	17.90	85.42	23.54	22.97	10.19	25.38	227.82	49	
1,691,205	3,989,944	5,778,218	140,848	265,016	72,351	52,223	47,246	281,703	1,352,974	50	
1,776,780	6,676,241	2,663,860	50,305	121,450	69,850	.....	36,180	261,191	881,881	51	
4,626,368	2,488,908	3,503,207	56,967	93,195	46,935	.....	52,014	430,350	702,280	52	
-4.8	-40.3	116.9	180.0	118.2	3.6	.....	30.6	7.9	53.4	53	
27.71	40.98	73.01	16.47	85.16	21.60	15.34	9.74	15.58	103.99	54	
25.37	84.51	43.06	6.34	30.86	18.27	.....	7.47	31.68	89.53	55	
39.30	28.28	39.96	7.32	18.27	14.05	.....	4.37	12.37	77.54	56	
			Primary	Supplemental		Primary	Supplemental				
			Enterprises			Enterprises					
26	10	167	102	6	9	12	7	35	127	143	3
31,095	76,523	48,257	7,389	64	3,007	2,973	605	1,589	4,475	10,364	3,205
21,107	158,721	111,130	9,303	168	6,923	7,476	2,022	5,837	5,917	69,101	2,915
0.68	2.07	2.30	1.26	2.63	2.30	2.51	3.34	3.67	1.32	6.67	0.91
1.44	2.76	2.50	1.80	.....	2.57	1.93	.....	.....	2.22	9.30	2.00
36,062	158,024	55,681	3,711	.....	6,345	5,028	.....	.....	3,601	130	233
1.25	2.07	2.37	0.96	.....	2.23	1.91	.....	.....	1.94	1.00	0.07
37,118	89,856	31,005	3,874	.....	2,847	2,703	.....	.....	1,857	130	3,185
0.97	1.76	1.80	0.96	.....	2.23	1.86	.....	.....	1.94	1.00	0.07
34,343	273,432	17,510	241	.....	135	1,181	.....	.....	366	.....	.....
218,187	2,513,259	3,390,482	.....	.....	90	532	.....	.....	.....	.....	24,701
34	9	222	104	7	9	11	7	31	33	151	1
31,944	76,503	54,417	6,420	68	3,007	2,945	605	1,388	1,893	10,570	(5)
35,324	249,262	164,645	18,938	69	5,285	8,431	486	1,668	5,326	23,688	(5)
1.2	3.3	3.0	2.9	1.0	1.8	2.9	0.8	1.2	2.8	2.2	(5)
1.19	2.07	2.48	1.21	2.62	2.28	2.68	3.34	2.87	2.19	6.71	(5)
(5)	(5)	15	(5)	2	(5)	(5)	(5)	(5)	(5)	(5)	(5)
(5)	97,010	33,075	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
(5)	76,238	24,630	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
(5)	87,585	9,927	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
(5)	500	1,017	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)

⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.
⁵ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁶ Data for less than 3 enterprises shown with permission of the enterprise involved.

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COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Mora	Otero	Quay	Rio Arriba	Roosevelt		
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS²							
1 All farms.....1940..number.....	1,222	656	999	2,622	1,797		
2 .....1930..number.....	1,318	537	1,176	2,492	1,579		
3 Irrigated farms.....1940..number.....	501	237	21	1,792	314		
4 .....1930..number.....	658	178	41	1,748	186		
5 Increase or decrease (-), 1930-1940.....percent.....	-23.9	33.1	-48.8	2.5	68.8		
6 Operated by—							
7 (a) Owners and managers.....1940..number.....	449	170	16	1,691	225		
8 .....1930..number.....	599	143	.....	1,704	118	
9 (b) Tenants.....1940..number.....	52	67	5	101	89		
10 .....1930..number.....	59	35	.....	44	68	
11 Land in all farms.....1940..acres.....	868,720	882,426	1,704,163	1,014,558	1,385,930		
12 Land in irrigated farms.....1940..acres.....	357,968	92,123	11,480	212,864	34,379		
13 Average per farm.....1940..acres.....	715	389	547	119	109		
14 (a) Operated by owners and managers.....1940..acres.....	303,945	81,283	8,750	188,914	26,660		
15 Average per farm.....1940..acres.....	677	478	570	112	118		
16 (b) Operated by tenants.....1940..acres.....	54,023	10,840	2,730	23,950	7,719		
Average per farm.....1940..acres.....	1,039	162	546	237	87		
17 Approximate land area.....1940..acres.....	1,242,880	4,248,320	1,845,120	3,747,200	1,571,200		
IRRIGATED AND IRRIGABLE AREAS							
18 Area irrigated.....1939..acres.....	21,260	4,618	243	35,581	10,872		
19 (a) Cropland harvested.....1939..acres.....	19,825	4,233	237	30,226	10,425		
20 (b) Crop failure.....1939..acres.....	805	307	.....	2,585	132	
21 (c) Pasture.....1939..acres.....	630	78	6	2,770	315		
22 Area irrigated.....1929..acres.....	26,137	5,349	.....	41,449	4,823	
23 .....1919..acres.....	17,833	7,556	.....	46,036	.....	
24 Increase or decrease (-), 1929-1939.....percent.....	-18.7	-13.7	.....	14.2	125.4	
25 Irrigable area in enterprises.....1940..acres.....	23,860	4,880	619	47,291	21,694		
26 .....1930..acres.....	31,184	5,658	.....	56,226	5,308	
27 .....1920 ³ ..acres.....	37,673	12,117	.....	68,691	.....	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	2,600	262	376	11,710	10,822		
29 .....1930..acres.....	5,047	309	.....	14,777	485	
30 Area works were capable of supplying with water.....1940..acres.....	22,483	4,773	619	41,283	20,761		
31 .....1930..acres.....	30,139	5,644	.....	49,081	5,248	
32 .....1920..acres.....	29,749	8,565	.....	50,247	.....	
33 Increase or decrease (-), 1930-1940.....percent.....	-25.4	-15.4	.....	-15.9	295.6	
34 Excess, capability of works over area irrigated.....1940..acres.....	1,223	155	376	5,702	9,889		
35 .....1930..acres.....	4,002	295	.....	7,632	425	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	5.9	5.0	2.1	16.7	31.6		
37 .....1929..percent.....	7.3	16.2	.....	23.9	21.0	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	94.6	96.8	39.3	86.1	52.4		
39 .....1929..percent.....	86.7	94.8	.....	84.5	91.9	
CAPITAL INVESTED TO JANUARY 1							
40 Total investment in all enterprises.....1940..dollars.....	114,617	442,922	14,694	681,604	363,060		
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	107,925	240,763	14,694	679,559	360,151		
42 (b) Investment in water rights (reported).....1940..dollars.....	6,692	202,159	.....	2,045	2,909	
43 Total investment in all enterprises.....1930..dollars.....	132,700	156,015	.....	404,181	182,433	
44 .....1920..dollars.....	316,097	361,284	.....	245,425	.....	
45 Increase or decrease (-), 1930-1940.....percent.....	-13.6	183.9	.....	68.6	99.0	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	5.10	92.80	23.74	16.51	17.49		
47 .....1930..dollars.....	4.40	27.64	.....	8.23	34.76	
48 .....1920..dollars.....	10.63	42.18	.....	4.88	.....	
49 Average investment per acre irrigated.....1939..dollars.....	5.39	95.91	60.47	19.16	33.39		
50 Estimated final investment in existing enterprises.....1940..dollars.....	116,877	513,237	15,569	966,539	370,369		
51 .....1930..dollars.....	135,700	156,076	.....	447,885	182,683	
52 .....1920..dollars.....	327,786	364,489	.....	259,670	.....	
53 Increase or decrease (-), 1930-1940.....percent.....	-13.9	228.8	.....	115.8	102.7	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	4.90	105.17	25.15	20.44	17.07		
55 .....1930..dollars.....	4.35	27.59	.....	7.97	34.42	
56 .....1920 ³ ..dollars.....	8.70	30.08	.....	3.78	.....	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57 Enterprises reporting maintenance and operation.....1939..number.....	49	Primary		2	8	159	228
		Supplemental					
58 Area irrigated in these enterprises.....1939..acres.....	19,040	3,407	(⁶)	243	32,863	8,467	
59 Cost of maintenance and operation.....1939..dollars.....	3,764	5,706	(⁶)	509	19,769	36,624	
60 Average cost, per acre irrigated.....1939..dollars.....	0.20	1.67	(⁶)	2.09	0.61	4.33	
61 .....1929..dollars.....	0.44	2.18	1.16	6.89	
62 Total annual charges (reported) ⁶ 7.....1939..dollars.....	4,479	5,116	24,497	
63 Average annual charge per acre irrigated.....1939..dollars.....	0.28	1.66	0.81	
64 Area against which charges were assessed.....1939..acres.....	17,023	3,074	31,170	
65 Average annual charge per acre assessed.....1939..dollars.....	0.26	1.66	78.6	
66 Total charges collected ⁶.....1939..dollars.....	735	6,159	8,554	
67 Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	2,500	1,633	179,619	
WATER DELIVERED TO IRRIGATORS							
68 Enterprises reporting water delivered.....1939..number.....	37	18	(⁶)	2	8	134	283
69 Area irrigated in these enterprises.....1939..acres.....	17,593	3,482	(⁶)	243	24,580	10,609	
70 Water delivered in these enterprises.....1939..acre-feet.....	17,137	9,748	(⁶)	149	38,894	24,243	
71 Average water delivered per acre irrigated.....1939..acre-feet.....	1.0	2.8	(⁶)	0.6	1.6	2.3	
72 Average cost of water per acre irrigated.....1939..dollars.....	0.15	1.65	(⁶)	2.09	0.77	4.32	
DRAINAGE OF IRRIGATED LAND							
73 Enterprises reporting land drained or needing drainage.....1939..number.....	(⁶)	1	3	11	(⁶)	1
74 Irrigable area in these enterprises.....1939..acres.....	(⁶)	718	5,673	(⁶)	
75 Irrigated area in these enterprises.....1939..acres.....	(⁶)	625	4,982	(⁶)	
76 Area for which drains have been installed.....1939..acres.....	(⁶)	17	316	(⁶)	
77 Additional area needing drainage.....1939..acres.....	(⁶)	130	577	(⁶)	

⁶Census of Agriculture.

⁷Data between census years not comparable (see headnote).

²The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — NEW MEXICO

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

irrigation data omitted from any of the counties listed are included under "All other counties"

Sandoval	San Juan	San Miguel	Santa Fe	Sierra	Socorro	Taos	Torrance	Union	Valencia	All other counties ¹		
1,710	2,383	1,482	973	397	798	1,803	1,301	1,035	1,945	2,013	1	
1,309	1,422	1,070	687	449	849	1,423	1,055	1,454	1,274	2,243	2	
1,197	1,185	433	598	282	510	1,663	53	52	1,435	143	3	
998	759	517	488	278	377	1,225	20	29	959	94	4	
19.9	56.1	-16.2	22.5	1.4	35.3	35.8	165.0	79.3	49.6	52.1	5	
1,117	986	379	588	222	407	1,564	48	43	1,309	92	6	
969	557	442	480	223	341	1,179	18	24	892	173	7	
80	199	54	10	60	103	99	5	9	126	51	8	
29	202	75	8	55	36	45	2	5	67	55	9	
402,842	1,628,742	1,595,560	545,677	964,387	936,571	190,309	1,460,421	² 2,472,803	1,165,394	3,372,820	10	
111,430	401,400	183,265	20,054	218,746	59,135	168,252	13,671	640,785	496,836	176,562	11	
93	339	423	34	776	116	101	258	12,323	346	1,235	12	
108,075	385,150	165,612	17,992	214,318	49,139	165,558	12,311	551,441	486,383	171,575	13	
97	391	437	31	965	121	106	256	12,824	372	1,865	14	
3,355	16,250	17,653	2,062	4,428	9,996	2,694	1,360	89,344	10,453	4,987	15	
42	82	327	205	74	97	27	272	9,927	83	98	16	
2,439,040	3,529,600	3,039,360	1,243,520	1,941,760	4,974,080	1,443,840	2,137,600	2,442,880	3,607,680	3,774,080	17	
18,630	34,759	19,280	10,403	4,840	13,311	37,123	1,425	5,779	37,022	4,970	18	
17,192	31,256	18,015	9,512	4,406	13,034	31,985	955	4,996	33,191	4,970	19	
745	1,321	739	484	276	191	3,611	460	109	2,681	.....	20
693	2,182	526	407	158	86	1,517	.....	675	1,150	.....	21
19,621	38,421	22,823	12,612	6,451	7,328	47,428	477	2,525	27,288	3,497	22	
23,214	42,470	16,565	10,582	8,491	11,110	59,607	1,085	6,774	19,241	3,810	23	
-5.1	-9.5	-15.5	-17.5	-25.0	81.6	-21.7	198.7	128.9	35.7	42.1	24	
33,186	49,846	21,677	13,102	7,161	27,869	53,618	4,769	6,995	65,870	7,290	25	
32,460	51,236	28,484	17,043	12,854	9,729	99,626	478	4,649	46,468	8,937	26	
32,988	68,515	68,806	12,244	18,432	29,780	88,265	1,550	20,056	48,780	11,777	27	
14,556	15,087	2,397	2,699	2,321	14,558	16,495	3,344	1,216	28,848	2,320	28	
12,839	12,815	5,661	4,431	6,403	2,401	52,198	1	2,124	19,180	5,440	29	
31,450	40,790	21,552	11,728	6,053	26,843	46,950	3,254	6,295	64,340	7,290	30	
26,015	49,555	28,454	15,160	11,884	8,960	56,878	477	4,629	36,226	8,839	31	
26,659	48,195	43,277	10,858	9,533	13,356	67,061	1,165	17,986	32,666	8,733	32	
20.9	-17.7	-24.3	-22.6	-49.1	199.6	-17.5	582.2	36.0	77.6	-17.5	33	
12,820	6,031	2,272	1,325	1,213	13,532	9,827	1,829	516	27,318	2,020	34	
6,394	11,134	5,631	2,548	5,433	1,632	9,450	.....	2,104	8,938	5,342	35
16.7	8.7	10.5	51.9	2.2	22.5	22.1	10.4	0.9	7.5	2.8	36	
13.1	54.8	10.0	23.0	2.4	16.1	59.8	8.5	1.0	30.0	0.9	37	
59.2	85.2	89.5	88.7	80.0	49.6	79.1	43.8	91.8	57.5	68.2	38	
75.4	77.5	80.2	83.2	54.3	81.8	83.4	100.0	54.5	75.3	39.6	39	
1,941,964	2,564,775	1,097,378	399,823	286,000	2,106,332	594,528	89,425	166,950	4,264,946	233,058	40	
1,940,302	2,557,185	1,094,930	399,125	285,058	2,105,350	576,787	89,170	164,710	4,221,058	233,058	41	
1,662	7,590	2,448	698	942	982	17,741	255	2,240	43,888	.....	42
197,152	941,116	226,343	482,182	796,179	101,025	1,217,794	6,625	66,620	725,208	117,905	43	
108,419	1,666,875	777,482	69,975	758,484	235,051	160,886	21,100	363,939	194,471	130,728	44	
685.0	172.5	-17.1	-17.1	-64.1	(⁴)	-51.2	(⁴)	150.6	488.1	97.7	45	
61.75	62.68	50.92	34.09	47.25	78.47	12.66	27.48	26.52	66.29	31.97	46	
7.58	18.99	7.95	31.81	67.00	11.28	21.41	13.89	14.39	20.02	1,334	47	
4.07	34.59	1,797	6.44	79.56	17.60	2.40	18.11	20.23	5.95	14.97	48	
104.24	73.79	56.92	38.43	59.09	158.24	16.02	62.75	28.89	115.20	46.89	49	
2,584,979	3,457,557	1,146,928	698,598	291,375	2,112,382	995,108	96,025	167,150	4,660,081	233,058	50	
199,002	943,316	229,463	482,182	797,479	101,025	2,691,979	6,725	66,620	735,458	119,155	51	
124,939	2,716,875	788,502	69,975	1,060,459	259,351	177,176	23,600	382,389	227,991	156,728	52	
(⁴)	266.5	399.8	44.9	-63.5	(⁴)	-63.0	(⁴)	150.9	533.6	95.6	53	
77.89	69.36	52.91	53.32	40.69	75.80	18.56	20.14	23.90	70.75	31.97	54	
6.13	18.41	8.06	28.29	62.04	10.38	27.02	14.07	14.33	15.83	13.33	55	
3.79	39.65	11.46	5.72	57.53	8.71	2.01	15.23	19.07	4.67	13.31	56	
				Primary	Supplemental							
				Enterprises								
36	56	53	60	60	1	11	85	4	29	10	3	
16,998	32,902	18,068	10,144	4,778	(⁵)	13,291	28,636	1,236	5,373	35,232	4,970	58
48,835	86,311	12,313	8,422	9,052	(⁵)	59,572	13,447	580	5,329	111,613	5,427	59
2.87	2.62	0.68	0.83	1.89	(⁵)	4.48	0.47	0.47	0.99	3.17	1.09	60
1.33	2.07	0.70	0.76	4.51	3.78	0.72	0.62	3.70	3.23	3.69	61
81,645	78,412	10,981	12,003	7,784	106,107	14,227	305	200,898	18,000	62
4.86	2.39	0.62	1.22	2.04	6.03	0.48	0.27	5.70	3.67	63
23,680	34,241	18,243	9,846	4,673	28,130	32,458	1,140	58,690	7,200	64
3.45	2.29	0.60	1.22	1.67	3.77	0.44	0.27	3.42	2.50	65
99,072	35,616	198	4,910	12,862	127,413	7,502	11,381	226,799	12,298	66
1,664,418	430,693	160,158	153,969	1,933,624	148,445	3,547,506	137,656	67
27	42	49	46	58	1	12	46	6	19	9	3	68
9,717	25,499	17,038	7,880	4,005	(⁵)	13,311	19,124	1,361	2,789	29,592	4,970	69
70,989	97,253	19,462	10,061	10,776	(⁵)	74,675	25,618	1,841	4,533	157,554	38,175	70
7.3	3.8	1.1	1.3	2.7	(⁵)	5.6	1.3	1.4	1.6	5.3	7.7	71
7.68	2.44	0.58	1.26	1.82	(⁵)	7.99	0.51	0.40	0.78	5.56	3.69	72
6	10	1	5	3	(⁵)	2	(⁵)	(⁵)	(⁵)	73
21,325	16,989	(⁵)	2,652	4,454	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	74
11,383	10,708	(⁵)	2,602	2,465	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	75
21,325	605	(⁵)	40	3,005	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	76
.....	3,172	(⁵)	397	245	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	77

¹Percent not shown when more than 1,000.

²Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

³Annual charges may include costs of maintenance and operation, and assessments for the principal and interest on bonds, notes, warrants, and for special reasons.

⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NEW MEXICO

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS.
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL	Bernalillo	Catron	Chaves	Colfax	Dona Ana	Eddy	Grant
FARM VALUES, 1940*								
1 Land and buildings, all farms.....dollars..	187,525,814	5,235,036	3,411,369	13,753,593	9,635,294	16,281,330	9,549,306	9,517,826
2 Land and buildings, irrigated farms.....dollars..	82,619,776	4,365,694	1,110,952	9,171,106	5,637,112	15,432,930	8,023,090	4,826,076
Operated by—								
3 (a) Owners and managers.....dollars..	67,593,251	3,743,494	1,051,302	7,104,533	3,560,665	12,009,995	6,030,940	4,369,476
4 (b) Tenants.....dollars..	15,026,525	622,200	59,650	2,066,573	2,076,447	3,422,935	1,992,250	456,600
5 Average, land and buildings, per farm.....dollars..	5,225.46	4,234.43	7,879.09	14,218.77	26,219.13	10,455.91	15,887.31	17,053.27
6 per acre in farms.....dollars..	11.15	91.45	1.06	22.00	5.27	72.97	22.62	11.23
7 Buildings, irrigated farms reporting value.....number..	14,236	925	136	613	212	1,396	477	268
8 Total reported.....dollars..	14,976,063	1,337,791	178,348	1,558,089	525,600	2,299,260	1,126,046	751,040
9 Average, per irrigated farm reporting.....dollars..	1,051.99	1,446.26	1,311.38	2,541.74	2,479.25	1,647.03	2,360.68	2,802.39
10 per acre on all irrigated farms.....dollars..	2.02	28.02	0.17	3.74	0.49	10.87	3.17	1.42
11 Buildings, nonirrigated farms reporting value.....number..	17,255	564	489	309	431	95	146	327
12 Total reported.....dollars..	13,277,993	253,897	289,530	351,274	479,625	158,537	214,245	885,521
13 Average, per nonirrigated farm reporting.....dollars..	793.48	450.17	592.09	1,136.81	1,112.82	1,668.81	1,467.43	2,708.02
14 per acre on all nonirrigated farms.....dollars..	0.42	2.90	0.31	0.15	0.60	0.74	0.17	1.29
15 Implements and machinery, irrigated farms reporting value.....number..	13,043	769	113	514	205	1,396	452	265
16 Total reported.....dollars..	6,937,641	311,890	74,640	947,221	248,193	1,379,173	731,791	379,697
17 Average, per irrigated farm reporting.....dollars..	531.91	405.57	660.53	1,842.84	1,210.70	987.95	1,619.01	1,432.82
18 per acre, on all irrigated farms.....dollars..	0.94	6.53	0.07	2.27	0.23	6.52	2.06	0.72
19 Implements and machinery, nonirrigated farms reporting value.....number..	15,179	450	410	250	397	77	124	282
20 Total reported.....dollars..	8,275,033	102,718	162,704	175,535	253,425	102,804	86,099	357,618
21 Average, per acre, on all nonirrigated farms.....dollars..	0.26	1.17	0.17	0.07	0.32	0.48	0.07	0.52
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22 Enterprises.....1940.....number.....	1,252	36	94	498	34	10	241	120
23 ..1930.....number.....	1,969	21	45	359	30	2	181	69
24 ..1920.....number.....	2,391	44	.....	339	86	12	240	70
25 Average size of enterprise based on irrigable area.....1940.....acres.....	320	819	106	174	1,795	9,734	328	71
26 ..1930.....acres.....	376	946	40	166	2,334	39,500	342	115
27 ..1920 ².....acres.....	402	433	.....	170	1,368	7,335	365	111
28 Diversion dams.....1940.....number.....	1,072	25	68	50	40	3	12	71
29 Main canals and laterals.....1940.....length, miles.....	4,647.9	192.0	113.0	137.7	169.0	372.8	103.2	158.7
30 ..1930.....length, miles.....	4,466	124	46	165	333	330	266	106
31 ..1920.....length, miles.....	5,932	228	.....	310	612	53	589	108
32 ..1940.....capacity, c.f.s. ³	16,821	351	249	1,084	2,539	1,524	871	362
33 ..1930.....capacity, c.f.s. ³	17,479	486	94	292	4,376	1,650	1,045	496
34 ..1920.....capacity, c.f.s. ³	23,432	137	.....	836	5,889	1,231	1,215	331
35 Pipe lines ⁴.....1940.....length, miles.....	36.5	1.4	0.6	3.8	1.3	0.2	1.6	1.5
36 Storage dams.....1940.....number.....	141	4	9	5	16	.....	7	8
37 Reservoirs.....1940.....number.....	502	4	11	66	16	.....	135	28
38 ..1930.....number.....	240	1	1	77	18	1	40	.....
39 ..1920.....number.....	328	10	.....	74	38	6	27	10
40 ..1940.....capacity, acre-feet.....	3,280,550	176	665	322	104,350	.....	50,187	219
41 ..1930.....capacity, acre-feet.....	2,945,220	1	601	1,220	121,983	5	53,264	.....
42 ..1920.....capacity, acre-feet.....	2,960,718	1,001	.....	313	65,658	6	81,855	55
43 Wells, flowing.....1940.....number.....	268	.....	.....	120	.....	.....	131	3
44 ..1930.....number.....	340	.....	.....	223	.....	.....	116	.....
45 ..1920.....number.....	556	.....	.....	318	.....	.....	230	.....
46 ..1940.....yield, g.p.m.....	181,076	.....	.....	91,775	.....	.....	88,470	318
47 ..1930.....yield, g.p.m.....	223,257	.....	.....	162,277	.....	.....	59,980	.....
48 ..1920.....yield, g.p.m.....	376,222	.....	.....	228,885	.....	.....	146,330	.....
49 Wells, pumped.....1940.....number.....	1,487	1	12	563	.....	.....	199	27
50 ..1930.....number.....	660	.....	.....	255	.....	.....	64	5
51 ..1920.....number.....	461	13	.....	143	2	8	48	4
52 ..1940.....yield, g.p.m.....	1,143,276	(⁵)	374	510,490	.....	.....	190,350	3,055
53 ..1930.....yield, g.p.m.....	481,898	.....	.....	212,231	.....	.....	40,040	920
54 ..1920.....yield, g.p.m.....	265,618	6,261	.....	99,328	.....	1,575	27,118	400
55 Pumping plants.....1940.....number.....	1,558	3	16	597	1	7	206	29
56 ..1930.....number.....	702	.....	.....	267	.....	1	71	5
57 ..1920.....number.....	472	12	.....	146	2	8	52	8
58 Prime movers.....1940.....capacity, hp.....	40,110	28	85	17,727	(⁵)	90	6,203	220
59 ..1930.....capacity, hp.....	14,483	.....	.....	5,972	.....	45	1,433	41
60 ..1920.....capacity, hp.....	8,488	126	.....	2,810	60	109	843	32
61 Pumps.....1940.....capacity, g.p.m.....	1,309,005	4,522	2,078	602,360	(⁵)	5,150	210,050	4,178
62 ..1930.....capacity, g.p.m.....	555,063	.....	.....	259,756	.....	2,000	62,478	1,070
63 ..1920.....capacity, g.p.m.....	304,789	6,361	.....	135,605	1,500	2,277	30,639	800
64 Pumping lift, from all sources.....1940.....average, feet.....	44	6	40	37	(⁵)	9	45	38
65 ..1930.....average, feet.....	40	.....	.....	26	.....	53	28	59
66 ..1920.....average, feet.....	40	37	.....	26	61	42	28	35
67 from pumped wells.....1940.....average, feet.....	46	(⁵)	42	38	.....	.....	46	35
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁶								
68 Enterprises reporting pay roll.....number.....	218	6	5	9	5	7	5	10
69 Irrigated area in these enterprises.....acres.....	330,218	20,292	742	12,379	28,774	76,238	23,681	3,737
70 Wages and salaries paid and payable.....dollars..	718,210	56,527	540	6,672	19,882	129,000	59,831	2,452
71 Persons employed during week ending April 29.....number..	1,773	64	9	21	59	93	76	16

* Census of Agriculture.

¹ Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — NEW MEXICO

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1940, 1930, AND 1920: AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

Irrigation data omitted from any of the counties listed are included under "All other counties"

Guadalupe	Hidalgo	Lea	Lincoln	Luna	McKinley	Mora	Otero	Quay	Rio Arriba	Roosevelt	Sandoval	San Juan	San Miguel	
2,536,261	2,177,656	7,487,414	5,154,362	3,067,678	2,559,139	4,099,821	3,353,046	8,422,845	5,307,024	10,945,919	2,961,738	5,523,766	5,487,066	1
270,306	537,700	1,218,035	964,586	1,335,410	560,003	2,033,480	1,228,828	117,870	3,429,438	1,569,769	2,149,114	3,938,623	1,346,604	2
233,954	474,600	1,148,885	851,011	1,022,410	524,847	1,790,605	908,738	83,170	3,172,256	1,249,494	1,956,268	3,264,988	1,122,469	3
36,352	63,100	69,150	113,575	313,000	35,156	242,875	320,090	34,700	257,182	319,295	192,946	673,635	224,135	4
1,461.11	7,075.00	16,240.47	5,810.76	8,505.80	1,272.73	4,058.84	5,184.93	5,612.86	1,913.75	4,996.08	1,795.42	3,323.73	3,109.84	5
8.48	13.13	7.85	10.21	13.80	4.98	7.88	13.34	10.27	16.11	45.63	19.28	9.81	7.35	6
169	72	75	163	156	357	475	228	19	1,722	298	627	1,160	394	7
42,481	54,195	156,070	165,495	255,060	200,990	207,603	343,802	24,250	776,391	370,230	419,799	950,614	333,798	8
252.86	752.71	2,080.93	1,015.31	1,635.00	583.00	437.06	1,507.90	1,276.32	450.87	1,242.38	669.54	819.49	869.27	9
1.33	1.32	0.98	1.75	2.64	1.79	0.58	3.73	2.11	3.65	10.77	3.77	2.37	1.82	10
269	150	455	446	150	1,485	683	401	922	794	1,426	438	1,178	989	11
155,994	201,951	703,571	360,216	296,695	495,792	194,707	699,096	918,486	186,521	1,341,592	119,077	262,130	539,740	12
579.90	1,346.34	1,546.31	807.66	1,977.97	333.87	285.08	1,743.38	996.19	234.91	940.81	265.02	222.52	545.74	13
0.17	0.28	0.39	0.19	0.40	0.32	0.38	0.88	0.54	0.23	0.99	0.40	0.21	0.38	14
144	63	69	117	154	402	409	193	21	1,481	281	905	1,039	325	15
23,722	44,162	75,410	67,872	202,960	59,568	104,263	94,996	22,466	294,290	171,605	199,944	384,953	91,896	16
164.74	700.98	1,092.90	580.10	1,317.92	148.18	254.92	492.21	1,070.76	198.71	610.69	220.93	370.41	292.66	17
0.74	1.08	0.47	0.72	2.10	0.53	0.29	1.03	1.96	1.38	4.99	1.79	0.96	0.50	18
230	129	399	381	134	1,324	595	371	841	677	1,272	317	1,076	845	19
86,041	94,315	277,340	182,484	100,035	193,996	102,725	237,871	706,580	129,738	1,128,466	49,260	112,925	171,705	20
0.09	0.13	0.15	0.10	0.14	0.12	0.20	0.30	0.42	0.16	0.83	0.17	0.09	0.12	21
9	21	42	131	167	4	57	62	12	187	309	45	60	65	22
10	5	12	64	130	8	55	30	41	235	159	60	52	69	23
16	5	.....	102	153	15	102	96	.....	274	.....	82	54	101	24
346	160	81	37	108	3,252	419	79	52	253	70	737	831	333	25
394	765	.....	76	63	1,231	567	189	.....	239	33	541	985	413	26
319	668	.....	117	227	604	369	126	.....	251	.....	402	1,269	681	27
6	3	.....	113	4	5	41	66	.....	144	.....	49	61	62	28
41.2	29.2	0.5	83.1	44.0	43.3	157.1	53.5	.....	489.0	0.2	352.0	557.5	164.9	29
59	23	.....	120	20	61	170	59	.....	539	1	242	336	164	30
88	28	.....	268	48	74	276	232	.....	541	.....	346	340	245	31
58	185	.....	291	85	71	490	337	.....	923	1	905	1,549	518	32
85	159	.....	117	51	85	925	77	.....	1,217	2	551	1,071	545	33
82	47	.....	193	3,171	126	1,081	576	.....	1,526	.....	363	1,371	1,459	34
0.3	0.3	.....	1.9	.....	.....	.....	4.5	.....	0.7	0.1	6.0	3.7	0.1	35
1	.....	.....	.....	5	13	1	4	.....	4	.....	5	8	3	36
1	.....	1	.....	136	13	5	4	.....	5	.....	5	8	4	37
.....	.....	.....	2	60	4	2	.....	.....	5	.....	3	1	5	38
.....	.....	.....	3	16	11	16	13	.....	10	.....	5	2	21	39
(6)	(6)	.....	.....	320	11,405	41	205	.....	202,694	.....	177	4,500	24,002	40
.....	.....	.....	1	1,024	8,497	14,060	.....	.....	2,547	.....	476	150	11,270	41
.....	.....	.....	12	37	6,685	672	110	.....	753	.....	44,049	150	38,419	42
.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
.....	18	47	3	202	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	1	.....	2	155	.....	.....	.....	.....	.....	.....	.....	.....	.....	51
.....	1	.....	2	156	.....	.....	.....	.....	.....	.....	.....	.....	.....	52
.....	10,372	39,605	27	94,623	.....	.....	.....	.....	.....	.....	.....	(5)	(5)	53
.....	50	.....	190	74,391	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
800	.....	.....	18	95,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
.....	17	47	3	204	.....	.....	.....	.....	.....	.....	.....	.....	.....	56
.....	1	.....	2	153	.....	.....	.....	.....	.....	.....	.....	.....	.....	57
.....	1	.....	4	153	.....	.....	.....	.....	.....	.....	.....	.....	.....	58
.....	311	1,302	5	3,472	.....	.....	.....	.....	.....	.....	.....	.....	.....	59
.....	1	.....	21	3,176	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
60	.....	.....	8	3,471	.....	.....	.....	.....	.....	.....	.....	.....	.....	61
.....	11,222	41,355	27	97,403	.....	.....	.....	.....	.....	.....	.....	.....	.....	62
.....	50	.....	190	76,123	.....	.....	.....	.....	.....	.....	.....	.....	.....	63
800	.....	.....	118	91,010	.....	.....	.....	.....	.....	.....	.....	.....	.....	64
.....	38	55	63	67	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
.....	40	.....	14	67	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
20	.....	.....	82	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
.....	38	55	63	68	.....	.....	.....	.....	.....	.....	.....	.....	.....	68
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	69
5	2	.....	9	1	3	.....	.....	.....	.....	.....	.....	.....	.....	70
2,589	(5)	.....	1,204	(5)	3,965	(5)	3,314	.....	.....	.....	.....	.....	.....	71
5,378	(5)	.....	1,825	(5)	50,872	(5)	20,484	.....	.....	.....	.....	.....	.....	72
100	(5)	.....	13	(5)	81	(5)	.....	.....	.....	.....	.....	.....	.....	73

⁴Includes siphons and farm pipe lines reported.
⁵Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms.
⁷Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - NEW MEXICO

COUNTY TABLE II--FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL

AND NUMBER OF EMPLOYEES, 1939--Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	Santa Fe	Sierra	Socorro	Taos	Torrance	Union	Valencia	All other counties ¹
FARM VALUES, 1940*								
1 Land and buildings, all farms.....dollars..	3,560,339	2,543,191	3,314,026	2,998,344	5,457,224	7,855,433	5,013,801	19,955,967
2 Land and buildings, irrigated farms.....dollars..	1,961,630	1,160,963	909,768	2,772,800	156,020	1,665,290	3,681,205	1,046,374
Operated by--								
3 (a) Owners and managers.....dollars..	1,918,230	993,558	719,686	2,618,214	125,920	1,449,954	3,248,545	845,154
4 (b) Tenants.....dollars..	43,400	167,405	190,082	154,586	30,100	215,336	432,660	201,220
5 Average, land and buildings, per farm.....dollars..	3,280.32	1,116.89	1,783.86	1,667.35	2,943.77	32,024.81	2,565.30	7,317.30
6 per acre in farms.....dollars..	97.82	5.31	15.38	16.48	11.41	2.60	7.41	5.93
7 Buildings, irrigated farms reporting value.....number..	562	275	459	1,539	37	49	1,243	141
8 Total reported.....dollars..	613,645	164,126	185,775	720,522	11,565	120,565	927,353	155,540
9 Average, per irrigated farm reporting.....dollars..	1,091.90	596.82	404.74	468.18	313.11	2,460.51	746.06	1,103.12
10 per acre on all irrigated farms.....dollars..	30.60	0.75	3.14	4.28	0.85	0.19	1.87	0.86
11 Buildings, nonirrigated farms reporting value.....number..	347	112	125	125	1,107	939	445	1,765
12 Total reported.....dollars..	349,035	96,189	331,846	71,204	590,614	647,940	133,184	1,952,184
13 Average, per nonirrigated farm reporting.....dollars..	1,005.86	858.83	1,242.87	569.63	533.53	690.03	299.29	1,105.43
14 per acre on all nonirrigated farms.....dollars..	0.66	0.13	0.38	3.23	0.41	0.35	0.20	0.91
15 Implements and machinery, irrigated farms reporting value.....number..	413	272	439	1,242	51	49	1,124	135
16 Total reported.....dollars..	120,629	87,510	102,308	243,965	20,582	59,423	285,371	107,261
17 Average, per irrigated farm reporting.....dollars..	292.08	321.73	233.05	196.43	403.57	1,212.71	253.89	788.68
18 per acre, on all irrigated farms.....dollars..	6.02	0.40	1.73	1.45	1.51	0.09	0.57	0.61
19 Implements and machinery, nonirrigated farms reporting value.....number..	257	107	229	85	1,120	799	376	1,635
20 Total reported.....dollars..	168,499	55,192	170,388	18,413	696,170	381,534	118,046	1,851,407
21 Average, per acre, on all nonirrigated farms.....dollars..	0.32	0.07	0.19	0.83	0.48	0.21	0.18	0.58
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22 Enterprises.....1940..number.....	67	70	12	107	9	36	14	3
23 ..1930..number.....	78	48	22	110	8	17	45	4
24 ..1920..number.....	102	66	95	168	7	70	46	45
25 Average size of enterprise based on								
irrigable area.....1940..acres.....	196	102	2,322	501	530	194	4,705	2,430
26 ..1930..acres.....	219	238	442	906	60	273	1,033	.....
27 ..1920 ² ..acres.....	120	279	313	525	221	287	1,060	256
28 Diversion dams.....1940..number.....	59	27	8	91	4	34	25	1
29 Main canals and laterals.....1940..length, miles.....	182.2	87.0	176.2	390.4	18.1	72.2	413.8	26.1
30 ..1930..length, miles.....	208	112	104	422	5	38	387	26
31 ..1920..length, miles.....	153	134	307	376	40	190	308	39
32 1940..capacity, c.f.s. ³	261	502	390	1,018	48	208	1,871	140
33 1930..capacity, c.f.s. ³	324	600	339	1,475	6	85	1,201	125
34 1920..capacity, c.f.s. ³	226	523	814	1,268	2	407	360	198
35 Pipe lines ⁴.....1940..length, miles.....	2.8	3.7	0.6	0.1	.....	0.1	0.6	0.6
36 Storage dams.....1940..number.....	10	13	1	7	4	6	6	1
37 Reservoirs.....1940..number.....	12	22	2	7	4	6	6	1
38 ..1930..number.....	1	3	.....	5	.....	3	4	4
39 ..1920..number.....	8	11	11	3	1	11	6	12
40 1940..capacity, acre-feet..	4,719	2,639,029	(⁵)	32,725	64	1,291	55,447	(⁵)
41 1930..capacity, acre-feet..	10,000	2,638,863	.....	27,073	.....	1,126	53,054	5
42 1920..capacity, acre-feet..	160	2,638,862	80,003	1,735	75	76	14	8
43 Wells, flowing.....1940..number.....	.....	7	.....	.....	.....	.....	.....	.....
44 ..1930..number.....	.....	1	1	.....	.....	.....	.....	1
45 ..1920..number.....	.....	1	.....	.....	.....	.....	.....	.....
46 1940..yield, g.p.m.....	.....	153	.....	.....	.....	.....	.....	.....
47 1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
48 1920..yield, g.p.m.....	.....	20	7	.....	.....	.....	.....	60
49 Wells, pumped.....1940..number.....	4	47	2	2	6	2	.....	2
50 ..1930..number.....	13	.....	.....	.....	4	.....	.....	12
51 ..1920..number.....	2	11	8	.....	4	.....	.....	51
52 1940..yield, g.p.m.....	1,747	4,314	(⁵)	(⁵)	1,550	(⁵)	.....	(⁵)
53 1930..yield, g.p.m.....	.....	479	.....	.....	7	.....	.....	6,315
54 1920..yield, g.p.m.....	.....	1,269	3,600	.....	.....	47	.....	26,180
55 Pumping plants.....1940..number.....	4	59	2	2	5	3	.....	3
56 ..1930..number.....	17	.....	.....	.....	4	.....	.....	12
57 ..1920..number.....	1	15	11	.....	5	.....	2	42
58 Prime movers.....1940..capacity, hp.....	56	288	(⁵)	(⁵)	35	34	.....	210
59 ..1930..capacity, hp.....	.....	26	.....	.....	4	.....	.....	214
60 ..1920..capacity, hp.....	2	59	94	.....	.....	33	20	742
61 Pumps.....1940..capacity, g.p.m.....	3,149	8,549	(⁵)	(⁵)	700	1,606	.....	9,750
62 ..1930..capacity, g.p.m.....	.....	549	.....	.....	7	.....	.....	5,965
63 ..1920..capacity, g.p.m.....	.....	2,839	3,875	.....	.....	544	2,000	25,995
64 Pumping lift, from all sources.....1940..average, feet.....	27	17	(⁵)	(⁵)	68	38	.....	12
65 ..1930..average, feet.....	.....	74	.....	.....	212	.....	.....	33
66 ..1920..average, feet.....	1	31	27	.....	.....	50	.....	109
67 from pumped wells.....1940..average, feet.....	26	18	(⁵)	(⁵)	68	(⁵)	.....	(⁵)
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁶								
68 Enterprises reporting pay roll.....number.....	16	5	5	31	1	.....	8	1
69 Irrigated area in these enterprises.....acres.....	4,317	3,646	13,221	22,076	(⁵)	.....	33,289	(⁵)
70 Wages and salaries paid and payable.....dollars..	6,562	5,901	36,507	6,587	(⁵)	.....	105,483	(⁵)
71 Persons employed during week ending April 29.....number..	41	36	51	177	(⁵)	.....	185	(⁵)

¹ Census of Agriculture.

² Data between census years not comparable (see headnote).

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁵ Includes siphons and farm pipe lines reported.

⁶ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁷ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - NORTH DAKOTA

STATE TABLE 1.-IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF-						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	⁸ 44,834,560	44,917,120	44,917,120	44,917,120	44,917,120	44,917,120	44,917,120
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	73,962	84,606	77,975	77,690	74,360	45,332	27,611
Land in all farms.....acres.....	37,936,136	39,116,136	38,637,894	36,214,751	28,426,650	15,542,640	7,660,333
Farms irrigated: ¹							
Farms.....number.....	479	273	113	340	69	54	7
Increase or decrease (-) over preceding census.....percent..	² 323.9	.....	-66.8	392.8	27.8	671.4	.....
Proportion of all farms.....percent.....	0.6	0.3	0.1	0.4	0.1	0.1	(³)
Land in farms.....acres.....	344,988	(⁴)	56,654	(⁴)	(⁴)	(⁴)	(⁴)
Proportion of all farm land.....percent.....	0.9	(⁴)	0.1	(⁴)	(⁴)	(⁴)	(⁴)
Area irrigated.....acres.....	⁵ 19,375	⁶ 11,759	⁷ 10,651	(⁸)	(⁸)	4,872	445
Increase or decrease (-) over preceding census.....percent..	² 87.5	.....	.....	.....	.....	994.8	.....
Proportion of total land area of State.....percent.....	(³)	(³)	(³)	.....	.....	(³)	(³)
Proportion of all farm land.....percent.....	0.1	(³)	(³)	.....	.....	(³)	(³)
Value of irrigated farms (land and buildings).....dollars..	4,371,806	(⁴)	1,304,150	(⁴)	(⁴)	(⁴)	(⁴)
Average per farm.....dollars.....	9,126.94	(⁴)	11,541.15	(⁴)	(⁴)	(⁴)	(⁴)
Average per acre.....dollars.....	12.67	(⁴)	23.02	(⁴)	(⁴)	(⁴)	(⁴)
Value of farm implements and machinery ⁹.....dollars..	616,899	(⁴)	148,185	(⁴)	(⁴)	(⁴)	(⁴)
Average per farm ⁹.....dollars.....	1,287.89	(⁴)	1,311.37	(⁴)	(⁴)	(⁴)	(⁴)
Average per acre ⁹.....dollars.....	1.79	(⁴)	2.62	(⁴)	(⁴)	(⁴)	(⁴)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number.....	80	(⁴)	23	30	49	(⁴)	(⁴)
Farms irrigated.....number.....	358	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Area irrigated.....acres.....	21,615	(⁴)	9,392	12,072	10,248	(⁴)	(⁴)
Area existing works were capable of supplying with water.....acres.....	36,522	(⁴)	24,006	34,235	21,917	(⁴)	(⁴)
Area irrigable.....acres.....	39,558	(⁴)	24,860	¹⁰ 57,476	¹⁰ 38,173	(⁴)	(⁴)
Additional area existing works were capable of supplying with water.....acres.....	14,907	(⁴)	14,614	22,163	11,669	(⁴)	(⁴)
Additional irrigable area in enterprises not supplied with water.....acres.....	17,943	(⁴)	15,468	¹⁰ 45,404	¹⁰ 27,925	(⁴)	(⁴)
Investment in irrigation enterprises.....dollars.....	1,755,489	(⁴)	1,267,314	1,857,118	836,482	16,990	(⁴)
Increase or decrease (-) over preceding census.....percent..	² 38.5	(⁴)	-31.8	122.0	(¹¹)	.....	.....
Average per acre based on area works were capable of supplying with water.....dollars.....	48.07	(⁴)	52.79	54.25	38.17	(⁴)	(⁴)
Increase or decrease (-) over preceding census.....percent..	² -8.9	(⁴)	-2.7	42.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	1,785,539	(⁴)	1,343,911	2,072,766	836,482	(⁴)	(⁴)
Average per acre based on irrigable area in enterprises.....dollars..	45.14	(⁴)	54.06	¹⁰ 36.06	¹⁰ 21.91	(⁴)	(⁴)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	1.41	(⁴)	1.97	5.50	28.40	(⁴)	(⁴)

¹ Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ² Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³ Less than one-tenth of 1 percent. ⁴ Not available. ⁵ Irrigated land from which crops were harvested plus 510 acres of irrigated land used only for pasture. ⁶ Irrigated land from which crops were harvested. ⁷ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁸ Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁹ Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹⁰ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹¹ Percent not shown when more than 1,000. ¹² The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.-CENSUS OF AGRICULTURE-NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms		CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
	Number	Acres	Acres	Acres		Acres	Dollars	Dollars	Dollars	Dollars	Dollars
All farms.....	73,962	37,936,136	15,536,632	19,465	510	490,197,358	12.92	140,374,996	3.70	76,876,269	2.03
Owners and managers.....	40,585	23,339,785	9,370,874	13,546	313	315,623,932	13.52	93,981,284	4.03	49,698,711	2.13
Tenants.....	33,377	14,596,351	6,165,758	5,919	197	174,573,426	11.96	46,393,712	3.18	27,177,558	1.86
Irrigated farms, total.....	479	344,988	88,922	19,465	510	4,371,806	12.67	1,200,510	3.48	616,899	1.79
Owners and managers.....	309	262,554	63,686	13,546	313	3,236,068	12.33	850,450	3.24	451,137	1.72
Tenants.....	170	82,434	23,236	5,919	197	1,135,738	13.78	350,060	4.25	165,762	2.01
Wholly irrigated farms.....	158	26,118	11,399	11,399	313	1,425,076	54.56	440,725	16.87	204,328	7.82
Owners and managers.....	99	19,739	7,001	7,001	197	911,026	46.15	290,825	14.73	120,068	6.54
Tenants.....	59	6,379	4,398	4,398	116	514,050	80.58	149,900	23.50	75,260	11.80
Partly irrigated farms.....	321	318,870	77,523	8,066	197	2,946,730	9.24	759,785	2.38	412,571	1.29
Owners and managers.....	210	242,815	58,685	6,545	116	2,325,042	9.58	559,625	2.30	322,089	1.33
Tenants.....	111	76,055	18,838	1,521	81	621,688	8.17	200,160	2.63	90,502	1.19
Nonirrigated farms, total.....	73,483	37,591,148	15,447,710	.....	.....	485,825,552	12.92	139,174,486	3.70	76,259,370	2.03

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION - NORTH DAKOTA

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-feet	Dollars	Dollars
Total.....	80	39,558	36,522	21,615	9,392	12,072	130.1	21,302	21,290	20,977	1.8	1.27	0.69
Streams, gravity.....	10	² 29,542	² 29,522	² 19,073	6,584	9,030	² 189.7	² 18,773	² 19,073	² 18,773	² 1.9	² 1.01	² 0.53
Streams, pumped.....	52	9,691	6,676	2,359	1,669	2,469	41.3	2,359	2,059	2,069	1.2	3.45	2.83
Streams, gravity and pumped.....	2	(²)	(²)	(²)				(²)	(²)	(²)	(²)	(²)	(²)
Wells, pumped.....	9	53	53	47				47	47	47	0.4	7.26	17.95
Wells, flowing.....													
Wells, pumped and flowing.....													
Lakes, gravity.....													
Lakes, pumped.....													
Springs.....	3	126	126	49	8		512.5	36	14	1	(²)	(²)	(²)
Springs and streams.....													
Stored storm water.....	4	146	143	87	600	508	-85.5	87	87	87	1.2	3.45	2.86
City water.....													
Sewage.....													
Streams, gravity; wells, pumped.....													
Streams, gravity; wells, flowing.....													
Streams, pumped; wells, pumped.....													
Waste water, seepage or drainage.....													
Other mixed.....						65							
Other and not reported.....					531								

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered.

²Data for 2 enterprises with "Streams, gravity and pumped" source of supply are included with enterprises reporting "Streams, gravity" source of supply in the 1940 Census.

³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT						COST OF MAINTENANCE AND OPERATION ¹							
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	1,755,489	100.0	48.07	1,267,314	100.0	52.79	-4.72	21,290	1.41	8,773	1.97	-0.56	10,951	5.50
Streams, gravity.....	³ 1,519,707	³ 86.5	³ 51.48	1,223,603	96.5	59.39	³ -7.91	³ 19,073	³ 1.17	6,584	2.22	³ -1.05	8,485	3.55
Streams, pumped.....	226,162	12.9	33.87	10,340	0.8	5.67	28.20	2,069	3.45	1,589	1.59	1.86	2,466	12.21
Streams, gravity and pumped.....	(³)	(³)	(³)					(³)	(³)					
Wells, pumped.....	3,120	0.2	58.87					47	7.26					
Wells, flowing.....														
Wells, pumped and flowing.....														
Lakes, gravity.....														
Lakes, pumped.....														
Springs.....	1,275	0.1	10.12	96	(⁴)	12.00	-1.88	14	0.79					
Springs and streams.....														
Stored storm water.....	5,225	0.3	36.54	20,000	1.6	19.23	17.31	87	3.45	600	0.25	3.20		
City water.....														
Sewage.....														
Streams, gravity; wells, pumped.....														
Streams, gravity; wells, flowing.....														
Streams, pumped; wells, pumped.....														
Waste water, seepage or drainage.....														
Other mixed.....														
Other and not reported.....				13,275	1.0	25.00								

¹Based on irrigated area in enterprises reporting cost of maintenance and operation.

²Based on area works were capable of supplying with water.

³Data for 2 enterprises with "Streams, gravity and pumped" source of supply are included with enterprises reporting "Streams, gravity" source of supply in the 1940 Census.

⁴Less than one-tenth of 1 percent.

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930	1920	
	Primary enterprises	Supplemental enterprises	Primary enterprises	Primary enterprises	
AREA IRRIGATED					
Total.....	Acres 21,615	Acres	Acres 9,392	Acres 12,072	Percent 130.1
Individual and partnership.....	2,232	3,303	3,306	{ -32.4
Cooperative, incorporated ¹	500	.....	.....	.....
Cooperative, unincorporated.....	.....	.....	.....	.....
Irrigation district.....	4,605	.....	.....	.....
Bureau of Reclamation ^{1 2}	14,131	6,089	8,766	{ 132.1
Office of Indian Affairs ²	147	.....	.....	.....
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER					
Total.....	36,522	24,006	34,235	52.1
Individual and partnership.....	3,996	4,006	7,997	{ -0.2
Cooperative, incorporated ¹	590	.....	.....	.....
Cooperative, unincorporated.....	.....	.....	.....	.....
Irrigation district.....	11,824	.....	.....	.....
Bureau of Reclamation ^{1 2}	19,928	20,000	26,238	{ -0.4
Office of Indian Affairs ²	184	.....	.....	.....
IRRIGABLE AREA ³					
Total.....	39,558	24,860	57,476	59.1
Individual and partnership.....	4,710	4,541	11,445	{ 3.7
Cooperative, incorporated ¹	610	.....	.....	.....
Cooperative, unincorporated.....	.....	.....	.....	.....
Irrigation district.....	14,124	.....	.....	.....
Bureau of Reclamation ^{1 2}	19,928	20,319	46,031	{ -1.9
Office of Indian Affairs ²	186	.....	.....	.....

¹Data for less than 3 enterprises shown with permission of the enterprises involved. ²U. S. Dept. of the Interior. ³For 1920 relates to total area. Irrigable area for that year was not reported. ⁴For explanation of areas, see text, p. 447.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total ✓	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area ✓	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre	Maintenance and operation per acre			From which crops were harvested	On which crops failed	
Total.....	Number 80	Number 7	Acres 39,558	Acres 36,522	Dollars 47.99	Dollars 1.41	.....	.....	Number 358	Acres 21,615	Acres 21,507	Acres 12	Acres 96
Individual and partnership.....	67	.....	4,710	3,996	13.10	3.27	.....	.....	65	2,232	2,159	12	61
Cooperative, incorporated ¹	2	1	610	590	96.61	3.40	.....	.....	35	500	500	.....	.....
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irrigation district.....	3	3	14,124	11,824	19.83	0.50	.....	.....	34	4,605	4,570	.....	35
U. S. Bureau of Reclamation ⁴	1	1	19,928	19,928	69.91	1.27	.....	.....	198	14,131	14,131	.....	.....
U. S. Office of Indian Affairs..	7	2	186	184	85.82	7.97	.....	.....	26	147	147	.....	.....

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for less than 3 enterprises shown with permission of the enterprises involved. ⁵For explanation of areas and investment, see text, p. 447.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940					1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises		
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment	Investment in water rights							
Total.....	Dollars 1,755,489	Dollars 1,755,489	Dollars	Dollars 1,752,862	Dollars 2,627	Dollars 1,267,314	Dollars 1,857,118	Percent 38.5	Dollars 48.07	.....	Dollars 70,952	Dollars 30,050
Individual and partnership.....	54,732	54,732	.....	52,335	2,397	55,091	81,693	-0.7	13.70	.....	.....	5,150
Cooperative, incorporated ²	57,130	57,130	.....	57,000	130	.....	.....	.....	96.83	.....	1,500	12,400
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irrigation district.....	234,600	234,600	.....	234,500	100	.....	.....	.....	19.84	.....	67,000	12,500
U. S. Bureau of Reclamation ²	1,393,237	1,393,237	.....	1,393,237	.....	1,212,223	1,775,425	14.9	69.91	.....	.....	.....
U. S. Office of Indian Affairs..	15,790	15,790	.....	15,790	.....	.....	.....	.....	85.82	.....	2,452	.....

¹Only for enterprises serving 5 or more farms. ²Data for less than 3 enterprises shown with permission of the enterprises involved. ³For explanation of investment, see text, p. 447.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939	Average per acre works were capable of supplying with water	Enter-prises 1940	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrigable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
Total.....	Number 5	Acres 34,177	Acres 31,877	Dollars 1,337,648	Dollars 57.36	Dollars 41.96	Number 1	Dollars 23,854	Dollars 13,187	Dollars 1.58	Acres 23,425	Dollars 18,909	Dollars 14,749
Partnership.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooperative, incorporated ³.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	525	277	278
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irrigation district.....	3	14,124	11,824	204,500	23.30	17.30	.....	.....	.....	.....	7,704	3,208	3,201
Bureau of Reclamation ^{3 4}	1	19,928	19,928	1,125,708	74.59	56.49	1	⁵ 23,854	⁵ 13,187	1.58	15,092	15,092	11,270
Office of Indian Affairs ^{3 4}	1	125	125	67,440	84.55	59.52	.....	.....	.....	.....	104	332	.....

¹Only for enterprises serving 5 or more farms. ²In payment of principal, interest, and/or other funded obligations. ³Data for less than 3 enterprises shown with permission of the enterprises involved. ⁴U. S. Dept. of the Interior. ⁵Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁶Represents construction costs of irrigation works less cancellations and repayments. ⁷For explanation of areas and investment, see text, p. 447.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
Total.....	Acres 21,290	Dollars 30,072	Acres	Dollars	Dollars 1.41	Dollars	Number 6	Dollars 14,611	Number 21
Individual and partnership.....	2,157	7,045	.....	.....	3.27	.....	.....	.....	.....
Cooperative, incorporated ²	500	1,700	.....	.....	3.40	.....	1	(³)	(³)
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	(³)	(³)
Irrigation district.....	4,355	2,176	.....	.....	0.50	.....	2	(³)	(³)
U. S. Bureau of Reclamation ²	14,131	17,979	.....	.....	1.27	.....	1	12,466	17
U. S. Office of Indian Affairs ²	147	1,171	.....	.....	7.97	.....	2	620	.....

¹Only for enterprises serving 5 or more farms. ²Data for less than 3 enterprises shown with permission of the enterprises involved. ³Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁴For explanation of areas and investment, see text, p. 447.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
Total.....	Number 19	Number 14	Sec.-ft. 616	Miles 158	Miles 1.2	14	Ac.-ft. 3,946	Miles 3.8	.....	G. p. m.	11	G. p. m. 378	83	Hp. 1,253	83	G. p. m. 104,158
Individual and partnership....	15	12	152	10	0.2	12	3,226	3.4	.....	.....	11	378	59	494	59	39,683
Cooperative, incorporated.....	2	2	32	21	0.9	2	720	0.2	.....	.....	.....	.....	6	82	6	6,825
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irrigation district.....	1	.....	396	29	0.1	.....	.....	0.1	.....	.....	.....	.....	4	340	4	43,200
Bureau of Reclamation ³.....	.....	.....	.....	485	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Office of Indian Affairs ³	1	.....	36	3	.....	.....	.....	0.1	.....	.....	.....	.....	14	337	14	14,450

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³U. S. Dept. of the Interior. ⁴Heading of the Main Canal is in Montana, therefore, capacity not shown in North Dakota.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include that portion of the Lower Yellowstone Project which lies in McKenzie County, North Dakota. This area is not reported under any other classification.

The investment attributed to the Bureau of Reclamation in State table 7 includes the construction cost of the irrigation features originally charged to North Dakota lands. Drainage costs are not included.

Under the Water Conservation and Utilization Program designed to combat the effect of drought and maintain

established agricultural areas, the Bureau of Reclamation has been authorized to construct two new projects in North Dakota. The Buford-Trenton Project in Williams County will irrigate 13,400 acres unsuccessfully dry-farmed, and the Bismarck Project in Burleigh County is to provide water for 4,800 acres also unsuccessfully dry-farmed. The Department of Agriculture is to have charge of the operation and maintenance of both of these projects when they are completed. As these projects were not in operation when the census was taken, no data for them are included.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number
Total.....	19	14	9	10
Concrete or masonry.....			1	2
Timber.....	1			
Earth and rock.....	14	14	8	8
Other and mixed.....	1 ⁴			
Not reported.....				

⁴Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps		Rated capacity of pumps		Average lift of pumps Feet	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers		Rated capacity of movers	
	Number	Percent	G. p. m.	Percent			Number	Percent	Hp.	Percent
Total, 1940.....	83	100.0	104,158	100.0	17	Total, 1940.....	83	100.0	1,253	100.0
Electric motor.....	9	10.8	36,784	35.3	17	Centrifugal pump.....	58	70.0	703	56.1
Centrifugal.....	4	4.8	750	0.7	19	Electric.....	4	4.8	28	2.2
Turbine.....	3	3.6	36,000	34.6	24	Internal-combustion.....	53	64.0	650	51.9
Plunger.....	2	2.4	34	(¹)	11	Other.....	1	1.2	25	2.0
Other.....						Turbine pump.....	4	4.8	340	27.1
Internal-combustion engine.....	64	77.2	62,930	60.4	15	Electric.....	3	3.6	270	21.5
Centrifugal.....	58	70.0	49,560	47.6	14	Internal-combustion.....	1	1.2	70	5.6
Turbine.....	2	2.4	10,200	9.8	19	Other.....				
Plunger.....	1	1.2	30	(¹)	80	Plunger pump.....	12	14.4	41	3.3
Other.....	3	3.6	3,140	3.0	18	Electric.....	2	2.4	2	0.2
Other kinds of motive power.....	10	12.0	4,444	4.3	27	Internal-combustion.....	1	1.2	6	0.5
Centrifugal.....	1	1.2	4,000	3.9	22	Other.....	9	10.8	33	2.6
Turbine.....						Other and mixed types of pumps.....	9	10.8	169	13.5
Plunger.....	9	10.8	444	0.4	28	Electric.....				
Other.....						Internal-combustion.....	9	10.8	169	13.5
Mixed kinds of motive power.....						Other.....				
Centrifugal.....						Total, 1930.....	2 ¹³		216	
Turbine.....						Increase or decrease (-) 1930-1940.....	70		1,037	
Plunger.....										
Other.....										
Total, 1930.....	13		24,900		24					
Increase or decrease (-) 1930-1940..	70		79,258		-7					

¹Less than one-tenth of 1 percent.

²Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930	
Total.....	Miles 3.8	Miles 1.2	Percent 216.7
Concrete:			
1 to 12 inches.....			
13 to 24 inches.....			
Over 24 inches.....	0.3		
Metal:			
1 to 12 inches.....	3.3	1.2	175.0
13 to 24 inches.....	0.1		
Over 24 inches.....			
Wood-stave:			
1 to 12 inches.....			
13 to 24 inches.....			
Over 24 inches.....			
Clay and other:			
1 to 12 inches.....	0.1		
13 to 24 inches.....			
Over 24 inches.....			

¹Includes siphons and farm pipe lines reported.

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number...	9	2	8
Area irrigable in these enterprises.....acres....	26,826	20,359	¹ 49,581
Area irrigated in these enterprises.....acres....	15,277	(2)	(2)
Area for which drains have been installed.....acres....	11,552	3,040	1,613
Additional area needing drainage.....acres....	242	2,000	659
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	75.6	³ 14.9	¹ 3.3
(b) All irrigation enterprises.....percent..	53.4	32.4	13.4
Ratio of area drained plus area needing drainage to—			
(a) Irrigable area reporting.....percent..	44.0	24.8	¹ 4.6
(b) Irrigated area reporting.....percent..	77.2	(2)	(2)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ² Not available. ³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ²	1919 ¹	1939	1929 ²	1919	1939	1929 ³	1919 ³
From surface sources reported:									
Total water entering canals.....acre-feet..	87,466	37,025	28,106	79,407	37,025	28,106	8,059	.....	.....
Area irrigated by these enterprises.....acres.....	19,340	6,089	8,766	15,111	6,089	8,766	4,229	.....	.....
Average water per acre irrigated.....acre-feet..	4.5	6.1	3.2	5.3	6.1	3.2	1.9	.....	.....
Total water delivered to irrigators.....acre-feet..	39,289	9,778	11,636	.....	9,778	11,636	39,289	.....	.....
Area irrigated by these enterprises.....acres.....	21,253	6,089	8,766	.....	6,089	8,766	21,253	.....	.....
Average water per acre irrigated.....acre-feet..	1.8	1.6	1.3	.....	1.6	1.3	1.8	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	20	.....	.....	.....	.....	.....	20	.....	.....
Area irrigated by these enterprises.....acres.....	49	.....	.....	.....	.....	.....	49	.....	.....
Average water per acre irrigated.....acre-feet..	0.4	.....	.....	.....	.....	.....	0.4	.....	.....

¹ Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources were not segregated for 1929 and 1919. ² The quantities of water include only those reported by United States Bureau of Reclamation. ³ Not tabulated.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	21,615	100.0	.....	9,392	100.0	12,072	100.0
Appropriation ¹	20,419	94.5	.....	7,763	82.7	11,612	96.2
Riparian.....	872	4.0	.....	.....	.....	.....	.....
Underground.....	47	0.2	.....	.....	.....	.....	.....
Adjudicated by court.....	.....	.....	.....	960	10.2	.....	.....
Other mixed and not reported...	277	1.3	.....	669	7.1	460	3.8

¹ "Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number..	80	5	61	7	5	2 ¹	2 ¹
2	Irrigated farms, 1939.....number..	358		61	18	46	35	198
3	Area irrigated, 1939.....acres....	21,615		1,937	338	4,709	500	14,131
4	(a) From which crops were harvested.....acres....	21,507		1,914	288	4,674	500	14,131
5	(b) On which crops failed.....acres....	12		12				
6	(c) Irrigated pasture.....acres....	96		11	50	35		
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	1,755,469	3,730	48,457	10,700	243,240	56,125	1,393,237
8	(a) Cost of irrigation works and equipment.....dollars..	1,752,862	3,725	46,110	10,650	243,140	56,000	1,393,237
9	(b) Investment in water rights.....dollars..	2,627	5	2,347	50	100	125	
10	Area works were capable of supplying with water.....acres....	36,522	179	3,279	596	11,965	575	19,928
11	Average investment per acre irrigated.....dollars..	81.22		25.02	31.66	51.65	112.25	98.59
12	Average investment per acre which the works could supply with water.....dollars..	48.07	20.84	14.79	17.95	20.33	97.61	69.91
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number..	71		58	7	4	2 ¹	2 ¹
14	(a) Area irrigated in these enterprises.....acres....	21,290		1,862	338	4,459	500	14,131
15	(b) Cost of maintenance and operation.....dollars..	30,072		5,646	2,239	2,508	1,700	17,979
16	(c) Average cost per irrigated acre reporting.....dollars..	1.41		3.03	6.62	0.56	3.40	1.27
17	Total annual charges.....dollars..	18,909				3,540	277	15,092
18	Average charge per irrigated acre reporting.....dollars..	0.99				0.79	0.55	1.07
19	Area against which charges were assessed.....acres....	23,425				7,808	525	15,092
20	Average annual charge per acre assessed.....dollars..	0.81				0.45	0.53	1.00
21	Total charges collected.....dollars..	14,749				3,201	278	11,270
INDEBTEDNESS AND ARREARAGE, 1939								
22	Enterprises reporting indebtedness.....number..	5				4		2 ¹
23	(a) Area irrigated in these enterprises.....acres....	18,824				4,693		14,131
24	(b) Indebtedness.....dollars..	1,337,648				211,940		1,125,708
25	(c) Average indebtedness per acre irrigated.....dollars..	71.06				45.16		79.66
26	(d) Cost of irrigation works and equipment.....dollars..	1,635,177				241,940		1,393,237
27	(e) Investment in water rights.....dollars..	100				100		
28	(f) Total investment.....dollars..	1,635,277				242,040		1,393,237
29	(g) Maintenance and operation.....dollars..	20,194				2,215		17,979
30	(h) Total annual charges.....dollars..	18,399				3,247		15,092
31	(i) Total charges collected.....dollars..	14,471				3,201		11,270
32	(j) Area against which annual charges were assessed.....acres....	22,884				7,792		15,092
33	(k) Average indebtedness per acre assessed.....dollars..	57.36				23.99		74.59
34	(l) Average charges per acre assessed.....dollars..	0.80				0.42		1.00
35	(m) Average charges per acre irrigated.....dollars..	0.99				0.73		1.07
36	Enterprises reporting arrearage.....number..	1						1
37	(a) Area assessed in these enterprises.....acres....	15,092						15,092
38	(b) Total arrearage.....dollars..	23,854						23,854
39	(c) Average arrearage per acre assessed.....dollars..	1.58						1.58
40	(d) Indebtedness.....dollars..	1,125,708						1,125,708
TYPE, 1940								
41	Individual and partnership.....number..	67	4	61	2			
42	Cooperative (incorporated, and unincorporated).....number..	2	1				1	
43	Irrigation district.....number..	3				3		
44	U. S. Bureau of Reclamation.....number..	1						1
45	U. S. Office of Indian Affairs.....number..	7			5	2		
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
46	Enterprises reporting pay roll.....number..	6				4	2 ¹	2 ¹
47	Wages and salaries paid and payable for 1939.....dollars..	14,611				1,045	1,100	12,466
48	Persons employed during week ending April 29, 1939.....number..	21				1	3	17
SOURCE OF WATER SUPPLY, 1939								
49	Streams, gravity.....number..	10		7	1	1		1
50	Streams, pumped.....number..	52	4	38	6	4		
51	Wells, pumped.....number..	9		9				
52	Wells, pumped and flowing; or wells flowing.....number..							
53	Lakes, gravity or pumped.....number..							
54	Streams and springs; or springs.....number..	3		3				
55	Mixed, streams and wells.....number..	2		1				1
56	Other mixed or stored storm water.....number..	4	1	3				

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Data for less than 3 enterprises shown with permission of the enterprises involved.
³Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station <i>Feet</i>	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Missouri River														
Williston.....	Williams.....	1,878	14.85	+0.05	2.41	+0.39	1.43	-0.21	6.62	-0.07	4.39	-0.06	43.2	+3.9
Medora.....	Billings.....	2,271	13.47	-1.84	1.29	-0.35	1.20	-0.70	6.79	+0.04	4.19	-0.83		
Bowman.....	Bowman.....	2,872	15.55	+0.64	0.81	-0.92	0.83	-0.78	9.08	+2.72	4.83	-0.38	43.5	+1.8
Dunn Center.....	Dunn.....	2,191	14.65	-1.80	2.14	+0.31	0.88	-0.84	6.44	-1.08	5.19	-0.19	40.7	-0.2
Mott.....	Hettinger.....	2,424	14.21	-2.31	1.29	-0.73	1.25	-0.94	6.32	-0.51	5.35	-0.13	44.6	+3.8
Washburn.....	McLean.....	1,731	13.45	-2.15	1.50	-0.48	1.07	-0.41	6.95	+0.30	3.93	-1.56	44.4	+3.8
Bismarck.....	Burleigh.....	1,674	14.62	-1.72	1.21	-0.87	1.16	-0.62	7.68	+0.49	4.57	-0.72	43.8	+3.3
Linton.....	Emmons.....	1,711	15.72	-0.84	0.54	-1.45	0.27	-1.38	9.75	+2.93	5.16	-0.94	44.2	+2.6
Red River														
Crosby.....	Divide.....	1,954	12.39	-2.77	3.32	+1.37	1.58	+0.14	5.50	-0.78	1.99	-3.50	40.8	+2.9
Minot.....	Ward.....	1,557	15.94	+0.16	3.37	+1.23	1.49	+0.04	5.70	-0.84	5.38	-0.25	42.5	+3.7
Bottineau.....	Bottineau.....	1,638	11.06	-4.97	1.94	-0.70	0.95	-0.47	5.06	-1.10	3.71	-2.70	39.5	+3.3
Carrington.....	Foster.....	1,579	14.99	-1.91	1.85	-0.10	1.67	+0.31	7.01	-0.33	4.46	-1.79	40.9	+1.8
Devils Lake.....	Ramsey.....	1,478	14.94	-3.11	1.40	-1.11	1.00	-0.75	7.24	+0.13	5.30	-1.38	40.1	+3.1
Ellendale.....	Dickey.....	1,451	18.71	-0.48	0.68	-1.51	1.51	-0.43	11.11	+3.27	5.41	-1.81	43.7	+2.1
Langdon.....	Cavalier.....	1,615	14.26	-4.04	1.61	-0.98	1.80	-0.19	6.63	+0.06	4.22	-2.93	39.3	+3.9
Valley City.....	Barnes.....	1,245	11.79	-6.90	0.88	-1.47	1.19	-0.45	5.65	-2.15	4.07	-2.83	42.8	+2.6
Grand Forks.....	Grand Forks.....	830	16.65	-2.97	2.23	-0.59	2.31	+0.50	6.47	-1.09	5.64	-1.79	40.2	+1.8
Wahpeton.....	Richland.....	962	17.68	-3.25	1.22	-1.57	1.81	+0.35	10.66	+2.36	3.89	-4.39	44.1	+2.4

¹Departure from normal.

CENSUS OF IRRIGATION — NORTH DAKOTA

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	
5	64	6	3	1	2	1	74	2	3	2	1
.....	83	14	48	15	198	.....	84	7	57	210	2
.....	896	1,225	5,363	14,131	.....	.....	2,291	88	.....	19,236	3
.....	873	1,175	5,328	14,131	.....	.....	2,218	88	.....	19,201	4
.....	12	.....	.....	.....	.....	.....	12	.....	.....	.....	5
.....	11	50	35	.....	.....	.....	61	.....	.....	35	6
3,730	57,047	33,750	267,725	1,393,237	.....	.....	64,067	7,440	1,683,962	.....	7
3,725	54,800	33,600	267,500	1,393,237	.....	.....	61,685	7,440	1,683,737	.....	8
5	2,247	150	225	.....	.....	.....	2,402	.....	225	.....	9
179	2,275	1,833	12,307	19,928	.....	.....	4,070	125	32,327	.....	10
.....	63.67	27.55	49.92	98.59	.....	.....	27.97	84.55	87.54	.....	11
20.84	25.08	18.41	21.75	69.91	.....	.....	15.75	59.52	52.09	.....	12
.....	61	5	4	2	1	.....	66	2	4	.....	13
.....	821	975	5,363	14,131	.....	.....	2,216	88	18,986	.....	14
.....	5,527	2,290	4,276	17,979	.....	.....	8,178	39	21,655	.....	15
.....	6.73	2.35	0.60	1.27	.....	.....	3.69	0.44	1.15	.....	16
.....	332	.....	3,485	15,092	.....	.....	293	39	18,577	.....	17
.....	3.19	.....	0.72	1.07	.....	.....	18.31	0.44	0.98	.....	18
.....	104	.....	8,229	15,092	.....	.....	16	88	23,321	.....	19
.....	3.19	.....	0.42	1.00	.....	.....	18.31	0.44	0.80	.....	20
.....	.....	.....	3,479	11,270	.....	.....	.....	.....	14,749	.....	21
.....	2	4	.....	2	.....	.....	.....	2	4	.....	22
.....	88	4,605	14,131	.....	.....	.....	.....	88	18,736	.....	23
.....	7,440	204,500	1,125,708	1,125,708	.....	.....	.....	7,440	1,330,208	.....	24
.....	84.55	44.41	79.66	.....	.....	.....	.....	84.55	71.00	.....	25
.....	7,440	234,500	1,393,237	.....	.....	.....	.....	7,440	1,627,737	.....	26
.....	.....	100	.....	.....	.....	.....	.....	.....	100	.....	27
.....	7,440	234,600	1,393,237	.....	.....	.....	.....	7,440	1,627,837	.....	28
.....	39	2,176	17,979	.....	.....	.....	.....	39	20,155	.....	29
.....	39	3,208	15,092	.....	.....	.....	.....	39	18,300	.....	30
.....	.....	3,201	11,270	.....	.....	.....	.....	.....	14,471	.....	31
.....	88	7,704	15,092	.....	.....	.....	.....	88	22,796	.....	32
.....	84.55	23.30	74.59	.....	.....	.....	.....	84.55	57.26	.....	33
.....	0.44	0.42	1.00	.....	.....	.....	.....	0.44	0.80	.....	34
.....	0.44	0.74	1.07	.....	.....	.....	.....	0.44	0.99	.....	35
.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	36
.....	.....	.....	15,092	.....	.....	.....	.....	.....	15,092	.....	37
.....	.....	.....	23,854	.....	.....	.....	.....	.....	23,854	.....	38
.....	.....	.....	1.58	.....	.....	.....	.....	.....	1.58	.....	39
.....	.....	.....	1,125,708	.....	.....	.....	.....	.....	1,125,708	.....	40
4	57	5	1	.....	.....	.....	67	.....	.....	.....	41
1	.....	.....	1	.....	.....	.....	1	.....	1	.....	42
.....	.....	1	1	1	.....	.....	.....	.....	2	1	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	44
.....	7	.....	.....	.....	.....	.....	6	1	.....	.....	45
.....	(⁵) 2	.....	3	2	.....	.....	(⁵) 1	2	4	.....	46
.....	.....	.....	1,525	12,466	.....	.....	.....	500	13,991	.....	47
.....	.....	.....	4	17	.....	.....	.....	.....	21	.....	48
.....	5	2	1	1	1	.....	8	.....	1	1	49
4	43	4	1	.....	.....	.....	49	1	1	1	50
.....	9	.....	.....	.....	.....	.....	9	.....	.....	.....	51
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
.....	3	.....	.....	.....	.....	.....	3	.....	.....	.....	54
.....	1	.....	1	.....	.....	.....	1	.....	1	.....	55
1	3	.....	.....	.....	.....	.....	4	.....	.....	.....	56

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation in North Dakota during both the calendar year (1939) and the water year (October 1938 through September 1939), as reported by the United States Weather Bureau, was substantially below normal, particularly in the drainage basins tributary to the Red River.

The average annual precipitation for the State over the period 1892 to 1939 inclusive was 16.92 inches. The average precipitations for the calendar years 1938 and 1939 were 15.33, a departure of -1.59, and 14.15, a departure of -2.72 inches, respectively.

In 1939 the precipitation averaged below normal in all sections of the State. Only three months, February, June, and August, had precipitations in excess of the normal. November 1939 was the driest month in the climatological

history of North Dakota. Dust storms were light and less frequent than in other years. Due to the fact that June was cool and wet, crops were mostly good throughout the State and hay was plentiful. Livestock was good to excellent.

The mean temperature for the year was above normal at almost every station in the State. February, March, June, and October were the only months with subnormal temperatures. February with a mean temperature of -0.8°, was by far the coldest month of the year and December was the warmest December since State-wide records began in 1892. The frost free season extended from May 11 to September 23 or 25 at most stations, which made the growing season somewhat longer than average.

CENSUS OF IRRIGATION - NORTH DAKOTA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	LAKE WINNIPEG (CANADA)			MISSISSIPPI RIVER						
		Red River			Missouri River						
		Total	Direct	Assini-boine River (Canada) Souris River (2)	Total	Direct ¹	Little Missouri River (7)	Knife River (6)	Heart River (10)	Cannon-ball River (11)	
IRRIGATED FARMS AND AREAS											
1	Irrigated farms.....1939...number.....	358	61	6	55	297	254	5	4	12	22
2	Area irrigated.....1939...acres.....	21,615	4,493	272	4,221	17,122	16,706	72	28	45	271
3	(a) Cropland harvested.....1939...acres.....	21,507	4,458	272	4,186	17,049	16,701	72	28	39	209
4	(b) Crop failure.....1939...acres.....	12	.....	.....	.....	12	.....	.....	.....	.....	12
5	(c) Pasture.....1939...acres.....	96	35	.....	35	61	5	.....	.....	6	50
6	Area irrigated.....1929...acres.....	9,392	2,099	.....	1,453	7,293	.....	.....	.....	.....	.....
7	.....1919...acres.....	12,072	.....	.....	.....	12,072	.....	.....	.....	.....	.....
8	Increase or decrease (-), 1929-1939.....percent.....	130.1	114.1	.....	190.5	134.8	.....	.....	.....	.....	.....
9	Irrigable area in enterprises.....1940...acres.....	39,558	8,100	455	7,645	31,458	30,157	95	412	115	679
10	.....1930...acres.....	24,860	2,409	.....	1,453	22,451	.....	.....	.....	.....	.....
11	.....1920 ² ...acres.....	57,476	.....	.....	.....	57,476	.....	.....	.....	.....	.....
12	Excess of irrigable area over the area irrigated.....1940...acres.....	17,943	3,607	183	3,424	14,336	13,451	23	394	70	408
13	.....1930...acres.....	15,468	310	.....	.....	15,158	.....	.....	.....	.....	.....
14	.....1920 ² ...acres.....	45,404	.....	.....	.....	45,404	.....	.....	.....	.....	.....
15	Area works were capable of supplying with water.....1940...acres.....	36,522	7,980	335	7,645	28,542	27,637	95	107	115	588
16	.....1930...acres.....	24,006	2,099	.....	1,453	21,907	.....	.....	.....	.....	.....
17	.....1920...acres.....	34,235	.....	.....	.....	34,235	.....	.....	.....	.....	.....
18	Increase or decrease (-), 1930-1940.....percent.....	52.1	280.2	.....	426.2	30.3	.....	.....	.....	.....	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940...acres.....	14,907	3,487	63	3,424	11,420	10,931	23	79	70	317
20	.....1930...acres.....	14,614	.....	.....	.....	14,614	.....	.....	.....	.....	.....
21	.....1920...acres.....	22,163	.....	.....	.....	22,163	.....	.....	.....	.....	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	59.2	56.3	81.2	55.2	60.0	60.4	75.8	26.2	39.1	46.1
23	.....1929...percent.....	39.1	100.0	.....	100.0	33.3	.....	.....	.....	.....	.....
24	.....1919...percent.....	35.3	.....	.....	.....	35.3	.....	.....	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1											
25	Total investment in irrigation enterprises.....1940...dollars.....	1,755,489	130,566	9,741	120,825	1,624,923	1,604,533	1,839	3,475	5,751	9,325
26	(a) Cost of irrigation works and equipment.....1940...dollars.....	1,752,862	130,225	9,625	120,600	1,622,637	1,602,367	1,625	3,450	5,735	9,260
27	(b) Investment in water rights (reported).....1940...dollars.....	2,627	341	116	225	2,286	2,166	14	25	16	65
28	Total investment in irrigation enterprises.....1930...dollars.....	1,267,314	20,925	.....	5,775	1,246,389	.....	.....	.....	.....	.....
29	.....1920...dollars.....	1,857,118	.....	.....	.....	1,857,118	.....	.....	.....	.....	.....
30	Increase or decrease (-), 1930-1940.....percent.....	38.5	524.0	.....	1,992.2	30.4	.....	.....	.....	.....	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940...dollars.....	48.07	16.36	29.08	15.80	56.93	58.06	19.36	32.48	50.01	15.86
32	.....1930...dollars.....	52.79	9.97	.....	3.97	56.89	.....	.....	.....	.....	.....
33	.....1920...dollars.....	54.25	.....	.....	.....	54.25	.....	.....	.....	.....	.....
34	Average investment per acre irrigated.....1939...dollars.....	81.22	29.06	35.81	28.62	94.90	96.05	25.54	124.11	127.80	34.41
35	Estimated final investment in existing enterprises.....1940...dollars.....	1,785,539	142,566	9,741	132,825	1,642,973	1,618,798	1,839	4,375	6,451	11,510
36	Average investment based on estimated final investment and irrigable area, per acre.....1940...dollars.....	45.14	17.60	21.41	17.37	52.23	53.68	19.36	10.62	56.10	16.95
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS											
37	Enterprises reporting maintenance and operation.....1939...number.....	71	13	6	7	58	21	4	3	12	18
38	Area irrigated in these enterprises.....1939...acres.....	21,290	4,493	272	4,221	16,797	16,421	52	8	45	271
39	Cost of maintenance and operation.....1939...dollars.....	30,072	5,912	1,816	4,096	24,160	22,424	95	42	612	987
40	Average cost, per acre irrigated.....1939...dollars.....	1.41	1.32	6.68	0.97	1.44	1.37	1.83	5.25	13.60	3.64
41	Total annual charges (reported) ³.....1939...dollars.....	18,909	3,235	.....	3,235	15,674	15,674	.....	.....	.....	.....
42	Average annual charge per acre irrigated.....1939...dollars.....	0.99	0.83	.....	0.83	1.03	1.03	.....	.....	.....	.....
43	Area against which charges were assessed.....1939...acres.....	23,425	7,249	.....	7,249	16,176	16,176	.....	.....	.....	.....
44	Average annual charge per acre assessed.....1939...dollars.....	0.81	0.45	.....	0.45	0.97	0.97	.....	.....	.....	.....
45	Total charges collected ⁴.....1939...dollars.....	14,749	3,479	.....	3,479	11,270	11,270	.....	.....	.....	.....
46	Indebtedness to December 31 (reported) ⁵.....1939...dollars.....	1,337,648	29,500	.....	29,500	1,308,148	1,308,148	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939											
47	Enterprises reporting water delivered.....1939...number.....	72	12	5	7	60	21	5	4	12	18
48	Area irrigated by these enterprises.....1939...acres.....	21,302	4,490	259	4,221	16,822	16,406	72	28	45	271
49	Water delivered.....1939...acre-feet.....	39,309	6,528	164	6,364	32,781	31,805	46	27	26	877
50	Average water delivered per acre irrigated.....1939...acre-feet.....	1.8	1.5	0.6	1.5	1.9	1.9	0.6	1.0	0.6	3.2
51	Average cost of water per acre irrigated.....1939...dollars.....	1.27	1.23	7.01	0.88	1.29	1.21	1.83	5.25	13.60	3.64
52	Average cost of water per acre-foot delivered.....1939...dollars.....	0.69	0.85	11.07	0.58	0.66	1.22	2.86	5.44	23.54	1.13
DRAINAGE OF IRRIGATED LAND											
53	Enterprises reporting land drained or needing drainage.....1939...number.....	9	.....	.....	.....	9	5	.....	.....	(5) ²	(5) ²
54	Irrigable area in these enterprises.....1939...acres.....	26,826	.....	.....	.....	26,826	26,766	.....	.....	(5)	(5)
55	Irrigated area in these enterprises.....1939...acres.....	15,277	.....	.....	.....	15,277	15,261	.....	.....	(5)	(5)
56	Area for which drains have been installed.....1939...acres.....	11,552	.....	.....	.....	11,552	11,536	.....	.....	(9)	(6)
57	Additional area needing drainage.....1939...acres.....	242	.....	.....	.....	242	198	.....	.....	(9)	(5)

¹Data for 2 enterprises in Yellow River Drainage Basin (8) (number refers to separate map) and for 2 enterprises in James River Drainage Basin (5) are included with Missouri River "Direct" Drainage Basin (4). ²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only. ⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - NORTH DAKOTA

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DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	STATE TOTAL	LAKE WINNIPEG (CANADA)			MISSISSIPPI RIVER						
		Red River			Missouri River						
		Total	Direct	Assini- boine River (Canada)	Total	Direct ¹	Little Mis- souri River	Knife River	Heart River	Cannon- ball River	
		(1)	(2)		(4)	(7)	(6)	(10)	(11)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1											
1	Enterprises.....1940..number.....	80	13	6	7	67	24	5	6	12	20
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	457	614	56	1,092	426	1,152	19	18	10	29
3	Diversions dams.....1940..total number.....	19	5	3	2	14	7	1	3	.....	3
4	1930..total number.....	9	.....	.....	.....	9	.....	.....	.....	.....	.....
5	1920..total number ²	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	(a) Concrete and masonry.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7	(b) Timber.....1940..number.....	1	.....	.....	.....	1	.....	.....	1	.....	.....
8	(c) Earth and rock.....1940..number.....	14	5	3	2	9	3	1	2	.....	3
9	(d) Other, mixed, and not reported.....1940..number.....	4	.....	.....	.....	4	.....	.....	.....	.....	.....
10	Main canals and laterals.....1940..total length, miles.....	159.2	23.9	.....	23.9	135.3	133.3	.....	1.0	.....	1.0
11	1930..total length, miles.....	87	1	.....	.....	86	.....	.....	.....	.....	.....
12	1920..total length, miles ²	151	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	(a) Earth.....1940..length, miles.....	158	23	.....	23	135	133	.....	1	.....	1
14	(b) Lined.....1940..length, miles.....	1.2	0.9	.....	0.9	0.3	0.3	.....	.....	.....	.....
15	1940..capacity, c.f.s. ³	616	365	15	350	251	192	5	9	10	35
16	1930..capacity, c.f.s. ³	1,072	2	.....	.....	1,070	.....	.....	.....	.....	.....
17	1920..capacity, c.f.s. ³	836	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	Pipe lines ⁴.....1940..total length, miles.....	3.8	1.9	0.5	1.4	1.9	0.6	0.2	.....	0.7	0.4
19	1930..total length, miles.....	1.2	1.2	.....	.....	.....	.....	.....	.....	.....	.....
20	1920..total length, miles ²	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	(a) Concrete.....1940..length, miles.....	0.3	0.1	.....	0.1	0.2	0.1	.....	.....	.....	0.1
22	(b) Metal.....1940..length, miles.....	3.4	1.8	0.5	1.3	1.6	0.5	0.2	.....	0.6	0.3
23	(c) Wood-stave.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	(d) Other.....1940..length, miles.....	0.1	.....	.....	.....	0.1	.....	.....	.....	0.1	.....
25	Storage dams.....1940..total number.....	14	2	.....	2	12	2	.....	1	2	7
26	1930..total number.....	10	.....	.....	.....	10	.....	.....	.....	.....	.....
27	1920..total number ²	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	(a) Concrete and masonry.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	14	2	.....	2	12	2	.....	1	2	7
30	(c) Other, mixed, and not reported.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Reservoirs.....1940..total number.....	14	2	.....	2	12	2	.....	1	2	7
32	(a) 1-99 acre-foot capacity.....1940..number.....	10	.....	.....	.....	10	1	.....	1	2	6
33	(b) 100-999 acre-foot capacity.....1940..number.....	3	2	.....	2	1	1	.....	.....	.....	.....
34	(c) 1,000 and over acre-foot capacity.....1940..number.....	1	.....	.....	.....	1	.....	.....	.....	.....	1
35	1940..total capacity, ac.-ft. ⁵	3,946	720	.....	720	3,226	(?)	.....	(?)	(?)	2,781
36	1930..total capacity, ac.-ft. ⁵	8	.....	.....	.....	8	.....	.....	.....	.....	.....
37	1920..total capacity, ac.-ft. ⁵	1,466	.....	.....	.....	1,466	.....	.....	.....	.....	.....
38	Wells, flowing.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39	1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	1920..number ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41	1940..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42	1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43	1920..yield, g.p.m. ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	11	.....	.....	.....	11	1	.....	.....	4	6
45	1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
46	1920..number ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
47	1940..yield, g.p.m.....	378	.....	.....	.....	378	(?)	.....	.....	39	39
48	1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
49	1920..yield, g.p.m. ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
50	Pumping plants.....1940..total number.....	83	16	6	10	67	26	3	6	14	18
51	1930..total number.....	13	8	.....	5	5	.....	.....	.....	.....	.....
52	Prime movers.....1940..capacity, hp.....	1,253	274	114	160	979	727	13	71	67	101
53	1930..capacity, hp.....	216	153	.....	123	63	.....	.....	.....	.....	.....
54	1920..capacity, hp. ²	2,068	.....	.....	.....	.....	.....	.....	.....	.....	.....
55	(a) Electric.....1940..number.....	9	1	.....	.....	8	3	.....	.....	5	.....
56	1940..capacity, hp.....	300	(?)	.....	(?)	292	270	.....	.....	22	.....
57	(b) Internal-combustion.....1940..number.....	64	15	6	9	49	22	3	6	7	11
58	1940..capacity, hp.....	895	266	114	152	629	432	13	71	43	70
59	(c) Other.....1940..number.....	10	.....	.....	.....	10	1	.....	.....	2	7
60	1940..capacity, hp.....	58	.....	.....	.....	58	(?)	.....	.....	(?)	31
61	Pumps.....1940..total number.....	83	16	6	10	67	26	3	6	14	18
62	1930..number.....	13	8	.....	5	5	.....	.....	.....	.....	.....
63	1920..number ²	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
64	1940..capacity, g.p.m.....	104,158	26,045	6,270	19,775	78,113	66,000	1,400	3,300	3,104	4,309
65	1930..capacity, g.p.m.....	24,900	20,400	.....	14,400	4,500	.....	.....	.....	.....	.....
66	1920..capacity, g.p.m. ²	51,250	.....	.....	.....	.....	.....	.....	.....	.....	.....
67	(a) Centrifugal.....1940..number.....	63	12	3	9	51	22	3	6	10	10
68	1940..capacity, g.p.m.....	54,310	19,975	3,200	16,775	34,335	22,800	1,400	3,300	3,065	3,770
69	1940..average capacity, g.p.m.....	862	1,655	1,067	1,864	673	1,036	467	550	306	377
70	(b) Turbine.....1940..number.....	5	5	.....	.....	4	.....	.....	.....	.....	.....
71	1940..capacity, g.p.m.....	46,200	3,000	.....	3,000	43,200	43,200	.....	.....	.....	.....
72	1940..average capacity, g.p.m.....	9,240	3,000	.....	3,000	10,800	10,800	.....	.....	.....	.....
73	(c) Plunger.....1940..number.....	12	1	1	.....	11	.....	.....	.....	4	7
74	1940..capacity, g.p.m.....	508	(?)	(?)	.....	478	.....	.....	.....	39	439
75	1940..average capacity, g.p.m.....	42	(?)	(?)	.....	43	.....	.....	.....	10	63
76	(d) Other.....1940..number.....	3	2	2	.....	1	.....	.....	.....	.....	1
77	1940..capacity, g.p.m.....	3,140	(?)	(?)	.....	(?)	.....	.....	.....	.....	(?)
78	Pumping lift, from all sources.....1940..average, feet.....	17	21	30	13	16	15	17	16	15	19
79	1930..average, feet.....	24	13	.....	13	40	.....	.....	.....	.....	.....
80	1920..average, feet ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
81	from pumped wells.....1940..average, feet.....	25	.....	.....	.....	25	(?)	.....	.....	11	30
82	from surface sources.....1940..average, feet.....	16	21	30	13	15	14	17	16	16	13

¹Data for 2 enterprises in Yellow River Drainage basin (8) (number refers to separate map) and for 2 enterprises in James River Drainage Basin (5) are included with Missouri River "Direct" Drainage Basin (4). ²Not tabulated by drainage basin in 1920. ³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁴Includes siphons and farm pipe lines reported. ⁵Data for less than 3 enterprises shown with permission of the enterprises involved. ⁶Total capacity of all reservoirs regardless of size. ⁷Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - NORTH DAKOTA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)		STATE TOTAL	Billings	Cass	Dunn	Grant	McKenzie	Mercer
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a								
1	All farms.....1940..number.....	73,902	471	2,592	1,359	1,233	1,563	1,057
2	.....1930..number.....	77,975	531	2,595	1,407	1,511	1,738	1,030
3	Irrigated farms.....1940..number.....	479	7	9	12	21	167	8
4	.....1930..number.....	113	.....	.....	.....	.....	89	.....
5	Increase or decrease (-), 1930-1940.....percent.....	323.9	.....	.....	(¹)	.....	87.6	.....
6	Operated by—(a) Owners and managers.....1940..number.....	309	6	6	10	8	115	8
7	.....1930..number.....	85	.....	.....	.....	.....	65	.....
8	(b) Tenants.....1940..number.....	170	1	3	2	13	52	.....
9	.....1930..number.....	28	.....	.....	.....	.....	24	.....
10	Land in all farms.....1940..acres.....	37,936,136	352,125	1,093,727	1,009,967	894,049	915,963	628,676
11	Land in irrigated farms.....1940..acres.....	344,988	9,715	4,486	20,540	24,440	50,706	4,023
12	Average per farm.....1940..acres.....	720	1,388	498	1,712	1,164	304	503
13	(a) Operated by owners and managers.....1940..acres.....	262,554	(²)	3,696	(²)	8,015	43,072	4,023
14	Average per farm.....1940..acres.....	850	(²)	616	(²)	1,002	375	503
15	(b) Operated by tenants.....1940..acres.....	82,434	(²)	790	(²)	16,425	7,634	.....
16	Average per farm.....1940..acres.....	485	(²)	263	(²)	1,263	147	.....
17	Approximate land area.....1940..acres.....	44,834,560	728,960	1,119,360	1,323,520	1,070,080	1,786,400	698,880
IRRIGATED AND IRRIGABLE AREAS								
18	Area irrigated.....1939..acres.....	21,615	37	234	43	39	15,361	26
19	(a) Cropland harvested.....1939..acres.....	21,507	37	234	43	31	15,361	26
20	(b) Crop failure.....1939..acres.....	12	.....	.....	.....	2	.....	.....
21	(c) Pasture.....1939..acres.....	96	.....	.....	.....	6	.....	.....
22	Area irrigated.....1929..acres.....	9,392	.....	.....	.....	.....	6,097	.....
23	.....1919..acres.....	12,072	.....	.....	.....	.....	6,630	.....
24	Increase or decrease (-), 1929-1939.....percent.....	130.1	.....	.....	.....	.....	151.9	.....
25	Irrigable area in enterprises.....1940..acres.....	39,558	60	245	364	65	27,328	167
26	.....1930..acres.....	24,860	.....	.....	.....	.....	20,327	.....
27	.....1920 ³ ..acres.....	57,476	.....	.....	.....	.....	21,424	.....
28	Excess of irrigable area over the area irrigated.....1940..acres.....	17,943	23	11	321	26	11,967	141
29	.....1930..acres.....	15,468	.....	.....	.....	.....	14,230	.....
30	Area works were capable of supplying with water.....1940..acres.....	36,522	60	242	59	50	25,028	167
31	.....1930..acres.....	24,006	.....	.....	.....	.....	20,008	.....
32	.....1920..acres.....	34,235	.....	.....	.....	.....	14,726	.....
33	Increase or decrease (-), 1930-1940.....percent.....	52.1	.....	.....	.....	.....	25.1	.....
34	Excess, capability of works over area irrigated.....1940..acres.....	14,907	23	8	16	11	9,667	141
35	.....1930..acres.....	14,614	.....	.....	.....	.....	13,911	.....
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	6.3	0.4	5.2	0.2	0.2	30.3	0.6
37	.....1929..percent.....	16.6	.....	.....	.....	.....	29.5	.....
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	59.2	61.7	96.7	72.9	78.0	61.4	15.6
39	.....1929..percent.....	39.1	.....	.....	.....	.....	30.5	.....
CAPITAL INVESTED TO JANUARY 1								
40	Total investment in all enterprises.....1940..dollars.....	1,755,489	1,514	7,416	3,092	3,470	1,568,237	5,542
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	1,752,862	1,500	7,300	3,067	3,460	1,568,237	5,542
42	(b) Investment in water rights (reported).....1940..dollars.....	2,627	14	116	25	10	.....	.....
43	Total investment in all enterprises.....1930..dollars.....	1,267,314	.....	.....	.....	.....	1,212,319	.....
44	.....1920..dollars.....	1,857,118	.....	.....	.....	.....	1,235,209	.....
45	Increase or decrease (-), 1930-1940.....percent.....	38.5	.....	.....	.....	.....	29.4	.....
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	48.07	25.23	30.64	52.41	69.40	62.66	33.19
47	.....1930..dollars.....	52.79	.....	.....	.....	.....	60.59	.....
48	.....1920..dollars.....	54.25	.....	.....	.....	.....	89.88	.....
49	Average investment per acre irrigated.....1939..dollars.....	81.22	40.92	31.69	71.91	88.97	102.09	213.15
50	Estimated final investment in existing enterprises.....1940..dollars.....	1,785,539	1,514	7,416	3,292	4,705	1,580,737	7,117
51	.....1930..dollars.....	1,343,911	.....	.....	.....	.....	1,285,816	.....
52	.....1920..dollars.....	2,072,766	.....	.....	.....	.....	1,321,457	.....
53	Increase or decrease (-), 1930-1940.....percent.....	32.9	.....	.....	.....	.....	22.9	.....
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	45.14	25.23	30.27	9.04	72.38	57.84	42.62
55	.....1930..dollars.....	54.06	.....	.....	.....	.....	63.26	.....
56	.....1920 ³ ..dollars.....	36.06	.....	.....	.....	.....	61.68	.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57	Enterprises reporting maintenance and operation.....1939..number.....	73	3	4	9	9	2	3
58	Area irrigated in these enterprises.....1939..acres.....	21,290	17	234	23	39	(²)	26
59	Cost of maintenance and operation.....1939..dollars.....	30,072	70	1,715	48	680	(²)	281
60	Average cost, per acre irrigated.....1939..dollars.....	1.41	4.12	7.33	2.09	17.44	(²)	10.81
61	.....1929..dollars.....	1.97	.....	.....	.....	.....	2.34	.....
62	Total annual charges (reported) ⁴.....1939..dollars.....	18,909	.....	.....	6	.....	15,342	6
63	Average annual charge per acre irrigated.....1939..dollars.....	0.99	.....	.....	0.40	.....	1.02	0.40
64	Area against which charges were assessed.....1939..acres.....	23,425	.....	.....	15	.....	16,072	15
65	Average annual charge per acre assessed.....1939..dollars.....	0.81	.....	.....	0.40	.....	0.95	0.40
66	Total charges collected ⁴.....1939..dollars.....	14,749	.....	.....	.....	.....	11,270	.....
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	1,337,648	.....	.....	1,267	.....	1,300,708	1,267
WATER DELIVERED TO IRRIGATORS								
68	Enterprises reporting water delivered.....1939..number.....	74	4	4	5	9	3	3
69	Area irrigated in these enterprises.....1939..acres.....	21,302	37	234	43	39	15,361	26
70	Water delivered in these enterprises.....1939..acre-feet.....	39,309	26	125	49	18	30,058	54
71	Average water delivered per acre irrigated.....1939..acre-feet.....	1.8	0.7	0.5	1.1	0.5	2.0	2.1
72	Average cost of water per acre irrigated.....1939..dollars.....	1.27	4.12	7.33	2.09	17.44	1.02	10.81
DRAINAGE OF IRRIGATED LAND								
73	Enterprises reporting land drained or needing drainage.....1939..number.....	9	.....	.....	.....	2	(²)	2
74	Irrigable area in these enterprises.....1939..acres.....	26,826	.....	.....	.....	(²)	(²)	.....
75	Irrigated area in these enterprises.....1939..acres.....	15,277	.....	.....	.....	(²)	(²)	.....
76	Area for which drains have been installed.....1939..acres.....	11,552	.....	.....	.....	(²)	(²)	.....
77	Additional area needing drainage.....1939..acres.....	242	.....	.....	.....	(²)	.....	.....

^aCensus of Agriculture. ¹Percent not shown when more than 1,000. ²Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census. ³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - NORTH DAKOTA

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COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	Morton	Sioux	Slope	Stark	Ward	Williams	All other counties ¹
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1 All farms.....1940..number.....	1,755	447	589	1,320	2,447	2,080	57,049
2 .....1930..number.....	1,851	688	737	1,337	2,662	2,288	59,600
3 Irrigated farms.....1940..number.....	9	51	8	21	30	10	126
4 .....1930..number.....	2	2	2	2	2	7	12
5 Increase or decrease (-), 1930-1940.....percent.....			300.0		(2)	42.9	950.0
6 Operated by—(a) Owners and managers.....1940..number.....	7	32	6	17	7	7	80
7 .....1930..number.....						6	14
8 (b) Tenants.....1940..number.....	2	19	2	4	23	3	46
9 .....1930..number.....						1	3
10 Land in all farms.....1940..acres.....	1,106,368	371,509	587,430	825,140	1,110,636	1,028,040	28,012,506
11 Land in irrigated farms.....1940..acres.....	889	67,983	9,040	12,862	3,042	10,758	126,504
12 Average per farm.....1940..acres.....	99	1,333	1,130	612	101	1,076	1,004
13 (a) Operated by owners and managers.....1940..acres.....	(3)	48,992	(3)	10,692	2,711	6,402	98,051
14 Average per farm.....1940..acres.....	(3)	1,531	(3)	629	387	915	1,226
15 (b) Operated by tenants.....1940..acres.....	(3)	18,991	(3)	2,170	331	4,356	28,453
16 Average per farm.....1940..acres.....	(3)	1,000	(3)	542	14	1,452	619
17 Approximate land area.....1940..acres.....	1,237,120	719,380	784,640	844,160	1,310,720	1,344,000	31,855,360
IRRIGATED AND IRRIGABLE AREAS							
18 Area irrigated.....1939..acres.....	68	75	217	24	846	282	4,363
19 (a) Cropland harvested.....1939..acres.....	68	69	163	24	846	277	4,328
20 (b) Crop failure.....1939..acres.....		6	4				
21 (c) Pasture.....1939..acres.....			50			5	35
22 Area irrigated.....1929..acres.....						1,085	2,210
23 .....1919..acres.....						5,442	
24 Increase or decrease (-), 1929-1939.....percent.....						-74.0	97.4
25 Irrigable area in enterprises.....1940..acres.....	162	139	506	66	921	1,475	8,060
26 .....1930..acres.....						1,848	2,685
27 .....1920 ⁴ ..acres.....						36,052	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	94	64	289	42	75	1,193	3,697
29 .....1930..acres.....						763	475
30 Area works were capable of supplying with water.....1940..acres.....	132	81	506	66	921	1,305	7,905
31 .....1930..acres.....						1,633	2,355
32 .....1920..acres.....						19,509	
33 Increase or decrease (-), 1930-1940.....percent.....						-20.1	234.2
34 Excess, capability of works over area irrigated.....1940..acres.....	64	6	289	42	75	1,023	3,542
35 .....1930..acres.....						548	155
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	7.6	0.1	2.4	0.2	27.8	2.6	3.4
37 .....1929..percent.....						17.7	7.4
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	51.5	92.6	42.9	36.4	91.9	21.6	55.2
39 .....1929..percent.....						66.4	93.4
CAPITAL INVESTED TO JANUARY 1							
40 Total investment in all enterprises.....1940..dollars.....	3,282	10,140	2,450	3,620	61,225	12,600	72,901
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	3,250	10,140	2,400	3,620	61,100	10,500	72,746
42 (b) Investment in water rights (reported).....1940..dollars.....	32		50		125	2,100	155
43 Total investment in all enterprises.....1930..dollars.....						32,400	22,595
44 .....1920..dollars.....						621,909	
45 Increase or decrease (-), 1930-1940.....percent.....						-61.1	222.6
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	24.86	125.19	4.84	54.85	66.48	9.66	9.22
47 .....1930..dollars.....						19.84	9.55
48 .....1920..dollars.....						31.88	
49 Average investment per acre irrigated.....1939..dollars.....	48.26	135.20	11.29	150.83	72.37	44.68	16.71
50 Estimated final investment in existing enterprises.....1940..dollars.....	3,582	10,790	2,450	4,120	73,225	12,600	73,991
51 .....1930..dollars.....						32,900	25,195
52 .....1920..dollars.....						751,309	
53 Increase or decrease (-), 1930-1940.....percent.....						-61.7	193.7
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	22.11	77.63	4.84	62.42	79.51	8.54	9.18
55 .....1930..dollars.....						17.80	9.38
56 .....1920 ⁴ ..dollars.....						20.84	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57 Enterprises reporting maintenance and operation.....1939..number.....	8	10	5	5	6	3	11
58 Area irrigated in these enterprises.....1939..acres.....	68	75	217	24	846	247	4,363
59 Cost of maintenance and operation.....1939..dollars.....	332	1,423	146	315	2,170	1,550	3,113
60 Average cost, per acre irrigated.....1939..dollars.....	4.88	18.97	0.67	13.12	2.57	6.28	0.71
61 .....1929..dollars.....						0.56	1.54
62 Total annual charges (reported) ⁵.....1939..dollars.....		293			277		2,985
63 Average annual charge per acre irrigated.....1939..dollars.....		18.31			0.55		0.87
64 Area against which charges were assessed.....1939..acres.....		16			525		6,782
65 Average annual charge per acre assessed.....1939..dollars.....		18.31			0.53		0.44
66 Total charges collected ⁶.....1939..dollars.....					278		3,201
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....							34,406
WATER DELIVERED TO IRRIGATORS							
68 Enterprises reporting water delivered.....1939..number.....	8	10	5	5	6	4	8
69 Area irrigated in these enterprises.....1939..acres.....	68	75	217	24	846	282	4,050
70 Water delivered in these enterprises.....1939..acre-feet.....	16	141	826	14	929	406	6,647
71 Average water delivered per acre irrigated.....1939..acre-feet.....	0.2	1.9	3.8	0.6	1.1	1.4	1.6
72 Average cost of water per acre irrigated.....1939..dollars.....	4.88	18.97	0.67	13.12	0.88	6.28	1.01
DRAINAGE OF IRRIGATED LAND							
73 Enterprises reporting land drained or needing drainage.....1939..number.....				2		1	2
74 Irrigable area in these enterprises.....1939..acres.....				(3)		(3)	(3)
75 Irrigated area in these enterprises.....1939..acres.....				(3)		(3)	(3)
76 Area for which drains have been installed.....1939..acres.....				(3)		(3)	(3)
77 Additional area needing drainage.....1939..acres.....				(3)		(3)	(3)

*Census of Agriculture. ¹Data between census years not comparable (see headnote). ²Percent not shown when more than 1,000. ³Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census. ⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — NORTH DAKOTA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)		STATE TOTAL	Billings	Cass	Dunn	Grant	McKenzie	Mercer
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	490,197,358	1,912,489	34,238,227	7,293,693	6,086,202	8,255,455	5,530,123
2	Land and buildings, irrigated farms.....dollars..	4,371,806	40,500	226,720	137,160	130,210	1,614,155	58,270
Operated by—								
3	(a) Owners and managers.....dollars..	3,236,068	(¹)	193,700	(¹)	46,940	1,131,025	58,270
4	(b) Tenants.....dollars..	1,135,738	(¹)	33,020	(¹)	83,370	463,130	.....
5	Average, land and buildings, per farm.....dollars..	9,126.94	5,765.71	25,191.11	11,430.00	6,200.48	9,665.60	7,283.75
6	per acre in farms.....dollars..	12.67	4.17	50.54	6.68	5.33	31.83	14.48
7	Buildings, irrigated farms reporting value.....number..	469	6	8	12	20	163	8
8	Total reported.....dollars..	1,200,510	9,600	36,700	37,000	40,860	425,640	19,250
9	Average, per irrigated farm reporting.....dollars..	2,559.72	1,600.00	4,597.50	3,083.33	2,043.00	2,611.29	2,406.25
10	per acre on all irrigated farms.....dollars..	3.48	0.99	8.18	1.80	1.67	8.39	4.78
11	Buildings, nonirrigated farms reporting value.....number..	66,151	440	2,404	1,272	1,159	1,315	1,018
12	Total reported.....dollars..	139,174,486	417,074	9,704,660	1,645,635	1,671,970	1,661,265	1,477,532
13	Average, per nonirrigated farm reporting.....dollars..	2,042.15	947.90	4,036.88	1,293.74	1,442.60	1,263.32	1,451.41
14	per acre on all nonirrigated farms.....dollars..	3.70	1.22	8.91	1.66	1.92	1.92	2.37
15	Implements and machinery, irrigated farms reporting value.....number..	459	7	8	12	21	161	7
16	Total reported.....dollars..	616,899	4,600	40,790	22,470	19,050	256,890	8,800
17	Average, per irrigated farm reporting.....dollars..	1,344.01	657.14	5,098.75	1,872.50	907.14	1,595.59	1,257.14
18	per acre on all irrigated farms.....dollars..	1.79	0.47	9.09	1.09	0.78	5.07	2.19
19	Implements and machinery, nonirrigated farms reporting value.....number..	66,987	441	2,399	1,186	1,145	1,250	1,000
20	Total reported.....dollars..	76,259,370	242,867	4,534,153	914,427	803,346	1,154,051	768,080
21	Average, per acre, on all nonirrigated farms.....dollars..	2.03	0.71	4.16	0.92	0.92	1.33	1.23
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940.....number.....	282	4	4	5	10	3	5
23	.....1930.....number.....	23	.....	.....	1	.....	2	.....
24	.....1920.....number.....	30	.....	.....	.....	.....	4	.....
25	Average size of enterprise based on irrigable area.....1940.....acres.....	482	15	61	73	6	9,109	33
26	.....1930.....acres.....	1,081	.....	.....	.....	.....	10,164	.....
27	.....1920 ².....acres.....	1,916	.....	.....	.....	.....	5,356	.....
28	Diversion dams.....1940.....number.....	19	.....	3	1	1	.....	2
29	Main canals and laterals.....1940.....length, miles.....	159.2	.....	.....	1.0	.....	124.1	.....
30	.....1930.....length, miles.....	87	.....	.....	.....	.....	71	.....
31	.....1920.....length, miles.....	151	.....	.....	.....	.....	60	.....
32	.....1940.....capacity, c.f.s. ⁴	616	3	13	9	8	96	8
33	.....1930.....capacity, c.f.s. ⁴	1,072	.....	.....	.....	.....	830	.....
34	.....1920.....capacity, c.f.s. ⁴	836	.....	.....	.....	.....	276	.....
35	Pipe lines ⁵.....1940.....length, miles.....	3.8	0.2	.....	.....	0.1	0.1	.....
36	Storage dams.....1940.....number.....	14	.....	.....	1	3	.....	.....
37	Reservoirs.....1940.....number.....	14	.....	.....	1	3	.....	.....
38	.....1930.....number.....	8	.....	.....	.....	.....	.....	.....
39	.....1920.....number.....	9	.....	.....	.....	.....	1	.....
40	.....1940.....capacity, acre-feet.....	3,946	.....	.....	(¹)	47	.....	.....
41	.....1930.....capacity, acre-feet.....	1,466	.....	.....	.....	.....	.....	.....
42	.....1920.....capacity, acre-feet.....	1,110	.....	.....	.....	.....	400	.....
43	Wells, flowing.....1940.....number.....	.....	.....	.....	.....	.....	.....	.....
44	.....1930.....number.....	.....	.....	.....	.....	.....	.....	.....
45	.....1920.....number.....	.....	.....	.....	.....	.....	.....	.....
46	.....1940.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
47	.....1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
48	.....1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
49	Wells, pumped.....1940.....number.....	11	.....	.....	.....	4	.....	.....
50	.....1930.....number.....	.....	.....	.....	.....	.....	.....	.....
51	.....1920.....number.....	.....	.....	.....	.....	.....	.....	.....
52	.....1940.....yield, g.p.m.....	378	.....	.....	.....	11	.....	.....
53	.....1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
54	.....1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
55	Pumping plants.....1940.....number.....	83	3	5	5	11	4	6
56	.....1930.....number.....	13	.....	.....	.....	.....	.....	.....
57	.....1920.....number.....	4	.....	.....	.....	.....	.....	.....
58	Prime movers.....1940.....capacity, hp.....	1,253	13	99	65	50	340	87
59	.....1930.....capacity, hp.....	216	.....	.....	.....	.....	.....	.....
60	.....1920.....capacity, hp.....	2,068	.....	.....	.....	.....	.....	.....
61	Pumps.....1940.....capacity, g.p.m.....	104,158	1,400	5,270	3,400	1,511	43,200	3,125
62	.....1930.....capacity, g.p.m.....	24,900	.....	.....	.....	.....	.....	.....
63	.....1920.....capacity, g.p.m.....	51,250	.....	.....	.....	.....	.....	.....
64	Pumping lift, from all sources.....1940.....average, feet.....	17	17	30	13	21	26	18
65	.....1930.....average, feet.....	24	.....	.....	.....	.....	.....	.....
66	.....1920.....average, feet.....	38	.....	.....	.....	.....	.....	.....
67	from pumped wells.....1940.....average, feet.....	25	.....	.....	.....	35	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶								
68	Enterprises reporting pay roll.....number.....	8	.....	.....	71	.....	2	71
69	Irrigated area in these enterprises.....acres.....	19,090	.....	.....	15	.....	(¹)	15
70	Wages and salaries paid and payable.....dollars..	14,611	.....	.....	85	.....	(¹)	85
71	Persons employed during week ending April 29.....number..	21	.....	.....	.....	.....	(¹)	.....

¹ Census of Agriculture.
² Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.
³ Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.
⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁶ Includes siphons and farm pipe lines reported.
⁷ Pay roll and number of employees reported only by enterprises serving 5 or more farms.
⁸ Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - NORTH DAKOTA

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	Morton	Sioux	Slope	Stark	Ward	Williams	All other counties ¹
FARM VALUES, 1940²							
1 Land and buildings, all farms.....dollars..	12,559,097	2,224,348	3,142,505	8,665,267	12,818,363	10,869,174	376,602,415
2 Land and buildings, irrigated farms.....dollars..	36,500	286,479	72,220	162,860	256,140	93,985	1,246,607
Operated by—							
3 (a) Owners and managers.....dollars..	(2)	207,479	(2)	138,300	148,190	67,175	985,209
4 (b) Tenants.....dollars..	(2)	89,000	(2)	24,560	107,960	26,810	261,398
5 Average, land and buildings, per farm.....dollars..	4,055.56	5,813.31	9,027.50	7,755.24	8,538.00	9,398.50	9,893.71
6 per acre in farms.....dollars..	41.06	4.36	7.99	12.66	84.20	8.74	9.85
7 Buildings, irrigated farms reporting value.....number..	9	49	8	21	30	10	125
8 Total reported.....dollars..	14,650	65,300	16,600	56,350	153,600	22,275	302,685
9 Average, per irrigated farm reporting.....dollars..	1,627.78	1,332.65	2,075.00	2,683.33	5,120.00	2,227.50	2,421.48
10 per acre on all irrigated farms.....dollars..	16.48	0.96	1.84	4.38	50.49	2.07	2.39
11 Buildings, nonirrigated farms reporting value.....number..	1,672	377	538	1,226	2,184	1,854	52,692
12 Total reported.....dollars..	3,632,510	347,560	760,836	2,316,580	3,663,410	2,691,374	109,183,980
13 Average, per nonirrigated farm reporting.....dollars..	2,172.55	921.91	1,414.38	1,889.54	1,677.39	1,451.66	2,072.12
14 per acre on all nonirrigated farms.....dollars..	3.29	1.15	1.32	2.85	3.31	2.65	3.92
15 Implements and machinery, irrigated farms reporting value.....number..	8	49	8	21	29	10	118
16 Total reported.....dollars..	6,900	39,755	15,870	26,225	17,410	13,854	144,284
17 Average, per irrigated farm reporting.....dollars..	862.50	811.33	1,983.75	1,248.81	600.34	1,385.50	1,222.75
18 per acre, on all irrigated farms.....dollars..	7.76	0.58	1.76	2.04	5.72	1.29	1.14
19 Implements and machinery, nonirrigated farms reporting value.....number..	1,649	361	561	1,238	2,093	1,716	51,948
20 Total reported.....dollars..	1,541,503	204,066	568,623	1,434,481	2,013,169	1,621,545	60,459,029
21 Average, per acre, on all nonirrigated farms.....dollars..	1.39	0.67	0.98	1.77	1.82	1.59	2.17
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940.....number.....	8	10	5	5	6	4	13
23 .....1930.....number.....			1		2	6	11
24 .....1920.....number.....						26	
25 Average size of enterprise based on irrigable area.....1940.....acres.....	20	14	101	13	154	369	620
26 .....1930.....acres.....						308	
27 .....1920.....acres.....						1,387	
28 Diversion dams.....1940.....number.....			1		1	2	8
29 Main canals and laterals.....1940.....length, miles.....		3.0			23.9	6.2	1.0
30 .....1930.....length, miles.....						14	2
31 .....1920.....length, miles.....						91	
32 .....1940.....capacity, c.f.s. ⁴	8	22	14	4	50	34	347
33 .....1930.....capacity, c.f.s. ⁴						228	14
34 .....1920.....capacity, c.f.s. ⁴						560	
35 Pipe lines ⁵.....1940.....length, miles.....		0.3	0.1	0.6	1.4	0.1	0.9
36 Storage dams.....1940.....number.....		1	4		2	2	1
37 Reservoirs.....1940.....number.....		1	4		2	2	1
38 .....1930.....number.....						6	2
39 .....1920.....number.....						8	
40 .....1940.....capacity, acre-feet.....		(2)	2,710		720	(2)	(2)
41 .....1930.....capacity, acre-feet.....						983	(2)
42 .....1920.....capacity, acre-feet.....						710	
43 Wells, flowing.....1940.....number.....							
44 .....1930.....number.....							
45 .....1920.....number.....							
46 .....1940.....yield, g.p.m.....							
47 .....1930.....yield, g.p.m.....							
48 .....1920.....yield, g.p.m.....							
49 Wells, pumped.....1940.....number.....	1	2	2	1			1
50 .....1930.....number.....							
51 .....1920.....number.....							
52 .....1940.....yield, g.p.m.....	(2)	(2)	(2)	(2)			(2)
53 .....1930.....yield, g.p.m.....							
54 .....1920.....yield, g.p.m.....							
55 Pumping plants.....1940.....number.....	8	10	3	6	10	1	11
56 .....1930.....number.....						1	12
57 .....1920.....number.....						4	
58 Prime movers.....1940.....capacity, hp.....	44	155	4	35	160	(2)	176
59 .....1930.....capacity, hp.....						20	196
60 .....1920.....capacity, hp.....						2,068	
61 Pumps.....1940.....capacity, g.p.m.....	3,430	7,728	325	1,519	19,775	(2)	9,475
62 .....1930.....capacity, g.p.m.....						1,000	23,900
63 .....1920.....capacity, g.p.m.....						51,250	
64 Pumping lift, from all sources.....1940.....average, feet.....	13	16	10	16	13	(2)	14
65 .....1930.....average, feet.....						100	16
66 .....1920.....average, feet.....						38	
67 from pumped wells.....1940.....average, feet.....	(2)	(2)	(2)	(2)			(2)
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷							
68 Enterprises reporting pay roll.....number.....		1			1		2
69 Irrigated area in these enterprises.....acres.....		16			500		(2)
70 Wages and salaries paid and payable.....dollars..		120			1,100		(2)
71 Persons employed during week ending April 29.....number..					3		(2)

¹ Census of Agriculture.

² Data between census years not comparable (see headnote).

³ Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁵ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁶ Includes siphons and farm pipe lines reported.

⁷ Data for less than 3 enterprises shown with permission of the enterprises involved.

⁸ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — OKLAHOMA

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF —						
	1940	1935	1930	1920	1910	1900 ¹	1890 ²
Approximate land area of State.....acres....	* 44,341,120	3 44,396,160	44,424,960	44,424,960	44,424,960	44,424,960	44,424,960
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	179,687	213,325	203,866	191,988	190,192	108,000	8,826
Land in all farms.....acres....	34,803,317	35,334,870	33,790,817	31,951,934	28,859,353	22,988,339	1,806,423
Farms irrigated: ⁴							
Farms.....number...	275	184	99	73	137	124	(5)
Increase or decrease (-) over preceding census.....percent..	6 177.8	.....	35.6	-46.7	10.5	.....	.....
Proportion of all farms.....percent..	0.2	0.1	(7)	(7)	0.1	0.1	.....
Land in farms.....acres....	190,592	(5)	57,367	(5)	(5)	(5)	(5)
Proportion of all farm land.....percent..	0.5	(5)	0.2	(5)	(5)	(5)	(5)
Area irrigated.....acres....	8 4,437	9 1,361	10 2,109	(11)	(11)	2,759	(5)
Increase or decrease (-) over preceding census.....percent..	6 110.4	.....	.....	.....	.....	.....	.....
Proportion of total land area of State.....percent..	(7)	(7)	(7)	.....	.....	(7)	.....
Proportion of all farm land.....percent..	(7)	(7)	(7)	.....	.....	(7)	.....
Value of irrigated farms (land and buildings).....dollars..	3,251,114	(5)	1,671,866	(5)	(5)	(5)	(5)
Average per farm.....dollars..	11,822.23	(5)	16,887.54	(5)	(5)	(5)	(5)
Average per acre.....dollars..	17.06	(5)	29.14	(5)	(5)	(5)	(5)
Value of farm implements and machinery ¹².....dollars..	324,257	(5)	99,517	(5)	(5)	(5)	(5)
Average per farm ¹².....dollars..	1,179.12	(5)	1,005.22	(5)	(5)	(5)	(5)
Average per acre ¹².....dollars..	1.70	(5)	1.73	(5)	(5)	(5)	(5)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	120	(5)	77	33	114	(5)	(5)
Farms irrigated.....number...	147	(5)	(5)	(5)	(5)	(5)	(5)
Area irrigated.....acres....	4,160	(5)	1,573	2,969	4,388	(5)	(5)
Area existing works were capable of supplying with water.....acres....	8,624	(5)	7,331	9,672	6,397	(5)	(5)
Area irrigable.....acres....	13,494	(5)	7,344	13 11,742	13 8,528	(5)	(5)
Additional area existing works were capable of supplying with water.....acres....	4,464	(5)	5,758	6,703	2,009	(5)	(5)
Additional irrigable area in enterprises not supplied with water.....acres....	9,334	(5)	5,771	13 8,773	13 4,140	(5)	(5)
Investment in irrigation enterprises.....dollars..	272,186	(5)	160,099	151,325	47,200	21,872	(5)
Increase or decrease (-) over preceding census.....percent..	6 70.0	(5)	5.8	220.6	115.8	(5)	(5)
Average per acre based on area works were capable of supplying with water.....dollars..	31.56	(5)	21.84	15.65	7.38	(5)	(5)
Increase or decrease (-) over preceding census.....percent..	6 44.5	(5)	39.6	112.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	299,486	(5)	167,909	162,775	47,200	(5)	(5)
Average per acre based on irrigable area in enterprises.....dollars..	22.19	(5)	22.86	13 13.86	13 5.53	(5)	(5)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	3.35	(5)	7.62	2.92	0.51	(5)	(5)

¹ Figures for 1900 include Indian Territory. ² The 1890 figures for land area include Indian Territory; those for number of farms and farm acreage are for Oklahoma Territory alone, no data available for Indian Territory. ³ Due to relocation of the one-hundredth meridian (U. S. Supreme Court decision March 17, 1930) 45 square miles were transferred from Oklahoma to Texas. ⁴ Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ⁵ Not available. ⁶ Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁷ Less than one-tenth of 1 percent. ⁸ Irrigated land from which crops were harvested plus 406 acres of irrigated land used only for pasture. ⁹ Irrigated land from which crops were harvested. ¹⁰ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ¹¹ Data were secured for crops irrigated but the returns were considered relatively incomplete. ¹² Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹³ For 1920 and 1910 relates to total area in enterprises. Irrigable area for those years were not reported. ¹⁴ The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from those shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	179,687	34,803,317	12,766,219	4,031	406	831,140,748	23.88	141,515,968	4.07	78,448,733	2.25
Owners and managers.....	81,866	20,034,386	6,805,483	2,819	406	495,176,545	24.72	91,680,139	4.58	47,690,049	2.38
Tenants.....	97,821	14,768,931	5,960,736	1,212	.....	335,964,203	22.75	49,835,829	3.38	30,758,684	2.09
Irrigated farms, total.....	275	190,592	30,510	4,031	406	3,251,114	17.06	878,415	4.61	324,257	1.70
Owners and managers.....	205	155,752	24,007	2,819	406	2,631,046	16.89	774,330	4.97	258,271	1.66
Tenants.....	70	34,840	6,503	1,212	.....	620,068	17.80	104,085	2.99	65,986	1.89
Wholly irrigated farms.....	56	44,736	1,068	1,068	346	420,030	9.39	189,685	4.24	37,277	0.83
Owners and managers.....	41	31,367	730	730	346	328,790	10.48	163,800	5.22	33,285	1.06
Tenants.....	15	13,369	338	338	.....	91,240	6.82	25,885	1.94	3,992	0.30
Partly irrigated farms.....	219	145,856	29,442	2,963	60	2,831,084	19.41	688,730	4.72	286,980	1.97
Owners and managers.....	164	124,385	23,277	2,089	60	2,302,256	18.51	610,530	4.91	224,986	1.81
Tenants.....	55	21,471	6,165	874	.....	528,828	24.63	78,200	3.94	61,994	2.89
Nonirrigated farms, total.....	179,412	34,612,725	12,735,709	.....	.....	827,889,634	23.92	140,637,553	4.06	78,124,476	2.25

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION - OKLAHOMA

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number 120	Acres 13,494	Acres 8,624	Acres 4,160	Acres 1,573	Acres 2,969	Percent 164.5	Acres 3,974	Acres 3,869	Acres 3,702	Acres-foot 1.4	Dollars 3.34	Dollars 2.34
Total.....	11	2,606	2,356	1,631	355	2,522	359.4	1,604	1,631	1,604	0.9	0.63	0.68
Streams, gravity.....	32	7,033	2,699	1,163	320	188	263.4	1,027	1,158	1,022	1.2	2.06	2.44
Streams, pumped.....													
Streams, gravity and pumped.....													
Wells, pumped.....	39	1,346	1,143	792	63	107	(²)	792	724	724	2.0	6.48	3.31
Wells, flowing.....													
Wells, pumped and flowing.....													
Lakes, gravity.....	1	(²)	(²)	(²)	19		(²)	(²)	(²)	(²)	(²)	(²)	(²)
Lakes, pumped.....	4	155	95	40	35		14.3	40	40	40	1.0	9.35	9.35
Springs.....	3	22	22	21	5	6	320.0	21	21	21	2.1	3.67	1.75
Springs and streams.....													
Stored storm water.....	7	104	104	77				77	77	77	2.5	13.64	5.50
City water.....	18	1,850	1,850	255	235	3	8.5	232	37	33	2.9	12.12	4.21
Sewage.....													
Streams, gravity; wells, pumped.....													
Streams, gravity; wells, flowing.....													
Streams, pumped; wells, pumped.....	2	(²)	(²)	(²)				(²)	(²)	(²)	(²)	(²)	(²)
Waste water, seepage or drainage.....													
Other mixed.....	3	177	154	85	40	125	112.5	85	85	85	2.4	6.76	2.88
Other and not reported.....													

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ³Percent not shown when more than 1,000.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Acres	Dollars
Total.....	272,186	100.0	31.56	160,099	100.0	21.84	9.72	3,869	3.35	935	7.62	-4.27	2,626	2.92
Streams, gravity.....	44,210	16.2	18.76	101,950	63.7	19.83	-1.07	1,631	0.75	255	15.00	-14.25	2,322	1.56
Streams, pumped.....	67,378	24.8	24.96	9,670	6.0	15.35	9.61	1,158	2.96	320	3.00	-0.04	123	3.74
Streams, gravity and pumped.....														
Wells, pumped.....	87,265	32.1	76.35	12,225	7.6	185.23	-108.88	724	6.48	61	14.30	-7.82	32	40.76
Wells, flowing.....													18	55.56
Wells, pumped and flowing.....														
Lakes, gravity.....	(³)	(³)	(³)	1,000	0.6	52.63	(³)	(³)	(³)	19	5.26	(³)		
Lakes, pumped.....	7,509	2.8	79.04	1,000	0.6	28.57	50.47	40	9.38					
Springs.....	3,480	1.3	158.18	19,000	11.9	37.62	130.56	21	3.67	5	3.00	0.67	6	4.17
Springs and streams.....														
Stored storm water.....	6,000	2.2	57.69					77	13.64					
City water.....	10,044	3.7	5.43	229	0.2	0.97	4.46	37	10.86	235	4.89	5.97		
Sewage.....														
Streams, gravity; wells, pumped.....														
Streams, gravity; wells, flowing.....														
Streams, pumped; wells, pumped.....	(³)	(³)	(³)					(³)	(³)					
Waste water, seepage or drainage.....														
Other mixed.....	5,600	2.1	36.36	2,500	1.6	12.50	23.86	85	6.78	40	5.00	1.78	125	10.00
Other and not reported.....				12,525	7.8	25.00								

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - OKLAHOMA

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF —				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930	1920	
	Primary enterprises	Supplemental enterprises	Primary enterprises	Primary enterprises	
AREA IRRIGATED					
Total.....	Acres 4,160	Acres	Acres 1,573	Acres 2,969	Percent 164.5
Individual and partnership.....	3,816		1,453	969	162.6
Cooperative, incorporated.....			120	2,000	
Cooperative, unincorporated.....					
Bureau of Reclamation ¹					
U. S. Office of Indian Affairs ¹	334				
Other federal.....	10				
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER					
Total.....	8,624		7,331	9,672	17.6
Individual and partnership.....	7,961		2,531	2,072	214.5
Cooperative, incorporated.....			4,800	7,600	
Cooperative, unincorporated.....					
Bureau of Reclamation ¹					
U. S. Office of Indian Affairs ¹	648				
Other federal.....	15				
IRRIGABLE AREA²					
Total.....	13,494		7,344	11,742	63.7
Individual and partnership.....	12,831		2,544	4,142	404.4
Cooperative, incorporated.....			4,800	7,600	
Cooperative, unincorporated.....					
Bureau of Reclamation ¹					
U. S. Office of Indian Affairs ¹	648				
Other federal.....	15				

¹ U. S. Dept. of the Interior. ² For 1920 relates to total area. Irrigable area for that year was not reported. ³ For explanation of areas, see text, p. 463.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ⁴				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre	Maintenance and operation per acre			From which crops were harvested	On which crops failed	
Total.....	Number 120	Number 3	Acres 13,494	Acres 8,624	Dollars 31.26	Dollars 3.35	Dollars	Dollars	Number 147	Acres 4,160	Acres 3,603	Acres 148	Acres 409
Individual and partnership.....	101	1	12,831	7,961	22.40	3.43			107	3,816	3,259	148	409
Cooperative, incorporated.....													
Cooperative, unincorporated.....													
U. S. Bureau of Reclamation ¹													
U. S. Office of Indian Affairs.....	18	2	648	648	138.36	2.14			39	334	334		
Other federal.....	4 ¹		15	15	109.27	13.80			1	10	10		

¹ Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ² Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³ Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴ Data for less than 3 enterprises shown with permission of the enterprises involved. ⁵ For explanation of areas and investment, see text, p. 463.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works	
	1940					1930	1920	Increase or decrease (-) 1930-40	Primary enterprises			Supplemental enterprises
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment	Investment in water rights							
Total.....	Dollars 272,186	Dollars 272,186	Dollars	Dollars 269,618	Dollars 2,568	Dollars 160,099	Dollars 151,325	Percent 70.0	Dollars 31.56	Dollars	Dollars	Dollars 27,300
Individual and partnership.....	180,692	180,692		178,324	2,568	85,099	110,658	112.6	22.72			
Cooperative, incorporated.....						75,000	40,667					
Cooperative, unincorporated.....												
U. S. Bureau of Reclamation ¹												
U. S. Office of Indian Affairs.....	89,655	89,655		89,655					138.36			
Other federal.....	1,639	1,639		1,639					109.27			

¹ Only for enterprises serving 5 or more farms. ² For explanation of investment, see text, p. 463.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE, CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter- prises 1940	Area		Total indebt- ness 1940	Average per acre assessed 1939	Average per acre works were capable of supplying with water	Enter- prises 1940	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri- gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
Number ²	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars	
Total.....	2	40	40	15,850	106.79	396.25	2	.....	.....	.....	719	530	.....
Partnership.....	(4)	(4)	.....
Cooperative, incorporated.....
Cooperative, unincorporated.....
Bureau of Reclamation ³
Office of Indian Affairs ⁴
Other federal.....

¹Only for enterprises serving 5 or more farms. No supplemental enterprises reported indebtedness in this State. ²In payment of principal, interest, and/or other funded obligations. ³Data for less than 3 enterprises shown with permission of the enterprises involved. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁵U. S. Dept. of the Interior. ⁶Represents construction cost of irrigation works less cancellations and repayments. ⁷For explanation of areas and investment, see text, p. 463.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ²		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number	
Total.....	3,869	12,973	.....	.....	3.35	.....	.....	.....
Individual and partnership.....	3,540	12,151	.....	.....	3.43	.....	.....	.....
Cooperative, incorporated.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....
U. S. Bureau of Reclamation ³.....	.....	.....	.....	.....	.....	.....	.....	.....
U. S. Office of Indian Affairs.....	319	694	.....	.....	2.14	.....	.....	.....
Other federal.....	10	138	.....	.....	13.80	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²For explanation of areas and investment, see text, p. 453.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver- sion	Stor- age	Capac- ity at main head- ing	Length ¹		Num- ber	Capac- ity	Length	Num- ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capacity	Number	Rated capacity
Number	Number	Sec.-ft.	Miles	Miles	.....	Ac.-ft.	Miles	.....	G. p. m.	.....	G. p. m.	.....	#p.	.....	G. p. m.	.....
Total.....	8	21	277	41	1.2	20	900	24.4	.....	.....	77	15,486	116	1,037	116	59,280
Individual and partnership.....	8	17	261	40	1.2	14	829	17.5	.....	.....	55	13,886	80	735	80	50,515
Cooperative, incorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ³.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Office of Indian Affairs ³.....	.....	4	15	1	.....	6	71	6.6	.....	.....	22	1,600	35	272	35	8,015
Other federal.....	.....	.....	1	.....	.....	.....	.....	0.3	.....	.....	.....	.....	1	30	1	750

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³U. S. Dept. of the Interior.

STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number
Total.....	8	21	4	3
Concrete or masonry.....
Timber.....	1	2	2
Earth and rock.....	6	18	4	1
Other and mixed.....
Not reported.....	1

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STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940, AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps		Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number		Rated capacity of movers	Proportion of total capacity
	Number	Percent						Percent	Percent		
Total, 1940.....	116	100.0	59,280	100.0	36	Total, 1940.....	116	100.0	1,037	100.0	
Electric motor.....	32	27.6	7,259	12.2	55	Centrifugal pump.....	68	58.6	669	64.5	
Centrifugal.....	15	13.0	4,200	7.1	42	Electric.....	13	11.2	95	9.2	
Turbine.....	10	8.6	2,320	3.9	55	Internal-combustion.....	55	47.4	574	55.3	
Plunger.....	7	6.0	739	1.2	82	Other.....					
Other.....						Turbine pump.....	10	8.6	107	10.3	
Internal-combustion engine.....	65	56.0	49,935	84.2	25	Electric.....	5	4.3	29	2.8	
Centrifugal.....	56	48.3	45,415	76.6	22	Internal-combustion.....	5	4.3	78	7.5	
Turbine.....	7	6.0	4,410	7.4	45	Other.....					
Plunger.....	2	1.7	110	0.2	32	Plunger pump.....	26	22.4	41	4.0	
Other.....						Electric.....	7	6.0	21	2.0	
Other kinds of motive power.....	17	14.7	86	0.2	50	Internal-combustion.....	2	1.7	3	0.3	
Centrifugal.....						Other.....	17	14.7	17	1.7	
Turbine.....						Other and mixed types of pumps.....	12	10.4	220	21.2	
Plunger.....	17	14.7	86	0.2	50	Electric.....	8	6.9	105	10.1	
Other.....						Internal-combustion.....	4	3.5	115	11.1	
Mixed kinds of motive power.....	2	1.7	2,000	3.4	25	Other.....					
Centrifugal.....	2	1.7	2,000	3.4	25	Total, 1930.....	25		229		
Turbine.....						Increase or decrease (-) 1930-1940.....	91		808		
Plunger.....											
Other.....											
Total, 1930.....	30		8,855		33						
Increase or decrease (-) 1930-1940...	86		50,425		3						

¹Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930	
Total.....	Miles 24.4	Miles 0.7	Percent (2)
Concrete:			
1 to 12 inches.....	0.6		
13 to 24 inches.....			
Over 24 inches.....			
Metal:			
1 to 12 inches.....	23.6	0.7	(2)
13 to 24 inches.....			
Over 24 inches.....			
Wood-stave:			
1 to 12 inches.....	0.1		
13 to 24 inches.....			
Over 24 inches.....			
Clay and other:			
1 to 12 inches.....	0.1		
13 to 24 inches.....			
Over 24 inches.....			

¹Includes siphons and farm pipe lines reported.

²Percent not shown when more than 1,000.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	11	4	3
Area irrigable in these enterprises.....acres....	338	189	¹ 1,960
Area irrigated in these enterprises.....acres....	342	(2)	(2)
Area for which drains have been installed.....acres....	429	95	
Additional area needing drainage.....acres....	106	50	1,820
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainages.....percent..	125.4	³ 50.3	
(b) All irrigation enterprises.....percent..	10.3	6.0	
Ratio of area drained plus area needing drainage to—			
(a) Irrigable area reporting.....percent..	63.8	(2)	76.7
(b) Irrigated area reporting.....percent..	156.4		(2)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ²Not available. ³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939 ²	1929 ¹	1919 ¹	1939	1929 ¹	1919 ¹
From surface sources reported:									
Total water entering canals.....acre-feet..	16			16					
Area irrigated by these enterprises.....acres.....	19			19					
Average water per acre irrigated.....acre-feet..	0.8			0.8					
Total water delivered to irrigators.....acre-feet..	3,836						3,836		
Area irrigated by these enterprises.....acres.....	3,069						3,069		
Average water per acre irrigated.....acre-feet..	1.2						1.2		
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	1,835			7			1,828		
Area irrigated by these enterprises.....acres.....	905			15			890		
Average water per acre irrigated.....acre-feet..	2.0			0.5			2.1		

¹Not reported.

²Data only for enterprises serving 5 or more farms.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irri- gated	Proportion of total	Area irri- gated	Proportion of total
	Primary enter- prises	Proportion of total	Supple- mental enter- prises				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	4,160	100.0	.....	1,573	100.0	2,969	100.0
Appropriation ¹	2,294	55.1	.....	742	47.1	560	18.8
Riparian.....	766	18.4	.....	17	1.1	80	2.7
Underground.....	576	13.9	.....	78	5.0	120	4.1
Riparian and underground.....	89	2.1	.....	.....	.....	.....	.....
Adjudicated by court.....	266	6.4	.....	.....	.....	2,200	74.1
Other mixed and not reported.....	169	4.1	.....	736	46.8	9	0.3

¹"Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

BUREAU OF RECLAMATION ACTIVITIES

There were no projects of the United States Bureau of Reclamation in operation in Oklahoma at the time the Irrigation Census of 1940 was taken. Consequently, none of the areas or investment reported in State tables 5, 6, 7, 8, and 9 relate to activities of that agency.

The Bureau has under construction, however, the Lugert-Altus Project on the North Fork of the Red River, which will irrigate about 70,000 acres of productive land that has been unsuccessfully dry-farmed. The project is located in Greer, Kiowa, and Jackson Counties.

The reservoir of 200,000 acre-feet capacity will serve for flood control and also supplement the municipal water supply for the city of Altus. A nonreimbursable allocation for flood control, a Work Projects Administration

grant for labor, and the municipal water supply cost to be borne by the city of Altus will materially reduce the cost of irrigation. The estimated over-all cost of the project is \$5,600,000, of which \$2,520,000 is represented by the flood control and WPA grants, \$1,080,000 by the water allocation to the city of Altus, and \$2,000,000 by irrigation.

The droughts of the thirties, which had the effect of reducing population in Oklahoma for the first decade since it became a State, has revived interest in irrigation in the State. State authorities and the Bureau of Reclamation are conducting investigations of potential projects at various points, several in connection with flood control projects.

CENSUS OF IRRIGATION - OKLAHOMA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS			
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms
1	Enterprises, 1940.....number...	120	9	97	11	3
2	Irrigated farms, 1939.....number...	147		97	24	26
3	Area irrigated, 1939.....acres.....	4,160		2,269	1,157	734
4	(a) From which crops were harvested.....acres.....	3,603		2,173	1,057	373
5	(b) On which crops failed.....acres.....	148		43	90	15
6	(c) Irrigated pasture.....acres.....	409		53	10	346
CAPITAL INVESTMENT, 1940						
7	Total capital investment in all enterprises.....dollars.....	272,186	17,644	168,694	44,498	41,350
8	(a) Cost of irrigation works and equipment.....dollars.....	269,618	17,644	166,659	44,465	40,850
9	(b) Investment in water rights.....dollars.....	2,568		2,035	33	500
10	Area works were capable of supplying with water.....acres.....	8,624	210	3,624	3,750	1,040
11	Average investment per acre irrigated.....dollars.....	65.43		74.35	38.46	56.34
12	Average investment per acre which the works could supply with water.....dollars.....	31.56	84.02	46.55	11.87	39.76
MAINTENANCE AND OPERATION, AND CHARGES, 1939						
13	Enterprises reporting maintenance and operation.....number.....	107	5	90		12
14	(a) Area irrigated in these enterprises.....acres.....	3,869		2,127		1,742
15	(b) Cost of maintenance and operation.....dollars.....	12,973	5	10,714		2,254
16	(c) Average cost per irrigated acre reporting.....dollars.....	3.35		5.04		1.29
17	Total annual charges ².....dollars.....	530				530
18	Average charge per irrigated acre reporting.....dollars.....	0.74				0.74
19	Area against which charges were assessed.....acres.....	719				719
20	Average annual charge per acre assessed.....dollars.....	0.74				0.74
21	Total charges collected ².....dollars.....					
INDEBTEDNESS AND ARREARAGE, 1939						
22	Enterprises reporting indebtedness ³.....number.....	4 ²				2
23	(a) Area irrigated in these enterprises.....acres.....	34				34
24	(b) Indebtedness.....dollars.....	15,850				15,850
25	(c) Average indebtedness per acre irrigated.....dollars.....	466.18				466.18
26	(d) Cost of irrigation works and equipment.....dollars.....	15,850				15,850
27	(e) Investment in water rights.....dollars.....					
28	(f) Total investment.....dollars.....	15,850				15,850
29	(g) Maintenance and operation.....dollars.....	31				31
30	(h) Total annual charges ².....dollars.....	30				30
31	(i) Total charges collected ².....dollars.....					
32	(j) Area against which annual charges were assessed.....acres.....	19				19
33	(k) Average indebtedness per acre assessed.....dollars.....	106.79				106.79
34	(l) Average charges per acre assessed.....dollars.....	1.58				1.58
35	(m) Average charges per acre irrigated.....dollars.....	1.58				1.58
TYPE, 1940						
36	Individual and partnership.....number.....	101	7	85	8	1
37	Cooperative (incorporated and unincorporated).....number.....					
38	U. S. Bureau of Reclamation.....number.....					
39	U. S. Office of Indian Affairs.....number.....	18	2	11	3	2
40	All other.....number.....	1		1		
SOURCE OF WATER SUPPLY, 1939						
41	Streams, gravity.....number.....	11	1	7	2	1
42	Streams, pumped.....number.....	32	1	26	4	1
43	Wells, pumped.....number.....	39	3	31	4	1
44	Wells, pumped and flowing; or wells flowing.....number.....					
45	Lakes, gravity or pumped.....number.....	5	1	4		
46	Streams and springs; or springs.....number.....	3		3		
47	Mixed, streams and wells.....number.....	2		2		
48	Other mixed or stored storm water.....number.....	28	3	24	1	

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940. ²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ³Indebtedness was reported only by enterprises serving 5 or more farms. ⁴Data for less than 3 enterprises shown with permission of the enterprises involved.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water Year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual Mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Arkansas River														
Springer, N. Mex.....	Colfax.....	5,857	14.57	+0.08	2.39	+0.70	1.64	+0.35	3.41	-1.33	7.13	+0.36	50.1	+0.1
Tucumcari, N. Mex.....	Quay.....	4,100	12.56	-5.54	2.17	-0.60	1.81	+0.35	3.82	-2.20	4.76	-3.09	58.1	+0.1
Boise City.....	Cimarron.....	4,000	16.11	+0.06	3.44	+0.48	4.31	+2.78	5.83	+0.45	2.53	-3.65	55.4	+1.8
Buffalo.....	Harper.....	1,850	16.87	-5.27	1.00	-2.65	4.02	+0.88	9.25	+1.25	2.60	-4.85	61.2	+2.5
Oakwood.....	Dewey.....	1,854	21.65	-4.97	2.76	-2.17	5.66	+2.39	8.61	-2.23	4.02	-2.96	61.9	+3.4
Enid.....	Garfield.....	1,269	25.45	-5.21	3.01	-2.69	5.60	+1.76	12.36	+0.52	4.48	-4.80	62.8	+3.5
Norman.....	Cleveland.....	1,171	25.90	-7.41	2.45	-4.74	5.33	+0.26	13.24	+0.67	4.98	-3.60	62.0	+1.1
Blackwell.....	Kay.....	1,020	22.75	-9.02	2.93	-3.07	3.56	-0.52	12.66	+0.95	3.60	-6.39	61.4	+1.6
Bristow.....	Creek.....	818	29.65	-6.20	4.67	-3.61	5.43	-0.75	11.65	-0.53	7.90	-1.31	62.2	+0.8
Pawhuska.....	Osage.....	885	26.27	-11.86	3.99	-2.92	5.74	-0.02	12.37	-1.91	4.17	-7.01		
McAlester.....	Pittsburg.....	738	32.85	-10.48	4.44	-5.34	9.51	+1.35	11.00	-4.33	7.90	-2.16		
Miami.....	Ottawa.....	801	34.24	-10.19	4.15	-4.69	6.93	-0.78	14.93	+0.30	8.23	-5.02	60.7	+1.7
Sallisaw.....	Sequoyah.....	531	31.82	-11.05	6.75	-3.07	9.27	+0.77	12.33	-2.42	3.47	-6.33	63.5	+1.5
Red River														
Canyon, Texas.....	Randall.....	3,577	17.87	-2.11	3.60	+0.06	2.51	+0.41	9.32	+3.06	2.44	-5.64		
Hollis.....	Harmon.....	1,610	17.55	-7.18	1.88	-3.81	4.99	+1.95	8.43	-0.24	2.25	-5.08	64.5	+2.1
Cloud Chief.....	Washita.....	1,400	22.21	-7.67	2.63	-4.00	4.58	+1.07	9.80	-1.55	5.20	-3.19	63.0	+2.2
Lawton.....	Comanche.....	1,111	17.20	-15.54	2.55	-4.70	5.52	+1.37	6.14	-6.52	2.99	-5.69	65.5	+3.8
Sulphur.....	Murray.....	1,011	25.09	-12.68	3.98	-4.78	6.76	+0.44	9.83	-4.08	4.52	-4.26	65.1	+2.3
Idabel.....	McCurain.....	504	39.91	-5.09	5.61	-5.01	15.68	+4.39	14.23	-0.06	4.39	-4.41	64.8	+0.9

¹Departure from normal.

²Not available.

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED FARMS, AREAS IRRIGATED, AND COST OF WORKS, CENSUS OF 1940—Continued

PRIMARY ENTERPRISES (For definitions and explanations, see text)		ACRES IRRIGATED			COST OF IRRIGATION WORKS AND EQUIPMENT			
		No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999
1	Enterprises, 1940.....number.....	9	102	7	2	108	9	3
2	Irrigated farms, 1939.....number.....	128	11	8		114	25	8
3	Area irrigated, 1939.....acres.....	1,885	2,275			2,393	778	369
4	(a) From which crops were harvested.....acres.....	1,759	1,844			2,257	718	628
5	(b) On which crops failed.....acres.....	73	75			73	60	15
6	(c) Irrigated pasture.....acres.....	53	356			63		346
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	17,644	190,972	63,570		125,561	66,125	80,500
8	(a) Cost of irrigation works and equipment.....dollars..	17,644	188,924	63,050		123,503	66,115	80,000
9	(b) Investment in water rights.....dollars.....	2,048	2,048	520		2,058	10	500
10	Area works were capable of supplying with water.....acres.....	210	2,864	5,550		5,568	867	2,189
11	Average investment per acre irrigated.....dollars.....	84.02	101.31	27.94		52.47	84.99	81.40
12	Average investment per acre which the works could supply with water.....dollars..	84.02	66.68	11.45		22.55	76.27	36.77
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number...	5	94	8		96	8	3
14	(a) Area irrigated in these enterprises.....acres.....	1,728	2,141			2,117	763	989
15	(b) Cost of maintenance and operation.....dollars.....	5	10,629	2,339		10,454	859	1,660
16	(c) Average cost per irrigated acre reporting.....dollars.....	6.15	1.09			4.94	1.13	1.68
17	Total annual charges ².....dollars.....	30	500			30		500
18	Average charge per irrigated acre reporting.....dollars.....	1.58	0.71			1.58		0.71
19	Area against which charges were assessed.....acres.....	19	700			19		700
20	Average annual charge per acre assessed.....dollars.....	1.58	0.71			1.58		0.71
21	Total charges collected ².....dollars.....							
INDEBTEDNESS AND ARREARAGE, 1939								
22	Enterprises reporting indebtedness ³.....number.....	2				1	1	
23	(a) Area irrigated in these enterprises.....acres.....	34				19	15	
24	(b) Indebtedness.....dollars.....	15,850				2,029	13,821	
25	(c) Average indebtedness per acre irrigated.....dollars.....	466.18				106.79	921.40	
26	(d) Cost of irrigation works and equipment.....dollars.....	15,850				2,029	13,821	
27	(e) Investment in water rights.....dollars.....							
28	(f) Total investment.....dollars.....	15,850				2,029	13,821	
29	(g) Maintenance and operation.....dollars.....	31				31		
30	(h) Total annual charges ².....dollars.....	30				30		
31	(i) Total charges collected ².....dollars.....							
32	(j) Area against which annual charges were assessed.....acres.....	19				19		
33	(k) Average indebtedness per acre assessed.....dollars.....	106.79				106.79		
34	(l) Average charges per acre assessed.....dollars.....	1.58				1.58		
35	(m) Average charges per acre irrigated.....dollars.....	1.58				1.58		
TYPE, 1940								
36	Individual and partnership.....number.....	7	86	6	2	95	3	3
37	Cooperative (incorporated and unincorporated).....number.....							
38	U. S. Bureau of Reclamation.....number.....							
39	U. S. Office of Indian Affairs.....number.....	2	15	1		12	6	
40	All other.....number.....	1	1			1		
SOURCE OF WATER SUPPLY, 1939								
41	Streams, gravity.....number.....	1	6	2	2	8	2	1
42	Streams, pumped.....number.....	1	28	3		29	2	1
43	Wells, pumped.....number.....	3	35	1		34	5	
44	Wells, pumped and flowing; or wells flowing.....number.....							
45	Lakes, gravity or pumped.....number.....	1	4			5		
46	Streams and springs; or springs.....number.....		3			3		
47	Mixed, streams and wells.....number.....		2			1		1
48	Other mixed or stored storm water.....number.....	3	24	1		28		

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940. ²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ³Indebtedness was reported only by enterprises serving 5 or more farms.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation in Oklahoma during the calendar year (1938) was slightly above normal (+0.82 inches) and during the calendar year (1939) was considerably below normal (-5.56 inches) as reported by the United States Weather Bureau.

The precipitation during the water year (October 1938 through September 1939) was substantially below normal for the entire State (-8.11 inches) as indicated by the average for 16 typical Oklahoma weather stations shown in State table 18. Five of these typical weather stations in the drainage basins of the tributaries of the Red River show an average deficiency of 9.63 inches for the water year. The Weather Bureau reports further:

"The average precipitation was 26.71 inches, which is 5.56 inches less than the average of the past 48 years.

During the last 20 years, only 1936, with an average of 22.69 inches, was drier than this year, and there have been only 7 drier years than 1939, since the record began. September was the driest month, and was also, by far, the driest September on record, the State average precipitation being only 0.33 inch. January, February, and June were the only months with more than normal precipitation, and the latter month was the wettest of the year. Heavy dust storms occurred with much more than usual frequency during the first half of the year. The storm on March 11th covered practically the entire State, and for much of Oklahoma, was reported to have been the heaviest of record.

"The average temperature for the year, 62.7°, was 2.2° above the 48-year average. Only in 1921, 1933, 1934 and 1938 were the annual mean temperatures higher, while the mean this year was only 0.1° lower than last year."

CENSUS OF IRRIGATION - OKLAHOMA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

ITEM (For definitions and explanations, see text. Major basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSISSIPPI RIVER (Mississippi River drains entire State; therefore, Mississippi River total for Oklahoma is identical with State Total)					
		Arkansas River					
		Total	Direct (3)	Salt Fork Arkansas River (4)	Cimarron River (5)	Verdigris River (2)	
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number....	147	102	34	4	22	6
2	Area irrigated.....1939..acres.....	4,160	3,051	308	84	2,008	24
3	(a) Cropland harvested.....1939..acres.....	3,603	2,547	308	84	1,546	24
4	(b) Crop failure.....1939..acres.....	148	148	.....	.....	116	.....
5	(c) Pasture.....1939..acres.....	409	356	.....	.....	346	.....
6	Area irrigated.....1929..acres.....	1,573	954	.....	.....	293	.....
7	.....1919..acres.....	2,969	2,843	.....	.....	2,588	.....
8	Increase or decrease (-), 1929-1939.....percent....	164.5	219.8	.....	.....	585.3	.....
9	Irrigable area in enterprises.....1940..acres.....	13,494	9,853	456	147	7,968	27
10	.....1930..acres.....	7,344	5,987	.....	.....	5,088	.....
11	.....1920 ¹ ..acres.....	11,742	11,449	.....	.....	10,929	.....
12	Excess of irrigable area over the area irrigated..1940..acres.....	9,334	6,802	143	63	5,960	3
13	.....1930..acres.....	5,771	5,093	.....	.....	4,795	.....
14	.....1920 ¹ ..acres.....	8,773	8,606	.....	.....	8,341	.....
15	Area works were capable of supplying with water...1940..acres.....	8,624	5,290	456	97	3,718	27
16	.....1930..acres.....	7,331	5,974	.....	.....	5,076	.....
17	.....1920..acres.....	9,672	9,379	.....	.....	8,879	.....
18	Increase or decrease (-), 1930-1940.....percent....	17.6	-11.4	.....	.....	-26.8	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	4,464	2,239	148	13	1,710	3
20	.....1930..acres.....	5,758	5,020	.....	.....	4,783	.....
21	.....1920..acres.....	6,703	6,536	.....	.....	6,291	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	48.2	57.7	67.5	86.6	54.0	88.9
23	.....1929..percent....	21.5	16.0	.....	.....	5.8	.....
24	.....1919..percent....	30.7	30.3	.....	.....	29.1	.....
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars....	272,186	216,335	69,441	4,175	63,110	2,815
26	(a) Cost of irrigation works and equipment.....1940..dollars....	269,618	215,687	69,441	4,175	62,600	2,740
27	(b) Investment in water rights (reported).....1940..dollars....	2,568	648	.....	.....	510	75
28	Total investment in irrigation enterprises.....1930..dollars....	160,099	134,045	.....	.....	102,750	.....
29	.....1920..dollars....	151,325	142,587	.....	.....	93,157	.....
30	Increase or decrease (-), 1930-1940.....percent....	70.0	61.4	.....	.....	-38.6	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	31.56	40.90	152.28	43.04	16.97	104.26
32	.....1930..dollars....	21.84	22.44	.....	.....	20.24	.....
33	.....1920..dollars....	15.65	15.20	.....	.....	10.49	.....
34	Average investment per acre irrigated.....1939..dollars....	65.43	70.91	225.46	49.70	31.43	117.29
35	Estimated final investment in existing enterprises..1940..dollars....	299,486	240,585	69,441	5,175	80,610	2,815
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	22.19	24.42	152.28	35.20	10.12	104.26
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
37	Enterprises reporting maintenance and operation..1939..number....	107	77	20	4	14	6
38	Area irrigated in these enterprises.....1939..acres.....	3,869	2,982	288	84	2,008	24
39	Cost of maintenance and operation.....1939..dollars....	12,973	8,525	1,844	160	1,905	372
40	Average cost per acre irrigated.....1939..dollars....	3.35	2.86	6.40	1.90	0.95	15.50
41	Total annual charges (reported) ^{2 3}.....1939..dollars....	530	500	.....	.....	500	.....
42	Average annual charge per acre irrigated.....1939..dollars....	0.74	0.71	.....	.....	0.71	.....
43	Area against which charges were assessed.....1939..acres.....	719	700	.....	.....	700	.....
44	Average annual charge per acre assessed.....1939..dollars....	0.74	0.71	.....	.....	0.71	.....
45	Total charges collected ².....1939..dollars....	.....	.....	.....	.....	.....	.....
46	Indebtedness to December 31 (reported) ³.....1939..dollars....	15,880	13,821	13,821	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number....	105	71	20	4	14	6
48	Area irrigated by these enterprises.....1939..acres.....	3,974	3,020	308	84	2,008	24
49	Water delivered.....1939..acre-feet....	5,671	3,738	576	88	1,952	29
50	Average water delivered per acre irrigated.....1939..acre-feet....	1.4	1.2	1.9	1.0	1.0	1.2
51	Average cost of water per acre irrigated.....1939..dollars....	3.34	2.82	6.40	1.90	0.95	15.50
52	Average cost of water per acre-foot delivered..1939..dollars....	2.34	2.28	3.42	1.82	0.98	12.83
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number....	11	4	1	.....	.....	.....
54	Irrigable area in these enterprises.....1939..acres.....	838	283	(⁴)	.....	.....	.....
55	Irrigated area in these enterprises.....1939..acres.....	342	157	(⁴)	.....	.....	.....
56	Area for which drains have been installed.....1939..acres.....	429	17	(⁴)	.....	.....	.....
57	Additional area needing drainage.....1939..acres.....	106	16	.....	.....	.....	.....

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — OKLAHOMA

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DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSISSIPPI RIVER—Continued						
		Arkansas River—Continued			Red River			
		Canadian River			Total	Direct	Washita River	
		Total	Direct (7)	North Canadian River (6)				(9)	(10)
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....	1939..number.....	36	8	28	45	28	17
2	Area irrigated.....	1939..acres.....	627	83	544	1,109	941	268
3	(a) Cropland harvested.....	1939..acres.....	585	83	502	1,056	841	215
4	(b) Crop failure.....	1939..acres.....	32					
5	(c) Pasture.....	1939..acres.....	10		10	53		53
6	Area irrigated.....	1929..acres.....	319			619		
7		1919..acres.....	251			126		
8	Increase or decrease (-), 1929-1939.....	percent.....	96.6			79.2		
9	Irrigable area in enterprises.....	1940..acres.....	1,255	128	1,127	3,641	2,875	766
10		1930..acres.....	556			1,357		
11		1920..acres.....	502			293		
12	Excess of irrigable area over the area irrigated.....	1940..acres.....	628	45	583	2,532	2,034	498
13		1930..acres.....	237			738		
14		1920..acres.....	251			167		
15	Area works were capable of supplying with water.....	1940..acres.....	992	128	864	3,334	2,830	504
16		1930..acres.....	556			1,357		
17		1920..acres.....	495			293		
18	Increase or decrease (-), 1930-1940.....	percent.....	78.4			145.7		
19	Excess of area works were capable of supplying with water over area irrigated.....	1940..acres.....	365	45	320	2,225	1,989	236
20		1930..acres.....	237			738		
21		1920..acres.....	244			167		
22	Proportion which area irrigated is of area works were capable of supplying with water.....	1939..percent.....	63.2	64.8	63.0	33.3	29.7	53.2
23		1929..percent.....	57.4			45.6		
24		1919..percent.....	50.7			43.0		
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....	1940..dollars.....	76,794	7,812	68,982	55,851	24,919	30,932
26	(a) Cost of irrigation works and equipment.....	1940..dollars.....	76,731	7,812	68,919	53,831	23,899	30,032
27	(b) Investment in water rights (reported).....	1940..dollars.....	63		63	1,920	1,020	900
28	Total investment in irrigation enterprises.....	1930..dollars.....	13,195			26,054		
29		1920..dollars.....	46,234			8,728		
30	Increase or decrease (-), 1930-1940.....	percent.....	482.0			114.4		
31	Average investment based on area works were capable of supplying with water, per acre.....	1940..dollars.....	77.41	61.03	79.84	16.75	8.81	61.37
32		1930..dollars.....	23.73			19.20		
33		1920..dollars.....	93.40			29.79		
34	Average investment per acre irrigated.....	1939..dollars.....	122.48	94.12	126.81	50.36	29.63	115.42
35	Estimated final investment in existing enterprises.....	1940..dollars.....	82,544	10,562	71,982	58,901	26,394	32,507
36	Average investment based on estimated final investment and irrigable area, per acre.....	1940..dollars.....	65.77	82.52	63.87	16.18	9.18	42.44
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
37	Enterprises reporting maintenance and operation.....	1939..number.....	33	9	24	30	16	14
38	Area irrigated in these enterprises.....	1939..acres.....	578	83	495	887	620	267
39	Cost of maintenance and operation.....	1939..dollars.....	4,244	414	3,830	4,448	3,104	1,344
40	Average cost per acre irrigated.....	1939..dollars.....	7.34	4.99	7.74	5.01	5.01	5.03
41	Total annual charges (reported) ²	1939..dollars.....				30	30	
42	Average annual charge per acre irrigated.....	1939..dollars.....				1.58	1.58	
43	Area against which charges were assessed.....	1939..acres.....				19	19	
44	Average annual charge per acre assessed.....	1939..dollars.....				1.58	1.58	
45	Total charges collected ²	1939..dollars.....						
46	Indebtedness to December 31 (reported) ³	1939..dollars.....				2,029	2,029	
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....	1939..number.....	27	4	23	34	19	15
48	Area irrigated by these enterprises.....	1939..acres.....	596	56	540	954	686	268
49	Water delivered.....	1939..acre-feet.....	1,093	37	1,056	1,933	1,514	419
50	Average water delivered per acre irrigated.....	1939..acre-feet.....	1.8	0.7	2.0	2.0	2.2	1.6
51	Average cost of water per acre irrigated.....	1939..dollars.....	7.39	3.79	7.80	5.39	5.58	5.03
52	Average cost of water per acre-foot delivered.....	1939..dollars.....	4.03	5.73	3.99	2.66	2.53	3.22
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....	1939..number.....	3	1	2	7	2	5
54	Irrigable area in these enterprises.....	1939..acres.....	287	(*)	(*)	545	(*)	205
55	Irrigated area in these enterprises.....	1939..acres.....	151	(*)	(*)	185	(*)	39
56	Area for which drains have been installed.....	1939..acres.....	12	(*)	(*)	412	(*)	52
57	Additional area needing drainage.....	1939..acres.....	16	(*)	(*)	90	(*)	70

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - OKLAHOMA

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSISSIPPI RIVER (Mississippi River drains entire State; therefore, Mississippi River total for Oklahoma is identical with State Total)				
		Arkansas River				
		Total	Direct (3)	Salt Fork Arkansas River (4)	Cimarron River (5)	Verdigris River (2)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1						
1 Enterprises.....1940..number.....	120	81	23	4	14	6
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	72	65	20	24	265	4
3 Diversion dams.....1940..total number.....	8	6		1	2	
4 1930..total number.....	4	2			2	
5 1920..total number.....	7	7			7	
6 (a) Concrete and masonry.....1940..number.....	1	1			1	
7 (b) Timber.....1940..number.....						
8 (c) Earth and rock.....1940..number.....	6	4		1	1	
9 (d) Other, mixed, and not reported.....1940..number.....	1	1				
10 Main canals and laterals.....1940..total length, miles.....	42.2	36.2	2.0	1.1	31.0	
11 1930..total length, miles.....	24	21			20	
12 1920..total length, miles.....	57	56			52	
13 (a) Earth.....1940..length, miles.....	41	35	2	1	30	
14 (b) Lined.....1940..length, miles.....	1.2	1.2		0.1	1.0	
15 1940..capacity, c.f.s. ¹	277	215	11	15	174	3
16 1930..capacity, c.f.s. ¹	77	68			66	
17 1920..capacity, c.f.s. ¹	344	290			282	
18 Pipe lines ².....1940..total length, miles.....	24.4	19.5	11.2	0.2		0.5
19 1930..total length, miles.....	0.7	0.4			0.2	
20 1920..total length, miles.....	4.3	4.3				
21 (a) Concrete.....1940..length, miles.....	0.6					
22 (b) Metal.....1940..length, miles.....	23.6	19.4	11.2	0.2		0.5
23 (c) Wood-stave.....1940..length, miles.....	0.1	0.1				
24 (d) Other, mixed, and not reported.....1940..length, miles.....	0.1					
25 Storage dams.....1940..total number.....	21	14	2	2	5	1
26 1930..total number.....	3	2			1	
27 1920..total number.....	3	2				
28 (a) Concrete and masonry.....1940..number.....	2	1			1	
29 (b) Earth and rock.....1940..number.....	18	12	1	2	4	1
30 (c) Other, mixed, and not reported.....1940..number.....	1	1				
31 Reservoirs.....1940..total number.....	20	15	4	2	4	1
32 (a) 1-99 acre-feet capacity.....1940..number.....	19	14	4	2	3	1
33 (b) 100-999 acre-feet capacity.....1940..number.....	1	1			1	
34 (c) 1,000 and over acre-feet capacity.....1940..number.....						
35 1940..total capacity, ac.-ft. ³	900	854	37	(⁴)	733	(⁴)
36 1930..total capacity, ac.-ft.....	7	6			4	
37 1920..total capacity, ac.-ft.....	293	281			271	
38 Wells, flowing.....1940..number.....						
39 1930..number.....						
40 1920..number.....	1					
41 1940..yield, g.p.m.....						
42 1930..yield, g.p.m.....						
43 1920..yield, g.p.m.....	100					
44 Wells, pumped.....1940..number.....	77	58	29	1	2	
45 1930..number.....	18	16			4	
46 1920..number.....	19	19			5	
47 1940..yield, g.p.m.....	15,486	12,315	2,370	(⁴)	(⁴)	
48 1930..yield, g.p.m.....	2,715	2,625			530	
49 1920..yield, g.p.m.....	3,643	3,643			2,485	
50 Pumping plants.....1940..total number.....	116	77	33	3	9	3
51 1930..total number.....	25	16			4	
52 Prime movers.....1940..capacity, hp.....	1,037	606	111	14	187	10
53 1930..capacity, hp.....	229	145			31	
54 1920..capacity, hp.....	184	120			33	
55 (a) Electric.....1940..number.....	33	22	9			2
56 1940..capacity, hp.....	250	167	51			(⁴)
57 (b) Internal-combustion.....1940..number.....	66	39	10	2	9	1
58 1940..capacity, hp.....	770	423	46	(⁴)	187	(⁴)
59 (c) Other.....1940..number.....	17	16	14	1		
60 1940..capacity, hp.....	17	16	14	(⁴)		
61 Pumps.....1940..total number.....	116	77	33	3	9	3
62 1930..number.....	30	21			7	
63 1920..number.....	26	22			4	
64 1940..capacity, g.p.m.....	59,280	32,083	4,910	960	13,700	150
65 1930..capacity, g.p.m.....	8,855	3,425			680	
66 1920..capacity, g.p.m.....	7,668	4,668			1,485	
67 (a) Centrifugal.....1940..number.....	73	43	14	2	7	2
68 1940..capacity, g.p.m.....	51,615	27,190	4,130	(⁴)	11,700	(⁴)
69 1940..average capacity, g.p.m.....	707	632	295	(⁴)	1,671	(⁴)
70 (b) Turbine.....1940..number.....	17	11	3		2	
71 1940..capacity, g.p.m.....	6,730	4,310	560		(⁴)	
72 1940..average capacity, g.p.m.....	396	392	187		(⁴)	
73 (c) Plunger.....1940..number.....	26	23	16	1		1
74 1940..capacity, g.p.m.....	935	583	220	(⁴)		(⁴)
75 1940..average capacity, g.p.m.....	36	25	14	(⁴)		(⁴)
76 (d) Other.....1940..number.....						
77 1940..capacity, g.p.m.....						
78 Pumping lift, from all sources.....1940..average, feet.....	36	40	47	27	20	11
79 1930..average, feet.....	33	35			24	
80 1920..average, feet.....	59	69			26	
81 from pumped wells.....1940..average, feet.....	48	46	46	(⁴)	(⁴)	
82 from surface sources.....1940..average, feet.....	26	30	52	20	17	11

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³Total capacity of all reservoirs regardless of size. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — OKLAHOMA

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DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSISSIPPI RIVER—Continued					
		Arkansas River—Continued			Red River		
		Canadian River			Total	Direct	Washita River
		Total	Direct (7)	North Canadian River (6)				(8)	(9)	(10)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940. number.....	34	9	25	39	23	16
2	Average size of enterprise based on area works were capable of supplying with water.....1940. acres.....	29	14	35	85	123	32
3	Diversion dams.....1940. total number.....	3	3	.....	2	2	.....
4	.....1930. total number.....	.....	.....	.....	2	.....	.....
5	.....1920. total number.....	.....	.....	.....	.....	.....	.....
6	(a) Concrete and masonry.....1940. number.....	.....	.....	.....	.....	.....	.....
7	(b) Timber.....1940. number.....	.....	.....	.....	.....	.....	.....
8	(c) Earth and rock.....1940. number.....	2	2	.....	2	2	.....
9	(d) Other, mixed, and not reported.....1940. number.....	1	1	.....	.....	.....	.....
10	Main canals and laterals.....1940. total length, miles.....	2.1	2.1	.....	6.0	1.0	5.0
11	.....1930. total length, miles.....	1	.....	.....	3	.....	.....
12	.....1920. total length, miles.....	4	.....	.....	1	.....	.....
13	(a) Earth.....1940. length, miles.....	2	2	.....	6	1	5
14	(b) Lined.....1940. length, miles.....	0.1	0.1	.....	.....	.....	.....
15	.....1940. capacity, c.f.s. ¹	12	8	4	62	41	21
16	.....1930. capacity, c.f.s. ¹	2	.....	.....	9	.....	.....
17	.....1920. capacity, c.f.s. ¹	8	.....	.....	54	.....	.....
18	Pipe lines ².....1940. total length, miles.....	7.6	1.3	6.3	4.9	2.2	2.7
19	.....1930. total length, miles.....	0.2	.....	.....	0.3	.....	.....
20	.....1920. total length, miles.....	4.0	.....	.....	.....	.....	.....
21	(a) Concrete.....1940. length, miles.....	.....	.....	.....	0.6	0.3	0.3
22	(b) Metal.....1940. length, miles.....	7.5	1.3	6.2	4.2	1.9	2.3
23	(c) Wood-stave.....1940. length, miles.....	0.1	.....	0.1	.....	.....	.....
24	(d) Other.....1940. length, miles.....	.....	.....	.....	0.1	.....	0.1
25	Storage dams.....1940. total number.....	4	2	2	7	2	5
26	.....1930. total number.....	1	.....	.....	1	.....	.....
27	.....1920. total number.....	2	.....	.....	1	.....	.....
28	(a) Concrete and masonry.....1940. number.....	.....	.....	.....	1	.....	1
29	(b) Earth and rock.....1940. number.....	4	2	2	6	2	4
30	(c) Other, mixed, and not reported.....1940. number.....	.....	.....	.....	.....	.....	.....
31	Reservoirs.....1940. total number.....	4	2	2	5	2	3
32	(a) 1-99 acre-feet capacity.....1940. number.....	4	2	2	5	2	3
33	(b) 100-999 acre-feet capacity.....1940. number.....	.....	.....	.....	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940. number.....	.....	.....	.....	.....	.....	.....
35	.....1940. total capacity, ac.-ft. ³	68	(4)	(4)	46	(4)	5
36	.....1930. total number.....	1	.....	.....	1	.....	.....
37	.....1930. total capacity, ac.-ft.....	1	.....	.....	12	.....	.....
38	Wells, flowing.....1940. number.....	.....	.....	.....	.....	.....	.....
39	.....1930. number.....	.....	.....	.....	.....	.....	.....
40	.....1920. number.....	.....	.....	.....	1	.....	.....
41	.....1940. yield, g.p.m.....	.....	.....	.....	.....	.....	.....
42	.....1930. yield, g.p.m.....	.....	.....	.....	.....	.....	.....
43	.....1920. yield, g.p.m.....	.....	.....	.....	100	.....	.....
44	Wells, pumped.....1940. number.....	26	.....	26	19	16	3
45	.....1930. number.....	3	.....	.....	2	.....	.....
46	.....1920. number.....	12	.....	.....	.....	.....	.....
47	.....1940. yield, g.p.m.....	8,435	.....	8,435	3,171	2,570	601
48	.....1930. yield, g.p.m.....	645	.....	.....	90	.....	.....
49	.....1920. yield, g.p.m.....	1,106	.....	.....	.....	.....	.....
50	Pumping plants.....1940. total number.....	29	2	27	39	25	14
51	.....1930. total number.....	6	.....	.....	9	.....	.....
52	Prime movers.....1940. capacity, hp.....	294	(4)	274	431	269	162
53	.....1930. capacity, hp.....	45	.....	.....	84	.....	.....
54	.....1920. capacity, hp.....	78	.....	.....	64	.....	.....
55	(a) Electric.....1940. number.....	11	5	10	11	5	6
56	.....1940. capacity, hp.....	111	8	103	83	18	65
57	(b) Internal-combustion.....1940. number.....	17	1	16	27	20	7
58	.....1940. capacity, hp.....	172	(4)	170	347	251	96
59	(c) Other.....1940. number.....	1	.....	1	1	.....	1
60	.....1940. capacity, hp.....	(4)	.....	(4)	(4)	.....	(4)
61	Pumps.....1940. total number.....	29	2	27	39	25	14
62	.....1930. number.....	5	.....	.....	9	.....	.....
63	.....1920. number.....	16	.....	.....	4	.....	.....
64	.....1940. capacity, g.p.m.....	12,368	(4)	11,763	27,197	16,420	10,777
65	.....1930. capacity, g.p.m.....	1,285	.....	.....	5,430	.....	.....
66	.....1920. capacity, g.p.m.....	3,141	.....	.....	3,000	.....	.....
67	(a) Centrifugal.....1940. number.....	18	2	16	30	20	10
68	.....1940. capacity, g.p.m.....	10,310	(4)	9,710	24,425	14,300	10,125
69	.....1940. average capacity, g.p.m.....	573	(4)	607	814	715	1,012
70	(b) Turbine.....1940. number.....	6	.....	6	6	5	1
71	.....1940. capacity, g.p.m.....	1,750	.....	1,750	2,420	2,120	300
72	.....1940. average capacity, g.p.m.....	292	.....	292	403	424	300
73	(c) Plunger.....1940. number.....	5	.....	5	3	.....	3
74	.....1940. capacity, g.p.m.....	303	.....	303	352	.....	352
75	.....1940. average capacity, g.p.m.....	61	.....	61	117	.....	117
76	(d) Other.....1940. number.....	.....	.....	.....	.....	.....	.....
77	.....1940. capacity, g.p.m.....	.....	.....	.....	.....	.....	.....
78	Pumping lift, from all sources.....1940. average, feet.....	45	(4)	47	31	24	40
79	.....1930. average, feet.....	45	.....	.....	30	.....	.....
80	.....1920. average, feet.....	89	.....	.....	30	.....	.....
81	from pumped wells.....1940. average, feet.....	49	.....	49	57	35	93
82	from surface sources.....1940. average, feet.....	37	(4)	39	22	21	24

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³Total capacity of all reservoirs regardless of size. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁵Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - OKLAHOMA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Alfalfa	Caddo	Canadian	Carter	Cimarron	Cotton
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*								
1	All farms.....1940..number.....	179,687	2,012	4,425	2,436	2,517	605	1,544
2	.....1930..number.....	203,866	2,328	5,961	2,961	2,195	887	2,045
3	Irrigated farms.....1940..number.....	275	3	6	5	6	20	15
4	.....1930..number.....	89	3	.....	.....	4	8	1
5	Increase or decrease (-), 1930-1940.....percent.....	177.8	.....	.....	.....	50.0	150.0	(²)
Operated by—								
6	(a) Owners and managers.....1940..number.....	205	3	5	5	6	12	9
7	.....1930..number.....	69	.....	.....	.....	.....	8	.....
8	(b) Tenants.....1940..number.....	70	.....	1	.....	.....	8	6
9	.....1930..number.....	30	.....	.....	.....	.....	.....	.....
10	Land in all farms.....1940..acres.....	34,803,317	507,276	800,543	525,564	345,222	929,453	385,803
11	Land in irrigated farms.....1940..acres.....	190,592	720	3,526	1,356	170	82,990	4,983
12	Average per farm.....1940..acres.....	693	240	588	271	28	4,150	332
13	(a) Operated by owners and managers.....1940..acres.....	155,752	720	(³)	1,356	170	72,882	3,516
14	Average per farm.....1940..acres.....	760	240	(³)	271	28	6,074	391
15	(b) Operated by tenants.....1940..acres.....	34,840	.....	(³)	.....	.....	10,108	1,467
16	Average per farm.....1940..acres.....	498	.....	(³)	.....	.....	1,264	244
17	Approximate land area.....1940..acres.....	44,341,120	565,760	816,000	566,400	530,560	1,172,480	402,560
IRRIGATED AND IRRIGABLE AREAS								
18	Area irrigated.....1939..acres.....	4,160	24	141	18	42	1,548	189
19	(a) Cropland harvested.....1939..acres.....	3,603	24	91	18	39	1,086	189
20	(b) Crop failure.....1939..acres.....	148	.....	.....	.....	.....	116	.....
21	(c) Pasture.....1939..acres.....	409	.....	50	.....	3	346	.....
22	Area irrigated.....1929..acres.....	1,573	.....	.....	.....	.....	146	.....
23	.....1919..acres.....	2,969	.....	.....	.....	.....	315	.....
24	Increase or decrease (-), 1929-1939.....percent.....	164.5	.....	.....	.....	.....	960.3	.....
25	Irrigable area in enterprises.....1940..acres.....	13,494	37	246	45	55	2,302	196
26	.....1930..acres.....	7,344	.....	.....	.....	.....	226	.....
27	.....1920 ⁴ ..acres.....	11,742	.....	.....	.....	.....	2,255	.....
28	Excess of irrigable area over the area irrigated.....1940..acres.....	9,334	13	105	27	13	754	7
29	.....1930..acres.....	5,771	.....	.....	.....	.....	80	.....
30	Area works were capable of supplying with water.....1940..acres.....	8,624	37	246	45	55	2,052	194
31	.....1930..acres.....	7,331	.....	.....	.....	.....	226	.....
32	.....1920..acres.....	9,672	.....	.....	.....	.....	905	.....
33	Increase or decrease (-), 1930-1940.....percent.....	17.6	.....	.....	.....	.....	808.0	.....
34	Excess, capability of works over area irrigated.....1940..acres.....	4,464	13	105	27	13	504	5
35	.....1930..acres.....	5,758	.....	.....	.....	.....	80	.....
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	2.2	3.3	4.0	1.3	24.7	1.9	3.8
37	.....1929..percent.....	2.7	.....	.....	.....	.....	0.4	.....
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	48.2	64.9	57.3	40.0	76.4	75.4	97.4
39	.....1929..percent.....	21.5	.....	.....	.....	.....	64.6	.....
CAPITAL INVESTED TO JANUARY 1								
40	Total investment in all enterprises.....1940..dollars.....	272,186	575	9,787	11,039	5,300	44,910	6,150
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	269,618	575	9,787	11,039	4,400	44,400	6,150
42	(b) Investment in water rights (reported).....1940..dollars.....	2,568	.....	.....	.....	900	510	.....
43	Total investment in all enterprises.....1930..dollars.....	160,099	.....	.....	.....	.....	26,125	.....
44	.....1920..dollars.....	151,325	.....	.....	.....	.....	33,680	.....
45	Increase or decrease (-), 1930-1940.....percent.....	70.0	.....	.....	.....	.....	71.9	.....
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	31.56	15.54	39.78	245.31	96.36	21.89	31.70
47	.....1930..dollars.....	21.84	.....	.....	.....	.....	115.60	.....
48	.....1920..dollars.....	15.65	.....	.....	.....	.....	37.22	.....
49	Average investment per acre irrigated.....1939..dollars.....	65.43	23.96	69.41	613.28	126.19	29.01	32.54
50	Estimated final investment in existing enterprises.....1940..dollars.....	299,486	575	10,087	11,039	5,300	46,410	6,150
51	.....1930..dollars.....	167,909	.....	.....	.....	.....	26,125	.....
52	.....1920..dollars.....	162,775	.....	.....	.....	.....	42,680	.....
53	Increase or decrease (-), 1930-1940.....percent.....	78.4	.....	.....	.....	.....	77.6	.....
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	22.19	15.54	41.00	245.31	96.36	20.16	31.38
55	.....1930..dollars.....	22.86	.....	.....	.....	.....	115.60	.....
56	.....1920 ⁴ ..dollars.....	13.86	.....	.....	.....	.....	18.93	.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57	Enterprises reporting maintenance and operation.....1939..number.....	107	3	4	3	4	10	4
58	Area irrigated in these enterprises.....1939..acres.....	3,869	24	140	18	42	1,548	189
59	Cost of maintenance and operation.....1939..dollars.....	12,973	60	273	181	650	1,285	826
60	Average cost per acre irrigated.....1939..dollars.....	3.35	2.50	1.95	10.06	15.48	0.83	4.37
61	.....1929..dollars.....	7.62	.....	.....	.....	.....	2.43	.....
62	Total annual charges (reported) ⁶ 7.....1939..dollars.....	530	.....	.....	.....	.....	500	.....
63	Average annual charge per acre irrigated.....1939..dollars.....	0.74	.....	.....	.....	.....	0.71	.....
64	Area against which charges were assessed.....1939..acres.....	719	.....	.....	.....	.....	700	.....
65	Average annual charge per acre assessed.....1939..dollars.....	0.74	.....	.....	.....	.....	0.71	.....
66	Total charges collected ⁸.....1939..dollars.....	.....	.....	.....	.....	.....	.....	.....
67	Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	15,850	.....	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS								
68	Enterprises reporting water delivered.....1939..number.....	105	3	5	2	4	10	4
69	Area irrigated in these enterprises.....1939..acres.....	3,974	24	141	18	42	1,548	189
70	Water delivered in these enterprises.....1939..acre-feet.....	5,671	35	196	9	78	1,482	399
71	Average water delivered per acre irrigated.....1939..acre-feet.....	1.4	1.5	1.4	0.5	1.9	1.0	2.1
72	Average cost of water per acre irrigated.....1939..dollars.....	3.34	2.50	1.95	10.00	15.48	0.83	4.37
DRAINAGE OF IRRIGATED LAND								
73	Enterprises reporting land drained or needing drainage.....1939..number.....	11	.....	.....	.....	3	.....	.....
74	Irrigable area in these enterprises.....1939..acres.....	838	.....	.....	.....	60	.....	.....
75	Irrigated area in these enterprises.....1939..acres.....	342	.....	.....	.....	38	.....	.....
76	Area for which drains have been installed.....1939..acres.....	429	.....	.....	.....	11	.....	.....
77	Additional area needing drainage.....1939..acres.....	106	.....	.....	.....	.....	.....	.....

* Census of Agriculture.
¹ Data between census years not comparable (see headnote).
² Percent not shown when more than 1,000.
³ Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - OKLAHOMA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

irrigation data omitted from any of the counties listed are included under "All other counties"

Custer	Ellis	Harper	Jackson	Kay	Muskogee	Oklahoma	Osage	Pottawatomie	Texas	Tillman	Tulsa	All other counties ¹	
2,290	1,443	945	2,048	2,663	3,614	3,424	2,464	3,595	1,408	2,119	2,689	137,446	1
2,988	1,685	1,204	2,849	2,849	4,487	3,111	2,354	3,760	2,020	2,763	2,469	154,930	2
3	7	8	13	5	3	21	4	5	20	4	12	115	3
.....	.....	2	8	1	1	13	1	3	6	1	1	46	4
.....	.....	300.0	62.5	400.0	200.0	61.5	300.0	66.7	233.3	300.0	(²)	150.0	5
2	6	7	8	3	3	15	4	5	15	2	7	88	6
.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	58	7
1	1	1	5	2	.....	6	.....	.....	5	2	5	27	8
.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	25	9
594,852	703,892	606,054	470,017	562,703	392,569	338,698	1,156,106	422,366	1,153,916	530,930	284,091	24,094,262	10
1,467	5,410	11,164	2,212	234	465	311	7,854	432	15,672	960	697	49,769	11
489	773	1,396	170	47	155	15	1,964	86	784	240	75	433	12
(³)	(³)	(³)	1,253	(³)	465	189	7,854	432	11,872	(³)	620	38,036	13
(³)	(³)	(³)	157	(³)	155	13	1,964	86	791	(³)	89	432	14
(³)	(³)	(³)	959	(³)	.....	122	.....	.....	3,800	(³)	277	11,731	15
(³)	(³)	(³)	192	(³)	.....	20	.....	.....	760	(³)	55	434	16
639,360	782,080	661,760	499,200	604,160	526,080	453,760	1,467,520	511,360	1,315,840	551,040	366,080	31,909,120	17
55	56	570	308	60	33	53	19	13	87	43	178	723	18
55	56	560	308	60	33	53	19	13	55	43	178	723	19
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21
.....	.....	.....	420	.....	.....	.....	.....	.....	.....	.....	.....	1,007	22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,654	23
.....	.....	.....	-26.7	.....	.....	.....	.....	.....	.....	.....	.....	-28.2	24
277	86	5,880	2,015	66	96	65	33	73	132	140	178	1,592	25
.....	.....	.....	585	.....	.....	.....	.....	.....	.....	.....	.....	6,533	26
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,487	27
222	10	5,310	1,707	6	63	12	14	60	45	97	.....	869	28
.....	.....	.....	165	.....	.....	.....	.....	.....	.....	.....	.....	5,526	29
85	66	1,790	1,992	66	96	65	33	13	119	120	178	1,372	30
.....	.....	.....	585	.....	.....	.....	.....	.....	.....	.....	.....	6,520	31
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,767	32
.....	.....	.....	240.5	.....	.....	.....	.....	.....	.....	.....	.....	-79.0	33
30	10	1,220	1,684	6	63	12	14	.....	32	77	.....	649	34
.....	.....	.....	165	.....	.....	.....	.....	.....	.....	.....	.....	5,513	35
3.7	1.0	5.1	13.9	25.6	7.1	17.0	0.2	3.0	0.6	4.5	19.8	1.5	36
.....	.....	.....	44.0	.....	.....	.....	.....	.....	.....	.....	.....	5.9	37
64.7	84.8	31.8	15.5	90.9	34.4	81.5	57.6	100.0	73.1	35.8	100.0	52.7	38
.....	.....	.....	71.8	.....	.....	.....	.....	.....	.....	.....	.....	15.4	39
8,685	3,400	19,210	6,720	30,145	7,324	4,590	5,317	1,400	1,978	3,300	11,800	90,556	40
8,685	3,400	19,200	5,700	30,145	7,324	4,590	5,242	1,400	1,850	3,300	11,800	90,531	41
.....	.....	10	1,020	.....	.....	.....	75	.....	28	.....	.....	25	42
.....	.....	.....	4,504	.....	.....	.....	.....	.....	.....	.....	.....	129,470	43
.....	.....	.....	49.2	.....	.....	.....	.....	.....	.....	.....	.....	117,645	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	-30.1	45
102.18	51.62	10.73	3.37	456.74	76.29	70.62	161.12	107.69	16.62	27.50	66.29	66.00	46
.....	.....	.....	7.70	.....	.....	.....	.....	.....	.....	.....	.....	19.86	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.42	48
157.91	60.71	33.70	21.82	502.42	221.94	86.60	279.84	107.69	22.74	76.74	66.29	125.25	49
11,460	3,650	35,710	7,020	30,145	7,324	5,090	5,317	1,400	1,978	4,325	11,800	94,706	50
.....	.....	.....	4,504	.....	.....	.....	.....	.....	.....	.....	.....	137,280	51
.....	.....	.....	55.9	.....	.....	.....	.....	.....	.....	.....	.....	120,095	52
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	-31.0	53
41.37	55.30	6.07	3.48	456.74	76.29	78.31	161.12	19.18	14.98	30.89	66.29	59.49	54
.....	.....	.....	7.70	.....	.....	.....	.....	.....	.....	.....	.....	21.01	55
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.66	56
4	6	4	6	⁶ 2	4	6	4	3	4	2	10	24	57
53	56	570	144	45	28	53	19	13	87	(³)	178	620	58
378	376	845	872	51	172	508	265	151	395	(³)	1,550	3,860	59
6.87	6.71	1.48	6.06	1.13	6.14	9.58	13.95	11.62	4.54	(³)	8.71	6.23	60
.....	.....	.....	3.45	.....	.....	.....	.....	.....	.....	.....	.....	14.34	61
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	62
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.58	63
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.58	65
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
.....	.....	.....	.....	13,821	.....	.....	.....	.....	.....	.....	.....	2,029	67
3	2	4	8	3	4	5	4	3	4	3	10	24	68
55	(³)	570	308	60	33	49	19	13	87	43	178	568	69
125	(³)	525	787	29	49	137	7	8	75	88	478	1,136	70
2.3	(³)	0.9	2.6	0.5	1.5	2.8	0.4	0.6	0.9	2.0	2.7	2.0	71
6.85	(³)	1.48	6.06	1.13	6.11	10.35	13.95	11.62	4.54	6.88	8.71	7.14	72
.....	.....	(³)	1	.....	(³)	1	.....	.....	.....	(³)	1	.....	73
.....	.....	(³)	.....	.....	(³)	.....	.....	.....	.....	(³)	.....	490	74
.....	.....	(³)	.....	.....	(³)	.....	.....	.....	.....	(³)	.....	152	75
.....	.....	(³)	.....	.....	(³)	.....	.....	.....	.....	(³)	.....	381	76
.....	.....	(³)	.....	.....	(³)	.....	.....	.....	.....	(³)	.....	76	77

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁵ Data for less than 3 enterprises shown with permission of the enterprises involved.

⁶ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁷ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - OKLAHOMA

COUNTY TABLE II - FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS.
 [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Alfalfa	Caddo	Canadian	Carter	Cimarron	Cotton
FARM VALUES, 1940^o								
1	Land and buildings, all farms.....dollars..	831,140,748	25,363,523	24,069,651	23,875,846	7,609,785	5,539,236	9,355,579
2	Land and buildings, irrigated farms.....dollars..	3,251,114	28,000	104,400	140,675	108,000	251,950	144,848
Operated by—								
3	(a) Owners and managers.....dollars..	2,631,046	28,000	(²)	140,675	108,000	213,970	98,820
4	(b) Tenants.....dollars..	620,068		(²)			37,980	46,028
5	Average, land and buildings, per farm.....dollars..	11,822.23	9,333.33	17,400.00	28,135.00	18,000.00	12,597.50	9,656.53
6	per acre in farms.....dollars..	17.06	38.89	29.61	103.74	635.29	3.04	29.07
7	Buildings, irrigated farms reporting value.....number..	268	3	6	5	6	19	13
8	Total reported.....dollars..	878,415	6,000	22,500	41,115	82,500	42,775	17,900
9	Average, per irrigated farm reporting.....dollars..	3,277.67	2,000.00	3,750.00	8,223.00	13,750.00	2,251.32	1,376.92
10	per acre on all irrigated farms.....dollars..	4.61	8.33	6.38	30.32	485.29	0.52	3.59
11	Buildings, nonirrigated farms reporting value.....number..	173,242	1,889	4,306	2,339	2,433	491	1,465
12	Total reported.....dollars..	140,637,553	3,094,667	3,841,231	3,660,158	1,387,860	525,311	1,270,034
13	Average, per nonirrigated farm reporting.....dollars..	811.80	1,638.26	892.06	1,564.84	570.43	1,071.92	866.92
14	per acre on all nonirrigated farms.....dollars..	4.06	6.11	4.82	6.98	4.02	0.62	3.33
15	Implements and machinery, irrigated farms reporting value.....number..	245	3	5	5	5	19	14
16	Total reported.....dollars..	324,267	4,250	13,700	24,700	4,965	24,417	15,085
17	Average, per irrigated farm reporting.....dollars..	1,323.50	1,416.67	2,740.00	4,940.00	993.00	1,285.11	1,077.50
18	per acre on all irrigated farms.....dollars..	1.70	5.90	3.89	18.22	29.21	0.29	3.03
19	Implements and machinery, nonirrigated farms reporting value.....number..	152,490	1,737	3,839	2,114	2,044	513	1,323
20	Total reported.....dollars..	78,124,476	2,392,643	2,159,364	1,993,711	435,763	653,414	995,141
21	Average, per acre, on all nonirrigated farms.....dollars..	2.26	4.72	2.71	3.80	1.26	0.77	2.61
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940.....number.....	120	3	5	3	4	10	4
23	.....1930.....number.....	77	2			4	5	1
24	.....1920.....number.....	33					6	
25	Average size of enterprise based on irrigable area.....1940.....acres.....	112	12	49	15	14	230	49
26	.....1930.....acres.....	95					45	
27	.....1920 ³.....acres.....	356					376	
28	Diversion dams.....1940.....number.....	8					2	
29	Main canals and laterals.....1940.....length, miles.....	42.2	0.1			4.0	11.0	
30	.....1930.....length, miles.....	24					3	
31	.....1920.....length, miles.....	57					15	
32	.....1940.....capacity, c.f.s. ⁴	277	1	10	2	4	106	11
33	.....1930.....capacity, c.f.s. ⁴	77					5	
34	.....1920.....capacity, c.f.s. ⁴	344					123	
35	Pipe lines ⁵.....1940.....length, miles.....	24.4	0.1	1.4	1.0	0.4		0.4
36	Storage dams.....1940.....number.....	21	2			2	5	
37	Reservoirs.....1940.....number.....	20	2				4	
38	.....1930.....number.....	7					4	
39	.....1920.....number.....	8						
40	.....1940.....capacity, acre-feet.....	900	(²)				733	
41	.....1930.....capacity, acre-feet.....	293					271	
42	.....1920.....capacity, acre-feet.....	52						
43	Wells, flowing.....1940.....number.....							
44	.....1930.....number.....							
45	.....1920.....number.....	1						
46	.....1940.....yield, g.p.m.....							
47	.....1930.....yield, g.p.m.....							
48	.....1920.....yield, g.p.m.....	100						
49	Wells, pumped.....1940.....number.....	77	1	1	2	1		10
50	.....1930.....number.....	18					3	
51	.....1920.....number.....	19					1	
52	.....1940.....yield, g.p.m.....	15,486	(²)	(²)	400	(²)		1,000
53	.....1930.....yield, g.p.m.....	2,715					30	
54	.....1920.....yield, g.p.m.....	3,643					1,600	
55	Pumping plants.....1940.....number.....	116	2	6	4	3	4	6
56	.....1930.....number.....	25					2	
57	.....1920.....number.....	22					1	
58	Prime movers.....1940.....capacity, hp.....	1,037	(²)	88	45	9	58	56
59	.....1930.....capacity, hp.....	229					3	
60	.....1920.....capacity, hp.....	184					8	
61	Pumps.....1940.....capacity, g.p.m.....	59,290	(²)	4,852	1,250	650	6,200	4,700
62	.....1930.....capacity, g.p.m.....	8,855					30	
63	.....1920.....capacity, g.p.m.....	7,668					600	
64	Pumping lift, from all sources.....1940.....average, feet.....	36	(²)	46	76	44	16	23
65	.....1930.....average, feet.....	33					26	
66	.....1920.....average, feet.....	59					16	
67	from pumped wells.....1940.....average, feet.....	48	(²)	(²)	71	(²)		
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷								
68	Enterprises reporting pay roll.....number.....							
69	Irrigated area in these enterprises.....acres.....							
70	Wages and salaries paid and payable.....dollars.....							
71	Persons employed during week ending April 29.....number.....							

^o Census of Agriculture.

¹ Data between census years not comparable (see headnote).

² Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — OKLAHOMA

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1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Custer	Ellis	Harper	Jackson	Kay	Muskogee	Oklahoma	Osage	Pottawatomie	Texas	Tillman	Tulsa	All other counties ¹		
16,904,442	8,449,315	7,061,913	14,973,705	25,738,628	9,887,597	22,227,907	18,688,425	10,622,823	14,228,978	23,294,943	15,210,910	548,039,642	1	
40,000	54,280	129,580	104,640	46,700	82,730	148,906	228,600	35,100	128,850	56,000	76,950	1,338,905	2	
(²)	(²)	(²)	62,740	(²)	82,730	114,856	228,600	35,100	95,200	(²)	36,000	1,042,695	3	
(²)	(²)	(²)	41,900	(²)		34,050			33,650	(²)	40,850	296,210	4	
13,333.33	7,794.29	16,197.50	8,049.23	9,340.00	27,576.67	7,090.76	57,150.00	7,020.00	6,442.50	14,500.00	6,412.50	11,642.65	5	
27.27	10.03	11.61	47.31	199.57	177.91	478.80	28.11	81.25	8.22	60.42	85.79	26.90	6	
3	7	8	13	4	3	21	4	5	20	4	12	112	7	
3,450	8,800	15,800	24,100	29,550	29,500	63,220	30,400	20,500	25,950	9,300	28,950	378,105	8	
1,150.00	1,257.14	1,975.00	1,853.85	7,387.50	9,833.33	3,010.48	7,600.00	4,100.00	1,297.50	2,325.00	2,245.83	3,375.94	9	
2.35	1.63	1.42	10.90	126.28	63.44	203.28	3.87	47.45	1.66	9.69	30.04	7.60	10	
2,187	1,369	867	1,965	2,559	3,516	3,324	2,403	3,514	1,269	2,001	2,623	132,722	11	
2,680,914	1,378,930	990,894	1,844,720	3,910,895	2,266,871	5,531,258	3,802,778	2,445,738	1,828,270	2,819,453	4,001,996	93,354,605	12	
1,225.84	1,007.25	1,142.90	938.79	1,528.28	644.73	1,664.04	1,582.51	696.00	1,440.72	1,409.02	1,525.73	703.38	13	
4.52	1.97	1.67	3.94	6.95	5.78	16.35	3.31	5.80	1.61	5.32	14.13	3.88	14	
3	8	8	13	3	3	13	4	4	20	4	11	102	15	
2,370	4,275	13,300	19,476	5,550	11,350	6,740	5,300	2,700	17,730	4,395	12,342	131,613	16	
790.00	712.50	1,662.50	1,498.08	1,850.00	3,783.33	515.46	1,325.00	675.00	886.50	1,098.75	1,122.00	1,290.32	17	
1.62	0.79	1.19	8.90	23.72	24.41	21.67	0.67	6.25	1.13	4.58	13.76	2.64	18	
2,077	1,177	839	1,849	2,309	3,216	2,342	1,926	2,940	1,218	1,800	2,417	116,810	19	
2,174,127	1,099,940	884,058	1,644,965	2,475,562	931,757	1,097,115	1,181,568	925,521	1,475,342	2,194,739	1,143,680	52,386,018	20	
3.66	1.57	1.45	3.30	4.40	2.38	3.24	1.03	2.19	1.30	4.14	4.04	2.18	21	
4	6	4	8	3	6	6	4	3	4	5	10	28	22	
		1	7	1	1	13	1	3	1	1	1	35	23	
												27	24	
69	11	1,470	252	22	16	11	8	24	33	28	18	57	25	
			84										26	
			2										351	27
1.0	1.1	20.0	1.0		2.0								1	28
													2.0	29
													21	30
													42	31
3	6	68	18		9		2			1	1	35	32	
												72	33	
0.2			1.0	2.6	3.1	1.4	0.5	1.2			3.9	221	34	
												7.2	35	
1			1	2			1	1				6	36	
1			1	2			2		1			3	37	
(²)			(²)	6			(²)		(²)			110	40	
												22	41	
												52	42	
													43	
													44	
												1	45	
													46	
													47	
												100	48	
1		4		16		2	2		7	4	10	16	49	
												15	50	
400		2,660		380		(²)	70		1,100	1,420	1,570	18	51	
												6,253	52	
												2,685	53	
												2,043	54	
3		7	6	17	2	5	2	1	4	5	10	29	55	
			5									18	56	
		199	47	39	(²)	10	(²)	(²)	24	47	28	390	57	
			60									166	58	
												176	59	
4,300		7,660	5,100	520	(²)	740	(²)	(²)	1,800	2,920	1,620	15,278	60	
			3,900									4,825	61	
												7,068	62	
39		26	19	78	(²)	60	(²)	(²)	22	31	26	39	63	
			19									38	64	
												62	65	
70						(²)						62	66	
		27		78					22	35	28	47	67	
													66	
													69	
													70	
													71	

⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁵ Includes siphons and farm pipe lines reported.
⁶ Data for less than 3 enterprises are shown with permission of the enterprises involved.
⁷ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - OREGON

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	^a 61,664,000	61,188,480	61,188,480	61,188,480	61,188,480	61,188,480	61,188,480
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	61,829	64,826	55,153	50,206	45,502	35,837	25,530
Land in all farms.....acres.....	17,988,307	17,357,549	16,548,678	13,542,318	11,685,110	10,071,328	6,909,886
Farms irrigated: ¹							
Farms.....number.....	16,159	13,243	11,387	9,154	6,669	4,636	3,150
Increase or decrease (-) over preceding census.....percent..	² 41.9	.....	24.4	37.3	43.9	47.2	.....
Proportion of all farms.....percent..	26.1	20.4	20.6	18.2	14.7	12.9	12.3
Land in farms.....acres.....	8,730,104	⁽³⁾	6,306,825	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Proportion of all farm land.....percent..	48.5	⁽³⁾	38.1	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Area irrigated.....acres.....	⁴ 1,030,228	⁵ 578,838	⁶ 637,967	⁽⁷⁾	⁽⁷⁾	388,310	177,944
Increase or decrease (-) over preceding census.....percent..	² 61.5	.....	.....	.....	.....	118.2	.....
Proportion of total land area of State.....percent..	1.7	0.9	1.0	.....	.....	0.6	0.3
Proportion of all farm land.....percent..	5.7	3.3	3.9	.....	.....	3.9	2.6
Value of irrigated farms (land and buildings).....dollars..	152,701,476	⁽³⁾	160,937,826	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per farm.....dollars..	9,449.93	⁽³⁾	14,133.48	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per acre.....dollars..	17.49	⁽³⁾	25.52	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Value of farm implements and machinery ⁸.....dollars..	15,346,736	⁽³⁾	10,981,075	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per farm ⁹.....dollars..	949.73	⁽³⁾	964.35	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Average per acre ⁹.....dollars..	1.76	⁽³⁾	1.74	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number.....	5,884	⁽³⁾	4,066	4,710	3,745	⁽³⁾	⁽³⁾
Farms irrigated.....number.....	19,389	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾	⁽³⁾
Area irrigated.....acres.....	1,049,176	⁽³⁾	898,713	986,162	666,129	⁽³⁾	⁽³⁾
Area existing works were capable of supplying with water.....acres.....	1,261,081	⁽³⁾	1,158,210	1,344,046	830,526	⁽³⁾	⁽³⁾
Area irrigable.....acres.....	1,441,417	⁽³⁾	1,478,128	⁹ 1,925,987	⁹ 2,527,208	⁽³⁾	⁽³⁾
Additional area existing works were capable of supplying with water.....acres.....	211,905	⁽³⁾	259,497	357,884	144,397	⁽³⁾	⁽³⁾
Additional irrigable area in enterprises not supplied with water.....acres.....	392,241	⁽³⁾	579,415	⁹ 939,825	⁹ 1,841,079	⁽³⁾	⁽³⁾
Investment in irrigation enterprises.....dollars..	50,961,251	⁽³⁾	38,754,548	26,929,151	12,760,214	1,843,771	825,660
Increase or decrease (-) over preceding census.....percent..	² 31.5	⁽³⁾	34.0	126.7	592.1	123.3	.....
Average per acre based on area works were capable of supplying with water.....dollars..	40.41	⁽³⁾	33.46	21.52	15.36	⁽³⁾	⁽³⁾
Increase or decrease (-) over preceding census.....percent..	² 20.8	⁽³⁾	55.5	40.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	53,884,430	⁽³⁾	60,039,939	41,585,742	39,216,619	⁽³⁾	⁽³⁾
Average per acre based on irrigable area in enterprises.....dollars..	37.38	⁽³⁾	40.62	⁹ 21.59	⁹ 15.52	⁽³⁾	⁽³⁾
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	1.25	⁽³⁾	1.41	1.19	0.75	⁽³⁾	⁽³⁾

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³Not available. ⁴Irrigated land from which crops were harvested plus 299,546 acres of irrigated land used only for pasture. ⁵Irrigated land from which crops were harvested. ⁶Acres of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁰The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	Number 61,829	Acres 17,988,307	Acres 2,824,316	Acres 730,682	Acres 299,546	Dollars 476,817,354	Dollars 26.51	Dollars 115,245,583	Dollars 6.41	Dollars 44,607,932	Dollars 2.48
Owners and managers.....	50,552	15,548,863	2,273,134	612,191	264,849	396,802,291	25.52	99,425,228	6.39	37,196,120	2.39
Tenants.....	11,277	2,439,444	551,182	118,491	34,697	80,015,063	32.80	15,820,355	6.49	7,411,812	3.04
Irrigated farms, total.....	16,159	8,730,104	989,378	730,682	299,546	152,701,476	17.49	33,570,300	3.85	15,346,736	1.76
Owners and managers.....	13,345	7,968,948	836,900	612,191	264,849	131,641,303	16.52	29,582,709	3.71	13,280,611	1.67
Tenants.....	2,814	761,156	152,478	118,491	34,697	21,060,173	27.67	3,987,591	5.24	2,066,125	2.71
Wholly irrigated farms.....	10,551	4,332,604	588,183	588,183	228,577	85,468,774	19.73	19,223,279	4.44	8,763,433	2.02
Owners and managers.....	8,667	3,894,331	488,447	488,447	203,338	72,839,962	18.70	16,861,881	4.33	7,540,262	1.94
Tenants.....	1,884	438,273	99,736	99,736	25,239	12,628,812	28.81	2,361,398	5.39	1,223,171	2.79
Partly irrigated farms.....	5,608	4,397,500	401,195	142,499	70,969	67,232,702	15.29	14,347,021	3.26	6,583,303	1.50
Owners and managers.....	4,678	4,074,617	348,453	123,744	61,511	58,901,341	14.43	12,720,828	3.12	5,740,349	1.41
Tenants.....	930	322,883	52,742	18,755	9,458	8,431,361	26.11	1,626,193	5.04	842,954	2.61
Nonirrigated farms, total.....	45,670	9,256,203	1,834,938	.....	.....	324,115,878	35.01	81,675,283	8.82	29,261,196	3.16

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION — OREGON

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	5,894	1,441,417	1,261,081	1,049,176	898,713	988,162	16.7	925,920	983,423	892,684	3.5	1.45	0.42
Primary sources:													
Streams, gravity.....	3,172	1,090,191	927,233	786,059	674,396	786,354	16.6	696,432	733,371	669,621	3.1	0.99	0.31
Streams, pumped.....	876	64,245	59,955	45,008	50,537	64,576	-10.9	43,987	43,438	42,580	2.5	4.86	1.96
Streams, gravity and pumped.....	63	174,763	166,279	132,382	14,636	253	804.5	113,411	132,038	113,107	4.8	1.99	0.41
Wells, pumped.....	621	12,315	11,805	8,173	3,804	1,993	114.9	8,081	7,891	7,819	2.1	6.38	3.10
Wells, flowing.....	8	253	209	155	87	72	78.2	124	115	114	2.9	0.32	0.11
Wells, pumped and flowing.....						340							
Lakes, gravity.....	21	7,071	6,541	5,254	10,490	5,750	-50.7	4,666	4,929	4,491	2.2	0.77	0.35
Lakes, pumped.....	42	4,434	4,373	3,298	6,092	1,620	-45.9	3,298	3,208	3,208	1.2	1.73	1.45
Springs.....	500	19,938	19,453	15,274	6,973	9,584	119.0	11,386	13,585	10,295	2.2	0.83	0.38
Springs and streams.....	150	27,736	27,381	20,773				15,305	15,234	14,293	2.7	0.32	0.12
Stored storm water.....	14	2,141	1,691	1,014	1,501	3,763	-32.4	1,014	872	872	1.5	0.41	0.27
City water.....	12	126	126	73	4	258	(²)	48	46	45	2.7	13.24	4.89
Sewage.....					35	10							
Streams, gravity; wells, pumped...	37	7,308	6,100	4,416	994	105	344.3	3,427	4,416	3,427	1.9	2.30	1.19
Streams, gravity; wells, flowing...	10	6,973	6,679	6,585	2,328	200	182.9	6,585	6,585	6,585	1.4	0.19	0.14
Streams, pumped; wells, pumped...	38	1,588	1,468	1,043				1,043	1,003	1,003	2.9	5.43	1.88
Waste water, seepage or drainage...	64	2,721	2,526	2,283				2,210	2,033	2,033	2.6	2.00	0.77
Other mixed.....	60	19,614	19,262	17,386	124,002	111,137	-86.0	14,903	14,659	13,191	3.3	1.72	0.52
Other and not reported.....					2,834	147							
Supplemental sources:³													
Streams, gravity and/or storage...	27	158,971	138,212	101,843				79,950	94,536	79,915	2.2	0.89	0.41
Streams, pumped.....	11	2,453	2,453	2,424	7,887		-89.5	363	2,404	343	1.6	2.57	1.62
Wells, pumped.....	58	906	893	703	612		14.9	656	703	656	5.6	6.43	1.14
Wells, flowing.....													

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Percent not shown when more than 1,000. ³Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	50,961,251	100.0	40.41	38,754,548	100.0	33.46	6.95	982,940	1.25	863,685	1.41	-0.16	801,891	1.19
Primary sources:														
Streams, gravity.....	23,366,278	45.9	25.22	23,940,310	61.8	28.05	-2.83	732,888	0.72	645,238	0.90	-0.18	631,124	1.00
Streams, pumped.....	1,824,836	3.6	30.44	4,468,284	11.5	53.43	-22.99	43,438	4.14	50,014	5.72	-1.58	59,087	3.09
Streams, gravity and pumped.....	18,977,045	87.2	114.13	347,967	0.9	23.77	90.36	132,038	2.50	12,376	1.54	0.96	253	2.55
Wells, pumped.....	499,877	1.0	42.34	245,833	0.6	59.06	-16.72	7,891	6.42	3,711	10.72	-1.30	1,419	8.04
Wells, flowing.....	4,820	(³)	23.06	7,972	(³)	65.88	-42.82	115	0.36	87	0.63	-0.27	66	9.47
Wells, pumped and flowing.....													20	18.00
Lakes, gravity.....	58,615	0.1	8.96	245,802	0.6	13.52	-4.56	4,929	0.72	10,490	0.57	0.15	1,735	0.90
Lakes, pumped.....	59,040	0.1	13.50	185,600	0.5	17.92	-4.42	3,208	1.73	6,061	2.16	-0.43	457	2.52
Springs.....	523,473	1.0	26.91	89,648	0.2	7.95	18.96	13,585	0.69	6,543	1.00	-0.31	6,735	0.92
Springs and streams.....	169,632	0.3	6.20					15,234	0.31					
Stored storm water.....	21,565	(³)	12.75	39,785	0.1	16.07	-3.32	872	0.41	1,501	0.30	0.11	3,287	1.28
City water.....	5,485	(³)	43.53	50	(³)	7.50	36.03	46	13.35	4	7.50	5.85	252	23.89
Sewage.....				10	(³)	0.28								
Streams, gravity; wells, pumped...	183,680	0.4	30.11	32,392	0.1	27.89	2.22	4,416	2.48	994	5.58	-3.10	95	17.89
Streams, gravity; wells, flowing...	24,226	(³)	3.63	6,425	(³)	2.67	0.96	6,585	0.19	2,328	0.14	0.05	200	4.00
Streams, pumped; wells, pumped...	38,168	0.1	26.00					1,003	5.43					
Waste water, seepage or drainage...	32,362	0.1	12.81					2,033	2.00					
Other mixed.....	917,211	1.8	47.62	8,893,269	22.9	57.95	-10.33	14,659	1.57	123,586	1.94	-0.37	97,014	1.13
Other and not reported.....				19,171	(³)	6.71				752	1.80		147	0.78
Supplemental sources:⁴														
Streams, gravity and/or storage...	4,178,629	8.2	30.23					94,536	0.69					
Streams, pumped.....	15,062	(³)	6.14	229,690	0.6	20.74	-14.60	2,404	0.64	7,887	2.48	-1.84		
Wells, pumped.....	41,247	0.1	46.19	1,460	(³)	2.38	49.81	703	6.73	612	0.29	6.44		
Wells, flowing.....														

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION - OREGON

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				
	1940		1930	1920			1940		1930	1920	
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	Primary enterprises		Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	Primary enterprises
AREA IRRIGATED	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>	AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued					
Total.....	1,049,176	104,970	898,713	986,162	16.7						
Individual and partnership....	543,612	16,363	450,841	590,626	20.6						
Cooperative, incorporated.....	114,087	1,530	2 184,940	186,037	-14.5						
Cooperative, unincorporated....	44,067	2,035	160,974	92,081	26.9						
Irrigation district.....	204,271	.....	12,619	27,338	-43.6					
Commercial.....	7,123	.....	61,829	54,981	110.9					
Bureau of Reclamation ³	130,403	85,042	4,135	4,000	25.0						
Office of Indian Affairs ³	5,168	.....	325	.....	.....				
State.....	.....	.....	.....	330	.....					
City and/or sewage.....	.....	.....	.....	30,769	-98.2					
Other.....	425	.....	23,050	.....	.....				
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER											
Total.....	1,261,081	141,558	1,158,210	1,344,046	8.9						
Individual and partnership....	650,375	17,206	539,903	689,723	20.5						
Cooperative, incorporated.....	125,416	4,584	2 222,189	236,171	-21.6						
Cooperative, unincorporated....	48,829	2,035	240,019	198,540	-2.6						
Irrigation district.....	233,836	.....	.....	.....	.....		

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²Includes 1 Carey Act enterprise. ³U. S. Dept. of the Interior. ⁴For 1920 relates to total area. Irrigable area for that year was not reported. ⁵For explanation of areas, see text, p. 479.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total ✓	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area ✓	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 5,884	Number 327	Acres 1,441,417	Acres 1,261,081	Dollars 36.61	Dollars 1.18	Dollars 29.91	Dollars 0.73	Number 19,389	Acres 1,049,176	Acres 790,925	Acres 13,781	Acres 244,470
Individual and partnership....	5,616	94	675,595	650,375	8.10	0.72	9.86	0.41	6,762	543,612	367,743	4,338	171,531
Cooperative, incorporated.....	102	94	128,874	125,416	32.56	0.76	4.58	0.20	2,596	114,087	98,411	375	20,301
Cooperative, unincorporated....	90	68	50,133	48,829	9.72	0.36	4.42	0.24	817	44,067	33,907	.....	10,180
Irrigation district.....	39	38	271,897	233,836	53.90	1.98	.....	.....	6,206	204,271	177,757	2,299	24,215
Commercial.....	7	7	84,988	16,988	23.46	2.68	.....	.....	280	7,123	6,428	.....	695
U. S. Bureau of Reclamation ³	19	19	178,418	175,171	131.12	2.13	34.27	0.82	2,598	130,403	108,039	6,739	15,625
U. S. Office of Indian Affairs.....	7	5	50,868	9,822	35.36	1.52	.....	.....	113	5,168	3,215	30	1,923
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	2	2	.....	644	34.69	7.13	.....	.....	17	425	425	.....	.....
Other.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴For explanation of areas and investment, see text, p. 479.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works	
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises				
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment						Investment in water rights			
Total.....	Dollars 50,961,251	Dollars 46,726,313	Dollars 4,234,938	Dollars 50,399,668	Dollars 561,583	Dollars 38,754,548	Dollars 28,929,151	Percent 31.5	Dollars 37.05	Dollars 29.92	Dollars 296,948	Dollars 2,923,179	
Individual and partnership....	5,502,899	5,422,518	170,381	5,437,542	155,357	4,871,362	6,584,382	14.8	8.34	9.90	259	273,913	
Cooperative, incorporated.....	4,242,235	4,221,235	21,000	4,104,837	137,398	7,147	2 6,286,247	3,143,698	-24.7	33.66	4.58	11,358	265,200
Cooperative, unincorporated....	490,755	481,755	9,000	483,608	7,147	.....	.....	.....	9.87	4.42	955	2,290
Irrigation district.....	12,821,775	12,821,775	.....	12,602,599	219,176	13,983,816	6,313,753	-8.3	54.83	.....	113,746	297,905
Commercial.....	441,013	441,013	.....	398,513	42,500	1,606,967	3,281,034	-72.6	25.96	.....	1,044	51,000
U. S. Bureau of Reclamation ³	27,002,875	22,968,318	4,034,557	27,002,875	.....	11,408,297	5,956,950	136.7	131.12	34.27	154,588	396,371
U. S. Office of Indian Affairs.....	347,360	347,360	.....	347,365	5	257,317	230,038	35.0	35.37	.....	14,988	1,636,500
State.....	.....	.....	.....	.....	.....	9,550	10,107	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	171,068	.....	.....	.....	.....	.....
Other.....	22,339	22,339	.....	22,339	.....	331,000	3,232,121	-93.3	34.69	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Includes 1 Carey Act enterprise. ³For explanation of investment, see text, p. 479.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter-prises 1940	Area		Total indebted-ness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ⁶	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri-gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	73	599,008	429,854	14,329,768	36.06	33.43	13	1,800,973	1,588,681	22.64	686,561	994,245	929,550
Partnership.....	1	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	3	3,930	5,366	0.44	49,982	13,612	4,316
Cooperative, incorporated.....	22	67,212	64,524	447,184	7.15	6.93	3	3,930	5,366	0.44	123,808	101,654	89,498
Cooperative, unincorporated.....	2	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	6	.....	.....	.....	35,592	12,531	2,069
Irrigation district.....	31	249,996	212,808	4,955,383	23.73	22.31	1	1,673,643	1,470,609	36.18	228,034	612,883	661,319
Commercial.....	3	81,000	14,000	146,724	22.23	10.48	1	.....	.....	.....	7,944	7,944	7,944
Bureau of Reclamation ⁵	9	151,883	128,369	8,449,199	53.85	73.75	3	123,400	112,706	5.09	240,334	231,347	160,109
Office of Indian Affairs ⁶	5	46,854	7,772	10,328,128	100.69	42.22	.....	.....	.....	.....	2,867	2,834	1,749
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(⁷)	(⁷)	(⁷)
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$34.82. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$31.72. ⁵Based on primary enterprises only; no supplemental enterprises reported arrearage. ⁶Data are included only in State total because less than 3 enterprises reported in the 1940 Census. ⁷Data for 1 "City and/or sewage" enterprise are included with "Commercial" enterprises in the 1940 Census. ⁸U. S. Dept. of the Interior. ⁹Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ¹⁰Represents construction costs of irrigation works less cancellations and repayments. For explanation of areas and investment, see text, p. 479.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	982,940	1,157,018	97,643	71,049	1.18	0.73	185	621,247	1,094
Individual and partnership.....	488,921	352,611	16,286	6,738	0.72	0.41	33	6,199	58
Cooperative, incorporated.....	113,605	86,692	1,530	303	0.76	0.20	70	42,262	162
Cooperative, unincorporated.....	36,604	13,106	2,035	482	0.36	0.24	23	3,225	51
Irrigation district.....	202,971	402,571	.....	.....	1.98	.....	35	281,315	531
Commercial.....	7,123	19,096	.....	.....	2.68	.....	7	13,861	36
U. S. Bureau of Reclamation ²	130,403	277,250	77,792	63,526	2.13	0.82	15	262,501	236
U. S. Office of Indian Affairs.....	3,198	4,872	.....	.....	1.52	.....	2	11,884	20
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	115	820	.....	.....	7.13	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for less than 3 enterprises shown with permission of the enterprises involved. For explanation of areas and investment, see text, p. 479.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diversion	Storage	Capacity at main heading	Length ¹		Number	Capacity	Length	Number	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capacity	Number	Rated capacity
	Number	Number	Sec.-ft.	Miles	Miles	Ac.-ft.	Miles	G. p. m.	G. p. m.	Number	Hp.	Number	Hp.	Number	G. p. m.	
Total.....	5,097	247	37,290	8,222	296.0	257	2,212,315	665.2	76	3,396	901	209,289	2,275	29,527	2,265	1,510,958
Individual and partnership.....	4,802	203	19,151	3,968	79.9	214	93,338	514.6	76	3,396	896	206,439	2,193	17,167	2,183	1,002,592
Cooperative, incorporated.....	97	15	4,956	732	19.0	13	124,355	13.4	.....	.....	.....	13	1,730	13	117,385	
Cooperative, unincorporated.....	91	3	1,211	264	8.5	3	4,635	1.8	.....	.....	1	60	6	115	6	9,570
Irrigation district.....	76	14	6,008	2,048	51.9	15	236,887	42.8	.....	.....	.....	40	5,213	40	210,075	
Commercial.....	5	1	248	117	1.6	1	400	3.5	.....	.....	2	1,600	2	100	2	1,600
Bureau of Reclamation ³	10	9	5,382	1,010	134.0	9	1,748,300	77.7	.....	.....	.....	16	5,090	16	165,006	
Office of Indian Affairs ³	12	2	327	80	1.1	2	4,400	0.8	.....	.....	1	800	3	70	3	4,230
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	4	.....	7	3	.....	.....	.....	10.6	.....	.....	1	390	2	42	2	500

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number		Number	Number	Number	Number
Total.....	5,097	247	3,806	167	Earth and rock.....	2,220	156	.....	61
Concrete or masonry.....	663	33	422	24	Other and mixed.....	¹ 1,266	29	¹ 2,754	73
Timber.....	877	23	529	.....	Not reported.....	71	6	101	9

¹Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	2,265	100.0	1,510,958	100.0	27	Total, 1940.....	2,275	100.0	29,527	100.0
Electric motor.....	1,179	52.1	858,647	56.8	32	Centrifugal pump.....	1,775	78.0	24,807	84.0
Centrifugal.....	932	41.2	757,885	50.2	23	Electric.....	929	40.8	14,642	49.5
Turbine.....	103	4.6	88,024	5.8	64	Internal-combustion.....	832	36.6	7,787	26.4
Plunger.....	116	5.1	6,059	0.4	72	Other.....	14	0.6	2,378	8.1
Other.....	28	1.2	6,679	0.4	39	Turbine pump.....	145	6.4	2,340	7.9
Internal-combustion engine.....	968	42.7	480,152	31.8	20	Electric.....	92	4.1	1,345	4.5
Centrifugal.....	822	36.3	411,768	27.3	17	Internal-combustion.....	51	2.2	964	3.3
Turbine.....	53	2.3	36,563	2.4	46	Other.....	2	0.1	31	0.1
Plunger.....	63	2.8	7,077	0.5	38	Plunger pump.....	180	7.9	533	1.8
Other.....	30	1.3	24,744	1.6	17	Electric.....	108	4.8	287	0.9
Other kinds of motive power.....	27	1.2	24,247	1.6	47	Internal-combustion.....	58	2.5	248	0.8
Centrifugal.....	9	0.4	16,680	1.1	27	Other.....	² 14	0.6	18	0.1
Turbine.....	3	0.1	7,382	0.5	71	Other and mixed types of pumps.....	175	7.7	1,847	6.3
Plunger.....	13	0.6	154	(¹)	55	Electric.....	92	4.1	826	2.8
Other.....	2	0.1	41	(¹)	52	Internal-combustion.....	58	2.5	618	2.1
Mixed kinds of motive power.....	91	4.0	147,912	9.8	25	Other.....	² 25	1.1	403	1.4
Centrifugal.....	69	3.0	106,038	7.0	23	Total, 1930.....	³ 1,091	.....	21,257	.....
Turbine.....	6	0.3	10,360	0.7	20	Increase or decrease (-) 1930-1940.....	1,184	.....	8,270	.....
Plunger.....	9	0.4	589	(¹)	35					
Other.....	7	0.3	30,925	2.0	29					
Total, 1930.....	1,157	.....	1,022,213	.....	27					
Increase or decrease (-) 1930-1940..	1,108	.....	488,745	.....	.....			

¹Less than one-tenth of 1 percent.

²Includes a portion of 30 water wheels for which no horsepower was reported.

³Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
	Miles	Miles	Percent		Miles	Miles	Percent
Total.....	665.2	² 225.3	195.3	Wood-stave:			
Concrete:				1 to 12 inches.....	36.3	41.0	-11.5
1 to 12 inches.....	61.8	30.6	102.0	13 to 24 inches.....	19.4	27.4	14.6
13 to 24 inches.....	26.9	30.9	16.5	Over 24 inches.....	12.0		
Over 24 inches.....	9.1					Clay and other:	
Metal:				1 to 12 inches.....	5.8	0.9	544.4
1 to 12 inches.....	438.5	72.9	501.5	13 to 24 inches.....	0.1	.....	.....
13 to 24 inches.....	33.1	7.8	550.0	Over 24 inches.....	4.6	.....	.....
Over 24 inches.....	17.6						

¹Includes siphons and farm pipe lines reported. ²Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census. ³Includes 2.0 miles wood pipe lines not segregated by size; 5.2 miles 1 to 12 inches and 6.6 miles 13 to 30 inches in diameter, pipe lines not segregated by material.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	274	182	176	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	338,991	436,425	¹ 347,750	(a) Enterprises reporting lands drained and/or needing drainage...percent..	47.7	³ 52.8	¹ 27.0
Area irrigated in these enterprises.....acres...	265,771	(²)	(²)	(b) All irrigation enterprises.....percent..	12.1	25.6	9.5
Area for which drains have been installed.....acres...	126,698	230,413	93,799	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	18,786	94,866	46,115	(a) Irrigable area reporting.....percent..	42.9	74.5	¹ 40.2
				(b) Irrigated area reporting.....percent..	54.7	(²)	(²)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ²Not available. ³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,595,022	1,715,553	2,237,727	1,999,155	1,111,684	1,016,713	595,867	603,869	1,221,014
Area irrigated by these enterprises.....acres.....	493,654	360,007	498,943	380,214	212,678	212,100	113,440	147,329	286,743
Average water per acre irrigated.....acre-feet..	5.3	4.8	4.5	5.3	5.2	4.8	5.3	4.1	4.3
Total water delivered to irrigators.....acre-feet..	2,992,612	572,347	458,890	1,166,420	526,439	159,035	1,826,192	45,908	299,845
Area irrigated by these enterprises.....acres.....	912,102	186,198	206,448	279,585	166,215	109,326	632,517	19,983	97,122
Average water per acre irrigated.....acre-feet..	3.3	3.1	2.2	4.2	3.2	1.5	2.9	2.3	3.1
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	27,994	.....	.....	87	.....	.....	27,907	.....	.....
Area irrigated by these enterprises.....acres.....	13,818	.....	.....	214	.....	.....	13,604	.....	.....
Average water per acre irrigated.....acre-feet..	2.0	.....	.....	0.4	.....	.....	2.1	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	25,412	.....	.....	22,840	.....	.....	2,572	.....	.....
Area irrigated by these enterprises.....acres.....	20,581	.....	.....	17,776	.....	.....	2,805	.....	.....
Average water per acre irrigated.....acre-feet..	1.2	.....	.....	1.3	.....	.....	0.9	.....	.....
Total water delivered to irrigators.....acre-feet..	172,481	.....	.....	1,071	.....	.....	171,410	.....	.....
Area irrigated by these enterprises.....acres.....	80,313	.....	.....	1,530	.....	.....	78,783	.....	.....
Average water per acre irrigated.....acre-feet..	2.1	.....	.....	0.7	.....	.....	2.2	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	3,701	.....	.....	.....	.....	.....	3,701	.....	.....
Area irrigated by these enterprises.....acres.....	656	.....	.....	.....	.....	.....	656	.....	.....
Average water per acre irrigated.....acre-feet..	5.6	.....	.....	.....	.....	.....	5.6	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
Total.....	Acres 1,049,176	Percent 100.0	Acres 104,970	Acres 898,713	Percent 100.0	Acres 986,162	Percent 100.0
Appropriation ²	594,555	56.7	51,664	355,657	39.6	647,623	65.7
Riparian.....	47,628	4.5	32	92,546	10.3	14,277	1.5
Appropriation and riparian.....	68,965	6.6	39,271	.....	.....	.....	.....
Underground.....	7,468	0.7	703	3,963	0.4	3,235	0.3
Appropriation and underground.....	8,418	0.8	.....	.....	.....	.....	.....
Riparian and underground.....	2,948	0.3	.....	.....	.....	.....	.....
Adjudicated by court.....	303,378	28.9	13,116	399,451	44.4	293,913	29.8
Other mixed and not reported.....	15,816	1.5	184	47,096	5.3	27,114	2.7

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).

²"Appropriation" includes water rights published in the 1930 and 1920 census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 130,403 acres irrigated in 1939 with a primary water supply within the Vale and Umatilla Projects and the areas located within Oregon of the Klamath, Owyhee, and Boise Projects, and their statistics are not duplicated under any other type of enterprise. Areas totalling 85,042 acres irrigated in Oregon in 1939 with a supplemental water supply from works constructed by the Bureau of Reclamation are served by the Burnt River, Baker, Stanfield, Klamath, Umatilla, and McKay Reservoir Projects. These lands are also reported as receiving a primary water supply

through other types of enterprises, mostly irrigation districts.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 relates to the above enterprises and reflects construction costs by the Bureau of Reclamation together with additional costs incurred by certain non-Federal irrigation enterprises now receiving a primary water supply from facilities constructed by the Bureau of Reclamation.

Data on the Deschutes Project in North Central Oregon, under construction by the Bureau of Reclamation in 1939, were not included in the 1940 Census of Irrigation.

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	5,788	84	5,019	373	230	58	23	1
2	Irrigated farms, 1939.....number...	19,389	.....	5,019	946	2,312	2,799	.....	8,313
3	Area irrigated, 1939.....acres...	1,049,176	.....	494,393	63,453	136,540	151,118	.....	263,672
4	(a) From which crops were harvested.....acres...	790,925	.....	277,927	48,378	110,802	123,139	.....	227,679
5	(b) On which crops failed.....acres...	13,781	.....	3,824	194	589	2,451	.....	6,723
6	(c) Irrigated pasture.....acres...	244,470	.....	152,642	14,881	25,149	22,528	.....	29,270
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	46,726,313	85,337	4,179,057	663,966	3,580,789	7,900,963	.....	30,316,201
8	(a) Cost of irrigation works and equipment.....dollars..	46,165,446	83,150	4,037,054	653,362	3,470,725	7,680,682	.....	30,240,473
9	(b) Investment in water rights.....dollars..	560,867	.....	142,003	10,604	110,064	220,281	.....	75,728
10	Area works were capable of supplying with water.....acres...	1,261,081	5,947	520,372	75,465	164,903	173,186	.....	321,208
11	Average investment per acre irrigated.....dollars..	44.54	.....	9.62	10.46	26.23	52.28	.....	114.98
12	Average investment per acre which the works could supply with water.....dollars..	37.05	14.35	8.03	8.80	21.71	45.62	.....	94.38
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	5,178	44	4,514	346	194	56	23	1
14	(a) Area irrigated in these enterprises.....acres...	982,940	.....	404,592	59,237	116,906	138,529	.....	263,676
15	(b) Cost of maintenance and operation.....dollars..	1,157,018	571	309,924	40,958	57,677	202,619	.....	545,269
16	(c) Average cost per irrigated acre reporting.....dollars..	1.18	.....	0.77	0.69	0.49	1.46	.....	2.07
17	Total annual charges ².....dollars..	921,724	.....	.....	.....	69,987	252,116	.....	599,611
18	Average charge per irrigated acre reporting.....dollars..	1.73	.....	.....	.....	0.60	1.67	.....	2.27
19	Area against which charges were assessed.....acres...	587,585	.....	.....	.....	126,976	150,224	.....	310,385
20	Average annual charge per acre assessed.....dollars..	1.57	.....	.....	.....	0.55	1.28	.....	1.93
21	Total charges collected ².....dollars..	920,583	.....	.....	.....	42,645	220,427	.....	657,511
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ³.....number...	71	.....	.....	.....	19	33	18	1
23	(a) Area irrigated in these enterprises.....acres...	334,717	.....	.....	.....	18,267	108,589	.....	207,841
24	(b) Indebtedness.....dollars..	13,560,102	.....	.....	.....	490,495	1,872,052	.....	11,197,555
25	(c) Average indebtedness per acre irrigated.....dollars..	40.51	.....	.....	.....	26.82	17.24	.....	53.88
26	(d) Cost of irrigation works and equipment.....dollars..	25,623,399	.....	.....	.....	951,838	4,584,428	.....	20,087,133
27	(e) Investment in water rights.....dollars..	292,940	.....	.....	.....	6,645	210,567	.....	75,728
28	(f) Total investment.....dollars..	25,916,339	.....	.....	.....	958,483	4,794,995	.....	20,162,861
29	(g) Maintenance and operation.....dollars..	553,167	.....	.....	.....	11,743	157,916	.....	383,508
30	(h) Total annual charges ².....dollars..	769,038	.....	.....	.....	22,393	211,043	.....	535,602
31	(i) Total charges collected ².....dollars..	799,218	.....	.....	.....	19,548	184,140	.....	595,530
32	(j) Area against which annual charges were assessed.....acres...	374,937	.....	.....	.....	18,851	117,974	.....	238,112
33	(k) Average indebtedness per acre assessed.....dollars..	36.06	.....	.....	.....	23.93	15.87	.....	47.03
34	(l) Average charges per acre assessed.....dollars..	2.05	.....	.....	.....	1.19	1.79	.....	2.25
35	(m) Average charges per acre irrigated.....dollars..	2.31	.....	.....	.....	1.37	1.94	.....	2.58
36	Enterprises reporting arrearage ³.....number...	13	.....	.....	.....	3	5	5	.....
37	(a) Area assessed in these enterprises.....acres...	79,551	.....	.....	.....	3,030	37,778	.....	38,743
38	(b) Total arrearage.....dollars..	1,800,973	.....	.....	.....	195,952	64,128	.....	1,540,893
39	(c) Average arrearage per acre assessed.....dollars..	22.64	.....	.....	.....	64.67	1.70	.....	39.77
40	(d) Indebtedness.....dollars..	4,196,344	.....	.....	.....	366,500	242,679	.....	3,587,165
TYPE, 1940									
41	Individual and partnership.....number...	5,529	83	5,006	351	86	3	.....	.....
42	Cooperative (incorporated and unincorporated).....number...	188	.....	11	19	127	28	.....	.....
43	Irrigation district.....number...	39	1	.....	1	7	15	.....	.....
44	Commercial.....number...	7	.....	.....	.....	3	4	.....	.....
45	U. S. Bureau of Reclamation.....number...	14	.....	.....	.....	2	6	.....	.....
46	U. S. Office of Indian Affairs.....number...	7	.....	.....	2	3	2	.....	.....
47	All other.....number...	4	.....	2	.....	2	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....number...	181	.....	.....	.....	104	53	23	1
49	Wages and salaries paid and payable for 1939.....dollars..	617,781	.....	.....	.....	26,463	122,823	.....	468,495
50	Persons employed during week ending April 29, 1939.....number...	1,086	.....	.....	.....	171	233	.....	682
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....number...	3,172	45	2,552	302	212	44	.....	16
52	Streams, pumped.....number...	976	15	924	26	4	7	.....	.....
53	Wells, pumped.....number...	621	12	594	13	2	.....	.....	.....
54	Wells, pumped and flowing; or wells flowing.....number...	8	.....	8	.....	.....	.....	.....	.....
55	Lakes, gravity or pumped.....number...	63	2	57	4	.....	.....	.....	.....
56	Streams and springs; or springs.....number...	650	4	626	13	5	.....	.....	.....
57	Mixed, streams and wells.....number...	148	1	123	6	5	6	.....	1
58	Other mixed or stored storm water.....number...	150	4	133	9	2	1	.....	.....
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)									
		TOTAL	No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	96	9	73	3	4	2	5	.....
2	Irrigated farms, 1939.....number...	1,262	.....	73	6	33	61	1,089	.....
3	Area irrigated, 1939.....acres...	104,970	.....	1,684	60	11,279	.....	91,947	.....
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	4,234,936	11,728	48,811	1,350	304,592	.....	3,868,457	.....
5	(a) Cost of irrigation works and equipment.....dollars..	4,234,222	11,650	48,223	1,350	304,592	.....	3,868,407	.....
6	(b) Investment in water rights.....dollars..	716	.....	588	.....	.....	.....	.....	50
7	Area works were capable of supplying with water.....acres...	141,558	3,101	2,096	61	11,333	.....	124,967	.....
8	Average investment per acre irrigated.....dollars..	40.34	.....	28.99	22.50	27.01	.....	42.07	.....
9	Average investment per acre which the works could supply with water.....dollars..	29.92	3.78	23.29	22.13	26.88	.....	30.96	.....
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
10	Enterprises reporting maintenance and operation.....number...	86	4	69	3	4	1	5	.....
11	(a) Area irrigated in these enterprises.....acres...	97,643	.....	1,607	60	4,029	.....	91,947	.....
12	(b) Cost of maintenance and operation.....dollars..	71,049	189	5,566	318	650	.....	64,326	.....
13	(c) Average cost per irrigated acre reporting.....dollars..	0.73	.....	3.46	5.30	0.16	.....	0.70	.....
14	Total annual charges ².....dollars..	72,521	180	.....	.....	625	.....	71,716	.....
15	Average charge per irrigated acre reporting.....dollars..	0.76	.....	.....	.....	0.16	.....	0.78	.....
16	Area against which charges were assessed.....acres...	98,976	3,000	.....	.....	4,029	.....	91,947	.....
17	Average annual charge per acre assessed.....dollars..	0.73	0.06	.....	.....	0.16	.....	0.78	.....
18	Total charges collected ².....dollars..	8,967	.....	.....	.....	457	.....	8,510	.....

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION — OREGON

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES,
FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
84	4,458	758	411	57	20	5,500	168	71	43	6	1
.....	5,129	1,592	2,963	3,581	6,124	7,387	1,327	1,575	6,559	2,541	2
.....	102,340	124,515	280,245	204,928	337,148	428,024	94,244	131,633	263,425	131,850	3
.....	76,993	97,177	214,506	153,051	249,198	311,907	71,105	83,463	206,052	118,398	4
.....	820	1,338	1,401	3,638	6,584	3,667	886	128	2,950	6,150	5
.....	24,527	26,000	64,338	48,239	81,366	112,450	22,253	48,042	54,423	7,302	6
86,337	2,357,882	1,075,619	5,165,244	9,952,510	28,089,721	3,255,493	1,248,862	2,724,250	18,238,630	21,259,058	7
83,150	2,316,855	1,045,881	5,077,676	9,650,913	27,990,971	3,186,152	1,214,339	2,622,037	17,883,860	21,259,058	8
2,187	41,027	29,738	87,568	301,597	98,750	69,341	34,543	102,213	354,770	.....	9
5,947	145,024	142,420	323,017	239,053	405,620	502,104	105,276	177,944	313,246	162,511	10
.....	23.04	8.64	18.43	46.57	83.32	7.61	13.25	20.70	69.24	161.24	11
14.35	16.26	7.55	15.99	41.63	69.25	6.46	11.86	15.31	58.22	130.82	12
44	3,985	697	380	53	19	4,908	155	67	42	6	13
.....	93,294	114,576	255,639	194,786	324,645	387,927	84,760	127,481	250,918	131,854	14
571	207,316	72,173	137,353	280,859	458,746	306,875	59,628	83,534	451,178	255,803	15
.....	2.22	0.63	0.54	1.44	1.41	0.79	0.70	0.66	1.80	1.94	16
.....	4,302	9,300	97,444	357,198	453,480	20,818	26,084	94,392	581,558	198,872	17
.....	2.75	0.87	2.23	2.23	1.84	0.35	0.58	1.36	2.57	1.51	18
.....	1,945	13,750	120,717	182,383	269,090	60,421	50,269	78,780	233,656	164,459	19
.....	2.62	0.68	0.81	1.96	1.69	0.34	0.52	1.20	2.49	1.21	20
.....	2,302	4,516	70,817	403,217	439,731	11,287	10,889	79,361	639,364	179,662	21
.....	2	1	28	29	11	9	5	23	29	5	22
.....	414	26,184	123,842	184,277	8,966	6,102	45,701	180,914	93,034	23	23
.....	8,600	1,046,267	5,058,986	7,446,249	12,435	20,559	447,372	7,000,975	6,078,761	24	24
.....	20.77	39.96	40.85	40.41	1.39	3.37	9.79	38.70	65.34	25	25
.....	14,500	1,742,120	8,139,422	15,727,357	30,027	52,332	1,074,225	12,709,077	11,757,738	26	26
.....	5,000	51,693	197,497	38,750	120	5,090	72,960	214,770	.....	27	27
.....	19,500	1,793,813	8,336,919	15,766,107	30,147	57,422	1,147,185	12,923,847	11,757,738	28	28
.....	850	36,123	229,536	286,658	4,080	3,571	50,878	371,449	123,189	29	29
.....	897	54,354	298,896	414,891	5,256	3,974	76,925	500,506	182,377	30	30
.....	245	48,728	351,000	399,245	3,461	3,940	68,661	559,968	163,188	31	31
.....	1,250	29,133	141,494	203,060	9,004	8,928	196,276	196,276	109,476	32	32
.....	6.88	34.56	35.75	36.67	1.38	0.87	8.21	35.67	55.53	33	33
.....	0.72	1.87	2.11	2.04	0.58	0.45	1.50	2.55	1.67	34	34
.....	2.17	2.24	2.41	2.25	0.59	0.68	1.75	2.77	1.96	35	35
.....	.....	.....	3	8	2	.....	1	4	7	4	36
.....	.....	.....	3,030	76,521	.....	.....	13,678	56,845	9,028	37	37
.....	.....	.....	195,952	1,605,021	.....	.....	21,680	1,710,558	68,735	38	38
.....	.....	.....	64.67	20.97	.....	.....	1.59	30.09	7.61	39	39
.....	.....	.....	366,550	3,829,844	.....	.....	82,028	3,072,173	1,042,143	40	40
83	4,423	709	292	16	6	5,384	113	28	4	.....	41
.....	32	45	92	16	3	108	50	26	3	1	42
1	.....	.....	14	17	7	3	1	11	22	2	43
.....	.....	2	3	2	.....	1	1	3	2	.....	44
.....	.....	4	6	4	.....	.....	.....	11	3	.....	45
.....	1	6	.....	.....	.....	.....	2	3	1	.....	46
.....	2	2	.....	.....	.....	.....	1	.....	.....	.....	47
.....	10	29	88	41	13	56	42	37	40	6	48
.....	1,078	3,172	65,127	181,728	346,676	8,254	8,433	79,277	281,318	240,499	49
49	8	51	261	232	534	108	90	147	340	401	50
46	2,079	644	349	40	14	2,972	119	53	24	4	51
15	904	40	13	4	.....	947	20	6	3	.....	52
12	600	8	1	.....	.....	613	8	.....	.....	.....	53
.....	8	.....	.....	.....	.....	8	.....	.....	.....	.....	54
2	48	5	7	1	.....	59	1	3	.....	.....	55
4	599	25	19	3	.....	640	5	4	1	.....	56
1	99	24	7	7	.....	121	9	3	13	2	57
4	121	12	11	2	.....	140	6	2	.....	.....	58
9	73	3	4	2	5	86	4	.....	5	4	1
.....	76	3	54	40	1,089	115	29	.....	890	228	2
.....	1,235	509	11,279	.....	91,947	2,951	2,822	.....	89,358	9,839	3
11,728	48,636	1,525	304,592	.....	3,868,457	51,389	33,500	.....	2,118,982	2,031,067	4
11,650	48,048	1,525	304,592	.....	3,868,407	50,723	33,500	.....	2,118,932	2,031,067	5
78	588	.....	.....	.....	.....	50	666	.....	50	.....	6
3,101	1,648	509	11,333	.....	124,967	3,519	5,822	.....	118,118	14,099	7
.....	39.36	3.00	27.01	.....	42.07	17.41	11.87	.....	23.71	206.43	8
3.78	29.51	3.00	26.88	.....	30.96	14.60	5.75	.....	17.94	144.06	9
4	69	3	4	1	5	77	4	.....	4	4	10
.....	1,168	509	4,029	.....	91,947	2,874	2,822	.....	82,108	9,839	11
189	5,359	525	650	.....	64,326	5,829	894	.....	52,520	11,806	12
.....	4.63	1.03	0.16	.....	0.70	2.03	0.32	.....	0.64	1.20	13
180	.....	.....	625	.....	71,716	91	714	.....	59,910	11,806	14
.....	.....	.....	0.16	.....	0.78	0.07	0.25	.....	0.73	1.20	15
3,000	.....	.....	4,029	.....	91,947	1,224	5,805	.....	82,108	9,839	16
0.06	.....	.....	0.16	.....	0.78	0.07	0.12	.....	0.73	1.20	17
.....	.....	.....	457	.....	8,510	.....	457	.....	8,510	.....	18

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
² Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - OREGON

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
INDEBTEDNESS AND ARREARAGE, 1939									
19	Enterprises reporting indebtedness ².....number...	3 ²					3 ¹	3 ¹	
20	(a) Area irrigated in these enterprises.....acres....	24,266					7,250	17,016	
21	(b) Indebtedness.....dollars.....	769,666					177,166	592,500	
22	(c) Average indebtedness per acre irrigated.....dollars..	31.72					24.44	34.82	
23	(d) Cost of irrigation works and equipment.....dollars..	861,592					281,592	600,000	
24	(e) Total investment.....dollars.....	861,592					281,592	600,000	
25	(f) Maintenance and operation.....dollars.....	2,796						2,796	
26	(g) Total annual charges ³.....dollars.....	10,186						10,186	
27	(h) Total charges collected ⁴.....dollars.....	8,510						8,510	
28	(i) Area against which annual charges were assessed.....acres..	17,016						17,016	
29	(j) Average indebtedness per acre assessed.....dollars..	34.82						34.82	
30	(k) Average charges per acre assessed.....dollars.....	0.60						0.60	
31	(l) Average charges per acre irrigated.....dollars.....	0.60						0.60	
TYPE, 1940									
32	Individual and partnership.....number.....	87	8	73	3	2		1	
33	Cooperative (incorporated and unincorporated).....number..	4	1			2		1	
34	U. S. Bureau of Reclamation.....number.....	5						1	4
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
35	Enterprises reporting pay roll.....number.....	4	1				1	2	
36	Wages and salaries paid and payable for 1939.....dollars..	3,466	(⁵)				(⁵)	(⁵)	(⁵)
37	Persons employed during week ending April 29, 1939.....number..	8					(⁵)	(⁵)	(⁵)
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939									
38	Streams, pumped.....number.....	11	1	8	1	1			
39	Wells, pumped or flowing.....number.....	58	6	50	2				
40	Streams, gravity or storage.....number.....	27	2	15		3		2	5

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

²Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

³Data for less than 3 enterprises shown with permission of the enterprises involved.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.—Dec.		Jan.—Mar.		Apr.—June		July—Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Columbia River Direct		<i>Feet</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Degrees F.</i>	<i>Degrees F.</i>
Astoria.....	Clatsop....	10	72.76	-3.81	26.97	-2.89	34.90	+5.34	7.74	-3.78	3.15	-2.48	51.9	+0.7
Snake River														
Danner.....	Malheur....	4,000	8.27	(²)	3.30	(²)	2.90	-0.30	0.97	-1.61	1.10	+0.40	47.6	+1.7
Harper.....	Malheur....	2,156	5.25	-2.98	1.47	-0.98	2.04	-0.46	1.01	-1.41	0.73	-0.13	49.2	+1.0
Baker.....	Baker.....	3,445	6.21	-6.96	1.77	-1.89	1.49	-2.23	1.19	-2.22	1.19	-0.62	47.9	+2.6
Wallowa.....	Wallowa....	2,935	11.18	-5.47	5.03	+0.09	3.05	-1.81	2.04	-2.33	1.06	-1.42	47.1	+2.0
Walla Walla River														
Milton.....	Umatilla....	1,100	9.99	-4.29	2.58	-1.90	4.51	+0.09	2.28	-1.42	0.62	-1.06	54.4	+1.4
Umatilla River														
Echo.....	Umatilla....	601	7.22	-2.80	2.06	-1.60	3.50	+0.26	0.77	-1.25	0.89	-0.21	55.3	+1.5
John Day River														
Prairie City.....	Grant.....	3,425	14.37	-0.88	4.50	-0.04	4.95	+0.19	3.68	-0.23	1.24	-0.80	50.7	+2.4
Ukiah.....	Umatilla....	3,340	14.02	-3.92	5.13	-0.35	4.98	+0.13	3.21	-2.23	0.70	-1.47	45.0	+2.0
Deschutes River														
Bend.....	Deschutes...	3,623	7.96	-4.95	2.27	-1.89	2.83	-1.67	2.03	-0.81	0.83	-0.58	49.8	+2.9
Antelope.....	Wasco.....	2,630	7.72	-3.19	3.08	-0.52	2.19	-1.11	1.71	-1.31	0.74	-0.25	50.1	+1.7
Hood River														
Parkdale.....	Hood River..	1,740	29.90	-9.91	12.51	-4.60	14.37	-1.64	2.25	-2.33	0.77	-1.34	49.2	+2.2
Willamette River														
Oakridge.....	Lane.....	1,313	31.26	-7.36	11.33	-2.71	14.30	-0.58	4.19	-2.93	1.44	-1.14	54.6	+1.7
Corvallis.....	Benton....	266	25.10	-15.17	10.51	-5.95	9.96	-6.09	2.63	-2.64	2.00	-0.49	54.9	+2.7
Detroit.....	Marion....	1,450	62.37	-5.76	25.49	-1.20	29.10	+2.36	4.97	-5.44	2.81	-1.48	50.0	(³)
Hillsboro.....	Washington..	203	26.26	(⁴)	11.04	(³)	11.20	-2.17	2.18	-2.71	1.84	-0.14	52.6	+0.7
Umpqua River														
Roseburg.....	Douglas....	479	24.69	-8.22	8.80	-3.81	10.80	-2.28	3.21	-2.08	1.88	-0.05	55.6	+2.2
Rogue River														
Jacksonville.....	Jackson....	1,640	18.70	-5.90	7.01	-2.68	7.15	-2.47	3.46	-0.38	1.08	-0.37	53.9	+1.3
Klamath River														
Sand Creek.....	Klamath....	4,682	24.76	-0.04	10.63	+0.85	7.11	-3.40	2.83	-0.61	4.19	+3.12	42.2	+0.7
Klamath Falls.....	Klamath....	4,100	9.02	-3.18	3.43	-1.19	3.58	-0.84	0.90	-1.18	1.11	+0.03	50.1	+2.2
Malheur Lake														
Harney Branch Experiment Station..	Harney.....	4,139	5.59	-4.40	2.16	-0.90	2.23	-1.29	0.54	-1.91	0.66	-0.30	45.7	+1.7
Trout Creek														
Andrews (near).....	Harney.....	4,100	5.74	-1.57	2.62	+0.50	1.75	-0.38	0.88	-1.28	0.49	-0.41	50.0	+1.0
Lake Albert														
Valley Falls.....	Lake.....	4,326	9.16	-2.55	3.16	+0.01	2.52	-1.38	2.45	-0.80	1.03	-0.39	48.1	+0.9
Silver Lake														
Lake.....	Lake.....	4,200	5.69	-2.04	1.92	-0.05	1.25	-0.83	1.81	-0.48	0.71	-0.68	46.4	+1.8

¹Departure from normal.

²Data for November 1938 not available.

³Data not available.

⁴Data for October 1938 not available.

CENSUS OF IRRIGATION — OREGON

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES,
AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
				³ 1	³ 1				³ 2		19
				7,250	17,016				24,266		20
				177,166	592,500				769,666		21
				22.44	34.82				31.72		22
				281,592	600,000				881,592		23
				281,592	600,000				881,592		24
					2,796				2,796		25
					10,186				10,186		26
					8,510				8,510		27
					17,016				17,016		28
					34.82				34.82		29
					0.60				0.60		30
					0.60				0.60		31
8	73	3	2	1	1	85	1		1		32
1			2	1	3	1	3			1	33
				1	4				4	1	34
(5) 1			(5) 1		(5) 2	(5) 1	(5) 1		(5) 2		35
			(5)		(5)	(5)			(5)		36
			(5)		(5)	(5)			(5)		37
1	8	1		1		10	1				38
6	52					57	1				39
2	13	2	4	1	5	19	2		5	1	40

⁴ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁵ Data are included only in State total because less than 3 enterprises reported in the 1940 Census.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

The year 1939 as a whole for the State of Oregon was dry and warm; since State-wide records were begun in 1890 only 3 years have been warmer and 4 years drier, according to the U. S. Weather Bureau.

Precipitation.—The average annual precipitation for the calendar year at 179 stations was 20.77 inches, a departure of -5.33 inches from the normal. For the Western Division the annual average was 43.90 inches, a departure of -9.93 inches, and for the Eastern Division, 10.50 inches, a departure of -3.31 inches.

The average precipitation for the water year (October 1938 through September 1939) at 22 stations listed in State table 18 with complete records, and which are representative of the major drainage basins in Oregon, was 18.55 inches, a departure of -5.01 inches from the average normal precipitation at these stations. The average precipitation at the 16 stations located west of the Cascade Range was 10.86 inches, a departure of -3.70 inches, and for the

6 stations representative of the Pacific Slope the average precipitation was 33.94 inches, a departure of -7.70 inches from the water year normal for these stations.

The average snowfall for the year was: Western Division, 19.6 inches; Eastern Division, 45.3 inches; State, 33.7 inches. The average number of days with 0.01 inch, or more, was: Western Division, 135; Eastern Division, 67; State 97.

Temperature.—The average temperature was above normal in July, August, and September, with several periods of unusual warmth; new high temperature records were established at several eastern stations late in July and the maximum for the month was within 2° of the record for the State. The first half of July had frequent rains, but there was little after that till near the close of August. There was a shortage of water for irrigation and for livestock and pasturage became dry and short. Conditions were favorable for the rapid spread of forest fires.

CENSUS OF IRRIGATION - OREGON

DRAINAGE BASIN TABLE I—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER			
		Total	Direct (1)	Snake River	
				Total	
IRRIGATED FARMS AND AREAS					
1 Irrigated farms.....1939..number.....	19,389	12,726	117	5,577	
2 Area irrigated.....1939..acres.....	1,049,176	622,684	1,801	362,501	
3 (a) Cropland harvested.....1939..acres.....	790,925	518,295	1,147	293,374	
4 (b) Crop failure.....1939..acres.....	13,781	11,661	18	6,778	
5 (c) Pasture.....1939..acres.....	244,470	92,728	636	62,349	
6 Area irrigated.....1929..acres.....	898,713	504,956	.....	288,928	
7 1919..acres.....	986,162	638,223	92	394,205	
8 Increase or decrease (-), 1929-1939.....percent.....	16.7	23.3	.....	25.5	
9 Irrigable area in enterprises.....1940..acres.....	1,441,417	873,078	2,153	463,934	
10 1930..acres.....	1,478,128	880,067	.....	514,972	
11 1920 ² ..acres.....	1,925,987	1,145,451	223	628,588	
12 Excess of irrigable area over the area irrigated..1940..acres.....	392,241	250,394	352	101,433	
13 1930..acres.....	579,415	375,111	.....	226,044	
14 1920 ² ..acres.....	939,825	507,228	131	294,383	
15 Area works were capable of supplying with water..1940..acres.....	1,261,081	745,507	2,056	434,254	
16 1930..acres.....	1,158,210	658,449	.....	370,026	
17 1920..acres.....	1,344,046	846,918	123	489,719	
18 Increase or decrease (-), 1930-1940.....percent.....	8.9	13.2	.....	17.4	
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	211,905	122,823	255	71,753	
20 1930..acres.....	259,497	153,493	.....	81,098	
21 1920..acres.....	357,884	208,695	31	95,514	
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	83.2	83.5	87.6	83.5	
23 1929..percent.....	77.6	76.7	.....	78.1	
24 1919..percent.....	73.4	75.4	74.8	80.5	
CAPITAL INVESTED TO JANUARY 1					
25 Total investment in irrigation enterprises.....1940..dollars.....	50,961,251	37,565,199	106,703	24,982,561	
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	50,399,668	37,294,025	106,148	24,868,171	
27 (b) Investment in water rights (reported).....1940..dollars.....	561,583	271,174	555	114,390	
28 Total investment in irrigation enterprises.....1930..dollars.....	38,754,548	23,937,566	.....	11,994,581	
29 1920..dollars.....	28,929,151	18,480,068	11,150	7,093,652	
30 Increase or decrease (-), 1930-1940.....percent.....	31.5	56.9	.....	108.3	
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	40.41	50.39	51.90	57.53	
32 1930..dollars.....	33.46	36.35	.....	32.42	
33 1920..dollars.....	21.52	21.82	90.65	14.49	
34 Average investment per acre irrigated.....1939..dollars.....	48.57	60.33	59.25	68.92	
35 Estimated final investment in existing enterprises..1940..dollars.....	53,884,430	38,649,014	108,048	25,622,624	
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	37.38	44.27	50.18	55.23	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation..1939..number.....	5,185	87	3,789	80	24
38 Area irrigated in these enterprises.....1939..acres.....	982,940	97,643	581,462	56,163	45,527
39 Cost of maintenance and operation.....1939..dollars.....	1,157,018	71,049	730,315	28,821	12,202
40 Average cost, per acre irrigated.....1939..dollars.....	1.18	0.73	1.26	0.51	0.27
41 Total annual charges (reported) ⁴.....1939..dollars.....	921,724	72,521	519,291	30,855	19,049
42 Average annual charge per acre irrigated.....1939..dollars.....	1.77	0.76	1.41	0.56	0.42
43 Area against which charges were assessed.....1939..acres.....	587,585	98,976	427,320	57,694	47,855
44 Average annual charge per acre assessed.....1939..dollars.....	1.57	0.73	1.22	0.53	0.40
45 Total charges collected ⁴.....1939..dollars.....	920,583	8,967	465,206	8,510	8,510
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	13,560,102	769,666	10,043,368	769,666	769,666
WATER DELIVERED TO IRRIGATORS, 1939					
47 Enterprises reporting water delivered.....1939..number.....	5,345	74	3,942	68	19
48 Area irrigated by these enterprises.....1939..acres.....	925,920	80,969	566,211	41,504	30,917
49 Water delivered.....1939..acre-feet.....	3,020,606	176,182	1,989,116	97,438	45,967
50 Average water delivered per acre irrigated.....1939..acre-feet.....	3.3	2.2	3.5	2.3	1.5
51 Average cost of water per acre irrigated.....1939..dollars.....	1.35	0.94	1.33	0.83	0.60
52 Average cost of water per acre-foot delivered..1939..dollars.....	0.41	0.43	0.38	0.35	0.40
DRAINAGE OF IRRIGATED LAND					
53 Enterprises reporting land drained or needing drainage.....1939..number.....	276	.....	209	7	56
54 Irrigable area in these enterprises.....1939..acres.....	338,991	.....	193,747	249	145,573
55 Irrigated area in these enterprises.....1939..acres.....	265,771	.....	148,156	183	111,666
56 Area for which drains have been installed.....1939..acres.....	126,698	.....	49,242	21	43,462
57 Additional area needing drainage.....1939..acres.....	18,786	.....	10,391	154	6,106

¹Data for 2 enterprises in Whitehorse Creek Drainage Basin (60) (number refers to separate map) included in State totals only. Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State total.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - OREGON

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

COLUMBIA RIVER—Continued												
Snake River—Continued												
Owyhee River				Malheur River								
Direct	Total			Direct	Jordan Creek	Total		Direct	Bully Creek		Willow Creek	
(2)				(3)	(5)			(6)	(7)		(8)	
												1
877	1,056			964	92	1,066		965	37		64	2
38,160	67,273			57,017	10,256	74,282		65,213	3,848		5,201	3
30,364	57,040			49,486	7,554	61,836		54,105	3,343		4,388	4
460	3,405			1,542	1,863	1,975		1,384	338		253	5
7,336	6,828			5,989	839	10,451		9,724	167		560	6
31,814	18,165					32,122						7
22,199	36,295					52,850						8
19.9	270.3					131.2						9
				75,831	12,444	93,585		80,154	4,513		8,918	10
45,655	88,275					103,463						11
39,347	114,389					117,688						12
31,925	78,311			18,814	2,188	19,323		14,941	665		3,717	13
7,495	21,002					71,341						14
7,533	96,224					64,838						15
9,726	42,016											16
				75,676	12,444	92,535		79,109	4,513		8,913	17
44,124	88,120					77,574						18
35,881	27,133					79,618						19
25,469	42,093			18,659	2,188	18,273		13,896	665		3,712	20
23.0	224.8					45,452						21
						26,768						22
5,964	20,847			75.3	82.4	80.3		82.4	85.3		58.4	23
4,067	8,968					41.4						24
3,270	5,798					66.4						25
												26
86.5	76.3											27
88.7	66.9											28
87.2	86.2											29
												30
2,348,898	10,843,102			10,387,682	455,420	8,905,106		8,016,813	29,660		858,633	31
2,344,355	10,842,088			10,386,763	455,325	8,807,181		8,008,888	29,660		768,633	32
4,543	1,014			919	95	97,925		7,925			90,000	33
1,169,589	2,838,913					5,512,944						34
909,478	1,154,185					2,027,683						35
100.8	281.9					61.5						36
												37
53.23	123.05			137.27	36.60	96.24		101.34	6.57		96.33	38
32.60	104.63					71.07						39
35.71	27.42					25.47						40
												41
61.55	161.18			182.19	44.41	119.91		122.93	7.71		165.09	42
2,397,033	11,086,657			10,631,237	455,420	9,197,076		8,058,763	29,660		1,108,653	43
												44
52.50	125.59			140.20	36.60	98.28		100.54	6.57		124.32	45
												46
												47
												48
												49
												50
												51
												52
												53
												54
												55
												56
												57
36	3			3		7		6				58
18,647	68,073			68,073		56,654		56,554			(3)	59
14,857	50,632			50,632		44,089		44,089			(3)	60
8,011	14,787			14,787		20,603		20,593			(3)	61
1,318	2,470			2,470		2,085		2,085			(3)	62

³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — OREGON

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER—Continued								
	Snake River—Continued								
	Burnt River	Powder River	Imnaha River	Grande Ronde River					
	(9)	(10)	(11)	Total					
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	215	1,001	73	1,289				
2	Area irrigated.....1939..acres.....	23,475	93,161	1,469	64,701				
3	(a) Cropland harvested.....1939..acres.....	20,490	72,801	1,273	49,470				
4	(b) Crop failure.....1939..acres.....	113	818	.....	7			
5	(c) Pasture.....1939..acres.....	2,872	19,442	196	15,224				
6	Area irrigated.....1929..acres.....	16,519	104,089	6,838	57,635				
7	.....1919..acres.....	34,287	146,036	4,828	79,191			
8	Increase or decrease (-), 1929-1939.....percent.....	26.8	-10.5	-78.5	12.2				
9	Irrigable area in enterprises.....1940..acres.....	27,978	130,087	1,778	76,576				
10	.....1930..acres.....	40,686	120,742	8,528	65,227			
11	.....1920 ¹ ..acres.....	54,467	188,463	10,146	98,774			
12	Excess of irrigable area over the area irrigated.....1940..acres.....	4,503	36,926	309	11,875				
13	.....1930..acres.....	22,167	16,653	1,690	7,572			
14	.....1920 ¹ ..acres.....	20,180	42,427	5,318	19,583			
15	Area works were capable of supplying with water...1940..acres.....	24,725	108,198	1,740	74,812				
16	.....1930..acres.....	20,076	116,492	8,190	63,174			
17	.....1920..acres.....	37,506	165,826	6,069	87,191			
18	Increase or decrease (-), 1930-1940.....percent.....	23.2	-7.1	-78.8	18.4				
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,250	15,037	271	10,111				
20	.....1930..acres.....	1,557	12,403	1,352	5,519			
21	.....1920..acres.....	3,219	19,790	1,241	8,000			
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	94.9	86.1	84.4	86.5				
23	.....1929..percent....	92.2	89.4	83.5	91.3			
24	.....1919..percent....	91.4	88.1	79.6	90.8			
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	910,472	1,328,075	23,157	623,751				
26	(a) Cost of irrigation works and equipment.....1940..dollars....	908,122	1,323,546	22,672	620,207				
27	(b) Investment in water rights (reported).....1940..dollars....	2,350	4,529	485	3,544				
28	Total investment in irrigation enterprises.....1930..dollars....	255,199	1,290,723	203,301	386,759				
29	.....1920..dollars....	639,491	1,552,987	206,378	471,436			
30	Increase or decrease (-), 1930-1940.....percent.....	256.8	2.9	-88.6	61.3				
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	36.82	12.27	13.31	8.34				
32	.....1930..dollars....	12.71	11.08	24.82	6.12			
33	.....1920..dollars....	17.05	9.37	34.01	5.41			
34	Average investment per acre irrigated.....1939..dollars....	38.78	14.26	15.76	9.64				
35	Estimated final investment in existing enterprises...1940..dollars....	961,797	1,331,091	24,063	624,907				
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	34.38	10.23	13.53	8.16				
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number....	83	² 1	348	6	62	1	404	7
38	Area irrigated in these enterprises.....1939..acres.....	10,324	17,016	87,175	729	1,457	(³)	58,606	14,276
39	Cost of maintenance and operation.....1939..dollars....	4,351	2,796	33,265	125	1,378	(³)	24,749	1,003
40	Average cost, per acre irrigated.....1939..dollars....	0.42	0.16	0.38	0.17	0.95	(³)	0.42	0.07
41	Total annual charges (reported) ⁴ 5.....1939..dollars....	1,019	10,186	21,954	45	21,432	980
42	Average annual charge per acre irrigated.....1939..dollars....	0.37	0.60	0.42	0.10	0.49	0.07
43	Area against which charges were assessed.....1939..acres.....	2,760	17,016	52,583	464	48,530	17,155
44	Average annual charge per acre assessed.....1939..dollars....	0.37	0.60	0.42	0.10	0.44	0.06
45	Total charges collected ⁴.....1939..dollars....	8,510	13,648	16,193
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	592,500	48,455	177,166	55,922
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number....	91	² 1	361	5	62	1	417	5
48	Area irrigated by these enterprises.....1939..acres.....	10,832	17,016	79,032	297	1,469	(³)	57,103	124
49	Water delivered.....1939..acre-feet....	20,421	22,500	169,877	320	4,788	(³)	185,508	293
50	Average water delivered per acre irrigated.....1939..acre-feet....	1.9	1.3	2.1	1.1	3.3	(³)	3.2	2.4
51	Average cost of water per acre irrigated.....1939..dollars....	0.41	0.60	0.36	0.30	0.95	(³)	0.50	0.17
52	Average cost of water per acre-foot delivered.....1939..dollars....	0.22	0.45	0.17	0.28	0.29	(³)	0.15	0.07
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number....	1	9
54	Irrigable area in these enterprises.....1939..acres.....	(³)	2,195
55	Irrigated area in these enterprises.....1939..acres.....	(³)	2,084
56	Area for which drains have been installed.....1939..acres.....	(³)	57
57	Additional area needing drainage.....1939..acres.....	233

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Data for less than 3 enterprises shown with permission of the enterprise involved.
³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — OREGON

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER—Continued																			
Snake River—Continued				Walla Walla River	Umatilla River														
Grande Ronde River—Continued			Total		Direct	Birch Creek	Putter Creek	Total	Direct	Birch Creek	Putter Creek								
Direct	Wallowa River	Joseph Creek										(12)	(13)	(14)	(15)	(16)	(17)	(18)	
560	701	28	848	907	817	55	35	1											
17,483	46,196	1,022	15,765	37,016	30,476	2,559	3,981	2											
15,422	33,294	754	13,277	28,563	22,457	2,369	2,737	3											
7	.....	.....	34	4,277	3,863	.....	394	4								
2,054	12,902	268	2,454	4,176	3,136	190	850	5											
.....	.....	.....	11,123	35,795	.....	.....	.....	6						
.....	.....	.....	17,514	43,571	.....	.....	.....	7						
.....	.....	.....	41.7	3.4	.....	.....	.....	8						
25,174	50,301	1,101	20,022	50,783	42,250	2,832	5,701	9											
.....	.....	.....	14,359	57,038	.....	.....	.....	10						
.....	.....	.....	18,457	99,012	.....	.....	.....	11						
7,691	4,105	79	4,257	13,767	11,774	273	1,720	12											
.....	.....	.....	3,236	21,243	.....	.....	.....	13						
.....	.....	.....	943	55,441	.....	.....	.....	14						
23,595	50,116	1,101	19,758	47,915	40,392	2,728	4,795	15											
.....	.....	.....	11,526	48,294	.....	.....	.....	16						
.....	.....	.....	17,780	83,341	.....	.....	.....	17						
.....	.....	.....	71.4	-0.8	.....	.....	.....	18						
6,112	3,920	79	3,993	10,899	9,916	169	814	19											
.....	.....	.....	403	12,489	.....	.....	.....	20						
.....	.....	.....	266	39,770	.....	.....	.....	21						
74.1	92.2	92.8	79.8	77.3	75.5	93.8	83.0	22											
.....	.....	.....	96.5	74.1	.....	.....	.....	23						
.....	.....	.....	98.5	52.3	.....	.....	.....	24						
150,152	466,458	7,141	350,857	5,705,027	5,652,710	23,447	28,870	25											
148,906	464,371	6,930	334,320	5,651,105	5,599,210	23,095	28,800	26											
1,246	2,087	211	16,537	93,922	53,500	352	70	27											
.....	.....	.....	195,702	3,752,200	.....	.....	.....	28						
.....	.....	.....	280,934	4,308,892	.....	.....	.....	29						
.....	.....	.....	79.3	52.0	.....	.....	.....	30						
6.36	9.31	6.49	17.76	119.07	139.95	8.59	6.02	31											
.....	.....	.....	16.98	77.71	.....	.....	.....	32						
.....	.....	.....	15.80	51.70	.....	.....	.....	33						
8.59	10.10	6.99	22.26	154.12	185.48	9.16	7.25	34											
150,691	467,075	7,141	354,537	5,733,304	5,679,387	23,447	30,470	35											
5.99	9.29	6.49	17.71	112.90	134.42	8.28	5.34	36											
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises	
195	2	185	5	24	256	52	125	3	49	3	43	33	37						
13,327	(3)	44,337	14,187	942	14,311	700	35,584	9,935	29,357	9,935	2,288	3,929	38						
6,359	(3)	17,775	995	615	20,294	4,677	49,971	11,932	44,175	11,932	3,033	2,763	39						
0.48	(3)	0.40	0.07	0.65	1.40	6.68	1.40	1.20	1.50	1.20	1.32	0.70	40						
3,384	18,032	980	16	8,806	59,417	11,806	59,317	11,806	100	41						
0.38	0.51	0.07	0.08	1.19	2.20	1.20	2.21	1.20	0.58	42						
10,700	37,630	17,155	200	7,442	33,516	9,839	33,344	9,839	172	43						
0.32	0.48	0.06	0.08	1.18	1.77	1.20	1.78	1.20	0.58	44						
990	15,203	9,093	62,389	62,389	45						
.....	55,922	15,000	1,892,002	1,892,002	46						
208	3	186	2	23	263	45	143	3	64	3	45	34	47						
16,141	92	39,940	(3)	1,022	11,339	651	36,906	9,935	30,366	9,935	2,559	3,981	48						
32,853	167	149,804	(3)	2,851	76,043	3,688	208,320	47,782	189,472	47,782	8,675	10,173	49						
2.0	1.8	3.8	(3)	2.8	6.7	5.7	5.6	4.8	6.2	4.8	3.4	2.6	50						
0.45	0.09	0.52	(3)	0.61	1.30	6.39	1.93	1.20	2.14	1.20	1.32	0.70	51						
0.22	0.05	0.14	(3)	0.22	0.19	1.13	0.34	0.25	0.34	0.25	0.39	0.28	52						
3	6	(3)	1	5	5	53						
511	1,684	(3)	33,608	33,608	54						
501	1,583	(3)	23,656	23,656	55						
47	10	3,219	3,219	56						
80	153	(3)	2,660	2,660	57						

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - OREGON

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER—Continued						
	Willow Creek	John Day River			Deschutes River		
		Total	Direct	Rock Creek	Total	Direct	Squaw Creek
		(19)	(20)	(21)	(22)	(23)	
IRRIGATED FARMS AND AREAS							
1 Irrigated farms.....1939..number.....	106	718	673	45	1,717	1,118	87
2 Area irrigated.....1939..acres.....	4,337	43,736	42,319	1,417	104,087	59,559	7,680
3 (a) Cropland harvested.....1939..acres.....	3,986	36,711	35,388	1,323	94,231	56,476	6,180
4 (b) Crop failure.....1939..acres.....	.....	83	83	.....	388	43	288
5 (c) Pasture.....1939..acres.....	351	6,942	6,848	94	9,468	3,040	1,212
6 Area irrigated.....1929..acres.....	5,362	40,495	.....	.....	94,015	.....	.....
7 ..1919..acres.....	5,553	36,141	.....	.....	111,916	.....	.....
8 Increase or decrease (-), 1929-1939.....percent.....	-19.4	8.0	.....	.....	10.7	.....	.....
9 Irrigable area in enterprises.....1940..acres.....	4,996	49,839	47,973	1,866	130,224	75,871	11,456
10 ..1930..acres.....	6,265	45,211	.....	.....	181,445	.....	.....
11 ..1920 ¹ ..acres.....	7,159	48,191	.....	.....	291,014	.....	.....
12 Excess of irrigable area over the area irrigated..1940..acres.....	659	6,103	5,654	449	26,137	16,312	3,776
13 ..1930..acres.....	883	4,716	.....	.....	87,430	.....	.....
14 ..1920 ¹ ..acres.....	1,606	12,050	.....	.....	179,098	.....	.....
15 Area works were capable of supplying with water...1940..acres.....	4,922	47,814	46,045	1,769	112,412	62,864	9,375
16 ..1930..acres.....	6,060	44,384	.....	.....	139,444	.....	.....
17 ..1920..acres.....	6,518	41,492	.....	.....	174,790	.....	.....
18 Increase or decrease (-), 1930-1940.....percent.....	-18.8	7.7	.....	.....	-19.4	.....	.....
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	585	4,078	3,726	352	8,325	3,305	1,695
20 ..1930..acres.....	678	3,889	.....	.....	45,429	.....	.....
21 ..1920..acres.....	1,065	5,351	.....	.....	62,874	.....	.....
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	88.1	91.5	91.9	80.1	92.6	94.7	81.9
23 ..1929..percent.....	88.8	91.2	.....	.....	67.4	.....	.....
24 ..1919..percent.....	83.9	87.1	.....	.....	64.0	.....	.....
CAPITAL INVESTED TO JANUARY 1							
25 Total investment in irrigation enterprises.....1940..dollars....	51,042	433,991	407,133	26,858	3,743,928	2,732,828	193,682
26 (a) Cost of irrigation works and equipment.....1940..dollars....	50,690	424,301	397,740	26,561	3,732,239	2,732,786	193,650
27 (b) Investment in water rights (reported).....1940..dollars....	352	9,690	9,393	297	11,689	42	32
28 Total investment in irrigation enterprises.....1930..dollars....	79,547	436,492	.....	.....	6,046,877	.....	.....
29 ..1920..dollars....	60,139	510,248	.....	.....	5,078,636	.....	.....
30 Increase or decrease (-), 1930-1940.....percent.....	-35.8	-0.6	.....	.....	-38.1	.....	.....
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	10.37	9.08	8.84	15.18	33.31	43.47	20.66
32 ..1930..dollars....	13.13	9.83	.....	.....	43.36	.....	.....
33 ..1920..dollars....	9.09	12.30	.....	.....	29.06	.....	.....
34 Average investment per acre irrigated.....1939..dollars....	11.77	9.92	9.62	18.95	35.97	45.88	25.22
35 Estimated final investment in existing enterprises..1940..dollars....	53,417	456,596	427,538	29,058	3,853,513	2,816,163	193,682
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	10.69	9.16	8.91	15.57	29.59	37.12	16.91
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
37 Enterprises reporting maintenance and operation...1939..number.....	74	555	523	32	235	67	9
38 Area irrigated in these enterprises.....1939..acres.....	3,851	42,680	41,399	1,281	100,502	59,043	5,809
39 Cost of maintenance and operation.....1939..dollars....	4,066	29,240	27,743	1,497	115,542	79,095	6,031
40 Average cost, per acre irrigated.....1939..dollars....	1.06	0.69	0.67	1.17	1.15	1.34	1.04
41 Total annual charges (reported) ^{3 4}.....1939..dollars....	20	1,835	1,810	25	194,020	141,026	10,062
42 Average annual charge per acre irrigated.....1939..dollars....	0.19	0.45	0.48	0.10	2.56	2.57	1.82
43 Area against which charges were assessed.....1939..acres.....	106	4,113	3,887	246	85,624	62,478	7,001
44 Average annual charge per acre assessed.....1939..dollars....	0.19	0.45	0.47	0.10	2.27	2.26	1.44
45 Total charges collected ⁵.....1939..dollars....	.....	67	67	.....	168,128	123,559	5,107
46 Indebtedness to December 31 (reported) ⁴.....1939..dollars....	.....	.....	.....	.....	1,696,081	1,509,417	63,134
WATER DELIVERED TO IRRIGATORS, 1939							
47 Enterprises reporting water delivered.....1939..number.....	78	577	538	39	236	73	7
48 Area irrigated by these enterprises.....1939..acres.....	4,056	41,344	39,927	1,417	100,783	58,839	5,733
49 Water delivered.....1939..acre-feet..	6,867	117,073	113,732	3,341	400,246	310,204	19,402
50 Average water delivered per acre irrigated.....1939..acre-feet..	1.7	2.8	2.8	2.4	4.0	5.3	3.4
51 Average cost of water per acre irrigated.....1939..dollars....	1.10	0.68	0.66	1.17	2.11	2.48	1.79
52 Average cost of water per acre-foot delivered..1939..dollars....	0.65	0.24	0.23	0.50	0.53	0.47	0.53
DRAINAGE OF IRRIGATED LAND							
53 Enterprises reporting land drained or needing drainage.....1939..number.....	.....	6	6	.....	3	1	.....
54 Irrigable area in these enterprises.....1939..acres.....	.....	442	442	.....	8,514	(²)	.....
55 Irrigated area in these enterprises.....1939..acres.....	.....	435	435	.....	8,513	(²)	.....
56 Area for which drains have been installed.....1939..acres.....	.....	212	212	.....	5	.....	.....
57 Additional area needing drainage.....1939..acres.....	.....	10	10	.....	506	(²)	.....

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — OREGON

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER—Continued											
Deschutes River—Con.			Willamette River								
Crooked River	White River	Fifteenmile Creek	Hood River	Sandy River	Total	Direct	Calapooya River	Santiam River	Lucklamute River	Yamhill River	Molalla River
(24)	(25)	(26)	(27)	(28)		(29)	(30)	(31)	(32)	(33)	(34)
312	200	84	1,274	23	1,355	618	29	202	24	112	203
32,205	4,643	1,985	25,066	310	26,080	11,474	592	4,749	623	2,205	2,894
27,529	4,046	1,663	24,172	286	20,885	9,422	428	4,183	398	1,502	2,242
.....	57	23	1	7	52	12	.....	7	.....	12	6
4,676	540	299	893	17	5,143	2,040	164	559	225	691	646
.....	.....	.....	22,370	.....	4,250	.....	.....	.....	.....	.....	.....
.....	.....	.....	19,765	.....	2,892	.....	.....	.....	.....	.....	.....
.....	.....	.....	12.1	.....	513.6	.....	.....	.....	.....	.....	.....
36,429	6,468	2,650	30,963	396	117,118	34,892	937	66,201	1,313	3,474	4,801
.....	.....	.....	31,240	.....	25,919	.....	.....	.....	.....	.....	.....
.....	.....	.....	39,660	.....	4,656	.....	.....	.....	.....	.....	.....
4,224	1,825	685	5,897	86	91,038	23,418	345	61,452	690	1,269	1,907
.....	.....	.....	8,870	.....	21,669	.....	.....	.....	.....	.....	.....
.....	.....	.....	19,895	.....	1,764	.....	.....	.....	.....	.....	.....
34,319	5,854	2,632	27,391	364	45,989	20,497	784	11,018	1,252	2,908	4,505
.....	.....	.....	28,352	.....	7,022	.....	.....	.....	.....	.....	.....
.....	.....	.....	21,101	.....	4,302	.....	.....	.....	.....	.....	.....
.....	.....	.....	-3.4	.....	554.9	.....	.....	.....	.....	.....	.....
2,114	1,211	647	2,325	54	19,909	9,023	192	6,269	629	703	1,611
.....	.....	.....	5,982	.....	2,772	.....	.....	.....	.....	.....	.....
.....	.....	.....	1,336	.....	1,410	.....	.....	.....	.....	.....	.....
93.8	79.3	75.4	91.5	85.2	56.7	56.0	75.5	43.1	49.8	75.8	64.2
.....	.....	.....	78.9	.....	60.5	.....	.....	.....	.....	.....	.....
.....	.....	.....	93.7	.....	67.2	.....	.....	.....	.....	.....	.....
648,608	168,810	46,660	871,919	30,162	1,242,349	582,029	15,651	217,707	22,890	80,663	118,962
645,623	160,180	46,055	862,751	29,985	1,188,260	537,379	15,541	212,238	22,713	79,596	117,907
2,985	8,630	605	9,168	177	54,089	44,650	110	5,469	177	1,067	1,055
.....	.....	.....	957,875	.....	311,911	.....	.....	.....	.....	.....	.....
.....	.....	.....	807,269	.....	100,561	.....	.....	.....	.....	.....	.....
.....	.....	.....	-9.0	.....	298.3	.....	.....	.....	.....	.....	.....
18.90	28.84	17.73	31.83	82.86	27.01	28.40	19.96	19.76	18.28	27.74	26.41
.....	.....	.....	33.79	.....	44.42	.....	.....	.....	.....	.....	.....
.....	.....	.....	38.26	.....	23.38	.....	.....	.....	.....	.....	.....
20.14	36.36	23.51	34.78	97.30	47.64	50.73	26.44	45.84	36.74	36.58	41.11
662,858	180,810	46,775	922,344	31,037	1,466,819	670,432	17,490	287,996	25,310	93,040	129,734
18.20	27.95	17.65	29.79	78.38	12.52	19.21	18.67	4.35	19.28	26.78	27.02
			Primary	Sup.							
			Enterprises								
136	23	43	54	1	22	944	489	25	76	15	84
31,007	4,643	1,925	24,709	(2)	308	24,467	10,961	452	4,387	513	2,132
26,683	3,733	2,167	39,475	(2)	1,987	115,068	56,407	1,663	14,146	2,858	9,180
0.86	0.80	1.13	1.60	(2)	6.45	4.70	5.15	3.68	3.22	5.57	4.31
37,165	5,767	564	66,605	.....	11,095	4,512	.....	5,200	.....	149	594
3.19	1.56	0.98	2.79	.....	2.32	5.19	.....	1.89	.....	0.85	0.69
11,645	4,500	922	28,676	.....	6,517	1,470	.....	3,586	.....	175	1,137
3.19	1.28	0.61	2.32	.....	1.70	3.07	.....	1.45	.....	0.85	0.51
32,312	7,150	526	69,591	.....	2,447	2,100	.....	.....	.....	.....	347
321,180	350	.....	191,146	.....	135,724	85,000	.....	50,724	.....	.....	.....
135	21	47	76	1	21	960	506	28	74	21	124
31,779	4,432	1,700	25,046	(2)	294	23,833	10,986	590	4,315	607	2,708
62,198	8,502	2,452	78,698	(2)	437	36,894	15,719	619	7,337	1,436	5,815
2.0	1.9	1.4	3.1	(2)	1.5	1.5	1.4	1.0	1.7	2.4	1.3
1.57	1.41	1.15	2.75	(2)	5.95	4.88	5.29	3.66	3.27	5.57	4.23
0.80	0.74	0.79	0.88	(2)	4.00	3.15	3.70	3.51	1.92	2.35	3.01
(2)	.....	(2)	14	.....	4	111	17	.....	1	10	37
(2)	.....	(2)	230	.....	57	4,881	284	.....	(2)	243	1,365
(2)	.....	(2)	203	.....	49	3,336	233	.....	(2)	155	945
(2)	.....	(2)	58	.....	47	2,207	124	.....	(2)	125	520
(2)	.....	.....	13	.....	.....	857	34	.....	.....	8	64

³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - OREGON

DRAINAGE BASIN TABLE I-- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basins totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER--Con.		PACIFIC SLOPE			
	Willamette River--Con.		Total	Rogue River		
	Tualatin River	Clackamas River		Total	Direct	
	(35)	(36)					(37)
IRRIGATED FARMS AND AREAS						
1	Irrigated farms.....1939..number.....	115	52	4,809	4,359	2,342
2	Area irrigated.....1939..acres.....	3,185	358	71,884	64,944	21,255
3	(a) Cropland harvested.....1939..acres.....	2,409	301	52,627	49,163	15,681
4	(b) Crop failure.....1939..acres.....	15	.....	97	79	40
5	(c) Pasture.....1939..acres.....	761	57	19,160	15,702	5,534
6	Area irrigated.....1929..acres.....	.....	.....	60,693	58,960	11,931
7	.....1919..acres.....	.....	.....	40,703	38,569	3,256
8	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	18.4	10.1	78.1
9	Irrigable area in enterprises.....1940..acres.....	4,711	789	88,266	77,253	27,873
10	.....1930..acres.....	.....	.....	85,324	81,714	20,123
11	.....1920 ² ..acres.....	.....	.....	139,826	131,131	14,166
12	Excess of irrigable area over the area irrigated.....1940..acres.....	1,526	431	16,382	12,309	6,618
13	.....1930..acres.....	.....	.....	24,631	22,754	8,192
14	.....1920 ² ..acres.....	.....	.....	99,123	92,562	10,910
15	Area works were capable of supplying with water.....1940..acres.....	4,329	696	84,743	74,680	26,239
16	.....1930..acres.....	.....	.....	77,877	74,651	14,836
17	.....1920..acres.....	.....	.....	56,469	52,816	4,673
18	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	8.8	(³)	76.9
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,144	338	12,859	9,736	4,984
20	.....1930..acres.....	.....	.....	17,184	15,691	2,905
21	.....1920..acres.....	.....	.....	15,766	14,247	1,417
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	73.6	51.4	8.48	87.0	81.0
23	.....1929..percent.....	.....	.....	77.9	79.0	80.4
24	.....1919..percent.....	.....	.....	72.1	73.0	69.7
CAPITAL INVESTED TO JANUARY 1						
25	Total investment in irrigation enterprises.....1940..dollars.....	167,613	36,834	5,305,470	5,031,147	2,164,329
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	166,288	36,598	5,275,788	5,004,744	2,160,076
27	(b) Investment in water rights (reported).....1940..dollars.....	1,325	236	29,682	26,403	4,253
28	Total investment in irrigation enterprises.....1930..dollars.....	.....	.....	5,230,947	5,144,992	1,605,192
29	.....1920..dollars.....	.....	.....	1,975,169	1,783,989	165,665
30	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	1.4	-2.2	34.8
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	38.72	52.92	62.61	67.37	82.49
32	.....1930..dollars.....	.....	.....	67.17	68.92	108.20
33	.....1920..dollars.....	.....	.....	34.98	33.78	35.45
34	Average investment per acre irrigated.....1939..dollars.....	52.63	102.89	73.81	77.47	101.83
35	Estimated final investment in existing enterprises.....1940..dollars.....	205,568	37,249	5,424,154	5,122,161	2,238,433
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	43.64	47.21	61.45	66.30	80.31
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
37	Enterprises reporting maintenance and operation.....1939..number.....	97	37	877	515	177
38	Area irrigated in these enterprises.....1939..acres.....	2,987	329	69,730	63,275	20,976
39	Cost of maintenance and operation.....1939..dollars.....	12,199	2,074	210,832	187,578	97,822
40	Average cost, per acre irrigated.....1939..dollars.....	4.08	6.30	3.02	2.96	4.66
41	Total annual charges (reported) ⁵.....1939..dollars.....	.....	640	213,245	212,756	115,976
42	Average annual charge per acre irrigated.....1939..dollars.....	.....	4.96	4.44	4.49	6.95
43	Area against which charges were assessed.....1939..acres.....	.....	129	52,436	51,733	19,424
44	Average annual charge per acre assessed.....1939..dollars.....	.....	4.96	4.07	4.11	5.97
45	Total charges collected ⁶.....1939..dollars.....	.....	.....	271,460	271,297	114,907
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	.....	.....	1,236,206	1,236,206	373,510
WATER DELIVERED TO IRRIGATORS, 1939						
47	Enterprises reporting water delivered.....1939..number.....	90	36	907	541	189
48	Area irrigated by these enterprises.....1939..acres.....	2,152	346	66,815	60,521	18,834
49	Water delivered.....1939..acre-feet.....	2,851	360	211,639	202,690	86,887
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.3	1.0	3.2	3.3	4.7
51	Average cost of water per acre irrigated.....1939..dollars.....	4.50	6.37	3.70	3.69	6.18
52	Average cost of water per acre-foot delivered.....1939..dollars.....	3.40	6.12	1.17	1.10	1.31
DRAINAGE OF IRRIGATED LAND						
53	Enterprises reporting land drained or needing drainage.....1939..number.....	42	4	26	5	(⁴)
54	Irrigable area in these enterprises.....1939..acres.....	2,660	314	13,325	12,531	(⁴)
55	Irrigated area in these enterprises.....1939..acres.....	1,876	112	12,379	11,867	(⁴)
56	Area for which drains have been installed.....1939..acres.....	1,351	72	651	444	(⁴)
57	Additional area needing drainage.....1939..acres.....	751	.....	333	218	(⁴)

¹ Percent not shown when more than 1,000.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Less than one-tenth of 1 percent.

⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - OREGON

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

PACIFIC SLOPE—Continued							KLAMATH RIVER							
Rogue River—Continued					Umpqua River (43)	Other Pacific Slope streams (44)	Total	Direct (45)	Upper Klamath Lake					
Little Butte Creek (38)	Bear Creek (39)	Evans Creek (40)	Applegate River (41)	Illinois River (42)					Williamsion River	Total				
100	1,404	67	294	152	196	254	1,273	464	80	1				
3,263	24,683	1,303	9,984	5,056	2,906	4,034	162,866	78,705	34,394	2				
2,541	18,971	1,217	7,522	3,231	2,098	1,366	92,467	43,292	11,310	3				
.....	1	.....	25	13	17	1	1,584	909	.....	4		
722	5,711	86	1,837	1,812	791	2,667	63,815	34,504	23,084	5				
11,726	14,862	1,215	9,266	4,328	.....	1,733	126,105	1,841	7,587	6			
6,706	8,319	1,333	10,659	4,961	.....	2,134	90,570	3,185	7,800	7			
-72.2	66.1	7.2	1.3	16.8	.....	132.8	29.2	(¹)	353.3	8			
3,299	27,169	1,454	10,375	7,083	5,200	5,813	233,674	98,684	69,488	9				
12,247	20,425	1,517	12,620	6,079	.....	3,610	198,432	4,777	15,817	10			
54,383	28,275	2,746	17,335	8,705	.....	8,695	239,940	5,910	10,150	11			
36	2,486	151	991	2,027	2,294	1,779	71,008	19,979	35,094	12				
521	5,583	302	3,354	1,751	.....	1,877	72,327	2,936	8,284	13			
47,677	19,956	1,413	6,676	3,744	.....	6,561	149,370	2,725	2,350	14			
3,299	27,161	1,410	10,207	6,361	4,755	5,308	186,018	66,661	36,914	15				
12,171	20,293	1,482	11,871	5,836	.....	3,226	169,699	3,672	13,616	16			
6,417	14,573	1,614	13,012	6,323	.....	3,653	135,089	5,800	9,980	17			
-72.9	33.8	-4.9	-14.0	9.0	.....	64.5	9.6	(¹)	171.1	18			
36	2,478	107	823	1,308	1,849	1,271	23,152	7,956	2,520	19				
445	5,431	267	2,605	1,508	.....	1,493	43,594	1,631	6,029	20			
1,711	6,254	281	2,353	1,362	.....	1,519	44,528	2,615	2,180	21			
98.9	90.9	92.4	91.9	79.4	61.1	76.0	87.6	90.8	93.2	22				
96.3	73.2	82.0	78.1	74.2	.....	53.7	74.3	50.1	55.7	23			
79.7	57.1	82.6	81.9	78.5	.....	58.4	67.0	54.9	78.2	24			
9,221	2,692,456	21,859	91,884	51,398	114,266	160,057	5,136,003	1,464,349	415,089	25				
9,180	2,674,250	21,179	91,279	48,780	112,880	158,164	4,955,757	1,439,756	404,034	26				
41	18,206	680	605	2,618	1,386	1,893	180,246	24,593	11,055	27				
1,219,886	1,475,733	22,504	166,953	203,421	.....	85,955	5,238,426	61,700	259,900	28			
604,794	615,878	40,836	180,894	87,966	.....	191,200	3,811,932	43,141	32,368	29			
-99.2	82.4	-2.9	-45.0	-74.7	.....	86.2	-2.0	(¹)	59.7	30			
2.80	99.13	15.50	9.00	8.08	24.03	30.15	27.61	16.90	11.24	31				
100.23	72.72	15.18	14.06	34.86	.....	26.64	30.87	16.80	19.09	32			
71.85	42.26	25.30	13.90	13.91	.....	52.34	28.22	7.44	3.24	33			
2.83	109.08	16.78	9.79	10.17	39.32	39.68	31.54	18.61	12.07	34				
9,221	2,692,656	22,284	96,659	62,908	126,768	175,225	6,828,833	1,581,699	1,970,289	35				
2.80	99.11	15.33	9.32	8.88	24.38	30.14	29.20	16.03	28.35	36				
Primary	Sup.						Primary	Sup.	Primary	Sup.				
Enterprises							Enterprises		Enterprises					
43	82	21	95	97	144	218	161	7	69	2	27	1	37
3,081	24,466	1,241	8,931	4,580	2,774	3,681	153,945	41,480	71,191	(⁴)	33,042	(⁴)	38
1,452	76,166	874	6,146	3,118	8,186	15,068	161,615	42,228	58,525	(⁴)	12,578	(⁴)	39
0.47	3.19	0.70	0.69	0.68	2.95	4.09	1.05	1.02	0.82	(⁴)	0.38	(⁴)	40
1,103	91,294	531	3,692	160	489	175,133	41,666	61,319	4,554	2,482	41
1.26	3.98	0.67	0.62	1.07	0.78	1.98	1.01	1.55	0.77	0.58	42
878	23,976	847	6,408	200	703	93,950	41,282	40,784	5,939	5,182	43
1.26	3.81	0.63	0.58	0.80	0.70	1.86	1.01	1.50	0.77	0.48	44
1,002	153,051	656	1,681	163	168,224	457	54,584	457	2,049	45
100	862,596	1,904,668	476,013	253,846	46
47	1	86	21	90	108	147	219	158	5	74	7	19	1	47
3,163	(⁴)	24,227	1,169	8,239	4,889	2,660	3,634	148,309	39,445	70,967	3,902	28,090	(⁴)	48
5,578	(⁴)	49,551	4,151	25,776	28,747	4,178	4,771	450,887	76,729	239,083	13,870	74,067	(⁴)	49
1.8	(⁴)	2.0	3.6	3.1	5.9	1.6	1.3	3.0	2.0	3.4	3.6	2.6	(⁴)	50
0.41	3.87	0.84	0.70	0.65	3.11	4.36	1.35	1.06	1.10	1.05	0.21	(⁴)	51
0.23	1.89	0.24	0.23	0.11	1.98	3.32	0.44	0.53	0.33	0.30	0.08	(⁴)	52
.....	1	5	16	37	19	3	53
.....	(⁴)	(⁴)	203	591	112,758	57,589	1,729	54
.....	(⁴)	(⁴)	59	453	86,166	45,004	2,807	55
.....	(⁴)	(⁴)	7	200	71,955	41,733	760	56
.....	(⁴)	(⁴)	70	45	8,004	2,014	842	57

⁶ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁸ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

⁷ Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION — OREGON

DRAINAGE BASIN TABLE I.— AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	KLAMATH RIVER—Continued				SACRAMENTO RIVER	INDEPENDENT BASINS
	Upper Klamath Lake—Continued		Lost River	Pit River	Malheur Lake	Total
	Williamson River—Continued					
	Direct (46)	Sprague River (47)	(48)	Goose Lake (49)		
IRRIGATED FARMS AND AREAS						
1	Irrigated farms.....1939..number.....	47	33	729	176	215
2	Area irrigated.....1939..acres.....	3,812	30,582	49,767	21,922	79,902
3	(a) Cropland harvested.....1939..acres.....	2,720	8,590	37,865	19,136	47,943
4	(b) Crop failure.....1939..acres.....	.....	.....	675	.....	250
5	(c) Pasture.....1939..acres.....	1,092	21,992	11,227	2,786	31,709
6	Area irrigated.....1929..acres.....	.....	7,587	60,450	.....	107,727
7	.....1919..acres.....	.....	7,800	58,568	.....	86,193
8	Increase or decrease (-), 1929-1939.....percent.....	.....	303.1	-17.7	.....	-25.8
9	Irrigable area in enterprises.....1940..acres.....	8,808	60,680	65,702	24,235	112,933
10	.....1930..acres.....	.....	15,871	77,170	.....	169,497
11	.....1920 ¹ ..acres.....	.....	10,150	194,748	.....	199,868
12	Excess of irrigable area over the area irrigated.....1940..acres.....	4,996	30,098	15,935	2,313	33,031
13	.....1930..acres.....	.....	8,284	16,720	.....	61,770
14	.....1920 ¹ ..acres.....	.....	2,350	136,180	.....	113,770
15	Area works were capable of supplying with water...1940..acres.....	5,399	31,515	62,443	23,998	112,845
16	.....1930..acres.....	.....	13,616	75,857	.....	118,023
17	.....1920..acres.....	.....	9,980	95,304	.....	141,217
18	Increase or decrease (-), 1930-1940.....percent.....	.....	131.5	-17.7	.....	-4.4
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,587	933	12,676	2,076	32,943
20	.....1930..acres.....	.....	6,029	15,407	.....	10,296
21	.....1920..acres.....	.....	2,180	36,736	.....	55,019
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	70.6	97.0	79.7	91.3	70.8
23	.....1929..percent.....	.....	55.7	79.7	.....	91.3
24	.....1919..percent.....	.....	78.2	61.5	.....	61.0
CAPITAL INVESTED TO JANUARY 1						
25	Total investment in irrigation enterprises.....1940..dollars....	263,521	151,568	3,256,565	1,533,323	329,102
26	(a) Cost of irrigation works and equipment.....1940..dollars....	263,521	140,513	3,111,967	1,528,572	314,248
27	(b) Investment in water rights (reported).....1940..dollars....	.....	11,055	144,598	4,751	14,854
28	Total investment in irrigation enterprises.....1930..dollars....	.....	259,900	4,295,740	.....	1,884,114
29	.....1920..dollars....	.....	32,368	3,451,383	.....	1,137,612
30	Increase or decrease (-), 1930-1940.....percent.....	.....	-41.7	-24.2	.....	-82.5
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	48.81	4.81	52.15	63.89	2.92
32	.....1930..dollars....	.....	19.09	56.63	.....	15.96
33	.....1920..dollars....	.....	3.24	36.21	.....	8.06
34	Average investment per acre irrigated.....1939..dollars....	69.13	4.96	65.44	69.94	4.12
35	Estimated final investment in existing enterprises..1940..dollars....	313,721	1,656,568	3,276,845	1,535,473	336,612
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	35.62	27.30	49.87	63.36	2.98
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
		Primary	Supplemental		Primary	Supplemental
		Enterprises		Enterprises		
37	Enterprises reporting maintenance and operation...1939..number.....	6	1	21	4	82
38	Area irrigated by these enterprises.....1939..acres.....	3,760	(²)	29,282	49,712	35,539
39	Cost of maintenance and operation.....1939..dollars....	6,562	(²)	6,016	90,512	37,625
40	Average cost, per acre irrigated.....1939..dollars....	1.75	(²)	0.21	1.82	1.06
41	Total annual charges (reported) ^{3 4}.....1939..dollars....	2,182	.....	300	111,332	37,112
42	Average annual charge per acre irrigated.....1939..dollars....	1.70	.....	0.10	2.49	1.05
43	Area against which charges were assessed.....1939..acres.....	2,182	.....	3,000	47,984	35,345
44	Average annual charge per acre assessed.....1939..dollars....	1.00	.....	0.10	2.32	1.05
45	Total charges collected ³.....1939..dollars....	1,749	.....	300	111,591	.....
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars....	241,014	.....	12,832	1,174,809	.....
WATER DELIVERED TO IRRIGATORS, 1939						
47	Enterprises reporting water delivered.....1939..number.....	4	1	15	3	73
48	Area irrigated by these enterprises.....1939..acres.....	1,952	(²)	26,138	49,252	35,539
49	Water delivered.....1939..acre-feet.....	7,591	(²)	66,476	137,707	64,845
50	Average water delivered per acre irrigated.....1939..acre-feet.....	3.9	(²)	2.5	2.8	1.8
51	Average cost of water per acre irrigated.....1939..dollars....	1.30	(²)	0.13	2.94	1.06
52	Average cost of water per acre-foot delivered..1939..dollars....	0.33	(²)	0.05	0.84	0.58
DRAINAGE OF IRRIGATED LAND						
53	Enterprises reporting land drained or needing drainage.....1939..number.....	(²)	2	(²)	1	15
54	Irrigable area in these enterprises.....1939..acres.....	(²)	.....	(²)	50,440	230
55	Irrigated area in these enterprises.....1939..acres.....	(²)	.....	(²)	38,355	139
56	Area for which drains have been installed.....1939..acres.....	(²)	.....	(²)	29,462	.....
57	Additional area needing drainage.....1939..acres.....	(²)	.....	(²)	5,148	58

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — OREGON

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

INDEPENDENT BASINS—Continued												
Silvies River (50)	Malheur Lake—Continued				Benjamin Lake (54)	Silver Lake (55)	Summer Lake (56)	Lake Abert (57)	Cowhead and Warner Lakes (58)	Trout Creek (59)	Quinn River	
	Harney Lake			Dorner und Blitzen River (53)							McDermitt Creek (61)	Tenmile Creek (62)
	Total	Direct	Silver Creek (52)									
164	10	3	7	41	3	20	23	31	55	38	7	11
53,156	9,182	1,150	8,032	17,564	160	6,315	3,508	27,389	33,467	9,381	2,970	4,149
30,182	3,552	560	2,992	14,209	160	3,786	2,678	20,749	19,561	7,870	2,370	1,004
210	40	40	.....	.....	.....	.....	.....	.....	10	.....	.....	135
22,764	5,590	550	5,040	3,355	.....	2,529	830	6,640	13,896	1,467	600	2,410
28,727	.....	.....	.....	79,000	.....	.....	.....	.....	.....	.....	.....	.....
64,842	.....	.....	.....	21,356	.....	.....	.....	.....	.....	.....	.....	.....
85.0	.....	.....	.....	-77.8	.....	.....	.....	.....	.....	.....	.....	.....
60,373	14,750	1,470	13,280	17,810	170	14,609	4,823	28,691	39,574	11,011	3,014	4,189
59,997	.....	.....	.....	109,500	.....	.....	.....	.....	.....	.....	.....	.....
102,258	42,779	.....	42,779	54,931	.....	.....	.....	.....	.....	.....	.....	.....
27,217	5,568	320	5,248	246	10	8,294	1,315	1,302	6,107	1,630	44	40
31,270	.....	.....	.....	30,500	.....	.....	.....	.....	.....	.....	.....	.....
37,416	42,779	.....	42,779	33,575	.....	.....	.....	.....	.....	.....	.....	.....
80,285	14,750	1,470	13,280	17,810	170	14,609	4,823	28,691	38,914	10,614	3,010	4,189
33,523	.....	.....	.....	84,500	.....	.....	.....	.....	.....	.....	.....	.....
95,867	17,394	.....	17,394	27,956	.....	.....	.....	.....	.....	.....	.....	.....
139.5	.....	.....	.....	-78.9	.....	.....	.....	.....	.....	.....	.....	.....
27,129	5,568	320	5,248	246	10	8,294	1,315	1,302	5,447	1,233	40	40
4,796	.....	.....	.....	5,500	.....	.....	.....	.....	.....	.....	.....	.....
31,025	17,394	.....	17,394	6,600	.....	.....	.....	.....	.....	.....	.....	.....
66.2	62.3	78.2	60.5	98.6	94.1	43.2	72.7	95.5	86.0	88.4	98.7	99.0
85.7	.....	.....	.....	93.5	.....	.....	.....	.....	.....	.....	.....	.....
67.6	.....	.....	.....	76.4	.....	.....	.....	.....	.....	.....	.....	.....
207,402	80,220	4,050	76,170	41,480	1,725	296,927	365,585	237,348	116,568	47,230	11,371	10,900
203,848	70,220	4,050	66,170	40,180	1,725	291,927	365,585	186,935	111,165	47,185	11,356	10,900
3,554	10,000	.....	10,000	1,300	.....	5,000	.....	50,413	5,403	45	15	.....
80,114	.....	.....	.....	1,804,000	.....	.....	.....	.....	.....	.....	.....	.....
1,005,862	.....	.....	.....	131,750	.....	.....	.....	.....	.....	.....	.....	.....
158.9	.....	.....	.....	-97.7	.....	.....	.....	.....	.....	.....	.....	.....
2.58	5.44	2.76	5.74	2.33	10.15	20.32	75.80	8.27	3.00	4.45	3.78	2.60
2.39	.....	.....	.....	21.35	.....	.....	.....	.....	.....	.....	.....	.....
10.49	.....	.....	.....	4.71	.....	.....	.....	.....	.....	.....	.....	.....
3.90	8.74	3.52	9.48	2.36	10.78	47.02	104.21	8.67	3.48	5.03	3.83	2.63
213,952	80,220	4,050	76,170	42,440	1,725	296,927	365,585	247,348	123,108	48,880	11,371	10,900
2.66	5.44	2.76	5.74	2.36	10.15	20.32	75.80	8.62	3.11	4.44	3.77	2.60
104	8	2	6	40	3	8	4	14	41	34	7	11
52,297	8,712	(2)	7,872	15,564	160	2,635	3,122	25,928	30,912	9,334	2,970	4,149
13,232	1,093	(2)	1,057	5,236	478	1,455	1,613	5,794	6,130	2,625	560	875
0.25	0.13	(2)	0.13	0.34	2.99	0.55	0.52	0.22	0.20	0.25	0.19	0.21
392	.....	.....	.....	.....	.....	400	963	300	.....	.....	.....	.....
0.15	.....	.....	.....	.....	.....	0.50	0.77	0.25	.....	.....	.....	.....
2,629	.....	.....	.....	.....	.....	800	1,250	1,200	.....	.....	.....	.....
0.15	.....	.....	.....	.....	.....	0.50	0.77	0.25	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	400	962	300	.....	.....	.....	.....
4,500	.....	.....	.....	.....	.....	322,000	33,000	.....	.....	.....	.....	.....
98	10	3	7	39	3	7	1	15	35	37	7	11
45,212	9,182	1,150	8,032	15,384	160	2,495	(2)	26,724	7,582	9,351	2,970	4,149
99,333	25,874	1,140	24,734	32,808	405	7,079	(2)	103,685	14,729	12,302	7,685	5,700
2.2	2.8	1.0	3.1	2.1	2.5	2.8	(2)	3.9	1.9	1.3	2.6	1.4
0.27	0.13	0.04	0.13	0.33	2.99	0.52	(2)	0.22	0.52	0.25	0.19	0.21
0.12	0.04	0.04	0.04	0.15	1.18	0.18	(2)	0.06	0.27	0.19	0.07	0.15
.....	.....	.....	.....	.....	.....	.....	.....	.....	(2)	1	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	(2)	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	(2)	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	(2)	.....	.....	.....

³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - OREGON

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER					
		Total	Direct (1)	Snake River		Owyhee River Total	
				Total	Direct (2)		
							Total	Total
ENTERPRISES AND IRRIGATION WORKS							
JANUARY 1							
1	Enterprises.....1940..number.....	25,891	4,315	103	1,546	297	CG
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	214	173	20	281	149	1,335
3	Diversion dams.....1940..total number.....	5,097	3,827	13	1,925	283	56
4	.....1930..total number.....	3,806	2,700	.....	1,304	2	95
5	.....1920..total number.....	3,285	2,458	.....	1,162	.....	96
6	(a) Concrete and masonry.....1940..number.....	663	564	2	160	18	5
7	(b) Timber.....1940..number.....	877	563	8	308	42	1
8	(c) Earth and rock.....1940..number.....	2,220	1,757	2	990	101	44
9	(d) Other, mixed, and not reported.....1940..number.....	1,337	943	1	467	122	6
10	Main canals and laterals.....1940..total length, miles.....	8,518.0	5,948.6	11.3	2,772.5	266.7	473.0
11	.....1930..total length, miles.....	8,177	5,651	.....	2,634	112	199
12	.....1920..total length, miles.....	9,071	6,556	1	3,610	112	247
13	(a) Earth.....1940..length, miles.....	8,222	5,707	9	2,720	264	459
14	(b) Lined.....1940..length, miles.....	296.0	241.6	2.3	52.5	2.7	14.0
15	.....1940..capacity, c.f.s. ³	37,290	22,796	69	13,295	1,337	2,567
16	.....1930..capacity, c.f.s. ³	25,906	17,120	.....	9,209	554	535
17	.....1920..capacity, c.f.s. ³	28,897	19,161	2	10,917	330	1,555
18	Pipe lines ⁴.....1940..total length, miles.....	665.2	531.4	41.5	57.9	15.4	23.0
19	.....1930..total length, miles.....	225.3	204.2	.....	32.0	15.4	1.5
20	.....1920..total length, miles.....	159.6	132.2	2.5	29.2	14.4	2.4
21	(a) Concrete.....1940..length, miles.....	97.8	86.9	0.8	24.9	9.0	9.7
22	(b) Metal.....1940..length, miles.....	489.2	385.7	40.4	13.4	1.4	5.1
23	(c) Wood-stave.....1940..length, miles.....	67.7	49.4	0.3	19.6	5.0	8.2
24	(d) Other.....1940..length, miles.....	10.5	9.4	.....	.....	.....	.....
25	Storage dams.....1940..total number.....	247	146	1	86	9	12
26	.....1930..total number.....	167	118	.....	73	2	14
27	.....1920..total number.....	309	168	.....	103	.....	18
28	(a) Concrete and masonry.....1940..number.....	33	18	.....	10	1	1
29	(b) Earth and rock.....1940..number.....	156	86	1	54	2	10
30	(c) Other, mixed, and not reported.....1940..number.....	58	42	.....	22	6	1
31	Reservoirs.....1940..total number.....	257	153	1	94	10	13
32	(a) 1-99 acre-feet capacity.....1940..number.....	153	92	1	44	3	4
33	(b) 100-999 acre-feet capacity.....1940..number.....	54	35	.....	31	6	7
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	50	26	.....	19	.....	4
35	.....1940..total capacity, ac.-ft. ⁵	2,212,315	1,426,761	(6)	1,170,186	6,050 ¹	756,146
36	.....1930..total capacity, ac.-ft.....	120	80	.....	58	1	14
37	.....1920..total capacity, ac.-ft.....	1,698,428	987,123	.....	783,260	6,000	391,053
38	Wells, flowing.....1940..number.....	76	12	.....	6	.....	3
39	.....1930..number.....	59	15	.....	6	.....	.....
40	.....1920..number.....	65	19	.....	12	.....	4
41	.....1940..yield, g.p.m.....	3,396	1,165	.....	275	.....	25
42	.....1930..yield, g.p.m.....	6,535	2,005	.....	1,505	.....	.....
43	.....1920..yield, g.p.m.....	11,968	1,182	.....	1,102	.....	787
44	Wells, pumped.....1940..number.....	901	843	38	117	16	2
45	.....1930..number.....	558	535	.....	93	3	.....
46	.....1920..number.....	206	178	9	39	.....	2
47	.....1940..yield, g.p.m.....	209,289	195,294	4,110	36,877	7,192	(6)
48	.....1930..yield, g.p.m.....	136,669	121,217	.....	31,714	1,375	.....
49	.....1920..yield, g.p.m.....	47,026	32,077	178	9,818	.....	240
50	Pumping plants:.....1940..total number.....	2,275	1,764	83	289	116	29
51	.....1930..total number.....	1,091	931	.....	266	78	75
52	Prime movers.....1940..capacity, hp.....	29,527	19,674	549	8,636	3,823	3,697
53	.....1930..capacity, hp.....	21,257	12,666	.....	7,928	5,978	546
54	.....1920..capacity, hp.....	13,769	11,470	42	9,289	5,594	1,312
55	(a) Electric.....1940..number.....	1,221	936	59	177	91	16
56	.....1940..capacity, hp.....	17,060	11,841	331	7,500	3,520	3,386
57	(b) Internal-combustion.....1940..number.....	969	784	24	93	24	3
58	.....1940..capacity, hp.....	9,617	7,348	218	746	303	41
59	(c) Other ⁷.....1940..number.....	55	44	.....	19	1	10
60	.....1940..capacity, hp.....	2,830	485	.....	390	.....	270
61	Pumps.....1940..total number.....	2,265	1,753	82	276	116	21
62	.....1930..number.....	1,157	978	.....	292	101	77
63	.....1920..number.....	614	442	12	190	60	60
64	.....1940..capacity, g.p.m.....	1,510,958	969,794	14,667	419,949	181,530	169,089
65	.....1930..capacity, g.p.m.....	1,022,213	600,215	.....	292,378	188,085	36,894
66	.....1920..capacity, g.p.m.....	600,045	491,607	2,418	377,160	185,022	80,153
67	(a) Centrifugal.....1940..number.....	1,832	1,426	31	239	103	18
68	.....1940..capacity, g.p.m.....	1,292,351	865,699	9,196	392,506	171,491	161,297
69	.....1940..average capacity, g.p.m.....	705	607	297	1,642	1,665	8,959
70	(b) Turbine.....1940..number.....	165	125	12	21	10	3
71	.....1940..capacity, g.p.m.....	142,329	85,324	2,762	24,792	8,594	7,832
72	.....1940..average capacity, g.p.m.....	863	683	230	1,181	859	2,611
73	(c) Plunger.....1940..number.....	201	154	35	7	.....	.....
74	.....1940..capacity, g.p.m.....	13,889	10,450	2,574	291	.....	.....
75	.....1940..average capacity, g.p.m.....	69	68	74	42	.....	.....
76	(d) Other.....1940..number.....	67	48	4	9	3	.....
77	.....1940..capacity, g.p.m.....	62,389	8,321	135	2,360	1,445	.....
78	Pumping lift, from all sources.....1940..average, feet.....	27	28	88	20	20	28
79	.....1930..average, feet.....	27	27	.....	22	27	18
80	.....1920..average, feet.....	28	28	45	24	31	28
81	from pumped wells.....1940..average, feet.....	35	35	143	19	20	(6)
82	from surface sources.....1940..average, feet.....	22	22	41	21	20	29

¹Data for 2 enterprises in Whitehorse Creek Drainage Basin (60) (number refers to separate map) are included only in State totals. Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State totals.
²Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.
³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — OREGON

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WORKS, 1940, 1930, AND 1920

COLUMBIA RIVER—Continued												
Sneke River—Continued												
Owyhee River—Continued			Malheur River						Grande Ronde River			
Direct	Jordan Creek	Total	Direct	Bully Creek	Willow Creek	Burnt River	Powder River	Imaha River	Total	Direct	Wallowa River	Joseph Creek
(3)	(5)		(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)	(14)
52	14	186	108	34	44	97	392	64	444	221	198	25
1,455	889	498	732	133	203	255	276	27	168	107	253	44
44	12	351	189	38	114	273	512	103	347	102	196	49
		331				184	342	70	175			
		256				213	291	34	203			
4	1	20	14	1	5		83	1	33	18	14	1
		33	14	18	1	13	104	5	110	24	85	1
35	9	230	120	12	98	241	182	28	164	54	67	43
5	1	68	51	7	10	19	143	69	40	6	30	4
397.7	75.3	755.6	606.5	48.0	101.1	294.1	515.2	69.7	398.2	164.5	214.5	19.2
		420				268	1,009	75	323			
		624				414	1,335	86	621			
384	75	740	599	48	93	285	512	67	393	163	211	19
13.7	0.3	15.6	7.5		8.1	9.1	3.2	2.7	5.2	1.5	3.5	0.2
2,096	471	3,720	1,839	212	1,669	607	2,795	96	2,173	653	1,488	32
		2,642				458	2,722	212	1,551			
		2,022				781	3,754	102	1,883			
22.8	0.2	3.0	2.9		0.1	6.3	2.9	1.6	5.7	4.8	0.7	0.2
		4.3				1.1	6.7					
		2.0				1.0	7.9	0.1	1.1			
9.7						6.0			0.2	0.2		
5.1		0.4	0.4			0.2	1.0	0.6	4.7	3.9	0.6	0.2
8.0	0.2	2.6	2.5		0.1	0.1	1.9	1.0	0.8	0.7	0.1	
11	1	11	7	1	3	9	30		15	6	9	
		11				9	22		10			
		34				8	19	1	19			
1		3	2		1		4		1		1	
9	1	8	5	1	2	6	21		7	4	3	
1						3	5		7	2	5	
13	1	18	7	1	10	8	30		14	9	5	
3		9	1		8		18		11	9	2	
7		5	4	1		6	6		1		1	
3	1	4	2		2	2	6		2		2	
722,146	(⁶)	300,931	250,780	(⁶)	50,031	28,910	28,745		49,404	50	49,354	
		10				5	19		5			
		234,323				104,120	3,314		41,766			
3							3					
		2				1	3					
							8					
25							250					
		280				75	1,150					
							315					
2		4			4	1	24		70	67	3	
		1				1	30		58			
		2					13		20			
(⁶)		1,346			1,346	(⁶)	6,710		20,849	20,713	136	
		25				150	10,020		20,144			
		60					4,780		4,203			
29		17	6		11	2	36	2	87	79	8	
		12				1	32	1	67			
3,697		290	187		103	(⁶)	484	(⁶)	316	302	14	
		652				2	377	6	367			
		521				24	1,601	23	189			
16		7	2		5		20		43	37	6	
3,386		55	(⁶)		10		431		108	98	10	
3		9	3		6	2	14		40	39	1	
41		160	67		93	(⁶)	52	(⁶)	164	160	(⁶)	
10		1	1				2		4	3	1	
270		(⁶)	(⁶)				(⁶)		44	44		
21		14	6		8	2	36	1	86	78	8	
		12				1	33	1	67			
		10				3	14	4	35			
169,089		17,046	15,700		1,346	(⁶)	15,590	(⁶)	33,564	33,133	431	
		29,420				150	14,025	300	23,504			
		30,010				965	69,132	500	10,743			
18		9	5		4	2	29	1	77	72	5	
161,257		16,475	15,675		800	(⁶)	7,905	(⁶)	32,248	31,898	350	
8,959		1,831	3,135		200	(⁶)	273	(⁶)	419	443	70	
3							5		3	1	2	
7,832							7,590		776	(⁶)	(⁶)	
2,611							1,518		259	(⁶)	(⁶)	
		2	1		1		2		3	3		
		(⁶)	(⁶)		(⁶)		(⁶)		155	155		
		(⁶)	(⁶)		(⁶)		(⁶)		52	52		
		3			3				3	2	1	
		530			530				385	(⁶)	(⁶)	
28		19	20		18	(⁶)	27	(⁶)	17	15	35	
		25					25		18			
		17					33		12			
(⁶)		21			21		25		17	16	34	
29		16	20		9	(⁶)	32	(⁶)	19	11	35	

⁴ Includes siphons and farm pipe lines reported.
⁵ Total capacity of all reservoirs regardless of size.
⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁷ Includes water wheels for which no horsepower was reported.

CENSUS OF IRRIGATION — OREGON

DRAINAGE BASIN TABLE II— ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		COLUMBIA RIVER—Continued					
		Walla Walla River (15)	Umatilla River				Willow Creek (19)
			Total	Direct	Birch Creek	Dutter Creek	
		(15)	(16)	(17)	(18)	(19)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940..number.....	349	147	67	45	35	83
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	57	326	603	61	137	59
3	Diversion dams.....1940..total number.....	204	164	51	53	60	128
4	.....1930..total number.....	27	179	.....	.....	.....	117
5	.....1920..total number.....	101	139	.....	.....	.....	71
6	(a) Concrete and masonry.....1940..number.....	124	94	35	22	37	78
7	(b) Timber.....1940..number.....	12	11	2	6	3	17
8	(c) Earth and rock.....1940..number.....	54	40	10	16	14	9
9	(d) Other, mixed, and not reported.....1940..number.....	14	19	4	9	6	24
10	Main canals and laterals.....1940..total length, miles.....	92.1	376.2	305.2	60.0	11.0	95.4
11	.....1930..total length, miles.....	95	416	.....	.....	.....	101
12	.....1920..total length, miles.....	206	461	.....	.....	.....	105
13	(a) Earth.....1940..length, miles.....	85	258	187	60	11	93
14	(b) Lined.....1940..length, miles.....	7.1	118.2	118.2	.....	.....	2.4
15	.....1940..capacity, c.f.s. ¹	727	1,639	1,387	113	139	133
16	.....1930..capacity, c.f.s. ¹	261	1,804	.....	.....	.....	171
17	.....1920..capacity, c.f.s. ¹	404	2,007	.....	.....	.....	110
18	Pipe lines ².....1940..total length, miles.....	18.4	64.1	63.3	0.8	.....	1.6
19	.....1930..total length, miles.....	2.4	43.4	.....	.....	.....	0.1
20	.....1920..total length, miles.....	23.6	14.3	.....	.....	.....	0.3
21	(a) Concrete.....1940..length, miles.....	13.1	18.7	18.2	0.5	.....	0.2
22	(b) Metal.....1940..length, miles.....	4.8	37.7	37.8	0.1	.....	0.9
23	(c) Wood-stave.....1940..length, miles.....	0.3	7.7	7.5	0.2	.....	0.5
24	(d) Other.....1940..length, miles.....	0.2	.....	.....	.....	.....	.....
25	Storage dams.....1940..total number.....	.....	2	2	.....	.....	1
26	.....1930..total number.....	.....	6	.....	.....	.....	7
27	.....1920..total number.....	7	10	.....	.....	.....	.....
28	(a) Concrete and masonry.....1940..number.....	.....	1	1	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	.....	1	1	.....	.....	.....
30	(c) Other, mixed, and not reported.....1940..number.....	.....	.....	.....	.....	.....	.....
31	Reservoirs.....1940..total number.....	.....	4	4	.....	.....	.....
32	(a) 1-99 acre-feet capacity.....1940..number.....	.....	2	2	.....	.....	.....
33	(b) 100-999 acre-feet capacity.....1940..number.....	.....	.....	.....	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	.....	2	2	.....	.....	.....
35	.....1940..total capacity, ac.-ft. ³.....	.....	123,012	123,012	.....	.....	.....
36	.....1930..total capacity.....	.....	3	.....	.....	.....	.....
37	.....1920..total capacity, ac.-ft.....	.....	52,412	.....	.....	.....	.....
38	Wells, flowing.....1940..number.....	.....	.....	.....	.....	.....	.....
39	.....1930..number.....	1	.....	.....	.....	.....	.....
40	.....1920..number.....	1	2	.....	.....	.....	.....
41	.....1940..yield, g.p.m.....	.....	.....	.....	.....	.....	.....
42	.....1930..yield, g.p.m.....	125	.....	.....	.....	.....	.....
43	.....1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	200	8	7	1	.....	.....
45	.....1930..number.....	178	11	.....	.....	.....	2
46	.....1920..number.....	88	6	.....	.....	.....	.....
47	.....1940..yield, g.p.m.....	39,212	2,200	2,000	(⁴)	.....	.....
48	.....1930..yield, g.p.m.....	42,452	2,460	.....	.....	.....	2
49	.....1920..yield, g.p.m.....	19,325	171	.....	.....	.....	.....
50	Pumping plants.....1940..total number.....	221	19	17	2	.....	3
51	.....1930..total number.....	190	26	.....	.....	.....	2
52	Prime movers.....1940..capacity, hp.....	953	177	170	(⁴)	.....	24
53	.....1930..capacity, hp.....	860	268	.....	.....	.....	4
54	.....1920..capacity, hp.....	467	115	.....	.....	.....	2
55	(a) Electric.....1940..number.....	201	11	9	2	.....	1
56	.....1940..capacity, hp.....	812	90	83	(⁴)	.....	(⁴)
57	(b) Internal-combustion.....1940..number.....	19	8	8	.....	.....	2
58	.....1940..capacity, hp.....	139	87	87	.....	.....	(⁴)
59	(c) Other ⁵.....1940..number.....	1	.....	.....	.....	.....	.....
60	.....1940..capacity, hp.....	(⁴)	.....	.....	.....	.....	.....
61	Pumps.....1940..total number.....	221	19	17	2	.....	3
62	.....1930..number.....	190	27	.....	.....	.....	2
63	.....1920..number.....	93	13	.....	.....	.....	1
64	.....1940..capacity, g.p.m.....	42,489	15,070	14,570	(⁴)	.....	956
65	.....1930..capacity, g.p.m.....	46,264	13,790	.....	.....	.....	2
66	.....1920..capacity, g.p.m.....	19,425	4,246	.....	.....	.....	200
67	(a) Centrifugal.....1940..number.....	205	17	15	2	.....	.....
68	.....1940..capacity, g.p.m.....	38,236	11,870	11,370	(⁴)	.....	.....
69	.....1940..average capacity, g.p.m.....	187	698	758	(⁴)	.....	.....
70	(b) Turbine.....1940..number.....	15	2	2	.....	.....	.....
71	.....1940..capacity, g.p.m.....	4,175	(⁴)	(⁴)	.....	.....	.....
72	.....1940..average capacity, g.p.m.....	278	(⁴)	(⁴)	.....	.....	.....
73	(c) Plunger.....1940..number.....	1	.....	.....	.....	.....	2
74	.....1940..capacity, g.p.m.....	(⁴)	.....	.....	.....	.....	(⁴)
75	.....1940..average capacity, g.p.m.....	(⁴)	.....	.....	.....	.....	(⁴)
76	(d) Other.....1940..number.....	.....	.....	.....	.....	.....	1
77	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁴)
78	Pumping lift, from all sources.....1940..average, feet.....	32	20	18	(⁴)	.....	27
79	.....1930..average, feet.....	28	25	.....	.....	.....	65
80	.....1920..average, feet.....	25	94	.....	.....	.....	12
81	from pumped wells.....1940..average, feet.....	33	19	19	(⁴)	.....	.....
82	from surface sources.....1940..average, feet.....	27	20	18	(⁴)	.....	27

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.
³Total capacity of all reservoirs regardless of size.

CENSUS OF IRRIGATION — OREGON

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WORKS, 1940, 1930, AND 1920—Continued

COLUMBIA RIVER—Continued													
John Day River			Deschutes River					Willamette River					
Total	Direct	Rock Creek	Total	Direct	Squaw Creek	Crooked River	White River	Fifteenmile Creek	Hood River	Sandy River	Total	Direct	
	(20)	(21)		(22)	(23)	(24)	(25)	(26)	(27)	(28)		(29)	
597	558	39	266	86	13	144	23	54	83	23	1,064	529	1
80	83	45	423	731	721	238	255	49	330	16	43	39	2
712	680	32	404	66	28	288	22	62	38	5	172	60	3
712	.....	.....	224	.....	.....	.....	.....	.....	30	.....	68	.....	4
504	.....	.....	361	.....	.....	.....	.....	.....	34	.....	15	.....	5
45	27	18	27	12	.....	13	2	18	7	.....	9	.....	6
57	49	8	40	4	4	28	4	11	10	2	87	31	7
457	453	4	123	35	2	77	9	16	20	3	43	14	8
153	151	2	214	15	22	170	7	17	1	.....	33	14	9
573.5	663.7	9.8	1,488.1	946.4	84.1	306.4	151.2	82.2	170.2	.....	187.1	32.0	10
639	.....	.....	1,413	.....	.....	.....	.....	.....	208	.....	38	.....	11
707	.....	.....	1,101	.....	.....	.....	.....	.....	220	.....	58	.....	12
671	662	9	1,470	935	84	300	151	82	147	.....	172	.....	13
2.5	1.7	0.8	18.1	11.4	0.1	6.4	0.2	0.2	23.2	.....	15.1	6.0	14
1,791	1,733	58	3,000	1,981	301	595	123	77	681	12	136.2	453	15
952	.....	.....	4,156	.....	.....	.....	.....	.....	432	.....	72	.....	16
1,052	.....	.....	4,023	.....	.....	.....	.....	.....	435	.....	148	.....	17
19.4	18.8	0.6	9.1	7.2	.....	1.9	.....	3.1	23.5	14.3	278.5	180.6	18
1.9	.....	.....	12.4	.....	.....	.....	.....	.....	44.4	.....	43.6	.....	19
5.7	.....	.....	8.5	.....	.....	.....	.....	.....	38.6	.....	3.2	.....	20
0.6	0.6	.....	0.8	0.8	.....	.....	.....	2.0	3.8	.....	22.0	8.8	21
14.3	13.7	0.6	5.0	4.0	.....	1.0	.....	0.8	7.6	14.2	246.6	167.0	22
.....	.....	.....	3.2	2.3	.....	0.9	.....	0.1	11.4	0.1	6.2	3.9	23
4.5	4.5	.....	0.1	0.1	.....	.....	.....	0.2	0.7	.....	3.7	0.9	24
10	10	.....	13	3	4	6	.....	.....	3	.....	31	7	25
6	.....	.....	10	.....	.....	.....	.....	.....	3	.....	15	.....	26
8	.....	.....	25	.....	.....	.....	.....	.....	5	.....	.....	.....	27
2	2	.....	1	1	.....	.....	.....	.....	1	.....	3	2	28
7	7	.....	12	2	4	6	.....	.....	2	.....	9	1	29
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	19	4	30
5	4	1	16	4	3	9	.....	.....	5	.....	28	5	31
4	3	1	10	2	1	7	.....	.....	3	.....	28	5	32
.....	.....	.....	2	1	.....	.....	.....	.....	2	.....	.....	.....	33
1	1	.....	4	1	2	1	.....	.....	.....	.....	.....	.....	34
1,606	1,605	(*)	130,974	80,402	2,505	48,067	.....	.....	803	.....	165	31	35
5	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	3	.....	36
1,609	.....	.....	148,829	.....	.....	.....	.....	.....	.....	.....	1,010	.....	37
3	3	.....	1	1	.....	.....	.....	.....	.....	.....	2	1	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	39
200	200	.....	(*)	(*)	.....	.....	.....	.....	3	.....	(*)	(*)	40
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	43
13	13	.....	12	10	.....	2	.....	1	.....	11	443	321	44
.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	187	.....	45
6	.....	.....	3	.....	.....	.....	.....	.....	1	.....	15	.....	46
1,500	1,500	.....	3,118	1,688	.....	(*)	.....	(*)	.....	545	107,502	81,352	47
.....	.....	.....	13	.....	.....	.....	.....	.....	.....	.....	40,367	.....	48
475	.....	.....	386	.....	.....	.....	.....	.....	17	.....	1,369	.....	49
73	64	9	31	21	.....	10	.....	6	5	24	1,010	523	50
30	.....	.....	26	.....	.....	.....	.....	.....	3	.....	292	.....	51
876	798	78	364	198	.....	166	.....	65	26	122	7,882	3,889	52
385	.....	.....	823	.....	.....	.....	.....	.....	3	.....	2,032	.....	53
413	.....	.....	764	.....	.....	.....	.....	.....	36	.....	220	.....	54
6	5	(*)	7	(*)	1	6	.....	4	4	20	446	259	55
45	43	(*)	166	(*)	12	126	.....	12	24	91	2,768	1,438	56
63	55	8	16	.....	.....	4	.....	2	.....	4	552	263	57
825	749	76	185	145	.....	40	.....	(*)	(*)	31	5,040	2,425	58
4	4	.....	8	8	.....	.....	.....	.....	.....	.....	12	6	59
6	6	.....	13	13	.....	.....	.....	.....	.....	.....	74	26	60
73	64	9	29	19	.....	10	.....	6	7	25	1,012	523	61
30	.....	.....	26	.....	.....	.....	.....	.....	3	.....	311	.....	62
47	.....	.....	26	.....	.....	.....	.....	.....	5	.....	32	.....	63
68,453	61,318	7,135	20,931	8,546	.....	12,385	.....	362	585	3,016	382,816	157,046	64
40,420	.....	.....	36,331	.....	.....	.....	.....	.....	271	.....	160,749	.....	65
41,280	.....	.....	36,564	.....	.....	.....	.....	.....	755	.....	7,813	.....	66
46	38	8	21	13	.....	8	.....	5	4	8	850	451	67
60,030	52,970	7,110	18,493	7,458	.....	11,035	.....	812	455	1,935	332,056	142,305	68
1,306	1,394	889	881	574	.....	1,379	.....	162	114	242	391	316	69
15	15	.....	.....	.....	.....	1	.....	.....	.....	.....	55	21	70
7,595	7,595	.....	(*)	.....	.....	(*)	.....	.....	.....	645	41,405	8,748	71
506	506	.....	(*)	.....	.....	(*)	.....	.....	.....	161	753	417	72
7	6	1	4	4	.....	.....	.....	1	1	9	87	47	73
205	180	(*)	330	330	.....	.....	.....	(*)	(*)	340	6,536	3,893	74
29	30	(*)	82	82	.....	.....	.....	(*)	(*)	38	75	83	75
5	5	.....	3	2	.....	.....	.....	.....	.....	4	20	9	76
573	573	.....	1,358	(*)	.....	(*)	.....	.....	(*)	96	2,819	2,100	77
42	44	26	28	33	.....	20	.....	52	62	60	22	20	78
19	.....	.....	27	.....	.....	.....	.....	.....	32	.....	22	.....	79
25	.....	.....	38	.....	.....	.....	.....	.....	70	.....	24	.....	80
133	133	.....	29	37	.....	(*)	.....	(*)	.....	102	26	22	81
23	23	26	28	31	.....	23	.....	57	62	27	20	19	82

*Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
 †Includes water wheels for which no horsepower was reported.

CENSUS OF IRRIGATION — OREGON

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER—Continued							
	Willamette River—Continued							
	Calapooya River (30)	Santiam River (31)	Luckiamute River (32)	Yamhill River (33)	Molalla River (34)	Tualatin River (35)	Clackamas River (36)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940. number.....	29	86	23	99	141	116	41
2	Average size of enterprise based on area works were capable of supplying with water.....1940. acres.....	27	128	54	29	32	37	17
3	Diversion dams.....1940. total number.....	4	10	8	18	31	35	6
4	.....1930. total number.....	.....	.....	.....	.....	.....	.....	.....
5	.....1920. total number.....	.....	.....	.....	.....	.....	.....	.....
6	(a) Concrete and masonry.....1940. number.....	.....	.....	.....	2	2	4	.....
7	(b) Timber.....1940. number.....	3	6	2	14	14	17	.....
8	(c) Earth and rock.....1940. number.....	1	4	6	2	2	9	5
9	(d) Other, mixed, and not reported.....1940. number.....	.....	.....	.....	.....	13	5	1
10	Main canals and laterals.....1940. total length, miles.....	8.8	97.7	2.5	13.1	10.9	20.3	1.8
11	.....1930. total length, miles.....	.....	.....	.....	.....	.....	.....	.....
12	.....1920. total length, miles.....	.....	.....	.....	.....	.....	.....	.....
13	(a) Earth.....1940. length, miles.....	8	97	1	11	10	18	1
14	(b) Lined.....1940. length, miles.....	0.8	0.7	1.5	2.1	0.9	2.3	0.8
15	.....1940. capacity, c.f.s. ¹	93	285	28	128	162	183	25
16	.....1930. capacity, c.f.s. ¹.....	.....	.....	.....	.....	.....	.....	.....
17	.....1920. capacity, c.f.s. ¹.....	.....	.....	.....	.....	.....	.....	.....
18	Pipe lines ².....1940. total length, miles.....	5.6	14.4	3.0	16.1	25.7	25.8	7.3
19	.....1930. total length, miles.....	.....	.....	.....	.....	.....	.....	.....
20	.....1920. total length, miles.....	.....	.....	.....	.....	.....	.....	.....
21	(a) Concrete.....1940. length, miles.....	0.1	0.9	0.3	1.7	1.7	8.1	0.4
22	(b) Metal.....1940. length, miles.....	4.8	12.0	2.4	14.0	23.4	16.6	6.4
23	(c) Wood-stave.....1940. length, miles.....	0.1	0.2	0.3	0.1	0.5	1.1	.....
24	(d) Other.....1940. length, miles.....	0.6	1.3	.....	0.3	0.1	.....	0.5
25	Storage dams.....1940. total number.....	.....	.....	1	1	9	9	4
26	.....1930. total number.....	.....	.....	.....	.....	.....	.....	.....
27	.....1920. total number.....	.....	.....	.....	.....	.....	.....	.....
28	(a) Concrete and masonry.....1940. number.....	.....	.....	1	.....	.....	.....	.....
29	(b) Earth and rock.....1940. number.....	.....	.....	.....	1	2	2	3
30	(c) Other, mixed, and not reported.....1940. number.....	.....	.....	.....	.....	7	7	1
31	Reservoirs.....1940. total number.....	1	1	1	1	7	9	3
32	(a) 1-99 acre-feet capacity.....1940. number.....	1	1	1	1	7	9	3
33	(b) 100-999 acre-feet capacity.....1940. number.....	.....	.....	.....	.....	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940. number.....	.....	.....	.....	.....	.....	.....	.....
35	.....1940. total capacity, ac.-ft. ³	(*)	(*)	(*)	(*)	28	82	16
36	.....1930. total number.....	.....	.....	.....	.....	.....	.....	.....
37	.....1930. total capacity, ac.-ft. ³.....	.....	.....	.....	.....	.....	.....	.....
38	Wells, flowing.....1940. number.....	.....	.....	.....	.....	.....	1	.....
39	.....1930. number.....	.....	.....	.....	.....	.....	.....	.....
40	.....1920. number.....	.....	.....	.....	.....	.....	.....	.....
41	.....1940. yield, g.p.m.....	.....	.....	.....	.....	.....	(*)	.....
42	.....1930. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
43	.....1920. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940. number.....	11	43	7	12	29	5	15
45	.....1930. number.....	.....	.....	.....	.....	.....	.....	.....
46	.....1920. number.....	.....	.....	.....	.....	.....	.....	.....
47	.....1940. yield, g.p.m.....	2,080	11,049	3,500	3,895	4,231	137	1,198
48	.....1930. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
49	.....1920. yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
50	Pumping plants.....1940. total number.....	26	76	19	71	152	102	36
51	.....1930. total number.....	.....	.....	.....	.....	.....	.....	.....
52	Prime movers.....1940. capacity, hp.....	190	539	249	846	878	1,117	174
53	.....1930. capacity, hp.....	.....	.....	.....	.....	.....	.....	.....
54	.....1920. capacity, hp.....	.....	.....	.....	.....	.....	.....	.....
55	(a) Electric.....1940. number.....	6	25	3	22	47	60	24
56	.....1940. capacity, hp.....	27	132	48	132	230	659	102
57	(b) Internal-combustion.....1940. number.....	19	51	14	49	104	41	11
58	.....1940. capacity, hp.....	160	407	174	714	646	443	71
59	(c) Other ⁵.....1940. number.....	1	.....	2	.....	1	1	1
60	.....1940. capacity, hp.....	(*)	.....	(*)	.....	(*)	(*)	(*)
61	Pumps.....1940. total number.....	26	78	20	70	152	102	36
62	.....1930. number.....	.....	.....	.....	.....	.....	.....	.....
63	.....1920. number.....	.....	.....	.....	.....	.....	.....	.....
64	.....1940. capacity, g.p.m.....	10,764	23,506	11,190	31,436	37,591	107,704	3,579
65	.....1930. capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
66	.....1920. capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
67	(a) Centrifugal.....1940. number.....	22	65	19	66	126	88	13
68	.....1940. capacity, g.p.m.....	9,029	19,566	10,110	29,306	34,950	84,630	2,160
69	.....1940. average capacity, g.p.m.....	410	301	532	444	277	962	166
70	(b) Turbine.....1940. number.....	1	10	1	2	9	6	5
71	.....1940. capacity, g.p.m.....	(*)	3,460	(*)	(*)	1,606	22,600	911
72	.....1940. average capacity, g.p.m.....	(*)	346	(*)	(*)	178	3,767	182
73	(c) Plunger.....1940. number.....	3	1	.....	2	12	7	15
74	.....1940. capacity, g.p.m.....	835	(*)	.....	(*)	904	314	480
75	.....1940. average capacity, g.p.m.....	278	(*)	.....	(*)	75	45	32
76	(d) Other.....1940. number.....	.....	2	.....	.....	5	1	3
77	.....1940. capacity, g.p.m.....	.....	(*)	.....	.....	131	(*)	28
78	Pumping lift, from all sources.....1940. average, feet.....	16	15	31	27	18	25	53
79	.....1930. average, feet.....	.....	.....	.....	.....	.....	.....	.....
80	.....1920. average, feet.....	.....	.....	.....	.....	.....	.....	.....
81	from pumped wells.....1940. average, feet.....	20	18	16	19	25	101	85
82	from surface sources.....1940. average, feet.....	15	13	34	28	17	21	28

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.
³Total capacity of all reservoirs regardless of size.

CENSUS OF IRRIGATION — OREGON

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WORKS, 1940, 1930, AND 1920—Continued

PACIFIC SLOPE										KLAMATH RIVER		
Total	Rogue River								Umpqua River	Other Pacific Slope streams	Total	Direct
	Total	Direct	Little Butte Creek	Bear Creek	Evans Creek	Applegate River	Illinois River	(43)					(44)	(45)
	(37)	(38)	(39)	(40)	(41)	(42)						
986	578	199	50	90	24	103	112	157	251	187	84	1
86	129	132	66	302	59	99	57	30	21	995	1,032	2
431	294	114	9	54	18	64	35	68	69	100	40	3
405	339	8	30	46	13	110	90	.....	66	67	6	4
335	257	8	13	29	22	55	67	.....	78	57	4	5
42	7	3	.....	22	2	7	1	.....	.....	10	3	6
123	69	27	.....	5	4	21	12	19	35	46	20	7
181	148	67	6	.....	11	22	15	13	20	26	15	8
65	35	13	.....	.....	1	14	7	36	14	18	2	9
1,067.5	976.7	366.0	46.3	306.6	20.6	134.1	103.1	55.9	34.9	822.8	323.9	10
1,188	1,129	137	158	169	16	201	106	.....	59	756	22	11
1,066	954	41	316	196	44	249	137	.....	112	555	43	12
1,029	944	351	45	297	20	133	98	.....	33	812	322	13
38.5	32.7	15.0	1.3	9.6	0.6	1.1	5.1	3.9	1.9	10.8	1.9	14
2,326	1,987	680	178	242	37	357	373	197	262	6,607	3,184	15
1,613	1,710	322	172	327	49	461	237	.....	103	3,049	114	16
2,216	1,978	149	161	512	66	434	400	.....	238	3,162	62	17
118.6	39.0	20.5	0.3	15.0	0.9	1.2	1.1	29.3	50.3	10.5	4.5	18
16.3	10.0	5.4	2.1	0.6	.....	1.3	0.3	.....	6.3	3.6	0.1	19
23.7	20.5	7.1	0.8	6.3	0.5	2.1	1.0	.....	3.2	3.0	1.7	20
8.0	3.9	0.8	.....	2.7	0.2	0.2	.....	3.2	0.9	1.5	0.7	21
92.9	22.9	11.6	0.3	8.6	0.6	0.7	1.1	24.5	45.5	7.8	3.6	22
17.0	12.2	8.1	.....	3.7	0.1	0.3	.....	1.3	3.5	0.8	0.2	23
0.7	.....	.....	.....	.....	.....	.....	.....	0.3	0.4	0.4	.....	24
45	31	11	1	2	1	7	9	9	5	27	6	25
20	14	2	2	3	.....	6	1	.....	6	10	.....	26
26	18	.....	2	6	.....	4	3	.....	8	18	.....	27
10	10	2	.....	1	.....	2	7	.....	3	3	2	28
23	19	9	1	2	.....	5	2	.....	1	22	3	29
12	2	.....	.....	.....	.....	2	.....	.....	8	2	1	30
43	32	15	1	1	1	6	8	4	7	31	10	31
40	29	15	.....	.....	1	5	8	4	7	12	4	32
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	1	33
3	3	.....	1	1	.....	1	.....	.....	.....	8	5	34
21,714	21,624	227	(*)	(*)	(*)	1,132	13	16	74	654,954	552,558	35
16	11	1	2	3	.....	5	.....	.....	5	9	.....	36
45,948	45,924	5	21,000	24,225	.....	694	.....	.....	24	561,106	.....	37
4	2	1	.....	1	.....	.....	.....	.....	2	.....	.....	38
1	1	.....	.....	.....	.....	.....	.....	.....	.....	25	.....	39
4	3	.....	.....	.....	.....	.....	.....	.....	1	1	.....	40
53	(*)	(*)	.....	(*)	.....	.....	.....	.....	(*)	.....	.....	41
2	2	.....	.....	.....	.....	.....	.....	.....	.....	41	.....	42
10,000	10,000	.....	.....	.....	.....	.....	.....	.....	.....	35	.....	43
37	21	11	.....	7	.....	.....	3	6	10	8	5	44
13	13	1	2	6	.....	.....	1	.....	.....	.....	.....	45
23	23	11	.....	9	.....	.....	2	.....	.....	2	.....	46
4,345	2,790	635	.....	1,425	.....	.....	730	1,125	430	2,040	800	47
6,292	6,292	1,800	540	3,780	.....	.....	75	.....	.....	.....	.....	48
11,499	11,499	6,964	.....	1,133	.....	.....	402	.....	.....	1,600	.....	49
362	118	77	3	27	2	4	5	83	161	131	44	50
91	70	30	3	17	5	8	.....	.....	21	56	17	51
5,246	3,596	3,352	7	131	(*)	25	71	629	1,021	4,309	1,404	52
4,817	4,501	4,132	7	79	63	175	.....	.....	316	3,620	1,403	53
769	723	347	9	120	77	93	32	2	66	1,301	453	54
172	54	40	.....	12	.....	.....	.....	.....	31	107	34	55
1,491	898	836	.....	53	.....	.....	(*)	159	434	3,695	1,079	56
181	59	32	3	15	2	4	3	52	70	22	9	57
1,536	486	304	7	78	(*)	25	62	470	580	488	324	58
9	5	.....	.....	.....	.....	.....	.....	.....	4	2	1	59
2,219	2,212	2,212	.....	.....	.....	.....	.....	.....	7	(*)	(*)	60
364	116	75	3	27	2	4	5	85	163	130	43	61
92	70	31	3	16	5	8	.....	.....	22	73	19	62
121	111	44	1	36	5	8	.....	.....	10	36	15	63
194,352	122,662	103,108	1,650	12,719	(*)	1,690	2,690	31,639	40,031	323,971	121,705	64
99,809	73,224	49,645	550	6,510	1,150	12,825	.....	.....	26,585	309,289	34,147	65
41,662	36,147	16,597	.....	8,138	1,175	3,200	3,067	.....	3,705	62,475	30,755	66
306	96	61	3	22	1	4	5	69	141	91	29	67
186,848	118,496	102,097	1,650	9,769	(*)	1,690	2,690	29,667	38,685	224,669	68,988	68
611	1,234	1,674	550	444	(*)	422	538	430	274	2,469	2,275	69
7	4	1	.....	3	.....	.....	.....	.....	1	25	8	70
3,160	2,650	(*)	.....	2,150	.....	.....	.....	(*)	(*)	46,145	11,210	71
451	662	(*)	.....	717	.....	.....	.....	(*)	(*)	1,846	1,401	72
40	11	10	.....	.....	.....	.....	.....	.....	17	6	1	73
3,176	698	413	.....	.....	(*)	.....	.....	1,562	956	257	(*)	74
79	58	41	.....	.....	(*)	.....	.....	132	56	43	(*)	75
11	5	.....	.....	2	.....	.....	.....	.....	4	8	5	76
1,168	898	98	(*)	.....	.....	.....	(*)	.....	260	52,900	44,500	77
22	22	27	10	11	(*)	14	14	25	21	21	21	78
28	30	36	38	16	43	38	.....	.....	19	30	33	79
28	26	30	23	23	29	26	.....	.....	11	49	31	80
24	25	38	.....	15	.....	.....	.....	.....	10	26	36	81
22	21	26	10	10	(*)	14	15	26	20	19	19	82

* Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
 † Includes water wheels for which no horsepower was reported.

CENSUS OF IRRIGATION — OREGON

DRAINAGE BASIN TABLE II— ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	KLAMATH RIVER—Continued				SACRAMENTO RIVER	INDEPENDENT BASINS	
	Upper Klamath Lake			Lost River	Pit River	Malheur Lake	
	Williamson River						
	Total	Direct (46)	Sprague River (47)	Goose Lake (48)	Total (49)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940..number.....	31	8	23	72	90	158
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	1,191	675	1,370	867	267	714
3	Diversion dams.....1940..total number.....	49	10	39	11	124	306
4	.....1930..total number.....	9	.....	9	13	.....	106
5	.....1920..total number.....	9	.....	9	8	.....	274
6	(a) Concrete and masonry.....1940..number.....	1	1	.....	6	5	17
7	(b) Timber.....1940..number.....	26	7	19	.....	42	73
8	(c) Earth and rock.....1940..number.....	10	1	9	1	26	96
9	(d) Other, mixed, and not reported.....1940..number.....	12	1	11	4	49	118
10	Main canals and laterals.....1940..total length, miles.....	130.7	49.7	81.0	368.2	82.7	344.1
11	.....1930..total length, miles.....	38	.....	38	436	.....	157
12	.....1920..total length, miles.....	42	.....	42	303	.....	473
13	(a) Earth.....1940..length, miles.....	127	49	78	363	80	344
14	(b) Lined.....1940..length, miles.....	3.7	0.7	3.0	5.2	2.7	0.1
15	.....1940..capacity, c.f.s. ¹	1,156	243	913	2,267	761	2,312
16	.....1930..capacity, c.f.s. ¹	327	.....	327	1,008	.....	926
17	.....1920..capacity, c.f.s. ¹	212	.....	212	1,889	.....	1,513
18	Pipe lines ².....1940..total length, miles.....	1.0	0.4	0.6	5.0	0.2	1.0
19	.....1930..total length, miles.....	0.5	.....	0.5	2.2	.....	.....
20	.....1920..total length, miles.....	.....	.....	.....	0.6	.....	.....
21	(a) Concrete.....1940..length, miles.....	.....	.....	.....	3.8	.....	0.2
22	(b) Metal.....1940..length, miles.....	0.9	0.4	0.5	0.3	0.2	0.8
23	(c) Wood-stave.....1940..length, miles.....	.....	.....	.....	0.6	.....	.....
24	(d) Other, mixed, and not reported.....1940..length, miles.....	0.1	.....	0.1	0.3	.....	.....
25	Storage dams.....1940..total number.....	13	.....	13	8	3	6
26	.....1930..total number.....	6	.....	6	3	.....	4
27	.....1920..total number.....	5	.....	5	13	.....	79
28	(a) Concrete and masonry.....1940..number.....	.....	.....	.....	1	.....	1
29	(b) Earth and rock.....1940..number.....	13	.....	13	6	3	4
30	(c) Other.....1940..number.....	.....	.....	.....	1	.....	1
31	Reservoirs.....1940..total number.....	13	.....	13	8	5	6
32	(a) 1-99 acre-feet capacity.....1940..number.....	6	.....	6	2	2	2
33	(b) 100-999 acre-feet capacity.....1940..number.....	6	.....	6	4	.....	3
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	1	.....	1	2	3	1
35	.....1940..total capacity, ac.-ft. ³	2,325	.....	2,325	100,071	70,005	4,892
36	.....1930..total number.....	6	.....	6	2	.....	.....
37	.....1920..total capacity, ac.-ft. ³	1,062	.....	1,062	560,000	.....	.....
38	Wells, flowing.....1940..number.....	.....	.....	.....	.....	4	3
39	.....1930..number.....	.....	.....	.....	.....	.....	.....
40	.....1920..number.....	.....	.....	.....	.....	.....	2
41	.....1940..yield, g.p.m.....	.....	.....	.....	.....	35	30
42	.....1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....
43	.....1920..yield, g.p.m.....	.....	.....	.....	.....	.....	12
44	Wells, pumped.....1940..number.....	1	1	.....	2	3	4
45	.....1930..number.....	.....	.....	.....	.....	.....	6
46	.....1920..number.....	.....	.....	.....	2	.....	4
47	.....1940..yield, g.p.m.....	(⁴)	(⁴)	.....	(⁴)	235	2,425
48	.....1930..yield, g.p.m.....	.....	.....	.....	.....	.....	2,460
49	.....1920..yield, g.p.m.....	.....	.....	.....	1,600	.....	1,650
50	Pumping plants.....1940..total number.....	5	1	4	82	4	5
51	.....1930..total number.....	.....	.....	.....	26	.....	6
52	Prime movers.....1940..capacity, hp.....	87	(⁴)	86	2,818	6	70
53	.....1930..capacity, hp.....	.....	.....	.....	2,480	.....	66
54	.....1920..capacity, hp.....	.....	.....	.....	786	.....	32
55	(a) Electric.....1940..number.....	1	1	.....	72	3	3
56	.....1940..capacity, hp.....	(⁴)	(⁴)	.....	2,615	3	50
57	(b) Internal-combustion.....1940..number.....	4	.....	4	9	1	2
58	.....1940..capacity, hp.....	86	.....	86	78	(⁴)	(⁴)
59	(c) Other ⁵.....1940..number.....	1	.....	.....	1	.....	.....
60	.....1940..capacity, hp.....	.....	.....	.....	125	.....	.....
61	Pumps.....1940..total number.....	5	1	4	82	4	5
62	.....1930..number.....	.....	.....	.....	38	.....	7
63	.....1920..number.....	.....	.....	.....	16	.....	6
64	.....1940..capacity, g.p.m.....	13,070	(⁴)	13,000	189,196	241	4,200
65	.....1930..capacity, g.p.m.....	.....	.....	.....	207,742	.....	2,950
66	.....1920..capacity, g.p.m.....	.....	.....	.....	21,100	.....	1,815
67	(a) Centrifugal.....1940..number.....	3	.....	3	59	.....	2
68	.....1940..capacity, g.p.m.....	5,000	.....	5,000	153,684	235	(⁴)
69	.....1940..average capacity, g.p.m.....	1,667	.....	1,667	2,605	78	(⁴)
70	(b) Turbine.....1940..number.....	.....	.....	.....	17	.....	3
71	.....1940..capacity, g.p.m.....	.....	.....	.....	34,935	.....	2,100
72	.....1940..average capacity, g.p.m.....	.....	.....	.....	2,055	.....	700
73	(c) Plunger.....1940..number.....	1	1	.....	4	1	.....
74	.....1940..capacity, g.p.m.....	(⁴)	(⁴)	.....	177	(⁴)	.....
75	.....1940..average capacity, g.p.m.....	(⁴)	(⁴)	.....	44	(⁴)	.....
76	(d) Other.....1940..number.....	1	.....	1	2	.....	.....
77	.....1940..capacity, g.p.m.....	(⁴)	.....	(⁴)	(⁴)	.....	.....
78	Pumping lift, from all sources.....1940..average, feet.....	9	(⁴)	9	22	21	45
79	.....1930..average, feet.....	.....	.....	.....	33	.....	23
80	.....1920..average, feet.....	.....	.....	.....	22	.....	18
81	from pumped wells.....1940..average, feet.....	(⁴)	(⁴)	.....	(⁴)	21	61
82	from surface sources.....1940..average, feet.....	9	.....	9	20	.....	12

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

²Includes siphons and farm pipe lines reported.

³Total capacity of all reservoirs regardless of size.

CENSUS OF IRRIGATION — OREGON

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WORKS, 1940, 1930, AND 1920—Continued

INDEPENDENT BASINS—Continued													
Malheur Lake—Continued												Quinn River	
Silvies River (50)	Harney Lake			Donner und Blitzen River (53)	Benjamin Lake (54)	Silver Lake (55)	Summer Lake (56)	Lake Abert (57)	Cowhead and Warner Lakes (58)	Trout Creek (59)	McDermitt Creek (61)	Tenmile Creek (62)	
	Total	Direct	Silver Creek										
107	10	3	7	41	3	14	8	20	52	38	7	11	1
750	1,475	490	1,897	434	57	1,044	603	1,435	748	279	430	381	2
186	15	2	13	105	4	11	12	68	79	80	16	27	3
102	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	4
206	24	.....	24	44	.....	.....	.....	.....	.....	.....	.....	.....	5
13	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	6
39	9	.....	9	25	.....	2	.....	18	8	14	2	.....	7
47	5	2	3	46	4	3	1	7	45	34	7	27	8
87	1	.....	1	30	.....	6	11	43	17	30	7	.....	9
279.1	26.0	.....	26.0	39.0	.....	11.6	11.1	46.0	70.6	48.0	22.0	40.0	10
98	.....	.....	.....	59	.....	.....	.....	.....	.....	.....	.....	.....	11
274	41	.....	41	158	.....	.....	.....	.....	.....	.....	.....	.....	12
279	26	.....	26	39	.....	11	11	46	69	48	22	40	13
0.1	.....	.....	.....	.....	.....	0.6	0.1	.....	1.6	.....	.....	.....	14
1,055	246	42	204	1,011	9	114	114	1,214	646	221	32	82	15
622	.....	.....	.....	304	.....	.....	.....	.....	.....	.....	.....	.....	16
876	398	.....	398	239	.....	.....	.....	.....	.....	.....	.....	.....	17
.....	0.2	.....	0.2	0.8	.....	.....	0.6	.....	2.7	0.2	.....	.....	18
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19
.....	.....	.....	.....	0.2	.....	.....	.....	.....	1.2	.....	.....	.....	20
.....	0.2	.....	0.2	0.6	.....	.....	0.1	.....	1.5	0.2	.....	.....	21
.....	.....	.....	.....	.....	.....	.....	0.5	.....	.....	.....	.....	.....	22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
2	3	1	2	1	.....	1	3	1	13	2	.....	.....	25
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
72	1	.....	1	6	.....	.....	.....	.....	.....	.....	.....	.....	27
.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	28
1	3	1	2	.....	.....	1	3	1	13	.....	.....	.....	29
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	30
2	3	1	2	1	.....	1	3	1	12	2	.....	.....	31
1	1	.....	1	.....	.....	.....	3	.....	1	1	.....	.....	32
.....	2	1	1	1	.....	.....	.....	1	3	1	.....	.....	33
(4)	.....	(4)	(4)	(4)	.....	(4)	1	(4)	8	(4)	.....	.....	34
.....	660	.....	.....	.....	.....	.....	85	.....	15,042	.....	.....	.....	35
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37
.....	2	1	1	1	.....	.....	2	2	2	47	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	(4)	(4)	(4)	(4)	.....	.....	(4)	(4)	(4)	1,653	.....	.....	40
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41
.....	2	.....	2	10	.....	.....	.....	.....	.....	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
4	.....	.....	.....	.....	1	4	1	.....	.....	.....	.....	.....	44
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
2	2	.....	2	.....	(4)	3,550	(4)	.....	.....	.....	.....	.....	46
2,425	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
2,460	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
1,200	450	.....	450	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
5	.....	.....	.....	.....	1	4	1	.....	3	.....	.....	.....	51
6	.....	.....	.....	.....	(4)	75	(4)	.....	82	.....	.....	.....	52
70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
26	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	56
50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57
(4)	.....	.....	.....	.....	(4)	1	(4)	1	3	.....	.....	.....	58
.....	.....	.....	.....	.....	.....	75	.....	.....	82	.....	.....	.....	59
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61
5	.....	.....	.....	.....	1	4	1	.....	3	.....	.....	.....	62
7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63
2	3	.....	3	1	(4)	4,400	(4)	.....	12,000	.....	.....	.....	64
4,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
2,950	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
1,265	550	.....	550	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
(4)	.....	.....	.....	.....	(4)	1	.....	.....	3	.....	.....	.....	68
(4)	.....	.....	.....	.....	(4)	.....	.....	.....	12,000	.....	.....	.....	69
.....	.....	.....	.....	.....	.....	.....	.....	.....	4,000	.....	.....	.....	70
3	.....	.....	.....	.....	.....	4	(4)	1	.....	.....	.....	.....	71
2,100	.....	.....	.....	.....	.....	4,400	(4)	.....	.....	.....	.....	.....	72
700	.....	.....	.....	.....	.....	1,100	.....	.....	.....	.....	.....	.....	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77
45	.....	.....	.....	.....	(4)	32	(4)	.....	4	.....	.....	.....	78
23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	79
22	15	.....	15	16	.....	.....	.....	.....	.....	.....	.....	.....	80
61	.....	.....	.....	.....	(4)	32	(4)	.....	.....	.....	.....	.....	81
12	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	82

⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁵Includes water wheels for which no horsepower was reported.
⁶Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - OREGON

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL		Baker	Benton	Clackamas	Columbia
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*						
1 All farms.....1940...number....	61,829		1,259	1,507	5,475	2,060
2	55,153		1,383	1,340	4,747	1,667
3 Irrigated farms.....1940...number....	16,159		1,050	110	196	16
4	11,387		1,113	21	51	5
5 Increase or decrease (-), 1930-1940.....percent....	41.9		-5.7	423.8	284.3	220.0
Operated by—						
6 (a) Owners and managers.....1940...number....	13,345		759	90	159	16
7	9,339		824	16	41	.....
8 (b) Tenants.....1940...number....	2,814		291	20	37	.....
9	2,048		289	5	10	.....
10 Land in all farms.....1940...acres.....	17,988,307		795,435	221,054	301,231	138,085
11 Land in irrigated farms.....1940...acres.....	8,730,104		636,368	19,903	15,410	3,818
12 Average per farm.....1940...acres.....	540		606	181	79	239
13 (a) Operated by owners and managers.....1940...acres.....	7,968,948		556,424	17,694	13,384	3,818
14 Average per farm.....1940...acres.....	597		733	197	84	239
15 (b) Operated by tenants.....1940...acres.....	761,156		79,944	2,209	2,035	.....
16 Average per farm.....1940...acres.....	270		275	110	55	.....
17 Approximate land area.....1940...acres.....	61,864,000		1,973,760	414,080	1,209,600	413,440
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939...acres.....	1,049,176		121,591	1,251	2,278	648
19 (a) Cropland harvested.....1939...acres.....	790,925		94,887	856	1,643	160
20 (b) Crop failure.....1939...acres.....	13,781		974	1	.....	.....
21 (c) Pasture.....1939...acres.....	244,470		25,730	394	635	488
22 Area irrigated.....1929...acres.....	898,713		119,478	171	566	.....
23	986,162		171,490	.....	.....	.....
24 Increase or decrease (-), 1929-1939.....percent....	16.7		1.8	631.6	302.5	.....
25 Irrigable area in enterprises.....1940...acres.....	1,441,417		162,047	2,068	4,153	739
26	1,478,128		159,981	380	999	.....
27	1,925,987		259,361	.....	.....	.....
28 Excess of irrigable area over the area irrigated..1940...acres.....	392,241		41,056	817	1,875	91
29	579,415		40,503	209	433	.....
30 Area works were capable of supplying with water..1940...acres.....	1,261,081		136,875	1,963	3,775	735
31	1,158,210		134,621	238	989	.....
32	1,344,046		218,671	.....	.....	.....
33 Increase or decrease (-), 1930-1940.....percent....	8.9		1.7	724.8	281.7	.....
34 Excess, capability of works over area irrigated..1940...acres.....	211,905		15,284	712	1,497	87
35	259,497		15,143	67	423	.....
36 Proportion which area irrigated is of all lands in irrigated farms.....1939...percent....	12.0		19.1	6.3	14.6	17.0
37	14.2		21.2	5.2	22.7	.....
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent....	83.2		88.8	63.7	60.3	88.2
39	77.6		88.8	71.8	57.2	.....
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940...dollars....	50,961,251		1,909,544	52,091	119,540	10,925
41 (a) Cost of irrigation works and equipment.....1940...dollars....	50,399,668		1,900,861	51,674	118,400	10,840
42 (b) Investment in water rights (reported).....1940...dollars....	561,583		8,683	417	1,140	85
43 Total investment in all enterprises.....1930...dollars....	38,754,548		1,533,692	8,215	26,230	.....
44	28,929,151		2,153,639	.....	.....	.....
45 Increase or decrease (-), 1930-1940.....percent....	31.5		24.5	534.1	355.7	.....
46 Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars....	40.41		13.95	26.54	31.67	14.86
47	33.46		11.39	34.52	26.52	.....
48	21.52		9.85	.....	.....	.....
49 Average investment per acre irrigated.....1939...dollars....	48.57		15.70	41.64	52.48	16.86
50 Estimated final investment in existing enterprises..1940...dollars....	53,884,430		1,964,785	57,286	130,202	11,425
51	60,039,939		1,722,042	9,415	26,580	.....
52	41,585,742		2,941,589	.....	.....	.....
53 Increase or decrease (-), 1930-1940.....percent....	-10.3		14.1	508.5	389.8	.....
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars....	37.38		12.08	27.70	31.35	15.46
55	40.62		10.76	24.78	26.61	.....
56	21.59		11.34	.....	.....	.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Supplemental	Primary	Supplemental		
	Enterprises		Enterprises			
57 Enterprises reporting maintenance and operation..1939...number....	5,192	86	529	8	75	144
58 Area irrigated in these enterprises.....1939...acres.....	982,940	97,643	103,045	18,950	1,187	2,217
59 Cost of maintenance and operation.....1939...dollars....	1,157,018	71,049	41,059	3,014	6,460	10,029
60 Average cost, per acre irrigated.....1939...dollars....	1.18	0.73	0.40	0.16	5.44	4.52
61	1.41	.....	0.60	.....	4.82	5.12
62 Total annual charges (reported) ⁴ 5.....1939...dollars....	921,724	72,521	23,049	10,309	.....	916
63 Average annual charge per acre irrigated.....1939...dollars....	1.77	0.76	0.42	0.56	.....	1.00
64 Area against which charges were assessed.....1939...acres.....	587,585	98,976	56,153	18,546	.....	1,217
65 Average annual charge per acre assessed.....1939...dollars....	1.57	0.73	0.41	0.56	.....	0.75
66 Total charges collected ¹.....1939...dollars....	920,583	8,967	14,407	8,510	.....	347
67 Indebtedness to December 31 (reported) ⁵.....1939...dollars....	13,560,102	789,666	48,455	592,500	.....	.....
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939...number....	5,354	73	551	8	72	133
69 Area irrigated in these enterprises.....1939...acres.....	925,920	80,969	94,587	18,950	1,102	2,104
70 Water delivered in these enterprises.....1939...acre-feet....	3,020,606	176,182	213,132	24,298	2,521	3,640
71 Average water delivered per acre irrigated.....1939...acre-feet....	3.3	2.2	2.3	1.3	2.3	1.7
72 Average cost of water per acre irrigated.....1939...dollars....	1.35	0.94	0.38	0.55	5.78	4.79
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939...number....	275	.....	7	.....	3	13
74 Irrigable area in these enterprises.....1939...acres.....	338,991	.....	704	.....	59	1,179
75 Irrigated area in these enterprises.....1939...acres.....	265,771	.....	580	.....	37	645
76 Area for which drains have been installed.....1939...acres.....	126,698	.....	51	.....	27	156
77 Additional area needing drainage.....1939...acres.....	18,786	.....	25	.....	12	56

*Census of Agriculture.

¹Percent not shown when more than 1,000.

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — OREGON

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Lake	Lane	Lincoln	Linn	Malheur	Marion	Morrow
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS¹								
1	All farms.....1940..number.....	484	4,454	972	3,325	2,545	4,785	540
2	.....1930..number.....	485	4,069	732	3,074	1,345	4,821	628
3	Irrigated farms.....1940..number.....	317	370	30	191	2,258	307	259
4	.....1930..number.....	276	122	5	18	1,042	166	250
5	Increase or decrease (-), 1930-1940.....percent.....	14.9	203.3	500.0	961.1	116.7	84.9	3.6
Operated by—								
6	(a) Owners and managers.....1940..number.....	264	321	24	158	1,787	220	204
7	.....1930..number.....	226	110	.....	.....	732	118	199
8	(b) Tenants.....1940..number.....	53	49	6	33	471	87	55
9	.....1930..number.....	50	12	.....	.....	310	48	51
10	Land in all farms.....1940..acres.....	863,205	509,056	110,735	484,800	900,641	376,815	968,362
11	Land in irrigated farms.....1940..acres.....	698,326	46,785	5,972	33,435	666,098	37,458	511,861
12	Average per farm.....1940..acres.....	2,203	126	199	175	295	122	1,977
13	(a) Operated by owners and managers.....1940..acres.....	601,290	37,974	5,017	28,936	585,490	29,688	476,301
14	Average per farm.....1940..acres.....	2,278	118	209	183	328	135	2,335
15	(b) Operated by tenants.....1940..acres.....	97,036	8,811	955	4,499	80,608	7,770	35,660
16	Average per farm.....1940..acres.....	1,831	180	159	136	171	89	648
17	Approximate land area.....1940..acres.....	5,292,800	2,940,160	643,840	1,468,160	6,316,800	750,720	1,317,760
IRRIGATED AND IRRIGABLE AREAS								
18	Area irrigated.....1939..acres.....	110,339	4,732	242	2,093	153,843	6,641	10,196
19	(a) Cropland harvested.....1939..acres.....	66,430	3,558	129	1,612	130,574	5,938	9,655
20	(b) Crop failure.....1939..acres.....	.....	7	.....	9	5,882	6	55
21	(c) Pasture.....1939..acres.....	43,909	1,167	113	472	17,387	697	486
22	Area irrigated.....1929..acres.....	70,417	1,104	.....	.....	93,008	1,475	11,898
23	.....1919..acres.....	99,220	.....	.....	.....	109,463	.....	10,031
24	Increase or decrease (-), 1929-1939.....percent.....	56.7	328.6	.....	.....	65.4	350.2	-14.3
25	Irrigable area in enterprises.....1940..acres.....	126,432	24,247	469	6,063	197,942	67,138	13,346
26	.....1930..acres.....	109,876	20,151	.....	.....	263,237	3,017	16,075
27	.....1920 ² ..acres.....	183,997	.....	.....	.....	219,475	.....	19,941
28	Excess of irrigable area over the area irrigated.....1940..acres.....	16,093	19,515	227	3,970	43,999	60,497	3,150
29	.....1930..acres.....	39,459	19,047	.....	.....	170,229	1,542	4,177
30	Area works were capable of supplying with water.....1940..acres.....	124,740	10,493	404	5,684	196,948	11,822	12,670
31	.....1930..acres.....	94,317	2,719	.....	.....	145,757	1,938	15,865
32	.....1920..acres.....	149,467	.....	.....	.....	143,266	.....	15,561
33	Increase or decrease (-), 1930-1940.....percent.....	32.3	285.9	.....	.....	35.1	510.0	-20.1
34	Excess, capability of works over area irrigated.....1940..acres.....	14,401	5,761	162	3,591	43,005	5,181	2,474
35	.....1930..acres.....	23,900	1,615	.....	.....	52,749	463	3,867
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	15.8	10.1	4.1	6.3	23.1	17.7	2.0
37	.....1929..percent.....	14.4	9.4	.....	.....	23.0	11.7	1.8
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	88.5	45.1	59.9	36.8	78.2	56.2	80.5
39	.....1929..percent.....	74.7	40.6	.....	.....	63.8	76.1	75.0
CAPITAL INVESTED TO JANUARY 1								
40	Total investment in all enterprises.....1940..dollars.....	2,621,301	369,768	6,029	112,588	21,841,296	259,217	1,164,589
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	2,545,546	326,694	5,894	112,000	21,742,707	253,218	1,164,237
42	(b) Investment in water rights (reported).....1940..dollars.....	75,755	43,084	135	588	98,589	5,999	352
43	Total investment in all enterprises.....1930..dollars.....	2,318,721	111,151	.....	.....	9,688,384	101,050	1,008,907
44	.....1920 ² ..dollars.....	3,504,761	.....	.....	.....	4,057,373	.....	1,393,045
45	Increase or decrease (-), 1930-1940.....percent.....	13.0	232.7	.....	.....	125.4	156.5	15.4
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	21.01	35.24	14.92	19.81	110.96	21.93	91.92
47	.....1930..dollars.....	24.58	40.88	.....	.....	66.47	52.14	63.59
48	.....1920..dollars.....	23.45	.....	.....	.....	28.32	.....	89.52
49	Average investment per acre irrigated.....1939..dollars.....	23.76	78.14	24.91	53.79	141.97	39.03	114.22
50	Estimated final investment in existing enterprises.....1940..dollars.....	2,644,941	442,910	6,929	185,817	22,419,756	265,957	1,166,589
51	.....1930..dollars.....	2,323,346	262,661	.....	.....	27,903,254	109,915	1,011,377
52	.....1920..dollars.....	3,896,381	.....	.....	.....	4,835,543	.....	1,628,876
53	Increase or decrease (-), 1930-1940.....percent.....	13.8	68.6	.....	.....	-19.7	142.0	15.3
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	20.92	18.27	14.77	30.65	113.32	3.96	87.41
55	.....1930..dollars.....	22.37	13.03	.....	.....	106.00	36.43	62.92
56	.....1920 ² ..dollars.....	21.18	.....	.....	.....	22.03	.....	81.68
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57	Enterprises reporting maintenance and operation.....1939..number.....	147	269	20	100	285	6	87
58	Area irrigated in these enterprises.....1939..acres.....	99,776	4,516	195	1,907	148,995	11,814	9,678
59	Cost of maintenance and operation.....1939..dollars.....	31,613	29,345	599	9,433	271,431	8,135	11,591
60	Average cost, per acre irrigated.....1939..dollars.....	0.32	6.50	3.07	4.95	1.82	0.69	1.20
61	.....1929..dollars.....	0.92	10.46	.....	.....	2.66	.....	1.66
62	Total annual charges (reported) ⁴.....1939..dollars.....	13,663	4,512	.....	.....	128,128	7,715	7,630
63	Average annual charge per acre irrigated.....1939..dollars.....	1.26	5.19	.....	.....	1.09	0.66	1.96
64	Area against which charges were assessed.....1939..acres.....	11,250	1,470	.....	.....	146,723	11,690	3,655
65	Average annual charge per acre assessed.....1939..dollars.....	1.21	3.07	.....	.....	0.87	0.66	1.81
66	Total charges collected ⁴.....1939..dollars.....	15,693	2,100	.....	.....	120,130	.....	7,020
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	371,360	85,000	.....	.....	5,809,038	50,724	552,743
WATER DELIVERED TO IRRIGATORS								
68	Enterprises reporting water delivered.....1939..number.....	131	288	21	99	296	4	156
69	Area irrigated in these enterprises.....1939..acres.....	73,346	4,549	237	2,011	146,150	11,788	9,915
70	Water delivered in these enterprises.....1939..acre-feet.....	228,039	5,358	264	2,067	612,002	21,255	43,084
71	Average water delivered per acre irrigated.....1939..acre-feet.....	3.1	1.2	1.1	1.0	4.2	1.8	4.3
72	Average cost of water per acre irrigated.....1939..dollars.....	0.39	6.67	3.13	5.06	1.00	0.68	1.29
DRAINAGE OF IRRIGATED LAND								
73	Enterprises reporting land drained or needing drainage.....1939..number.....	4	5	3	.....	38	.....	37
74	Irrigable area in these enterprises.....1939..acres.....	19,161	119	110	.....	142,435	.....	6,732
75	Irrigated area in these enterprises.....1939..acres.....	19,070	116	36	.....	108,763	.....	4,914
76	Area for which drains have been installed.....1939..acres.....	4,850	19	56	.....	43,384	.....	.....
77	Additional area needing drainage.....1939..acres.....	58	14	14	.....	5,833	.....	1,900

¹Census of Agriculture.
²Data between census years not comparable (see headnote).
³Percent not shown when more than 1,000.
⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — OREGON

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920]

ITEM (For definitions and explanations, see text)	STATE TOTAL	Baker	Benton	Clackamas	Columbia	Coos
FARM VALUES, 1940*						
1 Land and buildings, all farms.....dollars..	476,817,354	12,419,255	10,959,243	29,730,859	8,118,086	9,593,609
2 Land and buildings, irrigated farms.....dollars..	152,701,476	11,424,759	960,165	1,706,415	389,400	1,317,150
Operated by—						
3 (a) Owners and managers.....dollars..	131,641,303	8,690,829	831,365	1,436,115	389,400	1,144,350
4 (b) Tenants.....dollars..	21,060,173	2,733,930	128,800	270,300	.....	172,800
5 Average, land and buildings, per farm.....dollars..	9,449.93	10,880.72	8,728.77	8,706.20	24,337.50	9,684.93
6 per acre in farms.....dollars..	17.49	17.95	48.24	110.67	101.99	40.19
7 Buildings, irrigated farms reporting value.....number..	14,822	1,026	110	193	16	136
8 Total reported.....dollars..	33,570,300	2,185,045	238,102	496,450	78,650	315,010
9 Average, per irrigated farm reporting.....dollars..	2,264.90	2,129.67	2,164.56	2,572.28	4,915.62	2,316.25
10 per acre on all irrigated farms.....dollars..	3.85	3.43	11.96	32.20	20.60	9.61
11 Buildings, nonirrigated farms reporting value.....number..	45,667	200	1,373	5,213	2,027	1,775
12 Total reported.....dollars..	61,675,283	191,765	2,588,334	9,417,592	2,524,121	2,297,871
13 Average, per nonirrigated farm reporting.....dollars..	1,768.50	958.82	1,885.17	1,806.56	1,245.25	1,294.58
14 per acre on all nonirrigated farms.....dollars..	8.82	1.21	12.87	32.95	18.80	9.21
15 Implements and machinery, irrigated farms reporting value.....number..	13,395	973	97	186	14	124
16 Total reported.....dollars..	15,346,736	849,483	100,020	195,340	24,985	122,203
17 Average, per irrigated farm reporting.....dollars..	1,145.71	873.06	1,031.13	1,050.22	1,784.64	985.51
18 per acre, on all irrigated farms.....dollars..	1.76	1.33	5.03	12.67	6.54	3.73
19 Implements and machinery, nonirrigated farms reporting value.....number..	38,054	169	1,091	4,456	1,487	1,371
20 Total reported.....dollars..	29,261,196	88,349	958,884	2,241,588	666,607	612,113
21 Average, per acre, on all nonirrigated farms.....dollars..	3.16	0.56	4.77	7.84	4.96	2.45
ENTERPRISES AND IRRIGATION WORKS						
JANUARY 1						
22 Enterprises.....1940.....number.....	5,898	585	86	154	12	105
23 .....1930.....number.....	4,071	561	15	20	2	4
24 .....1920.....number.....	4,710	825	.....	.....	.....	.....
25 Average size of enterprise based on irrigable area.....1940.....acres.....	244	278	24	27	62	21
26 .....1930.....acres.....	363	285	25	50	.....	.....
27 .....1920.....acres.....	409	314	.....	.....	.....	.....
28 Diversion dams.....1940.....number.....	5,097	957	23	26	2	19
29 Main canals and laterals.....1940.....length, miles.....	8,518.0	814.8	15.2	10.3	1.7	8.0
30 .....1930.....length, miles.....	8,177	1,247	5	9	.....	.....
31 .....1920.....length, miles.....	9,071	1,662	.....	.....	.....	.....
32 .....1940.....capacity, c.f.s. ³	37,290	3,950	121	136	13	118
33 .....1930.....capacity, c.f.s. ³	25,906	3,193	5	15	.....	.....
34 .....1920.....capacity, c.f.s. ³	28,897	3,925	.....	.....	.....	.....
35 Pipe lines ⁴.....1940.....length, miles.....	665.2	9.7	15.0	30.4	2.0	24.5
36 Storage dams.....1940.....number.....	247	38	1	17	1	4
37 Reservoirs.....1940.....number.....	257	39	.....	10	1	7
38 .....1930.....number.....	120	27	.....	1	.....	.....
39 .....1920.....number.....	266	53	.....	.....	.....	.....
40 .....1940.....capacity, acre-feet.....	2,212,315	42,264	.....	46	(⁵)	74
41 .....1930.....capacity, acre-feet.....	1,698,428	110,088	.....	2	.....	.....
42 .....1920.....capacity, acre-feet.....	1,905,037	36,145	.....	.....	.....	.....
43 Wells, flowing.....1940.....number.....	76	3	.....	1	.....	2
44 .....1930.....number.....	59	4	.....	4	.....	.....
45 .....1920.....number.....	65	8	.....	.....	.....	.....
46 .....1940.....yield, g.p.m.....	3,396	250	.....	(⁵)	.....	(⁵)
47 .....1930.....yield, g.p.m.....	6,535	1,225	.....	150	.....	.....
48 .....1920.....yield, g.p.m.....	11,868	315	.....	.....	.....	.....
49 Wells, pumped.....1940.....number.....	901	25	21	46	.....	7
50 .....1930.....number.....	558	31	5	8	.....	.....
51 .....1920.....number.....	208	13	.....	.....	.....	.....
52 .....1940.....yield, g.p.m.....	209,289	6,740	7,757	3,724	.....	170
53 .....1930.....yield, g.p.m.....	136,669	10,170	725	323	.....	.....
54 .....1920.....yield, g.p.m.....	47,026	4,780	.....	.....	.....	.....
55 Pumping plants.....1940.....number.....	2,275	40	53	136	11	89
56 .....1930.....number.....	1,091	35	9	15	.....	.....
57 .....1920.....number.....	573	19	.....	.....	.....	.....
58 Prime movers.....1940.....capacity, hp.....	29,527	554	581	770	89	565
59 .....1930.....capacity, hp.....	21,257	405	95	89	.....	.....
60 .....1920.....capacity, hp.....	13,789	1,668	.....	.....	.....	.....
61 Pumps.....1940.....capacity, g.p.m.....	1,510,958	21,044	24,872	23,301	4,754	20,070
62 .....1930.....capacity, g.p.m.....	1,022,213	14,900	5,905	1,449	.....	.....
63 .....1920.....capacity, g.p.m.....	600,045	71,297	.....	.....	.....	.....
64 Pumping lift, from all sources.....1940.....average, feet.....	27	29	18	37	32	24
65 .....1930.....average, feet.....	27	26	13	47	.....	.....
66 .....1920.....average, feet.....	28	31	.....	.....	.....	.....
67 from pumped wells.....1940.....average, feet.....	35	25	19	59	.....	36
PAY ROLL AND NUMBER OF EMPLOYEES						
1939⁶						
68 Enterprises reporting pay roll.....number.....	194	32	.....	3	.....	.....
69 Irrigated area in these enterprises.....acres.....	501,227	47,618	.....	818	.....	.....
70 Wages and salaries paid and payable.....dollars..	621,247	10,821	.....	491	.....	.....
71 Persons employed during week ending April 29.....number.....	1,094	81	.....	.....	.....	.....

* Census of Agriculture.

¹ Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table I.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — OREGON

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1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

irrigation data omitted from any of the counties listed are included under "All other counties"]

Crook	Deschutes	Douglas	Gilliam	Grant	Harney	Hood River	Jackson	Jefferson	Josephine	Klanath	Lake		
5,266,573	4,846,549	17,318,703	7,164,374	6,782,231	6,118,480	6,689,387	16,995,945	3,751,029	7,486,940	17,673,961	6,708,459	1	
4,795,732	4,589,424	2,062,808	1,475,123	6,052,435	5,419,469	6,345,257	12,133,740	1,579,081	5,711,208	14,999,552	6,046,911	2	
4,248,547	3,823,374	1,780,355	1,250,163	5,581,710	4,892,694	5,959,167	10,832,520	1,537,346	5,064,670	13,548,322	5,390,311	3	
547,185	766,050	282,453	224,960	470,725	526,775	386,090	1,301,220	41,735	646,538	1,451,230	656,600	4	
11,989.33	4,882.37	8,488.92	19,409.51	12,795.85	18,433.57	6,118.86	7,694.19	29,242.24	4,547.14	14,353.64	19,075.43	5	
7.37	35.64	34.76	7.62	7.58	7.62	186.41	58.57	4.87	75.71	25.20	8.66	6	
396	926	242	76	461	289	1,015	1,544	52	1,238	1,011	313	7	
833,515	1,304,694	519,751	200,265	929,744	641,080	2,519,869	3,494,263	268,360	1,878,575	3,066,546	734,860	8	
2,104.84	1,408.96	2,147.77	2,635.07	2,016.80	2,218.27	2,462.63	2,263.12	5,160.77	1,517.43	3,033.18	2,347.80	9	
1.28	10.13	8.76	1.04	1.16	0.90	74.03	16.87	0.83	24.90	5.15	1.05	10	
93	100	2,455	198	108	134	99	1,093	168	672	469	158	11	
86,359	74,605	3,771,774	642,073	121,035	170,740	133,375	1,498,018	251,094	537,350	801,193	151,565	12	
928.59	746.95	1,536.36	3,242.79	1,141.84	1,274.18	1,347.22	1,370.56	1,494.61	799.63	1,708.30	959.27	13	
0.52	1.32	6.66	1.04	1.05	1.05	23.70	13.71	0.67	10.80	4.49	0.92	14	
379	857	228	72	452	276	836	1,278	53	997	931	295	15	
484,611	590,571	183,456	139,171	513,454	392,911	804,187	1,006,485	81,275	482,865	2,011,441	471,030	16	
1,278.66	689.11	811.75	1,932.93	1,135.96	1,423.59	961.95	787.55	1,533.49	494.35	2,160.52	1,596.71	17	
0.74	4.59	3.09	0.72	0.64	0.55	23.63	4.86	0.25	6.53	3.38	0.67	18	
87	90	1,981	192	102	115	73	796	150	433	388	133	19	
39,760	43,241	1,059,743	788,374	80,175	59,946	25,287	356,379	280,215	131,156	346,682	89,220	20	
0.24	0.77	1.87	1.27	0.70	0.37	4.49	3.26	0.75	2.64	1.94	0.54	21	
137	23	160	61	413	255	84	324	42	273	173	182	22	
104	30	73	39	301	134	55	255	26	196	144	153	23	
166	36	93	52	289	328	77	345	51	309	90	149	24	
353	2,709	33	41	108	555	369	161	112	95	1,244	695	25	
453	3,145	43	59	130	1,537	568	207	213	152	1,369	679	26	
395	4,642	90	89	146	684	515	311	121	81	2,661	1,235	27	
274	39	69	42	503	491	38	183	43	115	82	306	28	
355.4	845.6	55.9	24.7	671.9	446.9	170.2	643.6	64.4	335.1	804.8	254.0	29	
511	701	54	31	513	251	208	817	33	334	733	276	30	
424	397	107	65	557	566	220	637	85	331	558	365	31	
569	1,799	200	91	1,572	2,869	692	941	388	954	5,911	3,483	32	
1,254	2,638	99	63	918	1,718	432	942	101	780	3,034	2,247	33	
734	2,898	234	64	801	1,752	435	1,048	117	862	3,135	2,767	34	
1.9	0.9	29.4	1.3	7.7	2.4	24.3	22.1	1.3	17.3	10.1	2.3	35	
6	4	9	2	7	12	3	9	.....	23	20	28	36	
9	3	4	1	2	13	5	7	.....	26	24	29	37	
2	1	3	.....	4	6	.....	2	.....	5	5	10	38	
3	4	4	1	8	32	5	23	.....	24	14	17	39	
48,067	2,505	16	(^b)	(^b)	6,157	803	33,780	.....	344	721,169	105,237	40	
47,528	100	3	.....	9	3,910	.....	45,875	701	49	640,046	88,561	41	
47,101	5,123	10,005	.....	36,896	133,765	13	35,871	700	11	926,361	77,513	42	
.....	.....	.....	3	.....	53	.....	1	.....	1	.....	10	43	
.....	.....	.....	.....	.....	9	.....	.....	.....	1	.....	25	44	
.....	.....	.....	.....	.....	32	.....	.....	.....	3	.....	1	45	
.....	.....	.....	200	.....	1,708	.....	(^b)	.....	(^b)	.....	495	46	
.....	.....	.....	.....	.....	99	.....	.....	.....	2	.....	41	47	
.....	.....	.....	.....	.....	179	.....	.....	.....	10,000	.....	35	48	
.....	.....	.....	.....	.....	4	.....	.....	.....	7	.....	6	49	
2	.....	6	.....	.....	11	.....	16	.....	3	.....	6	50	
.....	.....	.....	.....	.....	6	.....	11	.....	1	.....	2	51	
.....	.....	.....	.....	.....	5	.....	12	.....	1	.....	2	51	
(^b)	.....	.....	.....	.....	2,425	.....	1,784	.....	30	1,026	2,020	52	
.....	.....	.....	.....	.....	1,170	.....	.....	.....	.....	.....	.....	53	
.....	.....	.....	.....	.....	2,460	.....	4,417	.....	.....	1,875	6,700	53	
371	.....	.....	.....	.....	1,650	.....	10,133	.....	15	1,366	1,600	54	
.....	
10	1	85	15	19	5	6	68	8	52	129	13	55	
11	3	13	3	4	6	3	42	11	28	56	6	56	
11	1	9	8	2	9	5	51	6	51	31	6	57	
166	(^b)	644	189	111	70	29	464	84	3,134	4,307	228	58	
181	601	169	29	40	66	3	373	95	4,128	3,620	82	59	
430	200	56	41	12	38	36	345	9	378	1,303	171	60	
12,385	(^b)	33,089	13,335	3,253	4,200	660	25,695	4,228	97,007	323,951	18,641	61	
16,324	16,502	7,855	2,625	2,370	2,950	271	21,647	14,340	51,577	309,289	9,200	62	
23,121	7,500	3,225	1,710	22,530	1,815	755	18,410	240	19,737	62,475	2,296	63	
20	(^b)	25	27	93	45	64	19	35	26	20	28	64	
18	77	24	13	28	23	32	30	19	32	30	24	65	
32	120	54	21	28	18	70	28	10	24	26	44	66	
(^b)	.....	.....	.....	.....	136	.....	61	.....	37	.....	38	67	
.....	
3	8	(^b)	.....	.....	6	.....	9	.....	2	12	14	68	
21,559	49,744	(^b)	.....	.....	2,662	(^b)	23,689	.....	(^b)	11,771	86,048	69	
19,829	59,502	(^b)	.....	.....	863	(^b)	25,061	.....	(^b)	28,977	75,335	70	
34	213	.....	.....	.....	8	.....	39	.....	(^b)	97	88	71	

⁴ Includes siphons and farm pipe lines reported.
⁵ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁶ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - OREGON

COUNTY TABLE II--FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920]

ITEM (For definitions and explanations, see text)	Lane	Lincoln	Lin	Malheur	Marion	Morrow
FARM VALUES, 1940*						
1 Land and buildings, all farms.....dollars..	28,223,172	3,746,837	24,222,449	14,579,441	38,293,980	7,922,180
2 Land and buildings, irrigated farms.....dollars..	4,324,825	206,458	2,131,322	13,593,603	5,147,912	3,288,152
Operated by—						
3 (a) Owners and managers.....dollars..	3,666,651	153,958	1,837,842	10,968,368	4,062,122	2,898,202
4 (b) Tenants.....dollars..	668,174	52,500	293,480	2,625,235	1,085,790	389,950
5 Average, land and buildings, per farm.....dollars..	11,688.72	6,881.93	11,158.75	6,020.20	16,768.44	12,685.57
6 per acre in farms.....dollars..	92.44	34.57	63.75	20.41	137.43	6.42
7 Buildings, irrigated farms reporting value.....number..	365	28	190	1,186	292	255
8 Total reported.....dollars..	1,188,891	71,788	521,499	2,469,496	1,092,896	533,045
9 Average, per irrigated farm reporting.....dollars..	3,257.24	2,563.86	2,744.73	2,082.21	3,742.79	2,090.37
10 per acre on all irrigated farms.....dollars..	25.41	12.02	15.60	3.71	29.18	1.04
11 Buildings, nonirrigated farms reporting value.....number..	4,007	931	3,103	1,250	4,398	261
12 Total reported.....dollars..	6,852,231	1,135,117	5,330,626	156,852	9,212,377	584,980
13 Average, per nonirrigated farm reporting.....dollars..	1,710.07	1,219.24	1,717.89	125.48	2,099.45	2,241.30
14 per acre on all nonirrigated farms.....dollars..	14.82	10.84	11.81	0.67	27.15	1.28
15 Implements and machinery, irrigated farms reporting value.....number..	340	30	172	1,078	293	237
16 Total reported.....dollars..	431,226	22,100	297,458	1,776,266	511,372	244,549
17 Average, per irrigated farm reporting.....dollars..	1,268.31	736.67	1,729.41	1,647.74	1,745.30	1,031.85
18 per acre, on all irrigated farms.....dollars..	9.22	3.70	8.90	2.67	13.65	0.48
19 Implements and machinery, nonirrigated farms reporting value.....number..	3,280	686	2,680	1,209	3,940	246
20 Total reported.....dollars..	1,848,359	242,970	2,499,766	119,826	2,897,188	716,556
21 Average, per acre, on all nonirrigated farms.....dollars..	4.00	2.32	5.54	0.51	8.54	1.57
ENTERPRISES AND IRRIGATION WORKS JANUARY 1						
22 Enterprises.....1940..number.....	294	22	107	320	170	99
23 ..1930..number.....	116	1	12	357	106	107
24 ..1920..number.....				354		109
25 Average size of enterprise based on irrigable area.....1940..acres.....	82	21	57	618	395	135
26 ..1930..acres.....	174			737	28	150
27 ..1920 ² ..acres.....				620		183
28 Diversion dams.....1940..number.....	34	10	6	344	28	168
29 Main canals and laterals.....1940..length, miles.....	19.5	10.1	28.4	1,287.9	86.1	137.4
30 ..1930..length, miles.....	7			799	15	187
31 ..1920..length, miles.....				902		169
32 ..1940..capacity, c.f.s. ³	205	25	214	6,402	328	156
33 ..1930..capacity, c.f.s. ³	20			3,794	30	594
34 ..1920..capacity, c.f.s. ³				4,013		551
35 Pipe lines ⁴.....1940..length, miles.....	120.5	1.2	20.0	40.5	34.1	14.6
36 Storage dams.....1940..number.....				20	4	
37 Reservoirs.....1940..number.....	2		1	28	5	
38 ..1930..number.....	1			29	1	
39 ..1920..number.....				43		
40 ..1940..capacity, acre-feet..	(⁵)		(⁵)	1,059,804	22	
41 ..1930..capacity, acre-feet..	8			644,216	1,000	
42 ..1920..capacity, acre-feet..				317,979		
43 Wells, flowing.....1940..number.....						
44 ..1930..number.....				2		
45 ..1920..number.....				4		
46 ..1940..yield, g.p.m.....						
47 ..1930..yield, g.p.m.....				280		
48 ..1920..yield, g.p.m.....				787		
49 Wells, pumped.....1940..number.....	205		54	22	55	
50 ..1930..number.....	127			4	26	2
51 ..1920..number.....				5		
52 ..1940..yield, g.p.m.....	42,288		14,044	9,288	10,979	
53 ..1930..yield, g.p.m.....	28,736			1,400	4,787	2
54 ..1920..yield, g.p.m.....				835		
55 Pumping plants.....1940..number.....	297	12	97	157	185	2
56 ..1930..number.....	108			163	133	2
57 ..1920..number.....				117		2
58 Prime movers.....1940..capacity, hp.....	1,543	70	590	7,726	1,339	(⁵)
59 ..1930..capacity, hp.....	808			7,136	668	4
60 ..1920..capacity, hp.....				7,409		22
61 Pumps.....1940..capacity, g.p.m.....	70,059	3,937	34,147	363,035	48,781	(⁵)
62 ..1930..capacity, g.p.m.....	48,944			253,624	28,081	2
63 ..1920..capacity, g.p.m.....				294,620		1,700
64 Pumping lift, from all sources.....1940..average, feet.....	15	20	16	20	18	(⁵)
65 ..1930..average, feet.....	17			22	24	65
66 ..1920..average, feet.....				27		18
67 from pumped wells.....1940..average, feet.....	16		18	21	28	
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶						
68 Enterprises reporting pay roll.....number.....	(⁵)	1		17	2	7
69 Irrigated area in these enterprises.....acres.....	(⁵)			116,469	(⁵)	4,914
70 Wages and salaries paid and payable.....dollars..	(⁵)		(⁵)	222,202	(⁵)	3,740
71 Persons employed during week ending April 29.....number..	(⁵)		(⁵)	224	(⁵)	4

* Census of Agriculture.

¹ Data between census years not comparable (see headnote).

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — OREGON

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Multnomah	Polk	Sherman	Tillamook	Umatilla	Union	Wallowa	Wasco	Washington	Wheeler	Yamhill	All other counties ¹	
15,883,281	15,225,759	10,507,217	9,600,904	37,658,315	12,143,862	8,788,961	10,960,912	30,515,555	3,062,704	21,318,949	6,539,193	1
1,394,782	2,172,150	163,750	1,172,400	9,941,716	5,420,677	6,549,581	3,628,104	2,064,019	2,378,867	1,825,229	289,300	2
890,022	2,057,650	115,750	928,800	8,543,319	4,860,477	5,127,636	3,141,644	1,895,679	2,281,687	1,440,958	269,300	3
404,760	114,500	48,000	243,600	1,398,397	560,200	1,421,945	486,460	168,340	97,160	384,271	20,600	4
16,031.98	26,170.48	8,187.50	14,474.07	7,503.18	9,784.62	10,598.03	10,516.24	18,594.77	15,754.09	14,259.60	13,776.19	5
211.52	119.89	11.39	107.32	12.77	24.98	21.64	14.98	153.41	3.88	89.80	48.61	6
85	83	19	80	1,301	543	607	341	110	149	123	21	7
336,584	507,925	44,750	259,500	2,379,297	1,251,625	1,389,948	707,852	373,670	327,125	356,495	53,125	8
3,959.81	6,119.58	2,355.26	3,243.75	1,828.82	2,305.02	2,289.86	2,075.81	3,397.00	2,195.47	2,898.33	2,522.76	9
51.04	28.03	3.11	23.76	3.06	5.72	4.59	2.92	27.77	0.53	17.54	8.93	10
2,108	1,614	308	859	957	673	363	640	4,157	93	2,627	995	11
5,015,308	3,444,121	1,106,219	2,043,895	2,510,905	1,379,090	406,200	1,304,857	8,688,690	115,458	4,965,114	2,164,368	12
2,379.18	2,133.90	3,591.62	2,379.39	2,623.73	2,049.17	1,119.01	2,038.85	2,090.13	1,241.48	1,890.03	2,175.24	13
68.54	16.84	2.47	25.76	3.02	5.43	1.47	2.06	37.53	0.72	18.35	14.42	14
73	74	20	78	1,184	504	566	314	103	145	119	19	15
147,932	198,119	17,592	104,000	1,040,391	501,671	603,037	376,017	161,879	182,155	243,059	24,425	16
2,025.47	2,677.28	879.60	1,333.33	878.71	995.38	1,065.44	1,197.51	1,571.64	1,256.24	2,042.51	1,285.53	17
22.43	10.93	1.22	9.52	1.34	2.31	1.99	1.55	12.03	0.30	11.96	4.10	18
1,664	1,382	288	744	843	614	336	582	3,364	85	2,342	755	19
1,089,956	1,332,891	1,176,334	499,371	2,488,307	710,218	310,832	750,446	2,281,137	58,901	1,845,747	524,672	20
14.89	6.52	2.63	6.29	3.00	2.79	1.12	1.18	9.85	0.37	6.82	3.49	21
54	69	16	78	482	278	309	167	113	136	104	11	22
22	12	6	16	489	241	157	171	3	132	6	5	23
.....	.....	.....	.....	497	311	230	148	.....	156	.....	101	24
22	65	15	27	130	141	174	103	40	74	47	28	25
.....	78	.....	.....	125	174	314	234	.....	58	.....	.....	26
.....	.....	.....	.....	209	223	280	329	.....	71	.....	.....	96
7	24	.....	24	342	154	364	111	34	231	10	1	28
1.0	8.1	4.4	7.4	416.9	266.6	311.4	283.1	20.3	98.3	8.6	.....	29
.....	.....	.....	.....	421	325	268	222	.....	201	.....	.....	9
.....	.....	.....	.....	591	501	424	259	.....	195	.....	.....	30
38	88	8	71	2,321	1,001	1,663	347	175	301	131	9	32
.....	.....	.....	.....	1,639	827	1,293	225	.....	128	.....	.....	7
.....	.....	.....	.....	1,932	1,381	1,398	328	.....	271	.....	.....	33
31.5	15.2	3.2	19.1	69.6	3.5	4.2	38.4	24.0	2.5	18.3	161	34
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.2	35
1	4	.....	.....	2	14	9	3	5	1	.....	.....	36
1	4	1	.....	4	16	5	4	5	1	.....	.....	37
.....	.....	.....	.....	3	3	3	5	.....	1	.....	.....	38
(⁵)	58	(⁵)	.....	8	1	7	10	.....	1	.....	.....	39
.....	.....	.....	.....	123,012	17,481	49,354	404	18	(⁵)	.....	.....	40
.....	.....	.....	.....	52,412	36	41,760	20,503	.....	1,600	.....	21	41
.....	.....	.....	.....	69,700	20	205,430	1	.....	2,400	.....	3	42
.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	43
.....	.....	.....	.....	1	.....	.....	4	.....	.....	.....	.....	44
.....	.....	(⁵)	.....	3	.....	.....	1	(⁵)	.....	.....	.....	45
.....	.....	.....	.....	125	.....	.....	225	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	70	.....	.....	.....	.....	47
18	24	7	1	208	67	3	36	5	.....	32	.....	48
.....	12	.....	.....	189	58	.....	57	.....	.....	.....	.....	49
.....	.....	.....	.....	94	20	.....	20	.....	.....	.....	.....	50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51
2,033	16,820	1,638	(⁵)	41,412	20,713	136	2,490	197	.....	11,045	(⁵)	52
.....	3,600	.....	.....	44,922	20,144	.....	3,357	.....	.....	.....	3,051	53
.....	.....	.....	.....	19,496	4,203	.....	516	.....	.....	.....	1,794	54
52	61	11	47	241	80	12	65	97	26	91	8	55
.....	14	.....	.....	216	66	3	80	.....	15	.....	.....	56
.....	.....	.....	.....	103	34	5	41	.....	21	.....	.....	57
318	761	69	245	1,131	303	53	571	1,076	371	1,296	66	58
.....	264	.....	.....	1,128	357	36	325	.....	188	.....	367	59
.....	.....	.....	.....	582	186	26	273	.....	266	.....	318	60
9,415	39,400	2,048	9,753	57,819	33,223	2,647	22,875	104,684	34,585	40,641	2,168	61
.....	72,625	.....	.....	60,054	23,454	1,150	15,879	.....	14,425	.....	26,771	62
.....	.....	.....	.....	23,671	10,578	665	8,974	.....	14,195	.....	10,531	63
59	30	29	16	31	15	32	103	24	19	27	10	64
.....	20	.....	.....	27	19	25	63	.....	18	.....	23	65
.....	.....	.....	.....	26	12	32	49	.....	21	.....	26	66
102	27	37	(⁵)	32	16	34	146	101	.....	23	(⁵)	67
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	68
.....	(⁵)	1	.....	15	10	20	8	.....	.....	(⁵)	1	69
.....	(⁵)	.....	.....	27,162	7,805	46,811	3,970	.....	.....	(⁵)	.....	70
.....	.....	.....	.....	31,063	1,419	8,135	9,946	.....	.....	.....	.....	71
.....	.....	.....	.....	37	15	40	36	.....	.....	.....	.....	71

⁴ Includes siphons and farm pipe lines reported.

⁵ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁶ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

⁷ Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - SOUTH DAKOTA

STATE TABLE 1.-IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF -						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	48,983,040	49,195,520	49,195,520	49,195,520	49,195,520	49,195,520	49,195,520
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	72,454	83,303	83,157	74,637	77,644	52,622	50,156
Land in all farms.....acres....	39,473,584	37,101,871	36,470,083	34,636,491	26,016,892	19,070,616	11,396,460
Farms irrigated: ¹							
Farms.....number...	967	974	763	1,198	500	606	189
Increase or decrease (-) over preceding census....percent..	² 26.7	.....	-36.3	139.6	-17.5	220.6	.....
Proportion of all farms.....percent..	1.3	1.2	0.9	1.6	0.6	1.2	0.4
Land in farms.....acres....	1,021,659	(³)	379,270	(³)	(³)	(³)	(³)
Proportion of all farm land.....percent..	2.6	(³)	1.0	(³)	(³)	(³)	(³)
Area irrigated.....acres....	⁴ 54,073	⁵ 56,565	⁶ 59,361	(⁷)	(⁷)	43,676	15,717
Increase or decrease (-) over preceding census....percent..	² -8.9	.....	.....	.....	.....	177.9	.....
Proportion of total land area of State.....percent..	0.1	0.1	0.1	.....	.....	0.1	(⁸)
Proportion of all farm land.....percent..	0.1	0.2	0.2	.....	.....	0.2	0.1
Value of irrigated farms (land and buildings).....dollars..	9,972,519	(³)	10,520,455	(³)	(³)	(³)	(³)
Average per farm.....dollars..	10,312.84	(³)	13,788.28	(³)	(³)	(³)	(³)
Average per acre.....dollars..	9.76	(³)	27.74	(³)	(³)	(³)	(³)
Value of farm implements and machinery ⁹.....dollars..	1,164,804	(³)	1,055,845	(³)	(³)	(³)	(³)
Average per farm ⁹.....dollars..	1,204.55	(³)	1,383.81	(³)	(³)	(³)	(³)
Average per acre ⁹.....dollars..	1.14	(³)	2.78	(³)	(³)	(³)	(³)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	274	(³)	121	292	395	(³)	(³)
Farms irrigated.....number...	1,298	(³)	(³)	(³)	(³)	(³)	(³)
Area irrigated.....acres....	60,198	(³)	67,107	100,682	63,248	(³)	(³)
Area existing works were capable of supplying with water.....acres....	121,847	(³)	109,550	150,914	128,481	(³)	(³)
Area irrigable.....acres....	123,961	(³)	122,510	¹⁰ 188,362	¹⁰ 201,625	(³)	(³)
Additional area existing works were capable of supplying with water.....acres....	61,649	(³)	42,443	50,232	65,233	(³)	(³)
Additional irrigable area in enterprises not supplied with water.....acres....	63,763	(³)	55,403	¹⁰ 87,700	¹⁰ 138,377	(³)	(³)
Investment in irrigation enterprises.....dollars..	5,395,610	(³)	4,502,117	5,465,248	3,043,140	284,747	63,968
Increase or decrease (-) over preceding census....percent..	² 19.8	(³)	-17.6	79.6	968.6	345.1	.....
Average per acre based on area works were capable of supplying with water.....dollars..	44.28	(³)	41.10	36.21	23.69	(³)	(³)
Increase or decrease (-) over preceding census....percent..	² 7.7	(³)	13.5	52.8	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	5,432,934	(³)	5,174,417	5,500,748	3,800,556	(³)	(³)
Average per acre based on irrigable area in enterprises.....dollars..	43.83	(³)	42.24	¹⁰ 29.20	¹⁰ 18.85	(³)	(³)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	1.28	(³)	1.33	1.26	0.64	(³)	(³)

¹ Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ² Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³ Not available. ⁴ Irrigated land from which crops were harvested plus 4,333 acres of irrigated land used only for pasture. ⁵ Irrigated land from which crops were harvested. ⁶ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷ Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸ Less than one-tenth of 1 percent. ⁹ Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹⁰ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹¹ The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.-CENSUS OF AGRICULTURE-NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	72,454	39,473,584	12,297,291	49,740	4,333	505,452,178	12.80	133,751,853	3.39	59,969,394	1.52
Owners and managers.....	34,056	24,195,839	6,125,597	29,608	3,128	270,320,333	11.17	73,528,607	3.04	32,427,348	1.34
Tenants.....	38,398	15,277,745	6,171,694	20,132	1,205	235,131,845	15.39	60,223,246	3.94	27,542,046	1.80
Irrigated farms, total.....	967	1,021,659	94,483	49,740	4,333	9,972,519	9.76	2,173,503	2.13	1,164,804	1.14
Owners and managers.....	586	863,702	62,852	29,608	3,128	7,699,778	8.91	1,583,478	1.83	792,637	0.92
Tenants.....	381	157,957	31,631	20,132	1,205	2,272,741	14.39	590,025	3.74	372,167	2.36
Wholly irrigated farms.....	505	332,801	32,919	32,919	1,830	3,794,098	11.40	956,640	2.87	551,010	1.66
Owners and managers.....	279	269,709	19,149	19,149	1,135	2,734,673	10.14	654,815	2.43	336,673	1.25
Tenants.....	226	63,092	13,770	13,770	795	1,059,425	16.79	301,825	4.78	214,337	3.40
Partly irrigated farms.....	462	688,858	61,564	16,821	2,403	6,178,421	8.97	1,216,863	1.77	613,794	0.89
Owners and managers.....	307	593,993	49,703	10,459	1,993	4,965,105	8.36	928,563	1.56	455,964	0.77
Tenants.....	155	94,865	17,861	6,362	410	1,213,316	12.79	288,200	3.04	157,830	1.66
Nonirrigated farms, total.....	71,487	38,451,925	12,202,808	.....	.....	495,479,659	12.89	131,578,350	3.42	58,804,590	1.53

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ²	
								Quantity	Cost	Quantity and cost		per acre	per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	274	123,961	121,847	60,198	67,107	100,662	-10.3	52,945	56,426	51,386	1.1	2.72	2.43
Streams, gravity.....	145	38,183	38,047	20,445	65,855	92,191	-69.0	14,919	18,009	14,532	1.6	0.63	0.40
Streams, pumped.....	55	4,574	3,658	1,723	61	669	(*)	1,568	1,631	1,476	1.3	4.87	3.65
Streams, gravity and pumped.....	7	73,699	73,749	34,913	.....	.....	.....	34,663	34,716	34,666	0.9	3.51	3.81
Wells, pumped.....	6	122	112	108	.....	.....	.....	108	33	33	0.4	14.55	34.29
Wells, flowing.....	11	788	646	593	526	130	12.3	30	428	.....	.....	.....	.....
Wells, pumped and flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakes, gravity.....	1	(³)	(³)	(³)	.....	170	.....	.....	(³)	.....	.....	.....	.....
Lakes, pumped.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springs.....	8	816	738	737	25	326	(*)	15	368	15	2.4	3.60	1.50
Springs and streams.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stored storm water.....	29	2,425	1,917	790	150	2,312	426.7	570	419	419	0.9	0.62	0.66
City water.....	1	(³)	(³)	(³)	.....	.....	.....	.....	(³)	.....	.....	.....	.....
Sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Streams, gravity; wells, pumped.....	.....	.....	.....	.....	.....	500	.....	.....	(³)	.....	.....	.....	.....
Streams, gravity; wells, flowing.....	1	(³)	(³)	(³)	160	20	(³)	(³)	(³)	(³)	(³)	(³)	(³)
Streams, pumped; wells, pumped.....	2	(³)	(³)	(³)	.....	.....	.....	(³)	(³)	(³)	(³)	(³)	(³)
Waste water, seepage or drainage.....	2	(³)	(³)	(³)	.....	.....	.....	(³)	(³)	(³)	(³)	(³)	(³)
Other mixed.....	6	447	402	278	.....	3,864	.....	106	251	79	2.0	5.82	2.70
Other and not reported.....	.....	.....	.....	.....	328	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
³Percent not shown when more than 1,000.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- portion of total	Aver- age per acre ²	Amount	Pro- portion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	5,395,610	100.0	44.28	1,502,117	100.0	41.10	3.18	56,426	1.28	68,763	1.33	-0.05	68,329	1.26
Streams, gravity.....	395,541	7.3	10.40	4,469,744	99.3	41.44	-31.04	18,009	0.51	64,945	1.34	-0.80	83,672	1.21
Streams, pumped.....	103,110	1.9	28.19	11,423	0.2	46.43	-18.24	1,631	4.73	60	8.17	-3.44	807	4.03
Streams, gravity and pumped.....	4,822,232	89.4	65.39	.....	.....	.....	.....	34,716	1.46	.....	.....	.....	.....	.....
Wells, pumped.....	6,000	0.1	53.57	.....	.....	.....	.....	33	13.55	.....	.....	.....	.....	.....
Wells, flowing.....	15,250	0.3	23.53	6,000	0.1	11.26	12.27	428	1.24	460	0.33	0.91	.....	.....
Wells, pumped and flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lakes, gravity.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	.....	.....
Lakes, pumped.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springs.....	5,125	0.1	6.94	725	(⁴)	29.00	-22.06	368	0.98	8	6.88	-5.90	31	17.74
Springs and streams.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stored storm water.....	19,989	0.4	10.43	4,150	0.1	10.61	-0.18	419	1.05	150	0.70	0.35	1,203	2.78
City water.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	.....	.....
Sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Streams, gravity; wells, pumped.....	(³)	(³)	(³)	1,600	(⁴)	10.00	(³)	(³)	(³)	160	0.09	(³)	.....	.....
Streams, gravity; wells, flowing.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	.....	.....
Streams, pumped; wells, pumped.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	.....	.....
Waste water, seepage or drainage.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	.....	.....
Other mixed.....	10,352	0.2	25.75	.....	.....	.....	.....	251	2.17	.....	.....	.....	2,616	1.14
Other and not reported.....	.....	.....	.....	8,475	0.2	25.84	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation.
²Based on area works were capable of supplying with water.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁴Less than one-tenth of 1 percent.

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF —				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930	1920	
	Primary enterprises	Supplemental enterprises	Primary enterprises	Primary enterprises	
AREA IRRIGATED					
Total.....	Acres 60,198	Acres	Acres 37,107	Acres 100,682	Percent -10.3
Individual and partnership.....	1 10,628	.....	11,268	31,664	1 -5.7
Cooperative, incorporated.....	12,329	.....	19,646	10,080	-20.0
Cooperative, unincorporated.....	2,204	.....	.....	2,380	.....
Commercial.....	.....	.....	.....	36,193	-5.4
Bureau of Reclamation ² *	34,222	.....	.....	56,638	.....
Office of Indian Affairs ² *	815	.....	.....	20	.....
State.....	(¹)	.....	.....	.....	.....
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER					
Total.....	121,847	.....	109,550	150,914	11.2
Individual and partnership.....	1 26,103	.....	14,174	56,032	1 84.2
Cooperative, incorporated.....	18,523	.....	20,876	10,615	2.9
Cooperative, unincorporated.....	2,948	.....	.....	1,600	.....
Commercial.....	.....	.....	.....	82,592	-2.7
Bureau of Reclamation ² *	72,504	.....	74,500	75	.....
Office of Indian Affairs ² *	1,769	.....	.....	.....	.....
State.....	(¹)	.....	.....	.....	.....
IRRIGABLE AREA ³					
Total.....	123,961	.....	122,510	188,382	1.2
Individual and partnership.....	1 28,024	.....	19,034	76,683	1 47.2
Cooperative, incorporated.....	18,523	.....	22,276	11,410	-3.4
Cooperative, unincorporated.....	2,998	.....	.....	2,280	.....
Commercial.....	.....	.....	.....	97,934	-10.7
Bureau of Reclamation ² *	72,504	.....	81,200	75	.....
Office of Indian Affairs ² *	1,912	.....	.....	.....	.....
State.....	(¹)	.....	.....	.....	.....

¹Data for 1 "State" enterprise are included with "Individual and partnership" enterprises in the 1940 Census. ²U. S. Dept. of the Interior. ³For 1920 relates to total area. Irrigable area for that year was not reported. *For explanation of areas, see text, p. 513.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total ✓	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre	Maintenance and operation per acre			From which crops were harvested	On which crops failed	
Total.....	Number 274	Number 26	Acres 123,961	Acres 121,847	Dollars 44.19	Dollars 1.28	Dollars	Dollars	Number 1,298	Acres 60,198	Acres 50,424	Acres 2,286	Acres 7,488
Individual and partnership.....	233	7	4 28,024	4 26,103	4 9.13	1.80	.....	.....	257	4 10,628	4 8,311	961	1,356
Cooperative, incorporated.....	13	9	18,523	18,523	11.11	0.32	.....	.....	115	12,329	9,164	1,310	1,855
Cooperative, unincorporated.....	8	6	2,998	2,948	14.33	0.38	.....	.....	91	2,204	2,134	.....	70
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
U. S. Bureau of Reclamation ⁵ *	1	1	72,504	72,504	63.84	1.47	.....	.....	676	34,222	30,015	.....	4,207
U. S. Office of Indian Affairs.....	18	3	1,912	1,769	151.94	3.05	.....	.....	158	815	800	15	.....
State.....	1	.....	(⁴)	(⁴)	(⁴)	.....	.....	.....	1	(⁴)	(⁴)	.....	.....

¹Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 1 "State" enterprise are included with "Individual and partnership" enterprises in the 1940 Census. ⁵Data for less than 3 enterprises shown with permission of the enterprises involved. *For explanation of areas and investment, see text, p. 513.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940					1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises		
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment	Investment in water rights							
Total.....	Dollars 5,395,610	Dollars 5,395,610	Dollars	Dollars 5,363,865	Dollars 11,745	Dollars 4,502,117	Dollars 5,465,248	Percent 19.8	Dollars 44.28	Dollars	Dollars 170,857	Dollars 37,324
Individual and partnership.....	2 241,939	2 241,939	.....	2 238,240	3,699	237,424	743,880	2 1.9	2 9.27	.....	1,078	26,150
Cooperative, incorporated.....	209,129	209,129	.....	205,725	3,404	196,953	240,030	30.0	11.29	.....	2,500	.....
Cooperative, unincorporated.....	46,892	46,892	.....	42,250	4,642	.....	.....	.....	15.91	.....	130	.....
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
U. S. Bureau of Reclamation ⁵ *	4,628,868	4,628,868	.....	4,628,868	.....	4,067,740	4,464,780	13.8	63.84	.....	105,000	.....
U. S. Office of Indian Affairs.....	269,782	269,782	.....	238,782	.....	.....	1,500	.....	151.94	.....	62,149	11,174
State.....	(²)	(²)	.....	(²)	.....	.....	.....	.....	(²)	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 1 "State" enterprise are included with "Individual and partnership" enterprises in the 1940 Census. ³Data for less than 3 enterprises shown with permission of the enterprises involved. *For explanation of investment, see text, p. 513.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939	Average per acre works were capable of supplying with water 1940 ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrigable 1940	Works were capable of supplying with water 1940 ⁴					Dec. 31 1939	Dec. 31 1939				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	3	72,771	72,771	4,600,023	66.62	63.21	1	66,992	57,507	1.27	73,040	131,490	83,983
Partnership.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,332	960	417
Cooperative, incorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16,020	7,395	7,124
Cooperative, unincorporated.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,414	1,301	1,271
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ³	1	72,504	72,504	4,577,395	86.61	63.13	1	66,992	57,507	1.27	52,830	121,509	74,771
Office of Indian Affairs ³	2	267	267	22,628	199.15	81.75	.....	.....	.....	.....	444	324	.....
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²In payment of principal, interest, and/or other funded obligations. ³U. S. Dept. of the Interior. ⁴Data for less than 3 enterprises shown with permission of the enterprises involved. ⁵Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁶Represents construction costs of irrigation works less cancellations and repayments. ⁷For explanation of areas and investment, see text, p. 513.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	56,426	71,986	.....	.....	1.28	.....	17	60,964	114
Individual and partnership.....	8,447	15,202	.....	.....	1.80	.....	2	(²)	.....
Cooperative, incorporated.....	10,879	3,535	.....	.....	0.32	.....	7	1,864	29
Cooperative, unincorporated.....	2,169	822	.....	.....	0.38	.....	5	2,939	20
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
U. S. Bureau of Reclamation ³	34,222	50,264	.....	.....	1.47	.....	1	38,812	31
U. S. Office of Indian Affairs ³	709	2,163	.....	.....	3.05	.....	2	19,349	31
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 2 "Individual and partnership" enterprises are included with "Cooperative, unincorporated" enterprises. ³Data for less than 3 enterprises shown with permission of the enterprises involved. ⁴For explanation of areas and investment, see text, p. 513.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capac-ity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec. -ft.	Miles	Miles	Ac. -ft.	Miles		G. p. m.		G. p. m.		Hp.		G. p. m.	
Total.....	258	74	1,948	1,038	11.3	82	209,785	17.3	19	5,377	16	1,039	119	2,060	127	103,050
Individual and partnership.....	237	66	669	219	2.5	74	3,307	5.1	18	5,375	10	460	62	1,105	69	56,906
Cooperative, incorporated.....	11	.....	432	81	0.1	.....	.....	0.1	.....	2	.....	.....	1	1	2	9
Cooperative, unincorporated.....	7	.....	101	23	0.3	.....	.....	0.4	.....	1	120	1	5	1	120	.....
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bureau of Reclamation ³	1	1	650	657	8.4	1	197,000	6.4	.....	.....	.....	.....	1	125	1	1,500
Office of Indian Affairs ³	2	7	93	58	.....	7	9,478	5.3	1	2	3	450	53	804	53	40,015
State.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	20	1	1,500

¹Includes main and lateral canals but not farm ditches.

²Includes flumes.

³U. S. Dept. of the Interior.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 relate to the Belle Fourche Project in Meade and Butte Counties. This acreage is not reported under any other classification.

The investment attributed to the Bureau of Reclamation in State table 7 includes the total cost to the United States of the irrigation system of the Belle Fourche Project. The outlay for the drainage system of the project is not included.

Under the Water Conservation and Utilization Program provided for by various acts of the Congress for combating

the effects of drought and maintaining established agricultural areas, the Bureau of Reclamation has been authorized to construct two additional projects in South Dakota. One, the Rapid Valley Project in Pennington County, will provide supplemental water for 12,000 acres now inadequately irrigated; the other, the Angostura Project in Fall River County, which will provide irrigation water for 16,210 acres. As these projects were not in operation when the census was taken, no data on them are included.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage
	Number	Number	Number	Number
Total.....	258	74	91	10
Concrete or masonry.....	13	2	3	.....
Timber.....	19	.....	4	.....
Earth and rock.....	198	69	.....	9
Other and mixed.....	¹ 23	2	¹ 43	.....
Not reported.....	5	1	41	1

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	127	100.0	103,050	100.0	20	Total, 1940.....	119	100.0	2,060	100.0
Electric motor.....	8	6.3	5,644	5.5	41	Centrifugal pump.....	106	89.1	1,928	93.6
Centrifugal.....	4	3.1	5,453	5.3	26	Electric.....	3	2.5	190	9.2
Turbine.....	.....	.....	.....	.....	.....	Internal-combustion.....	102	85.7	1,730	84.0
Plunger.....	4	3.1	191	0.2	59	Other.....	1	0.9	8	0.4
Other.....	.....	.....	.....	.....	.....	Turbine pump.....	6	5.0	72	3.5
Internal-combustion engine.....	114	89.8	93,706	90.9	18	Electric.....	.....	.....	.....	.....
Centrifugal.....	105	82.7	92,780	90.0	17	Internal-combustion.....	6	5.0	72	3.5
Turbine.....	6	4.7	320	0.3	19	Other.....	.....	.....	.....	.....
Plunger.....	1	0.8	6	.....	75	Plunger pump.....	4	3.4	9	0.4
Other.....	2	1.6	600	0.6	8	Electric.....	3	2.5	8	0.4
Other kinds of motive power.....	1	0.8	1,900	1.8	4	Internal-combustion.....	1	0.9	1	.....
Centrifugal.....	1	0.8	1,900	1.8	4	Other.....	.....	.....	.....	.....
Turbine.....	.....	.....	.....	.....	.....	Other and mixed types of pumps.....	3	2.5	51	2.5
Plunger.....	.....	.....	.....	.....	.....	Electric.....	2	1.7	41	2.0
Other.....	.....	.....	.....	.....	.....	Internal-combustion.....	1	0.8	10	0.5
Mixed kinds of motive power.....	4	3.1	1,800	1.8	11	Other.....	.....	.....	.....	.....
Centrifugal.....	3	2.3	1,350	1.3	10	Total, 1930.....	118	.....	92	.....
Turbine.....	.....	.....	.....	.....	.....	Increase or decrease (-) 1930-1940.....	111	.....	1,968	.....
Plunger.....	.....	.....	.....	.....	.....
Other.....	1	0.8	450	0.5	12					
Total, 1930.....	8	.....	4,027	.....	27					
Increase or decrease (-) 1930-1940..	119	.....	99,023	.....	-7					

¹ Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²	
	Miles	Miles	Percent
Total.....	17.3	8.9	94.4
Concrete:			
1 to 12 inches.....	2.0	.....	.....
13 to 24 inches.....	1.1	.....	.....
Over 24 inches.....	2.6	1.1	236.4
Metal:			
1 to 12 inches.....	10.0	2.9	244.8
13 to 24 inches.....	0.2	.....	.....
Over 24 inches.....	0.8	0.7	42.9
Wood-stave:			
1 to 12 inches.....	0.5	.....	.....
13 to 24 inches.....	.....	.....	.....
Over 24 inches.....	.....	1.8	.....
Clay and other:			
1 to 12 inches.....	.....	2.3	.....
13 to 24 inches.....	0.1	.....	.....
Over 24 inches.....	.....	0.1	.....

¹ Includes siphons and farm pipe lines reported.² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number...	15	9	17
Area irrigable in these enterprises.....acres....	74,640	79,729	¹ 106,129
Area irrigated in these enterprises.....acres....	36,072	(2)	(2)
Area for which drains have been installed.....acres....	25,906	4,353	2,109
Additional area needing drainage.....acres....	5,509	6,100	4,714
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	71.8	³ 5.4	¹ 2.0
(b) All irrigation enterprises.....percent..	43.0	6.5	2.1
Ratio of area drained plus area needing drainage to—			
(a) Irrigable area reporting.....percent..	42.1	13.1	¹ 6.4
(b) Irrigated area reporting.....percent..	87.1	(2)	(2)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census.

²Not available.

³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
From surface sources reported:									
Total water entering canals.....acre-feet..	96,132	176,844	168,186	83,704	157,604	121,487	12,428	19,240	46,699
Area irrigated by these enterprises.....acres....	46,840	47,035	67,366	38,289	43,769	56,638	8,551	3,266	10,728
Average water per acre irrigated.....acre-feet..	2.1	3.8	2.5	2.2	3.6	2.1	1.5	5.9	4.4
Total water delivered to irrigators.....acre-feet..	58,740	46,520	83,574	39,261	.....	81,568	19,479	46,520	2,006
Area irrigated by these enterprises.....acres....	52,207	36,193	59,618	40,232	.....	56,638	11,975	36,193	2,980
Average water per acre irrigated.....acre-feet..	1.1	1.3	1.4	1.0	.....	1.4	1.6	1.3	0.7
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	57	.....	.....	.....	.....	.....	57	.....	.....
Area irrigated by these enterprises.....acres....	138	.....	.....	.....	.....	.....	138	.....	.....
Average water per acre irrigated.....acre-feet..	0.4	.....	.....	.....	.....	.....	0.4	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	60,198	100.0	.....	67,107	100.0	100,682	100.0
Appropriation ¹	45,247	75.2	.....	47,664	71.0	89,940	89.3
Riparian.....	3,689	6.1	.....	3,365	5.0	1,599	1.6
Appropriation and riparian.....	2,929	4.9	.....	.....	.....	.....	.....
Underground.....	684	1.1	.....	529	0.8	130	0.1
Riparian and underground.....	172	0.3	.....	.....	.....	.....	.....
Adjudicated by court.....	4,236	7.0	.....	11,665	17.4	7,651	7.6
Other mixed and not reported...	3,241	5.4	.....	3,884	5.8	1,362	1.4

¹"Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

CENSUS OF IRRIGATION - SOUTH DAKOTA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number...	274	44	186	18	22	2	2
2	Irrigated farms, 1939.....number...	1,298	186	50	199	67	796	
3	Area irrigated, 1939.....acres...	60,198	7,424	2,915	10,704	39,155		
4	(a) From which crops were harvested.....acres...	50,424	5,691	2,279	7,906	34,548		
5	(b) On which crops failed.....acres...	2,286	584	253	1,449			
6	(c) Irrigated pasture.....acres...	7,488	1,149	393	1,349	4,607		
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	5,395,610	78,203	166,222	37,453	209,497	4,904,235	
8	(a) Cost of irrigation works and equipment.....dollars..	5,383,865	77,993	163,929	36,953	204,255	4,900,735	
9	(b) Investment in water rights.....dollars..	11,745	210	2,293	500	5,242	3,500	
10	Area works were capable of supplying with water.....acres...	121,847	9,151	14,190	4,631	15,840	78,035	
11	Average investment per acre irrigated.....dollars..	89.63	32.92	12.85	19.57	125.25		
12	Average investment per acre which the works could supply with water.....dollars..	44.28	8.55	11.71	8.09	13.23	62.85	
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number...	181	24	119	15	19	2	2
14	(a) Area irrigated in these enterprises.....acres...	56,426	5,686	1,728	9,857	39,155		
15	(b) Cost of maintenance and operation.....dollars..	71,986	927	13,543	1,616	3,813	51,887	
16	(c) Average cost per irrigated acre reporting.....dollars..	1.28	2.38	1.05	0.39	1.33		
17	Total annual charges ².....dollars..	131,490	22			8,001	123,467	
18	Average charge per irrigated acre reporting.....dollars..	2.68				0.81	3.15	
19	Area against which charges were assessed.....acres...	73,040	2,200			12,677	58,163	
20	Average annual charge per acre assessed.....dollars..	1.80	0.01			0.63	2.12	
21	Total charges collected ².....dollars..	83,883	22			7,252	76,609	
INDEBTEDNESS AND ARREARAGE, 1939								
22	Enterprises reporting indebtedness ³.....number...	3				4	2	
23	(a) Area irrigated in these enterprises.....acres...	34,371				149	34,222	
24	(b) Indebtedness.....dollars..	4,600,023				22,628	4,577,395	
25	(c) Average indebtedness per acre irrigated.....dollars..	133.83				151.87	133.76	
26	(d) Cost of irrigation works and equipment.....dollars..	4,651,496				22,628	4,628,868	
27	(e) Investment in water rights.....dollars..							
28	(f) Total investment.....dollars..	4,651,496				22,628	4,628,868	
29	(g) Maintenance and operation.....dollars..	50,304				40	50,264	
30	(h) Total annual charges ².....dollars..	121,549				40	121,509	
31	(i) Total charges collected ².....dollars..	74,771					74,771	
32	(j) Area against which annual charges were assessed.....acres...	52,915				85	52,830	
33	(k) Average indebtedness per acre assessed.....dollars..	86.93				266.21	86.64	
34	(l) Average charges per acre assessed.....dollars..	2.30				0.47	2.30	
35	(m) Average charges per acre irrigated.....dollars..	3.54				0.27	3.55	
36	Enterprises reporting arrearage ³.....number...	1					1	
37	(a) Area assessed in these enterprises.....acres...	52,830					52,830	
38	(b) Total arrearage.....dollars..	66,992					66,992	
39	(c) Average arrearage per acre assessed.....dollars..	1.27					1.27	
40	(d) Indebtedness.....dollars..	4,577,395					4,577,395	
TYPE, 1940								
41	Individual and partnership.....number...	233	38	177	11	7		
42	Cooperative (incorporated and unincorporated).....number...	21	1	3	2	13	2	
43	Commercial.....number...							
44	U. S. Bureau of Reclamation.....number...	1					1	
45	U. S. Office of Indian Affairs.....number...	18	5	5	5	2	1	
46	All other.....number...	1		1				
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
47	Enterprises reporting pay roll.....number...	17	3			11	2	
48	Wages and salaries paid and payable for 1939.....dollars..	60,964	19,371			2,194	39,399	
49	Persons employed during week ending April 29, 1939.....number...	114	42			35	37	
SOURCE OF WATER SUPPLY, 1939								
50	Streams, gravity.....number...	145	26	85	12	20	2	
51	Streams, pumped.....number...	55	6	44	5			
52	Wells, pumped.....number...	6		6				
53	Wells, pumped and flowing; or wells flowing.....number...	11		11				
54	Lakes, gravity or pumped.....number...	1		1				
55	Streams and springs; or springs.....number...	8		8				
56	Mixed, streams and wells.....number...	10		6		2		
57	Other mixed or stored storm water.....number...	38	12	25	1		2	

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
² Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁴ Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION - SOUTH DAKOTA

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

		ACRES IRRIGATED					
		No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres
PRIMARY ENTERPRISES (For definitions and explanations, see text)							
1	Enterprises, 1940.....number...	44	181	27	20	1	² 1
2	Irrigated farms, 1939.....number.....		232	62	296	32	576
3	Area irrigated, 1939.....acres.....		4,467	4,191	17,318		34,222
4	(a) From which crops were harvested.....acres.....		3,735	3,087	13,587		30,015
5	(b) On which crops failed.....acres.....		111	870	1,505		.....
6	(c) Irrigated pasture.....acres.....		621	434	2,226		4,207
CAPITAL INVESTMENT, 1940							
7	Total capital investment in all enterprises.....dollars..	78,203	186,306	77,822	124,409		4,628,868
8	(a) Cost of irrigation works and equipment.....dollars..	77,993	184,696	76,464	115,644		4,628,868
9	(b) Investment in water rights.....dollars.....	210	1,412	1,358	8,755		.....
10	Area works were capable of supplying with water.....acres.....	9,151	9,425	7,417	23,370		72,504
11	Average investment per acre irrigated.....dollars.....		41.71	18.57	24.51		135.26
12	Average investment per acre which the works could supply with water.....dollars.....	8.55	19.77	10.48	18.18		63.84
MAINTENANCE AND OPERATION, AND CHARGES, 1939							
13	Enterprises reporting maintenance and operation.....number...	24	115	24	16	1	² 1
14	(a) Area irrigated in these enterprises.....acres.....		3,295	3,824	15,085		34,222
15	(b) Cost of maintenance and operation.....dollars.....	927	10,698	3,962	6,135		50,264
16	(c) Average cost per irrigated acre reporting.....dollars.....		3.53	1.04	0.41		1.47
17	Total annual charges ³.....dollars.....	22	249	441	9,259		121,509
18	Average charge per irrigated acre reporting.....dollars.....		1.09	0.74	0.66		3.55
19	Area against which charges were assessed.....acres.....	2,200	229	599	17,182		52,830
20	Average annual charge per acre assessed.....dollars.....	0.01	1.09	0.74	0.54		2.30
21	Total charges collected ³.....dollars.....	22	59	211	8,820		74,771
INDEBTEDNESS AND ARREARAGE, 1939							
22	Enterprises reporting indebtedness ⁴.....number.....		² 2				² 1
23	(a) Area irrigated in these enterprises.....acres.....		149				34,222
24	(b) Indebtedness.....dollars.....		22,628				4,577,395
25	(c) Average indebtedness per acre irrigated.....dollars.....		151.87				133.76
26	(d) Cost of irrigation works and equipment.....dollars.....		22,628				4,628,868
27	(e) Investment in water rights.....dollars.....						.....
28	(f) Total investment.....dollars.....		22,628				4,628,868
29	(g) Maintenance and operation.....dollars.....		40				50,264
30	(h) Total annual charges ³.....dollars.....		40				121,509
31	(i) Total charges collected ³.....dollars.....						74,771
32	(j) Area against which annual charges were assessed.....acres.....		85				52,830
33	(k) Average indebtedness per acre assessed.....dollars.....		266.21				86.64
34	(l) Average charges per acre assessed.....dollars.....		0.47				2.30
35	(m) Average charges per acre irrigated.....dollars.....		0.27				3.55
36	Enterprises reporting arrearage ⁴.....number.....						² 1
37	(a) Area assessed in these enterprises.....acres.....						52,830
38	(b) Total arrearage.....dollars.....						66,992
39	(c) Average arrearage per acre assessed.....dollars.....						1.27
40	(d) Indebtedness.....dollars.....						4,577,395
TYPE, 1940							
41	Individual and partnership.....number.....	38	164	24	7		
42	Cooperative (incorporated and unincorporated).....number.....	1	5	2	12	1	
43	Commercial.....number.....						
44	U. S. Bureau of Reclamation.....number.....						1
45	U. S. Office of Indian Affairs.....number.....	5	11	1	1		
46	All other.....number.....		1				
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939							
47	Enterprises reporting pay roll.....number.....	3	⁽⁵⁾ 2	⁽⁵⁾ 2	8	1	² 1
48	Wages and salaries paid and payable for 1939.....dollars.....	19,371	⁽⁵⁾	⁽⁵⁾	1,949	⁽⁵⁾	38,812
49	Persons employed during week ending April 29, 1939.....number.....	42	⁽⁵⁾	⁽⁵⁾	35	⁽⁵⁾	34
SOURCE OF WATER SUPPLY, 1939							
50	Streams, gravity.....number.....	26	85	17	16	1	
51	Streams, pumped.....number.....	6	46	3			
52	Wells, pumped.....number.....		6				
53	Wells, pumped and flowing; or wells flowing.....number.....		10	1			
54	Lakes, gravity or pumped.....number.....		1				
55	Streams and springs; or springs.....number.....		6		2		
56	Mixed, streams and wells.....number.....		5	2	2		1
57	Other mixed or stored storm water.....number.....	12	22	4			

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
² Data for less than 3 enterprises shown with permission of the enterprises involved.
³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁵ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - SOUTH DAKOTA

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

PRIMARY ENTERPRISES (For definitions and explanations, see text)		COST OF IRRIGATION WORKS AND EQUIPMENT				
		Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999
1	Enterprises, 1940.....number...	239	22	11	1	1
2	Irrigated farms, 1939.....number...	286	69	147	120	676
3	Area irrigated, 1939.....acres....	11,021	3,962	10,634	359	34,222
4	(a) From which crops were harvested.....acres....	8,365	3,111	8,574	359	30,015
5	(b) On which crops failed.....acres....	824	402	1,060	.....	.....
6	(c) Irrigated pasture.....acres....	1,832	449	1,000	.....	4,207
CAPITAL INVESTMENT, 1940						
7	Total capital investment in all enterprises.....dollars..	150,568	170,836	278,471	166,867	4,628,868
8	(a) Cost of irrigation works and equipment.....dollars..	148,168	169,291	272,671	166,867	4,628,868
9	(b) Investment in water rights.....dollars..	4,400	1,545	5,800	.....	.....
10	Area works were capable of supplying with water.....acres....	21,671	12,244	14,917	511	72,504
11	Average investment per acre irrigated.....dollars..	13.66	43.12	26.19	464.81	135.26
12	Average investment per acre which the works could supply with water.....dollars..	6.95	13.95	18.67	326.55	63.84
MAINTENANCE AND OPERATION, AND CHARGES, 1939						
13	Enterprises reporting maintenance and operation.....number...	149	19	11	1	1
14	(a) Area irrigated in these enterprises.....acres....	7,355	3,856	10,634	359	34,222
15	(b) Cost of maintenance and operation.....dollars..	14,393	3,601	3,444	284	50,264
16	(c) Average cost per irrigated acre reporting.....dollars..	1.96	0.93	0.32	0.79	1.47
17	Total annual charges ².....dollars..	484	1,395	7,818	284	121,509
18	Average charge per irrigated acre reporting.....dollars..	0.55	0.50	0.71	0.79	3.55
19	Area against which charges were assessed.....acres....	884	6,133	12,834	359	52,830
20	Average annual charge per acre assessed.....dollars..	0.55	0.23	0.61	0.79	2.30
21	Total charges collected ².....dollars..	351	1,276	7,482	.....	71,771
INDEBTEDNESS AND ARREARAGE, 1939						
22	Enterprises reporting indebtedness ³.....number...	.....	1	1	.....	1
23	(a) Area irrigated in these enterprises.....acres....	.....	64	85	.....	34,222
24	(b) Indebtedness.....dollars..	.....	5,700	16,928	.....	4,577,395
25	(c) Average indebtedness per acre irrigated.....dollars..	.....	89.06	199.15	.....	133.76
26	(d) Cost of irrigation works and equipment.....dollars..	.....	5,700	16,928	.....	4,628,868
27	(e) Investment in water rights.....dollars..	.....	.....	.....	.....	.....
28	(f) Total investment.....dollars..	.....	5,700	16,928	.....	4,628,868
29	(g) Maintenance and operation.....dollars..	.....	.....	40	.....	50,264
30	(h) Total annual charges ².....dollars..	.....	.....	40	.....	121,509
31	(i) Total charges collected ².....dollars..	.....	.....	.....	.....	74,771
32	(j) Area against which annual charges were assessed.....acres....	.....	.....	85	.....	52,830
33	(k) Average indebtedness per acre assessed.....dollars..	.....	.....	199.15	.....	86.64
34	(l) Average charges per acre assessed.....dollars..	.....	.....	0.47	.....	2.30
35	(m) Average charges per acre irrigated.....dollars..	.....	.....	0.47	.....	3.55
36	Enterprises reporting arrearage ³.....number...	.....	.....	.....	.....	1
37	(a) Area assessed in these enterprises.....acres....	.....	.....	.....	.....	52,830
38	(b) Total arrearage.....dollars..	.....	.....	.....	.....	66,992
39	(c) Average arrearage per acre assessed.....dollars..	.....	.....	.....	.....	1.27
40	(d) Indebtedness.....dollars..	.....	.....	.....	.....	4,577,395
TYPE, 1940						
41	Individual and partnership.....number...	220	11	2	.....	.....
42	Cooperative (incorporated and unincorporated).....number...	9	5	7	.....	.....
43	Commercial.....number...	.....	.....	.....	.....	1
44	U. S. Bureau of Reclamation.....number...	.....	.....	.....	.....	.....
45	U. S. Office of Indian Affairs.....number...	9	6	2	1	.....
46	All other.....number...	1	.....	.....	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939						
47	Enterprises reporting pay roll.....number...	4	5	7	.....	1
48	Wages and salaries paid and payable for 1939.....dollars..	354	9,582	12,216	.....	38,812
49	Persons employed during week ending April 29, 1939.....number...	14	17	49	.....	34
SOURCE OF WATER SUPPLY, 1939						
50	Streams, gravity.....number...	125	11	9	.....	.....
51	Streams, pumped.....number...	48	6	1	.....	.....
52	Wells, pumped.....number...	6	.....	.....	.....	.....
53	Wells, pumped and flowing; or wells flowing.....number...	10	1	.....	.....	.....
54	Lakes, gravity or pumped.....number..	1	.....	.....	.....	.....
55	Streams and springs; or springs.....number..	8	.....	.....	.....	.....
56	Mixed, streams and wells.....number..	5	2	1	1	1
57	Other mixed or stored storm water.....number..	36	2	.....	.....	.....

¹Data for less than 3 enterprises shown with permission of the enterprises involved.
²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — SOUTH DAKOTA

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STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.—Dec.		Jan.—Mar.		Apr.—June		July—Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
<i>Missouri River</i>		<i>Feet</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Degrees F.</i>	<i>Degrees F.</i>
Belle Fourche.....	Butte.....	3,018	9.17	-5.49	0.70	-1.14	0.41	-1.10	3.87	-2.63	4.19	-0.62	48.3	+3.2
Ardmore.....	Fall River...	3,557	12.73	-2.49	1.39	-0.46	1.97	+0.66	5.32	-2.08	4.05	-0.61	48.9	+3.6
Ludlow.....	Harding.....	3,200	14.73	+1.76	0.90	-0.56	0.87	-0.19	5.63	-0.76	7.33	+3.27	45.4	+1.7
Rapid City.....	Pennington...	3,231	10.31	-7.67	0.94	-0.93	1.57	-0.33	3.94	-4.98	3.86	-1.43	50.2	+5.1
Pine Ridge.....	Shannon.....	3,200	12.30	-5.21	0.54	-1.70	1.69	+0.24	6.55	-1.39	3.52	-2.36	49.8	+2.5
Bison.....	Perkins.....	2,600	9.54	-6.93	0.81	-0.83	1.52	-0.17	5.38	-1.56	1.83	-4.37	46.1	+2.1
Cottonwood.....	Jackson.....	2,414	8.37	-7.27	1.19	-0.62	0.77	-0.46	3.59	-3.63	2.82	-2.56	49.6	+3.3
Dupree.....	Ziebach.....	2,353	11.06	-5.81	0.61	-1.84	1.47	-0.82	6.63	-0.02	2.35	-3.13	48.3	+2.6
McIntosh.....	Corson.....	2,272	13.14	-4.99	0.68	-1.30	1.05	-0.84	6.70	-1.89	4.71	-0.96	46.2	+4.6
Timber Lake.....	Dewey.....	2,161	12.61	-7.35	0.81	-1.23	1.08	-1.03	8.84	-0.17	1.88	-4.92	46.6	+2.8
Mobridge.....	Walworth.....	1,653	11.78	-6.09	0.69	-1.21	0.88	-1.39	7.80	-0.04	2.41	-3.45	48.4	+3.5
Pierre.....	Hughes.....	1,552	13.11	-3.59	0.70	-1.09	2.07	+0.29	6.93	-0.33	3.41	-2.46	51.6	+5.2
Pollock.....	Campbell.....	1,606	11.99	-4.67	0.65	-1.44	0.67	-1.06	8.53	+1.44	2.14	-3.61	45.1	+2.8
Kennebec.....	Lyman.....	1,691	15.42	-2.18	0.56	-1.69	3.25	+1.43	8.68	+0.97	2.93	-2.89	50.7	+4.1
Bedfield.....	Spink.....	1,295	16.06	-3.22	0.80	-1.72	3.63	+1.79	9.70	+1.75	1.93	-5.04	48.7	+4.7
Aberdeen.....	Brown.....	1,299	22.13	-2.65	1.18	-2.16	2.15	-0.71	11.93	+1.78	6.87	-1.56	45.0	+1.8
Wagner.....	Charles Mix..	1,441	17.20	-8.34	0.63	-3.06	3.24	+0.14	7.31	-2.48	6.02	-2.94	52.6	+4.0
Witchell.....	Davison.....	1,293	17.10	-6.02	0.35	-2.45	1.66	-0.60	8.53	-1.35	6.56	-1.62	50.6	+4.4
Eriton.....	Marshall.....	1,352	15.40	-4.84	0.92	-1.62	1.89	+0.21	9.87	+1.61	2.72	-5.04	45.5	+2.6
Watertown.....	Codington...	1,734	20.73	-0.69	0.79	-1.87	2.77	+1.00	11.19	+2.02	5.98	-1.84	45.8	+3.7
Vermillion.....	Clay.....	1,222	15.92	-9.54	2.24	-1.39	2.19	-0.37	5.61	-3.98	5.88	-3.80	51.4	+2.4
Sioux Falls.....	Minnehaha...	1,425	26.34	-0.08	2.89	-0.80	2.99	+0.58	12.30	+1.53	8.16	-1.39	49.5	+3.7

¹Departure from normal.

Precipitation in South Dakota during both the calendar year (1939) and especially for the water year (October 1938 through September 1939), as reported by the United States Weather Bureau, was substantially below normal in all parts of the State.

The average annual precipitation for the State as computed by the Weather Bureau is 17.50 inches for 1938 and 15.71 inches for 1939, and the departures are -1.44 inches for 1938 and -3.16 inches for 1939. However, the departure for the water year 1939 for the 22 representative stations shown in the accompanying State table number 18 ranged from +1.76 inches (one station only above normal) to -9.54 inches, with an average for these stations of -4.70 inches. The Weather Bureau reports further:

"High temperatures and deficient moisture in May were detrimental to crops and grain headed short. Much wheat and rye acreage was plowed under to be reseeded to other crops. Grasshoppers began hatching in great numbers. High wind and heavy hail damaged property in several southern counties on the 22d. June, the wettest month of the year, was favorable for crops, and the top soil over the greater portion of the State was moistened to depths of 1½ to over 5 feet. High winds and hailstorms, the worst of the year, caused extensive property damage in the eastern half on the 7th and 16th and in scattered counties on the 27th. June rains arrived too late to benefit winter

grains, but late seeded spring grains made a wonderful growth and were filling well.

"Corn was hip high and much was laid by. Grasshopper damage was slight. July weather was favorable for harvesting and threshing but trying on growing crops, especially in the western half. High damaging winds occurred from the 4th to 13th and again on the 20th. Heavy hail damaged property in the central section on the 2d and in southern counties on the 5-6th and on the 30th. Corn commenced to shrink badly, due to continuous heat, drought, and grasshopper infestation. Small grain harvest was completed with good returns in the northeast quarter but disappointing elsewhere. Range and gardens deteriorated. The water situation became acute in the western half, and much stock was shipped out. Conditions did not improve in August. No change from high temperature and deficient moisture occurred in September and October. The first killing frost of the season occurred the closing week of September, except for a number of south-central points where it was delayed until October 14. The ground generally was too hard and dry for fall plowing and seeding. Haying progressed and a plentiful supply of winter rough feed was assured, except in the southwest section. It was estimated that the crop of cane and sorghums was two and one-half times the record 1938 production. Corn dried out early, and final returns were much better than anticipated. The potato crop was fair. Only a fair crop of sugar beets was harvested in the western irrigated area."

CENSUS OF IRRIGATION - SOUTH DAKOTA

DRAINAGE BASIN TABLE I.-AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSISSIPPI RIVER (Mississippi River drains entire State; therefore, Mississippi River total for South Dakota is identical with State total)					
		Missouri River					
		Total	Direct (5)	Little Missouri River (7)	Grand River (6)	Moreau River (8)	
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	1,298	1,298	25	5	17	127
2	Area irrigated.....1939..acres.....	60,198	60,198	776	262	566	631
3	(a) Cropland harvested.....1939..acres.....	50,424	50,424	745	237	564	602
4	(b) Crop failure.....1939..acres.....	2,286	2,286	31	.....	2	29
5	(c) Pasture.....1939..acres.....	7,488	7,488	.....	25	.....	.....
6	Area irrigated.....1929..acres.....	67,107	67,107	5	.....	.....	60
7	.....1919..acres.....	100,682	100,682	.....	640	.....	305
8	Increase or decrease (-), 1929-1939.....percent.....	-10.3	-10.3	(¹)	.....	.....	951.7
9	Irrigable area in enterprises.....1940..acres.....	123,961	123,961	1,529	402	1,097	1,222
10	.....1930..acres.....	122,510	122,510	13	.....	.....	60
11	.....1920 ² ..acres.....	188,382	188,382	600	4,133	.....	3,094
12	Excess of irrigable area over the area irrigated.....1940..acres.....	63,763	63,763	753	140	531	591
13	.....1930..acres.....	55,403	55,403	8	.....	.....	.....
14	.....1920 ² ..acres.....	87,700	87,700	600	3,493	.....	2,789
15	Area works were capable of supplying with water...1940..acres.....	121,847	121,847	1,246	352	697	1,027
16	.....1930..acres.....	109,550	109,550	8	.....	.....	60
17	.....1920..acres.....	150,914	150,914	150	3,323	.....	1,721
18	Increase or decrease (-), 1930-1940.....percent.....	11.2	11.2	(¹)	.....	.....	(¹)
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	61,649	61,649	470	90	131	396
20	.....1930..acres.....	42,443	42,443	3	.....	.....	.....
21	.....1920..acres.....	50,232	50,232	150	2,683	.....	1,416
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	49.4	49.4	62.3	74.4	81.2	61.4
23	.....1929..percent.....	61.3	61.3	62.5	.....	.....	100.0
24	.....1919..percent.....	66.7	66.7	.....	19.3	.....	17.7
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	5,395,610	5,395,610	62,110	5,025	26,883	175,843
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	5,383,865	5,383,865	62,110	5,025	26,880	175,797
27	(b) Investment in water rights (reported).....1940..dollars.....	11,745	11,745	.....	.....	3	46
28	Total investment in irrigation enterprises.....1930..dollars.....	4,502,117	4,502,117	600	.....	.....	60
29	.....1920..dollars.....	5,465,248	5,465,248	3,512	55,818	.....	40,927
30	Increase or decrease (-), 1930-1940.....percent.....	19.8	19.8	(¹)	.....	.....	(¹)
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	44.28	44.28	49.85	14.28	38.57	171.22
32	.....1930..dollars.....	41.10	41.10	75.00	.....	.....	1.00
33	.....1920..dollars.....	36.21	36.21	23.41	16.80	.....	23.78
34	Average investment per acre irrigated.....1939..dollars.....	89.63	89.63	80.04	19.18	47.50	278.67
35	Estimated final investment in existing enterprises.....1940..dollars.....	5,432,934	5,432,934	74,210	5,900	27,783	180,143
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	43.83	43.83	48.53	14.68	25.33	147.42
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
37	Enterprises reporting maintenance and operation...1939..number.....	181	181	17	4	11	8
38	Area irrigated in these enterprises.....1939..acres.....	56,426	56,426	599	150	396	604
39	Cost of maintenance and operation.....1939..dollars.....	71,986	71,986	1,985	215	1,772	1,138
40	Average cost, per acre irrigated.....1939..dollars.....	1.28	1.28	3.31	1.43	4.47	1.88
41	Total annual charges (reported) ³ 4.....1939..dollars.....	131,490	131,490	.....	.....	.....	284
42	Average annual charge per acre irrigated.....1939..dollars.....	2.68	2.68	.....	.....	.....	0.79
43	Area against which charges were assessed.....1939..acres.....	73,040	73,040	.....	.....	.....	359
44	Average annual charge per acre assessed.....1939..dollars.....	1.80	1.80	.....	.....	.....	0.79
45	Total charges collected ⁵.....1939..dollars.....	83,883	83,883	.....	.....	.....	.....
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	4,600,023	4,600,023	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	167	167	9	4	10	7
48	Area irrigated by these enterprises.....1939..acres.....	52,345	52,345	225	237	246	596
49	Water delivered.....1939..acre-feet.....	58,797	58,797	610	284	383	881
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.1	1.1	2.6	1.2	1.6	1.5
51	Average cost of water per acre irrigated.....1939..dollars.....	2.72	2.72	7.52	1.52	5.98	1.41
52	Average cost of water per acre-foot delivered..1939..dollars.....	2.43	2.43	2.90	1.27	3.84	0.96
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	15	15	61	2	2	.....
54	Irrigable area in these enterprises.....1939..acres.....	74,640	74,640	210	(⁶)	(⁶)	.....
55	Irrigated area in these enterprises.....1939..acres.....	36,072	36,072	101	(⁶)	(⁶)	.....
56	Area for which drains have been installed.....1939..acres.....	25,906	25,906	20	(⁶)	(⁶)	.....
57	Additional area needing drainage.....1939..acres.....	5,509	5,509	10	.....	.....	.....

¹ Percent not shown when more than 1,000.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION — SOUTH DAKOTA

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

MISSISSIPPI RIVER—Continued															
Missouri River—Continued															
Cheyenne River										White River					
Total	Direct	Cherry Creek	Belle Fourche River			South Fork Cheyenne River				Total	Direct	South Fork White River	James River	Big Sioux River	
			Total	Direct	Redwater Creek	Total	Direct	Battle and Spring Creeks	Rapid and Box Elder Creeks						Elk Creek
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
1,080	5	5	853	744	109	217	44	20	117	36	32	9	23	8	4
56,187	350	25	43,055	39,391	3,664	12,757	3,173	764	8,495	325	1,397	468	929	286	93
46,520	127	25	37,722	34,495	3,227	8,646	2,245	327	6,024	50	1,377	452	925	286	93
2,220	205	.....	386	185	201	1,629	154	247	1,228	.....	4	.....	4	.....	.....
7,447	18	.....	4,947	4,711	236	2,462	774	190	1,243	.....	16	.....	.....	.....	.....
66,031	.....	.....	51,342	.....	.....	14,678	.....	.....	.....	.....	4	.....	.....	.....	.....
99,333	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
-14.9	.....	.....	-16.1	.....	.....	-13.1	.....	.....	.....	.....	(1)	.....	.....	.....	.....
115,968	1,072	147	84,707	79,058	5,649	30,042	6,938	5,455	15,176	2,473	3,328	2,152	1,176	292	123
120,984	.....	.....	97,159	.....	.....	23,624	.....	.....	.....	.....	4	.....	.....	.....	.....
176,716	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
59,781	722	122	41,652	39,667	1,985	17,285	3,765	4,691	6,681	2,148	1,931	1,684	247	6	30
54,953	.....	.....	45,817	.....	.....	8,946	.....	.....	.....	.....	.....	.....	.....	.....	.....
77,382	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
115,175	806	141	84,453	78,890	5,563	29,775	6,768	5,455	15,086	2,466	2,945	1,852	1,093	292	113
108,324	.....	.....	90,359	.....	.....	17,864	.....	.....	.....	.....	4	.....	.....	.....	.....
143,847	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6.3	.....	.....	-6.5	.....	.....	66.7	.....	.....	.....	.....	(1)	.....	.....	.....	.....
58,988	456	116	41,398	39,499	1,899	17,018	3,595	4,691	6,591	2,141	1,548	1,384	164	6	20
42,293	.....	.....	39,017	.....	.....	3,186	.....	.....	.....	.....	.....	.....	.....	.....	.....
44,514	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
48.8	43.4	17.7	51.0	49.9	65.9	42.8	46.9	14.0	56.3	13.2	47.4	25.3	85.0	97.9	82.3
61.0	.....	.....	56.8	.....	.....	82.2	.....	.....	.....	.....	100.0	.....	.....	.....	.....
69.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5,050,244	1,550	2,115	4,820,812	4,729,420	91,392	225,767	41,284	29,363	134,820	20,300	56,499	28,986	27,513	9,025	9,981
5,038,853	1,550	2,115	4,815,495	4,729,418	86,077	219,693	39,450	29,123	130,820	20,300	56,194	28,681	27,513	9,025	9,981
11,391	.....	.....	5,317	.....	5,315	6,074	1,834	.....	4,000	.....	305	.....	.....	.....	.....
4,476,175	.....	.....	4,273,434	.....	.....	196,491	.....	.....	.....	.....	207	.....	.....	.....	.....
5,277,782	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12.8	.....	.....	12.8	.....	.....	14.9	.....	.....	.....	.....	(1)	.....	.....	.....	.....
43.85	1.92	15.00	57.08	59.95	16.43	7.58	6.10	5.38	8.94	8.23	19.18	15.65	25.17	30.91	88.33
41.32	.....	.....	47.29	.....	.....	11.00	.....	.....	.....	.....	51.75	.....	.....	.....	.....
36.69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
89.88	4.43	84.60	111.97	120.06	24.94	17.70	13.01	38.43	15.87	62.46	40.44	61.94	29.62	31.56	107.32
5,065,169	3,200	2,530	4,821,652	4,730,260	91,392	237,787	51,934	29,363	135,020	21,470	60,549	32,486	28,063	9,025	10,155
43.68	2.99	17.21	56.92	59.83	16.18	7.92	7.49	5.38	8.90	8.68	18.19	15.10	23.86	30.91	82.56
117	5	10	34	12	22	68	21	25	17	5	14	10	4	6	4
53,476	350	25	42,420	39,229	3,191	10,681	1,900	685	8,006	90	884	468	416	294	93
69,457	755	159	54,057	52,587	1,470	8,486	4,397	973	2,775	341	2,066	1,571	495	562	791
1.19	2.16	6.36	1.27	1.34	0.46	0.79	2.31	1.42	0.35	3.79	2.34	3.36	1.19	2.51	8.51
131,166	.....	.....	124,049	122,908	1,141	7,117	550	22	6,545	.....	40	.....	40	.....	.....
2.70	.....	.....	3.06	3.16	0.73	0.88	1.49	.....	0.85	.....	0.47	.....	0.47	.....	.....
72,596	.....	.....	59,483	57,924	1,559	13,113	370	2,200	10,543	.....	85	.....	85	.....	.....
1.81	.....	.....	2.09	2.12	0.73	0.54	1.49	0.01	0.62	.....	0.47	.....	0.47	.....	.....
83,883	.....	.....	77,002	76,285	717	6,881	450	22	6,409	.....	.....	.....	.....	.....	.....
4,577,395	.....	.....	4,577,395	4,577,395	.....	.....	.....	.....	.....	.....	22,628	.....	22,628	.....	.....
115	5	5	25	14	11	80	12	18	15	35	12	7	5	7	3
50,085	350	25	41,207	39,017	2,190	8,503	1,160	741	6,327	275	622	382	240	236	88
55,605	384	36	40,756	36,139	4,617	14,429	3,099	345	10,975	110	662	436	226	313	59
1.1	1.1	1.4	1.0	0.9	2.1	1.7	2.7	0.5	1.7	0.4	1.1	1.1	0.9	1.3	0.7
2.69	2.16	5.20	3.03	3.17	0.57	0.96	2.40	0.69	0.74	1.56	3.48	3.72	2.55	2.05	8.98
2.42	1.97	3.61	3.07	3.42	0.27	0.57	0.90	1.99	0.43	3.89	3.27	3.26	2.71	1.55	13.39
5	.....	.....	(e) 1	(e) 2	(e) 2	(e) 2	.....	.....	(e) 2	.....	(e) 2	.....	(e) 2	(e) 2	(e) 1
74,097	.....	.....	(e)	(e)	(e)	(e)	.....	.....	(e)	.....	(e)	.....	(e)	(e)	78
35,787	.....	.....	(e)	(e)	(e)	(e)	.....	.....	(e)	.....	(e)	.....	(e)	(e)	55
25,750	.....	.....	(e)	(e)	(e)	(e)	.....	.....	(e)	.....	(e)	.....	(e)	(e)	56
5,483	.....	.....	(e)	(e)	(e)	(e)	.....	.....	(e)	.....	(e)	.....	(e)	(e)	11

⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁵ Data for less than 3 enterprises shown with permission of the enterprise involved.
⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — SOUTH DAKOTA

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSISSIPPI RIVER (Mississippi River drains entire State; therefore, Mississippi River total for South Dakota is identical with State total)					
		Missouri River					
		Total	Direct (5)	Little Missouri River (7)	Grand River (6)	Moreau River (8)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1	Enterprises.....1940..number.....	274	274	22	5	13	9
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	445	445	57	70	54	114
3	Diversion dams.....1940..total number.....	258	258	3	2	17	6
4	.....1930..total number.....	91	91				1
5	.....1920..total number.....	207	207		9		3
6	(a) Concrete and masonry.....1940..number.....	13	13			2	
7	(b) Timber.....1940..number.....	19	19				
8	(c) Earth and rock.....1940..number.....	198	198	3	2	15	6
9	(d) Other, mixed, and not reported.....1940..number.....	28	28				
10	Main canals and laterals.....1940..total length, miles.....	1,049.3	1,049.3	25.0	5.0	7.0	28.3
11	.....1930..total length, miles.....	1,082	1,082				
12	.....1920..total length, miles.....	1,258	1,258	3	47		28
13	(a) Earth.....1940..length, miles.....	1,038	1,038	25	5	7	28
14	(b) Lined.....1940..length, miles.....	11.3	11.3				0.3
15	.....1940..capacity, c.f.s. ¹	1,948	1,948	45	19	24	75
16	.....1930..capacity, c.f.s. ¹	1,995	1,995				
17	.....1920..capacity, c.f.s. ¹	5,427	5,427	3	90		39
18	Pipe lines ².....1940..total length, miles.....	17.3	17.3	2.8		0.5	0.1
19	.....1930..total length, miles.....	8.9	8.9				
20	.....1920..total length, miles.....	7.2	7.2		0.1		0.3
21	(a) Concrete.....1940..length, miles.....	5.7	5.7				
22	(b) Metal.....1940..length, miles.....	11.0	11.0	2.8		0.5	0.1
23	(c) Wood-stave.....1940..length, miles.....	0.5	0.5				
24	(d) Other.....1940..length, miles.....	0.1	0.1				
25	Storage dams.....1940..total number.....	74	74	5	2	6	10
26	.....1930..total number.....	10	10				
27	.....1920..total number.....	182	182		16		55
28	(a) Concrete and masonry.....1940..number.....	2	2			1	
29	(b) Earth and rock.....1940..number.....	69	69	5	2	5	10
30	(c) Other, mixed, and not reported.....1940..number.....	3	3				
31	Reservoirs.....1940..total number.....	82	82	5	2	6	10
32	(a) 1-99 acre-foot capacity.....1940..number.....	68	68	4	2	4	5
33	(b) 100-999 acre-foot capacity.....1940..number.....	11	11			2	4
34	(c) 1,000 and over acre-foot capacity.....1940..number.....	3	3	1			1
35	.....1940..total capacity, ac.-ft. ³	209,785	209,785	6,097	(⁴)	535	3,110
36	.....1930..total capacity, ac.-ft. ³	5	5				
37	.....1920..total capacity, ac.-ft. ³	203,124	203,124				
38	Wells, flowing.....1940..number.....	19	19	12			
39	.....1930..number.....	13	13				
40	.....1920..number.....	4	4				
41	.....1940..yield, g.p.m.....	5,377	5,377	3,485			
42	.....1930..yield, g.p.m.....	4,825	4,825				
43	.....1920..yield, g.p.m.....	2,750	2,750				
44	Wells, pumped.....1940..number.....	16	16	3			
45	.....1930..number.....	1	1				
46	.....1920..number.....	1	1				
47	.....1940..yield, g.p.m.....	1,039	1,039	450			
48	.....1930..yield, g.p.m.....	375	375				
49	.....1920..yield, g.p.m.....	800	800				
50	Pumping plants.....1940..total number.....	119	119	21	3	7	14
51	.....1930..total number.....	8	8	2			
52	Prime movers.....1940..capacity, hp.....	2,060	2,060	368	70	132	231
53	.....1930..capacity, hp.....	92	92	7			
54	.....1920..capacity, hp.....	498	498	40	175		60
55	(a) Electric.....1940..number.....	6	6	1			
56	.....1940..capacity, hp.....	239	239	(⁴)			
57	(b) Internal-combustion.....1940..number.....	110	110	20	3	7	14
58	.....1940..capacity, hp.....	1,813	1,813	328	70	132	231
59	(c) Other.....1940..number.....	1	1				
60	.....1940..capacity, hp.....	(⁴)	(⁴)				
61	Pumps.....1940..total number.....	127	127	28	3	7	14
62	.....1930..number.....	8	8	2			
63	.....1920..number.....	25	25	1	4		3
64	.....1940..capacity, g.p.m.....	103,050	103,050	13,820	5,700	4,625	13,790
65	.....1930..capacity, g.p.m.....	4,027	4,027	110			
66	.....1920..capacity, g.p.m.....	23,320	23,320	1,500	8,000		1,800
67	(a) Centrifugal.....1940..number.....	113	113	25	3	7	14
68	.....1940..capacity, g.p.m.....	101,483	101,483	13,250	5,700	4,625	13,790
69	.....1940..average capacity, g.p.m.....	898	898	530	1,900	661	985
70	(b) Turbine.....1940..number.....	6	6	2			
71	.....1940..capacity, g.p.m.....	320	320	(⁴)			
72	.....1940..average capacity, g.p.m.....	53	53	(⁴)			
73	(c) Plunger.....1940..number.....	5	5				
74	.....1940..capacity, g.p.m.....	197	197				
75	.....1940..average capacity, g.p.m.....	39	39				
76	(d) Other.....1940..number.....	3	3	1			
77	.....1940..capacity, g.p.m.....	1,050	1,050	(⁴)			
78	Pumping lift, from all sources.....1940..average, feet.....	20	20	16	13	12	33
79	.....1930..average, feet.....	27	27	8			
80	.....1920..average, feet.....	21	21	25	32		30
81	from pumped wells.....1940..average, feet.....	55	55				
82	from surface sources.....1940..average, feet.....	17	17	16	13	12	33

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

²Includes siphons and farm pipe lines reported.

³Total capacity of all reservoirs regardless of size.

CENSUS OF IRRIGATION - SOUTH DAKOTA

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WORKS, 1940, 1930, AND 1920

MISSISSIPPI RIVER—Continued																
Missouri River—Continued																
Cheyenne River											White River					
Total	Direct	Cherry Creek	Belle Fourche River			South Fork Cheyenne River					Total	Direct	South Fork White River	James Rlyer	Big Sioux River	
			Total	Direct	Redwater Creek	Total	Direct	Battle and Spring Creeks	Rapid and Box Elder Creeks	Elk Creek						(26)	(24)	(15)	(14)
	(10)	(11)	(12)	(13)	(12)	(13)	(26)	(24)	(15)	(14)	(22)	(27)	(4)	(3)		
194	5	15	49	24	25	125	25	34	25	41	19	10	9	8	4	1
594	161	9	1,724	3,287	223	238	271	160	603	60	155	185	121	36	28	2
215	10	18	33	16	17	154	20	63	26	45	14	2	12		1	3
85			52			32					1					4
182			6	6		5		1	2	2						5
11			7			12	1	9	2							6
19			11	6	5	120	15	45	17	43	12	2	10			7
159	10	18	9	4	5	17	4	8	5		2		2			8
26																9
965.0	5.0	6.0	760.6	713.5	47.1	193.4	54.0	47.0	67.4	25.0	18.0	14.0	4.0		1.0	10
1,077			967			109					1					11
1,148																12
954	5	6	751	705	46	192	54	46	67	25	18	14	4		1	13
11.0			9.6	8.5	1.1	1.4		1.0	0.4							14
1,684	13	15	926	798	128	730	122	139	369	100	78	47	31	16	7	15
1,939			1,469			469					2					16
5,210																17
8.3		0.6	6.7	6.6	0.1	1.0	0.1	0.8	0.1		1.5	0.2	1.3	1.2	2.9	18
8.4			7.2			0.2										19
6.8																20
5.7			5.7	5.7												21
2.3		0.6	0.7	0.7		1.0	0.1	0.8	0.1		1.2	0.2	1.0	1.2	2.9	22
0.2			0.2	0.2							0.3		0.3			23
0.1			0.1		0.1											24
47		2	20	16	4	25	3	10	2	10	3	1	2	1		25
9			2			4										26
95																27
1			1	1												28
43		2	17	14	3	24	3	9	2	10	3	1	2	1		29
3			2	1	1	1		1								30
55		3	22	16	6	30	3	11	2	14	3	1	2	1		31
51		3	21	15	6	27	2	11		14	1	1		1		32
3						3	1		2		2		2			33
1			1	1												34
198,957		5	197,320	197,270	50	1,632	210	92	(*)	110	1,001	(*)	(*)	(*)		35
4			1			3										36
203,121			203,000			121										37
6			4		4	2	2								1	38
8			7			1										39
4																40
1,890			1,750		1,750	(*)	(*)								(*)	41
2,885			2,855			30										42
2,750																43
3						3	2		1		1		1	6	3	44
1																45
140						140	(*)		(*)		(*)		(*)	209	185	46
800																47
29	6	1	8	8		14	11	1	2		27	12	15	12	6	50
4			2			2			(*)							51
599	138	(*)	243	243		216	168	(*)	(*)		416	275	141	206	38	52
64			22			42										53
173			5	5												54
5			1	1												55
125			125	125										3	3	56
27	6	1	6	6		14	11	1	(*)	2	27	12	15	9	3	57
466	138	(*)	110	110		216	168	(*)	(*)		416	275	141	140	30	58
1			1	1												59
(*)			(*)	(*)												60
29	5	1	9	9		14	11	1	2		27	12	15	13	6	61
4			2			2										62
14																63
32,580	7,200	(*)	14,150	14,150		11,210	9,540	(*)	(*)		23,591	12,760	10,631	6,329	2,615	64
2,480			1,360			1,120										65
9,550																66
27	5	1	7	7		14	11	1	2		26	12	14	8	3	67
31,980	7,200	(*)	13,550	13,550		11,210	9,540	(*)	(*)		23,585	12,760	10,625	6,123	2,430	68
1,184	1,440	(*)	1,936	1,936		801	867	(*)	(*)		907	1,063	773	765	810	69
														4		70
														200		71
														50		72
											(*)		(*)	1		73
											(*)		(*)	(*)	165	74
														(*)	62	75
(*)			(*)	(*)												76
15	16	(*)	18	18		14	13	(*)	(*)		30	28	34	17	58	77
39			35			41										78
16																79
22						22			(*)		(*)		(*)	30	74	80
15	16	(*)	18	18		13	13	(*)	(*)		26	28	21	16	25	81

* Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
 † Data for less than 3 enterprises shown with permission of the enterprises involved.

CENSUS OF IRRIGATION — SOUTH DAKOTA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1930 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL	Beadle	Bennett	Butte	Charles Mix	Corson	Custer
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^o							
1 All farms.....1940..number.....	72,454	1,724	559	800	1,927	923	551
2 ..1930..number.....	83,137	2,078	631	982	2,241	1,543	629
3 Irrigated farms.....1940..number.....	967	5	8	478	11	10	25
4 ..1930..number.....	763	.....	.....	524	2	.....	13
5 Increase or decrease (-), 1930-1940.....percent.....	26.7	.....	.....	-8.8	450.0	.....	92.3
Operated by—							
6 (a) Owners and managers.....1940..number.....	586	3	7	246	8	6	18
7 ..1930..number.....	453	.....	.....	276	.....	.....	10
8 (b) Tenants.....1940..number.....	381	2	1	232	3	4	7
9 ..1930..number.....	310	.....	.....	248	.....	.....	3
10 Land in all farms.....1940..acres.....	39,473,584	715,469	647,427	1,132,961	665,645	967,781	526,219
11 ..1940..acres.....	1,021,659	997	43,850	281,847	7,266	7,620	39,179
12 Average per farm.....1940..acres.....	1,057	199	5,481	590	681	762	1,567
13 (a) Operated by owners and managers.....1940..acres.....	663,702	(³)	(³)	216,010	6,806	4,740	33,024
14 Average per farm.....1940..acres.....	1,474	(³)	(³)	878	823	790	1,635
15 (b) Operated by tenants.....1940..acres.....	157,957	(³)	(³)	65,837	660	2,860	6,155
16 Average per farm.....1940..acres.....	415	(³)	(³)	284	220	720	879
17 Approximate land area.....1940..acres.....	48,983,040	807,040	759,680	1,440,640	723,840	1,616,000	983,280
IRRIGATED AND IRRIGABLE AREAS							
18 Area irrigated.....1939..acres.....	60,198	137	780	36,460	255	55	941
19 (a) Cropland harvested.....1939..acres.....	50,424	137	780	33,685	236	53	675
20 (b) Crop failure.....1939..acres.....	2,286	.....	.....	195	20	2	50
21 (c) Pasture.....1939..acres.....	7,488	.....	.....	4,580	.....	.....	216
22 Area irrigated.....1929..acres.....	67,107	.....	.....	43,419	.....	.....	3,715
23 ..1919..acres.....	100,682	.....	.....	57,856	.....	.....	5,527
24 Increase or decrease (-), 1929-1939.....percent.....	-10.3	.....	.....	-11.4	.....	.....	-74.7
25 Irrigable area in enterprises.....1940..acres.....	123,961	143	884	76,001	324	61	6,330
26 ..1930..acres.....	122,510	.....	.....	85,791	.....	.....	4,065
27 ..1920 ⁴ ..acres.....	188,382	.....	.....	89,353	.....	.....	11,080
28 Excess of irrigable area over the area irrigated.....1940..acres.....	63,763	6	104	37,541	69	6	5,389
29 ..1930..acres.....	55,403	.....	.....	42,372	.....	.....	350
30 Area works were capable of supplying with water.....1940..acres.....	121,847	143	804	76,001	324	61	6,330
31 ..1930..acres.....	109,550	.....	.....	79,091	.....	.....	3,715
32 ..1920..acres.....	150,914	.....	.....	82,073	.....	.....	9,018
33 Increase or decrease (-), 1930-1940.....percent.....	11.2	.....	.....	-3.9	.....	.....	70.4
34 Excess, capability of works over area irrigated.....1940..acres.....	61,649	6	24	37,541	69	6	5,389
35 ..1930..acres.....	42,443	.....	.....	35,672	.....	.....	.....
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	5.9	13.7	1.6	13.6	3.5	0.7	2.4
37 ..1929..percent.....	17.7	.....	.....	21.4	.....	.....	16.8
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	49.4	95.8	97.0	50.6	78.7	90.2	14.9
39 ..1929..percent.....	61.3	.....	.....	54.9	.....	.....	100.0
CAPITAL INVESTED TO JANUARY 1							
40 Total investment in all enterprises.....1940..dollars.....	5,395,610	1,600	5,525	4,509,595	11,493	14,900	39,415
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	5,383,865	1,600	5,525	4,509,579	11,493	14,900	39,200
42 (b) Investment in water rights (reported).....1940..dollars.....	11,745	.....	.....	16	.....	.....	215
43 Total investment in all enterprises.....1930..dollars.....	4,502,117	.....	.....	3,989,174	.....	.....	9,150
44 ..1920..dollars.....	5,465,248	.....	.....	4,349,699	.....	.....	118,501
45 Increase or decrease (-), 1930-1940.....percent.....	19.8	.....	.....	13.0	.....	.....	330.8
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	44.28	11.19	6.87	59.34	35.47	244.26	6.23
47 ..1930..dollars.....	41.10	.....	.....	50.44	.....	.....	2.46
48 ..1920..dollars.....	36.21	.....	.....	53.00	.....	.....	13.14
49 Average investment per acre irrigated.....1939..dollars.....	89.63	11.68	7.08	117.25	45.07	270.91	41.89
50 Estimated final investment in existing enterprises.....1940..dollars.....	5,432,934	1,600	6,075	4,509,595	12,493	14,900	39,415
51 ..1930..dollars.....	5,174,417	.....	.....	4,648,174	.....	.....	9,150
52 ..1920..dollars.....	5,500,748	.....	.....	4,350,849	.....	.....	127,951
53 Increase or decrease (-), 1930-1940.....percent.....	5.0	.....	.....	-3.0	.....	.....	330.8
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	43.83	11.19	6.87	59.34	38.56	244.26	6.23
55 ..1930..dollars.....	42.24	.....	.....	54.18	.....	.....	2.25
56 ..1920 ⁴ ..dollars.....	29.20	.....	.....	48.69	.....	.....	11.55
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57 Enterprises reporting maintenance and operation.....1939..number.....	184	3	3	9	4	5	27
58 Area irrigated in these enterprises.....1939..acres.....	56,426	137	331	38,380	78	55	873
59 Cost of maintenance and operation.....1939..dollars.....	71,986	433	505	49,747	170	785	1,538
60 Average cost, per acre irrigated.....1939..dollars.....	1.28	3.16	1.53	1.30	2.18	14.27	1.76
61 ..1929..dollars.....	1.33	.....	.....	1.76	.....	.....	0.22
62 Total annual charges (reported) ⁵.....1939..dollars.....	131,490	.....	.....	118,042	.....	.....	22
63 Average annual charge per acre irrigated.....1939..dollars.....	2.68	.....	.....	3.12	.....	.....	.....
64 Area against which charges were assessed.....1939..acres.....	73,040	.....	.....	56,181	.....	.....	2,200
65 Average annual charge per acre assessed.....1939..dollars.....	1.80	.....	.....	2.10	.....	.....	0.01
66 Total charges collected ⁶.....1939..dollars.....	83,883	.....	.....	72,447	.....	.....	22
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	4,600,023	.....	.....	4,348,525	.....	.....	.....
WATER DELIVERED TO IRRIGATORS							
68 Enterprises reporting water delivered.....1939..number.....	170	2	3	8	2	5	19
69 Area irrigated in these enterprises.....1939..acres.....	52,345	(³)	91	38,224	(³)	55	687
70 Water delivered in these enterprises.....1939..acre-feet.....	56,797	(³)	68	35,491	(³)	112	480
71 Average water delivered per acre irrigated.....1939..acre-feet.....	1.1	(³)	0.7	0.9	(³)	2.0	0.7
72 Average cost of water per acre irrigated.....1939..dollars.....	2.72	(³)	23.18	3.09	(³)	14.27	1.17
DRAINAGE OF IRRIGATED LAND							
73 Enterprises reporting land drained or needing drainage.....1939..number.....	16	2	1	2	.....	.....	.....
74 Irrigable area in these enterprises.....1939..acres.....	74,640	(³)	(³)	(³)	.....	.....	.....
75 Irrigated area in these enterprises.....1939..acres.....	36,072	(³)	(³)	(³)	.....	.....	.....
76 Area for which drains have been installed.....1939..acres.....	25,906	(³)	(³)	(³)	.....	.....	.....
77 Additional area needing drainage.....1939..acres.....	5,509	.....	.....	(³)	.....	.....	.....

^o Census of Agriculture.

¹ Data not comparable between census years (see headnote).

² Percent not shown when more than 1,000.

³ Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - SOUTH DAKOTA

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
Irrigation data omitted from any of the counties listed are included under "All other counties"]

Fall River	Harding	Hughes	Jones	Lawrence	Lyman	Meade	Mellette	Minnehaha	Pennington	Perkins	Yankton	All other counties ¹	
587	569	435	414	469	801	1,365	587	2,458	1,065	1,097	1,519	54,581	1
821	772	590	530	411	1,145	1,819	855	2,423	1,303	1,502	1,616	61,066	2
33	9	3	3	87	6	74	10	9	68	15	6	107	3
18	2	2	.....	87	5	22	.....	.....	78	2	.....	8	4
83.3	.....	.....	.....	.....	.....	236.4	.....	.....	-12.8	650.0	.....	(²)	5
27	8	2	3	47	5	50	8	9	56	12	6	65	6
13	.....	.....	.....	65	.....	19	.....	.....	55	.....	.....	15	7
6	1	1	.....	40	1	24	2	.....	12	3	.....	42	8
5	.....	.....	.....	22	.....	3	.....	.....	23	.....	.....	6	9
849,454	1,555,237	382,322	487,000	173,320	916,030	1,996,876	790,170	500,158	1,009,068	1,344,365	309,975	24,503,907	10
70,507	51,312	3,678	6,100	30,628	19,066	129,805	12,708	516	120,736	40,545	2,465	152,534	11
2,137	5,701	1,226	2,033	352	3,178	1,754	1,271	57	1,776	2,703	411	1,428	12
65,429	40,312	(³)	6,100	16,774	18,591	111,580	12,023	516	111,293	37,945	2,465	132,689	13
2,423	5,039	(³)	2,033	357	3,718	2,232	1,503	57	1,987	3,162	411	2,041	14
5,078	(³)	(³)	.....	13,854	(³)	18,225	(³)	.....	9,443	2,600	.....	20,145	15
846	(³)	(³)	.....	346	(³)	759	(³)	.....	787	867	.....	480	16
1,118,720	1,717,120	487,660	622,720	512,000	1,076,400	2,218,240	835,840	521,600	1,776,640	1,834,240	335,360	29,584,000	17
2,574	588	115	261	2,863	381	2,132	94	35	9,063	429	65	970	18
1,672	563	115	261	2,551	381	1,605	90	35	6,278	400	65	843	19
164	.....	.....	.....	181	.....	10	4	.....	1,530	29	.....	111	20
748	25	.....	.....	131	.....	517	.....	.....	1,255	.....	.....	16	21
1,388	.....	.....	.....	6,798	.....	1,125	.....	.....	9,575	.....	.....	1,087	22
2,891	928	.....	.....	6,219	.....	8,969	.....	.....	16,994	222	.....	76	23
85.4	.....	.....	.....	-57.9	.....	89.5	.....	.....	-5.3	.....	.....	.....	24
5,334	1,139	268	850	5,123	792	6,400	175	45	16,282	969	65	2,776	25
7,424	.....	.....	.....	7,208	.....	4,160	.....	.....	12,135	.....	.....	1,727	26
11,778	8,415	.....	.....	14,261	.....	26,873	.....	.....	23,750	2,059	.....	813	27
2,760	551	153	589	2,260	411	4,268	81	10	7,219	540	.....	1,806	28
6,036	.....	.....	.....	410	.....	3,035	.....	.....	2,560	.....	.....	640	29
5,274	689	159	550	5,037	652	6,163	172	35	16,082	774	65	2,532	30
3,314	.....	.....	.....	7,108	.....	4,160	.....	.....	10,835	.....	.....	1,327	31
7,358	5,442	.....	.....	8,516	.....	15,233	.....	.....	22,029	882	.....	363	32
59.1	.....	.....	.....	-29.1	.....	48.1	.....	.....	48.4	.....	.....	.....	33
2,700	101	44	289	2,174	271	4,031	78	.....	7,019	345	.....	1,562	34
1,926	.....	.....	.....	310	.....	3,035	.....	.....	1,260	.....	.....	240	35
3.7	1.1	3.1	4.3	9.3	2.0	1.6	0.7	6.8	7.5	1.1	2.6	0.6	36
6.3	.....	.....	.....	23.7	.....	9.4	.....	.....	16.3	.....	.....	3.3	37
48.8	85.3	72.3	47.5	56.8	59.4	34.6	54.7	100.0	56.4	56.4	100.0	38.3	38
41.9	.....	.....	.....	95.6	.....	27.0	.....	.....	88.4	.....	.....	81.9	39
27,894	14,728	14,180	2,805	72,987	35,356	261,370	6,260	4,510	138,748	10,411	2,225	221,618	40
26,350	14,725	14,180	2,500	67,686	35,356	261,370	6,260	4,510	134,423	10,365	2,225	221,618	41
1,534	3	.....	305	5,301	.....	.....	.....	.....	4,325	46	.....	.....	42
56,735	.....	.....	.....	57,540	.....	226,720	.....	.....	130,506	.....	.....	32,192	43
107,076	137,540	.....	.....	70,704	.....	453,344	.....	.....	182,314	35,270	.....	10,800	44
-50.9	.....	.....	.....	26.8	.....	15.3	.....	.....	6.2	.....	.....	.....	45
5.29	21.38	89.18	5.10	14.49	54.23	42.41	36.40	128.86	8.63	13.45	34.23	87.53	46
17.12	.....	.....	.....	8.10	.....	54.50	.....	.....	12.05	.....	.....	24.26	47
14.55	25.27	.....	.....	8.90	.....	29.76	.....	.....	8.28	39.99	.....	29.75	48
10.83	25.05	123.30	10.75	25.49	92.80	122.59	66.60	128.86	15.31	24.27	34.23	228.47	49
37,884	16,100	22,180	5,805	72,987	37,956	263,870	6,260	4,510	139,698	13,586	2,225	226,792	50
66,735	.....	.....	.....	57,540	.....	226,720	.....	.....	130,606	.....	.....	35,492	51
107,276	149,540	.....	.....	70,704	.....	460,894	.....	.....	185,264	37,470	.....	10,800	52
-43.2	.....	.....	.....	26.8	.....	16.4	.....	.....	7.0	.....	.....	.....	53
7.10	14.14	82.76	6.63	14.25	47.92	41.23	35.77	100.22	8.58	14.02	34.23	81.34	54
8.99	.....	.....	.....	7.68	.....	54.50	.....	.....	10.76	.....	.....	20.55	55
9.11	17.77	.....	.....	4.96	.....	17.15	.....	.....	7.60	18.20	.....	13.28	56
14	7	3	3	23	4	22	2	3	23	8	1	20	57
1,301	306	115	261	2,390	381	1,909	(³)	35	8,569	402	(³)	970	58
2,582	325	337	900	1,280	606	3,654	(³)	451	4,500	1,138	(³)	2,735	59
1.98	1.06	2.93	3.45	0.54	1.59	2.02	(³)	12.89	0.53	2.83	(³)	2.62	60
0.46	.....	.....	.....	0.29	.....	2.11	.....	.....	0.48	.....	.....	1.37	61
550	.....	.....	.....	917	.....	5,090	.....	.....	6,545	.....	.....	324	62
1.49	.....	.....	.....	0.84	.....	3.31	.....	.....	0.85	.....	.....	0.73	63
370	.....	.....	.....	1,089	.....	2,213	.....	.....	10,543	.....	.....	444	64
1.49	.....	.....	.....	0.84	.....	2.30	.....	.....	0.62	.....	.....	0.73	65
450	.....	.....	.....	717	.....	3,838	.....	.....	6,409	.....	.....	.....	66
.....	.....	.....	.....	.....	.....	228,870	5,700	.....	.....	.....	.....	16,928	67
6	7	(³)	2	9	7	53	3	2	20	7	3	15	68
803	393	(³)	261	1,271	41	2,032	94	(³)	6,914	244	65	894	69
2,745	497	(³)	296	3,481	60	1,941	186	(³)	11,316	311	52	1,011	70
3.4	1.3	(³)	1.1	2.7	1.5	1.0	2.0	(³)	1.6	1.3	0.8	1.1	71
1.42	1.07	(³)	3.45	0.71	3.54	3.31	7.50	(³)	0.94	2.48	25.00	2.92	72
.....	(³)	2	7	1	.....	.....	2	.....	(³)	2	.....	(³)	73
.....	(³)	210	.....	.....	.....	(³)	1	.....	(³)	1	.....	(³)	74
.....	(³)	101	.....	.....	.....	(³)	.....	.....	(³)	(³)	.....	(³)	75
.....	(³)	20	.....	.....	.....	(³)	.....	.....	(³)	(³)	.....	(³)	76
.....	.....	10	.....	.....	.....	(³)	.....	.....	.....	.....	.....	.....	77

⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

⁷Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - SOUTH DAKOTA

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS.
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Beadle	Bennett	Butte	Charles Mix	Corson	Custer
FARM VALUES, 1940⁶								
1	Land and buildings, all farms.....dollars..	505,452,178	8,315,925	3,991,668	5,336,406	9,933,518	4,186,105	3,001,485
2	Land and buildings, irrigated farms.....dollars..	9,972,519	178,445	275,900	3,109,683	74,200	57,162	243,025
Operated by—								
3	(a) Owners and managers.....dollars..	7,699,778	170,445	274,900	1,931,233	67,000	41,042	181,425
4	(b) Tenants.....dollars..	2,272,741	(²)	(²)	1,178,450	7,200	16,120	61,600
5	Average, land and buildings, per farm.....dollars..	10,312.84	35,689.00	34,487.50	6,505.61	6,745.45	5,716.20	9,721.00
6	per acre in farms.....dollars..	9.76	178.98	6.29	11.03	10.21	7.50	6.20
7	Buildings, irrigated farms reporting value.....number..	935	5	7	469	11	9	25
8	Total reported.....dollars..	2,173,503	45,056	15,200	880,155	11,250	18,000	44,950
9	Average, per irrigated farm reporting.....dollars..	2,324.60	9,011.20	2,171.43	1,876.66	1,022.73	2,000.00	1,798.00
10	per acre on all irrigated farms.....dollars..	2.13	45.19	0.35	3.12	1.55	2.36	1.15
11	Buildings, nonirrigated farms reporting value.....number..	67,742	1,595	509	316	1,849	838	515
12	Total reported.....dollars..	131,578,350	2,635,603	361,150	442,160	2,468,553	645,660	569,761
13	Average, per nonirrigated farm reporting.....dollars..	1,942.35	1,652.42	748.82	1,399.24	1,335.07	770.48	1,106.33
14	per acre on all nonirrigated farms.....dollars..	3.42	3.69	0.63	0.52	3.75	0.67	1.17
15	Implements and machinery, irrigated farms reporting value.....number..	908	5	8	459	10	9	23
16	Total reported.....dollars..	1,164,804	14,956	13,775	588,062	9,300	9,975	16,700
17	Average, per irrigated farm reporting.....dollars..	1,282.82	2,991.20	1,721.88	1,281.18	930.00	1,108.33	726.09
18	per acre on all irrigated farms.....dollars..	1.14	15.00	0.31	2.09	1.28	1.31	0.43
19	Implements and machinery, nonirrigated farms reporting value.....number..	65,568	1,528	496	289	1,676	824	490
20	Total reported.....dollars..	58,804,590	1,108,046	358,424	209,597	1,172,711	515,036	269,682
21	Average, per acre, on all nonirrigated farms.....dollars..	1.53	1.55	0.59	0.25	1.78	0.54	0.55
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940.....number.....	³ 277	3	6	11	9	5	36
23	.....1930.....number.....	³ 122			10	1		8
24	.....1920.....number.....	292			21			61
25	Average size of enterprise based on irrigable area.....1940.....acres.....	448	48	147	6,909	36	12	176
26	.....1930.....acres.....	1,004			8,579			508
27	.....1920 ⁴.....acres.....	645			4,255			182
28	Diversion dams.....1940.....number.....	258		10	8		1	65
29	Main canals and laterals.....1940.....length, miles.....	1,049.3		1.0	681.1		3.0	53.0
30	.....1930.....length, miles.....	1,082			695			27
31	.....1920.....length, miles.....	1,258			529			132
32	.....1940.....capacity, c.f.s. ⁵	1,948	8	14	783	10	9	152
33	.....1930.....capacity, c.f.s. ⁵	1,995			826			50
34	.....1920.....capacity, c.f.s. ⁵	5,427			1,908			317
35	Pipe lines ⁶.....1940.....length, miles.....	17.3		0.4	6.4			0.8
36	Storage dams.....1940.....number.....	74			3		2	9
37	Reservoirs.....1940.....number.....	82			3		2	9
38	.....1930.....number.....	5			1			
39	.....1920.....number.....	119			13			19
40	.....1940.....capacity, acre-feet.....	209,785			197,030		(²)	90
41	.....1930.....capacity, acre-feet.....	203,124			203,000			
42	.....1920.....capacity, acre-feet.....	212,264			204,386			939
43	Wells, flowing.....1940.....number.....	19				7		
44	.....1930.....number.....	13			3			1
45	.....1920.....number.....	4						
46	.....1940.....yield, g.p.m.....	5,377				1,185		
47	.....1930.....yield, g.p.m.....	4,825			30			30
48	.....1920.....yield, g.p.m.....	2,750						
49	Wells, pumped.....1940.....number.....	16		1				
50	.....1930.....number.....	1						
51	.....1920.....number.....	1						
52	.....1940.....yield, g.p.m.....	1,039		(²)				
53	.....1930.....yield, g.p.m.....	375						
54	.....1920.....yield, g.p.m.....	800						
55	Pumping plants.....1940.....number.....	119	4	5	3	5	5	1
56	.....1930.....number.....	8			1			
57	.....1920.....number.....	25			3			3
58	Prime movers.....1940.....capacity, hp.....	2,060	85	11	143	55	90	(²)
59	.....1930.....capacity, hp.....	92			20			
60	.....1920.....capacity, hp.....	498			21			28
61	Pumps.....1940.....capacity, g.p.m.....	103,050	3,170	1,316	7,000	4,250	3,450	(²)
62	.....1930.....capacity, g.p.m.....	4,027			1,200			
63	.....1920.....capacity, g.p.m.....	23,320			1,750			2,170
64	Pumping lift, from all sources.....1940.....average, feet.....	20	12	44	20	25	8	(²)
65	.....1930.....average, feet.....	27			14			
66	.....1920.....average, feet.....	21			16			14
67	from pumped wells.....1940.....average, feet.....	55		(²)				
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷								
68	Enterprises reporting pay roll.....number.....	18			(²) 2			1
69	Irrigated area in these enterprises.....acres.....	44,939			(²)			(²)
70	Wages and salaries paid and payable.....dollars.....	60,964			(²)			(²)
71	Persons employed during week ending April 29.....number.....	114			(²)			(²)

⁶ Census of Agriculture.

¹ Data between census years not comparable (see headnote).

² Data are included only in State totals because less than 3 farms or enterprises reported in the 1940 Census.

³ Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION – SOUTH DAKOTA

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1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

Irrigation data omitted from any of the counties listed are included under "All other counties"

Fall River	Harding	Hughes	Jones	Lawrence	Lyman	Meade	Mellette	Mirneha	Pennington	Perkins	Yankton	All other counties ¹	
3,733,765	3,843,034	1,760,179	2,004,994	3,266,219	4,853,373	7,822,211	2,313,207	29,111,936	6,206,611	4,699,509	12,797,737	388,274,296	1
357,493	132,332	36,545	25,200	919,520	47,320	569,815	76,965	204,050	1,375,315	129,975	933,990	1,223,584	2
316,093	118,332	(²)	25,200	517,980	41,350	476,660	72,365	204,050	1,139,615	120,855	933,990	1,033,773	3
41,400	(²)	(²)	.....	401,540	(²)	93,155	(²)	.....	235,700	9,120	.....	189,811	4
10,893.12	14,703.56	12,181.67	8,400.00	10,569.20	7,886.67	7,700.20	7,896.50	22,672.22	20,225.22	8,665.00	155,665.00	11,435.36	5
5.07	2.58	9.94	4.13	30.02	2.48	4.39	6.21	395.45	11.39	3.21	378.90	8.01	6
31	9	3	3	86	6	70	10	9	66	14	5	97	7
43,300	24,000	9,275	7,000	236,290	8,800	124,950	26,910	100,750	243,300	33,750	59,000	241,567	8
1,396.77	2,666.67	3,091.67	2,333.33	2,747.56	1,466.67	1,785.00	2,691.00	11,194.44	3,686.36	2,410.71	11,800.00	2,490.38	9
0.61	0.47	2.52	1.15	7.71	0.46	0.96	2.12	195.25	2.02	0.83	23.94	1.58	10
536	544	396	354	380	737	1,237	545	2,408	975	1,022	1,459	51,527	11
577,615	710,650	391,400	349,645	694,330	1,014,066	1,581,465	339,745	8,961,197	1,107,605	1,247,462	3,489,310	103,970,953	12
1,077.64	1,306.34	988.38	987.70	1,827.18	1,375.94	1,276.47	623.39	3,721.43	1,136.01	1,220.63	2,391.58	2,017.80	13
0.74	0.47	1.03	0.73	4.87	1.13	0.85	0.44	17.94	1.25	0.96	11.35	4.27	14
30	8	2	3	76	5	68	9	8	66	15	4	100	15
31,628	8,920	(²)	4,675	99,450	3,000	64,655	3,895	14,025	90,050	24,805	40,000	125,133	16
1,054.27	1,115.00	(²)	1,558.33	1,308.55	600.00	950.81	432.78	1,753.12	1,364.39	1,653.67	10,000.00	1,251.33	17
0.45	0.17	(²)	0.77	3.25	0.16	0.50	0.31	27.18	0.75	0.61	16.23	0.82	18
514	530	393	371	360	731	1,140	521	2,276	894	983	1,404	50,148	19
346,623	388,902	245,240	311,926	250,566	700,058	768,509	250,366	2,767,470	583,208	676,081	1,246,022	46,616,123	20
0.44	0.26	0.65	0.65	1.76	0.78	0.41	0.32	5.58	0.66	0.52	4.05	1.91	21
18	10	3	3	26	4	75	3	3	30	9	3	20	22
13	3	2	.....	51	5	1	.....	.....	18	2	.....	8	23
24	.....	.....	.....	48	.....	43	.....	.....	40	.....	.....	55	24
296	114	69	283	197	198	85	58	15	543	108	22	139	25
571	.....	.....	.....	141	.....	4,160	.....	.....	674	.....	.....	.....	26
491	.....	.....	.....	297	.....	625	.....	.....	594	.....	.....	205	27
18	13	.....	.....	18	2	75	.....	.....	25	8	.....	15	28
40.0	9.0	6.0	4.0	42.1	13.0	68.4	1.0	.....	75.4	6.3	.....	46.0	29
25	.....	.....	.....	257	.....	15	.....	.....	57	.....	.....	6	30
83	.....	.....	.....	86	.....	170	.....	.....	150	.....	.....	108	31
86	30	3	18	115	20	150	20	.....	386	50	4	79	32
84	.....	.....	.....	353	.....	290	.....	.....	335	.....	.....	57	33
107	.....	.....	.....	322	.....	656	.....	.....	1,904	.....	.....	214	34
0.1	0.2	2.8	.....	0.1	0.2	0.8	0.7	0.9	0.1	0.1	.....	3.7	35
3	6	.....	.....	5	4	25	2	.....	2	7	.....	6	36
3	6	.....	.....	7	4	30	2	.....	3	7	.....	6	37
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	38
10	.....	.....	.....	3	.....	19	.....	.....	4	.....	.....	51	39
210	300	.....	.....	550	97	355	(²)	.....	722	662	.....	8,973	40
120	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	41
189	.....	.....	.....	46	.....	294	.....	.....	87	.....	.....	6,323	42
2	.....	.....	.....	4	5	.....	.....	.....	.....	.....	.....	1	43
.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	5	44
(²)	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	1,750	2,300	.....	.....	.....	.....	.....	.....	(²)	46
.....	.....	.....	.....	2,825	.....	.....	.....	.....	.....	.....	.....	1,940	47
.....	.....	.....	.....	2,750	.....	.....	.....	.....	.....	.....	.....	.....	48
2	.....	3	.....	.....	.....	.....	.....	.....	3	1	6	.....	49
(²)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	50
.....	.....	450	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	51
.....	.....	.....	.....	.....	.....	.....	.....	185	(²)	.....	209	.....	52
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	375	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	300	.....	.....	.....	54
6	3	6	4	.....	3	7	7	3	9	3	6	39	55
2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	4	56
2	.....	.....	.....	.....	.....	2	.....	.....	4	.....	.....	11	57
87	70	117	115	.....	110	122	90	8	172	63	81	614	58
42	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	28	59
30	.....	.....	.....	.....	.....	30	.....	.....	64	.....	.....	325	60
6,440	5,700	2,850	7,500	.....	2,350	8,370	6,325	185	7,970	2,540	1,709	31,125	61
1,120	.....	.....	.....	160	.....	.....	.....	.....	.....	.....	.....	1,547	62
1,000	.....	.....	.....	.....	.....	1,900	.....	.....	2,730	.....	.....	13,770	63
12	13	14	17	.....	40	15	20	74	16	34	24	18	64
41	.....	.....	.....	35	.....	.....	.....	.....	.....	.....	.....	20	65
28	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	66
.....	.....	.....	.....	.....	.....	.....	.....	74	(²)	.....	.....	.....	67
(²)	.....	.....	.....	3	8	1	.....	.....	8	.....	.....	1	68
(²)	.....	.....	.....	969	.....	(²)	.....	.....	5,388	.....	.....	.....	69
(²)	.....	.....	.....	218	10,599	(²)	.....	.....	1,601	.....	.....	(²)	70
(²)	.....	.....	.....	14	31	.....	.....	.....	15	.....	.....	.....	71

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

²Includes siphons and farm pipe lines reported.

³Pay roll and number of employees reported only by enterprises serving 5 or more farms.

⁴Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - TEXAS

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	¹ 168,732,160	¹ 167,963,520	167,934,720	167,934,720	167,934,720	167,934,720	167,934,720
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	418,002	501,017	495,489	436,033	417,770	352,190	228,126
Land in all farms.....acres....	137,683,372	137,597,389	124,707,130	114,020,621	112,435,067	125,807,017	51,406,937
Farms irrigated: ²							
Farms.....number...	³ 19,568	16,435	10,861	5,974	5,238	1,325	⁴ 623
Increase or decrease (-) over preceding census.....percent..	⁵ 80.2	.....	81.8	14.1	295.3	112.7	.....
Proportion of all farms.....percent..	4.7	3.3	2.2	1.4	1.3	0.4	0.3
Land in farms.....acres....	11,619,780	(⁶)	1,899,240	(⁶)	(⁶)	(⁶)	(⁶)
Proportion of all farm land.....percent..	8.4	(⁶)	1.5	(⁶)	(⁶)	(⁶)	(⁶)
Area irrigated.....acres....	⁷ 894,638	⁸ 568,533	⁹ 594,287	(¹⁰)	(¹⁰)	49,652	18,419
Increase or decrease (-) over preceding census.....percent..	⁵ 50.5	.....	.....	.....	.....	169.6	.....
Proportion of total land area of State.....percent..	0.5	0.3	0.4	.....	.....	(¹¹)	(¹¹)
Proportion of all farm land.....percent..	0.6	0.4	0.5	.....	.....	(¹¹)	(¹¹)
Value of irrigated farms (land and buildings).....dollars..	248,746,614	(⁶)	180,145,521	(⁶)	(⁶)	(⁶)	(⁶)
Average per farm.....dollars..	12,711.91	(⁶)	16,586.46	(⁶)	(⁶)	(⁶)	(⁶)
Average per acre.....dollars..	21.41	(⁶)	94.85	(⁶)	(⁶)	(⁶)	(⁶)
Value of farm implements and machinery ¹².....dollars..	20,123,937	(⁶)	9,995,783	(⁶)	(⁶)	(⁶)	(⁶)
Average per farm ¹².....dollars..	1,028.41	(⁶)	920.34	(⁶)	(⁶)	(⁶)	(⁶)
Average per acre ¹².....dollars..	1.73	(⁶)	5.26	(⁶)	(⁶)	(⁶)	(⁶)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	4,040	(⁶)	1,728	1,371	2,772	(⁶)	(⁶)
Farms irrigated.....number...	³ 30,670	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
Area irrigated.....acres....	1,045,224	(⁶)	798,917	586,120	451,130	(⁶)	(⁶)
Area existing works were capable of supplying with water.....acres....	1,773,812	(⁶)	1,177,415	1,150,542	690,991	(⁶)	(⁶)
Area irrigable.....acres....	2,180,796	(⁶)	1,566,876	¹³ 1,687,447	¹³ 1,253,173	(⁶)	(⁶)
Additional area existing works were capable of supplying with water.....acres....	728,588	(⁶)	378,498	564,422	239,861	(⁶)	(⁶)
Additional irrigable area in enterprises not supplied with water.....acres....	1,135,572	(⁶)	767,959	¹³ 1,101,327	¹³ 802,043	(⁶)	(⁶)
Investment in irrigation enterprises.....dollars..	66,441,376	(⁶)	49,022,164	35,072,739	13,487,347	1,027,608	(⁶)
Increase or decrease (-) over preceding census.....percent..	⁵ 35.5	(⁶)	39.8	160.0	(¹⁴)	.....	.....
Average per acre based on area works were capable of supplying with water.....dollars..	37.46	(⁶)	41.64	30.48	19.52	(⁶)	(⁶)
Increase or decrease (-) over preceding census.....percent..	⁵ -10.0	(⁶)	36.6	56.1	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	67,319,032	(⁶)	59,555,624	39,860,871	14,754,172	(⁶)	(⁶)
Average per acre based on irrigable area in enterprises.....dollars..	30.87	(⁶)	38.01	¹³ 23.62	¹³ 11.77	(⁶)	(⁶)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	3.89	(⁶)	4.74	6.92	3.25	(⁶)	(⁶)

¹ Due to relocation of the one-hundredth meridian (U. S. Supreme Court decision, March 17, 1939), 28,800 acres were transferred to Texas from Oklahoma. ² Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ³ Difference in number of farms between the Census of Agriculture and the Census of Irrigation is in part due to some large enterprises reporting ownership tracts and/or water users rather than number of farms as defined by the Census. See text also. ⁴ Exclusive of number of rice irrigators, whose acreage covered only 178 acres in the State. ⁵ Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ⁶ Not available. ⁷ Irrigated land from which crops were harvested plus 50,799 acres of irrigated land used only for pasture. ⁸ Irrigated land from which crops were harvested. ⁹ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ¹⁰ Data were secured for crops irrigated but the returns were considered relatively incomplete. ¹¹ Less than one-tenth of 1 percent. ¹² Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ¹³ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁴ Percent not shown when more than 1,000. ¹⁵ The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
	Number	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
All farms.....	418,002	137,683,372	26,044,008	843,839	50,799	2,589,978,936	18.81	418,269,553	3.04	160,744,212	1.31
Owners and managers.....	213,540	97,431,128	14,046,709	536,086	36,773	1,701,988,851	17.47	288,369,706	2.96	111,796,875	1.15
Tenants.....	204,462	40,252,244	11,997,299	307,753	14,026	887,990,085	22.06	129,899,845	3.23	68,947,337	1.71
Irrigated farms, total.....	19,568	11,619,780	1,950,600	843,839	50,799	248,746,614	21.41	32,848,639	2.83	20,123,937	1.73
Owners and managers.....	12,181	9,672,335	1,268,823	536,086	36,773	194,702,077	20.13	26,503,742	2.74	13,821,282	1.43
Tenants.....	7,387	1,947,445	681,777	307,753	14,026	54,044,537	27.75	6,344,897	3.26	6,302,655	3.24
Wholly irrigated farms.....	11,205	5,147,715	577,721	577,721	27,958	120,537,584	23.42	15,301,239	2.97	9,193,125	1.79
Owners and managers.....	6,967	4,293,884	353,057	353,057	20,245	94,896,250	22.10	12,653,579	2.95	6,172,865	1.44
Tenants.....	4,238	853,831	224,664	224,664	7,713	25,641,334	30.03	2,647,660	3.10	3,020,260	3.54
Partly irrigated farms.....	8,363	6,472,066	1,372,879	266,118	22,841	128,209,030	19.81	17,547,400	2.71	10,930,812	1.69
Owners and managers.....	5,214	5,378,451	915,766	183,028	16,528	99,805,827	18.56	13,850,163	2.58	7,648,417	1.42
Tenants.....	3,149	1,093,614	457,113	83,089	6,313	28,403,203	25.97	3,697,237	3.38	3,282,395	3.00
Nonirrigated farms, total.....	398,434	126,063,592	24,093,408	.....	.....	2,341,232,322	18.57	385,420,914	3.06	160,620,275	1.27

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION—TEXAS

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; AREA IRRIGATED, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-feet	Dollars	Dollars
Total.....	4,040	2,180,796	1,773,812	1,045,224	798,917	586,120	30.8	1,017,411	1,002,679	979,854	2.5	4.94	2.01
Primary sources:													
Streams, gravity.....	127	348,652	299,120	191,124	168,246	73,982	13.6	172,589	189,291	171,663	2.8	2.98	1.05
Streams, pumped.....	717	1,281,370	955,541	525,547	527,700	421,535	-0.4	523,739	520,297	519,423	2.8	6.42	2.31
Streams, gravity and pumped.....	17	33,719	15,694	12,007	3,200	350	275.2	12,007	12,007	12,007	2.5	7.45	3.02
Wells, pumped.....	2,833	438,390	428,992	262,774	60,793	39,483	332.2	260,004	231,988	231,236	1.3	3.10	2.35
Wells, flowing.....	65	4,163	4,163	2,949	1,831	3,256	61.1	2,860	1,302	1,299	1.7	2.44	1.46
Wells, pumped and flowing.....	6	1,258	1,258	1,141	.....	1,727	.....	1,141	1,125	1,125	2.7	1.90	0.72
Lakes, gravity.....	7	964	619	199	.....	.....	.....	198	83	83	0.8	0.23	0.29
Lakes, pumped.....	52	9,859	6,898	4,406	1,861	597	136.8	4,389	4,215	4,215	2.2	2.40	1.09
Springs.....	84	12,319	12,300	9,715	9,328	8,686	4.1	8,377	9,449	8,143	1.6	0.70	0.44
Springs and streams.....	2	(²)	(²)	(²)	.....	.....	.....	(²)	(²)	(²)	(²)	(²)	(²)
Stored storm water.....	25	4,275	4,275	2,622	298	11,572	779.9	750	2,551	720	1.1	1.20	1.11
City water.....	3	9	9	9	.....	.....	.....	9	.....	.....	1.0	.....	.....
Sewage.....	17	1,944	1,679	1,499	2,070	260	-27.6	898	559	194	3.8	5.33	1.40
Streams, gravity; wells, pumped..	15	2,964	2,954	1,956	850	454	130.1	1,345	1,375	1,320	1.6	3.58	2.19
Streams, gravity; wells, flowing..	1	(²)	(²)	(²)	.....	.....	.....	(²)	(²)	(²)	(²)	(²)	(²)
Streams, pumped; wells, pumped..	20	11,167	10,667	7,858	.....	.....	.....	7,849	7,242	7,233	1.2	3.76	3.05
Waste water, seepage or drainage..	6	5,555	5,455	903	.....	.....	.....	763	763	763	17.7	4.52	0.26
Other mixed.....	24	12,549	12,549	8,884	19,247	24,170	-53.8	8,862	8,801	8,799	1.2	3.34	2.80
Not reported.....	.....	.....	.....	.....	3,493	.....	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:³													
Streams, gravity and/or storage..	5	165,156	136,776	65,047	.....	.....	.....	20,945	49,467	20,945	1.4	1.30	0.96
Streams, pumped.....	12	3,287	2,395	1,802	254	.....	609.4	1,602	1,670	1,670	2.0	2.50	1.23
Wells, pumped.....	2	(⁴)	(⁴)	(⁴)	.....	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Wells, flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ³Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ⁴Data are not shown because less than 3 enterprises reported in the 1940 Census.

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	66,441,376	100.0	37.46	49,022,164	100.0	41.64	-4.18	1,002,202	3.89	772,160	4.74	-0.85	558,306	6.92
Primary sources:														
Streams, gravity.....	19,205,590	28.9	64.21	16,336,367	33.3	67.13	-2.92	189,291	2.02	164,199	3.14	-1.12	66,906	1.98
Streams, pumped.....	36,391,597	54.8	38.08	26,286,985	53.6	32.80	5.26	519,820	4.99	524,847	4.96	0.03	412,118	7.55
Streams, gravity and pumped.....	281,287	0.4	17.92	229,067	0.5	48.74	-30.82	12,007	6.08	200	8.00	-1.92	350	8.57
Wells, pumped.....	6,437,794	9.7	15.01	3,879,881	7.9	47.15	-32.14	231,988	3.10	49,053	6.50	-5.40	31,749	11.07
Wells, flowing.....	191,399	0.3	45.98	206,672	0.4	86.69	-40.71	1,302	1.71	828	0.83	0.88	1,528	4.45
Wells, pumped and flowing.....	26,395	(³)	20.98	.....	.....	.....	.....	1,125	1.90	.....	.....	.....	1,253	16.69
Lakes, gravity.....	23,625	(³)	38.17	.....	.....	.....	.....	83	0.23	.....	.....	.....	.....	.....
Lakes, pumped.....	168,872	0.3	24.48	51,737	0.1	20.19	4.29	4,215	2.41	1,536	3.69	-1.28	517	6.32
Springs.....	91,151	0.1	7.41	376,015	0.8	35.73	-28.32	9,449	0.98	9,100	1.70	-0.72	8,217	2.72
Springs and streams.....	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....
Stored storm water.....	15,305	(³)	3.58	18,400	(³)	48.17	-44.59	2,551	0.53	.....	.....	.....	11,386	5.51
City water.....	160	(³)	17.78	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sewage.....	105,151	0.2	62.63	101,000	0.2	48.79	13.84	559	3.67	2,010	2.05	1.62	.....	.....
Streams, gravity; wells, pumped..	62,360	0.1	21.11	43,887	0.1	51.03	-29.92	1,375	3.54	847	8.84	-5.30	454	16.83
Streams, gravity; wells, flowing..	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....
Streams, pumped; wells, pumped..	354,127	0.5	33.20	.....	.....	.....	.....	7,242	3.79	.....	.....	.....	.....	.....
Waste water, seepage or drainage..	113,870	0.2	20.87	.....	.....	.....	.....	763	4.52	.....	.....	.....	.....	.....
Other mixed.....	411,305	0.6	32.78	1,350,425	2.8	57.96	-25.18	8,801	2.03	19,234	4.61	-2.58	23,828	5.95
Not reported.....	.....	.....	.....	139,720	0.3	40.00	.....	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:⁶														
Streams, gravity and/or storage..	2,127,041	3.2	15.55	.....	.....	.....	.....	49,467	0.57	.....	.....	.....	.....	.....
Streams, pumped.....	12,147	(³)	5.07	2,008	(³)	1.18	3.89	1,670	2.50	254	7.87	-5.37	.....	.....
Wells, pumped.....	(³)	(³)	(³)	.....	.....	.....	.....	(³)	(³)	.....	.....	.....	.....	.....
Wells, flowing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Less than one-tenth of 1 percent. ⁴Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text). ⁶Data are not shown because less than 3 enterprises reported in the 1940 Census.

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					Increase or decrease (-) 1930-40 primary enterprises
	1940		1930	1920				1940		1930	1920		
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	Primary enterprises	
AREA IRRIGATED	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>		AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Percent</i>	
Total.....	1,045,224	66,909	798,917	586,120	30.8		Irrigation district.....	696,415	604,595	170,548	15.2		
Individual and partnership....	349,774	1,826	132,291	110,680	164.4		Commercial.....	348,392	199,230	481,899	74.9		
Cooperative, incorporated....	49,663		58,691	103,378	1.0		Bureau of Reclamation ³	69,010	66,000	25,070	4.6		
Cooperative, unincorporated....	9,640	(²)	452,461	88,571	-15.5		State.....	445	36	120	(⁴)		
Irrigation district.....	382,458	(²)	89,996	262,892	112.0		City and/or sewage.....	5,623		250			
Commercial.....	190,763	(²)	65,442	20,284	-6.6		IRRIGABLE AREA⁵						
Bureau of Reclamation ³	61,453	12,681	36	65	794.4		Total.....	2,180,796	1,566,876	1,687,447	39.2		
State.....	322			250			Individual and partnership....	582,525	3,547	219,877	328,461	164.9	
City and/or sewage.....	1,451						Cooperative, incorporated....	96,600		184,047	294,761	-39.5	
							Cooperative, unincorporated....	14,741	(²)	728,286	286,874	5.7	
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER							Irrigation district.....	769,607	(²)	367,630	738,685	73.1	
Total.....	1,773,812	139,221	1,177,415	1,150,542	50.7		Commercial.....	636,332	(²)	67,000	58,106	11.5	
Individual and partnership....	563,686	2,655	189,739	216,351	197.1		Bureau of Reclamation ³	74,708	17,119	36	120	(⁴)	
Cooperative, incorporated....	76,100		117,815	256,304	-23.4		State.....	445		36			
Cooperative, unincorporated....	14,141	(²)					City and/or sewage.....	5,838		640			

¹ Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ³ U. S. Dept. of the Interior. ⁴ Percent not shown when more than 1,000. ⁵ For 1920 relates to total area. Irrigable area for that year was not reported. ⁶ For explanation of areas, see text, p. 532.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940, AND AREA IRRIGATED, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	4,040	108	2,180,796	1,773,812	35.94	3.86	15.37	0.49	30,670	1,045,224	961,765	12,589	70,870
Individual and partnership....	3,924	18	582,525	563,686	16.06	2.98	4.95	2.23	4,099	349,774	312,703	4,237	32,814
Cooperative, incorporated....	15	12	96,600	76,100	23.62	5.09			348	49,663	49,118	81	464
Cooperative, unincorporated....	23	15	14,741	14,141	9.53	1.12	(⁴)	(⁴)	136	9,640	5,752	750	3,138
Irrigation district.....	41	40	769,607	696,415	60.29	3.51	(⁴)	(⁴)	21,268	382,458	346,444	5,912	30,102
Commercial.....	23	19	636,332	348,392	22.10	6.24	(⁴)	(⁴)	1,773	190,763	187,043	12	3,708
U. S. Bureau of Reclamation ³	⁵ 2	2	74,708	69,010	41.27	2.39	17.52	1.10	3,000	61,153	58,978	1,565	610
State.....	4	1	445	445	30.42	4.83			9	322	322		
City and/or sewage.....	8	1	5,838	5,623	37.26	5.62			37	1,451	1,405	12	34

¹ Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ² Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³ Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁵ Data for less than 3 enterprises shown with permission of the enterprises involved. ⁶ For explanation of areas and investment, see text, p. 532.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ²	Estimated investment required to complete works
	1940					1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises		
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment	Investment in water rights							
Total.....	Dollars 66,441,376	Dollars 64,300,488	Dollars 2,140,888	Dollars 65,884,261	Dollars 557,115	Dollars 49,022,164	Dollars 35,072,739	Percent 35.5	Dollars 36.25	Dollars 15.38	Dollars 2,575,967	Dollars 877,656
Individual and partnership....	9,105,016	9,091,669	13,347	9,068,766	36,260	9,371,780	8,256,568	-2.8	16.13	5.03	1,140	155,285
Cooperative, incorporated....	1,798,140	1,798,140		1,797,197	943	3,459,486	3,821,844	-44.1	23.63		27,452	20,000
Cooperative, unincorporated....	136,760	134,760	(²)	136,760					9.33	(²)	300	
Irrigation district.....	42,700,333	42,369,323	(²)	42,317,338	382,995	26,543,073	5,449,142	60.9	60.84	(²)	2,283,148	599,371
Commercial.....	9,330,311	7,835,780	(²)	9,193,410	136,901	3,404,080	13,825,409	174.1	22.49	(²)	247,927	3,000
U. S. Bureau of Reclamation ³	3,147,764	2,847,764	300,000	3,147,764		6,238,245	3,673,476	-49.5	41.27	17.52	15,000	100,000
State.....	13,552	13,552		13,552	16	5,500	6,802	146.4	30.45			
City and/or sewage.....	209,500	209,500		209,500			39,498		37.26		1,000	

¹ Only for enterprises serving 5 or more farms. ² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ³ For explanation of investment, see text, p. 532.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE: CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING.						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING (totals, as reported)		
	Enter-prises 1940	Area		Total indebted-ness 1940	Average per acre assessed 1939 ²	Average per acre works were capable of supplying with water ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ²	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri-gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	60	1,532,436	1,140,250	36,041,368	34.02	33.98	14	730,703	647,425	2.45	1,252,742	4,086,704	3,730,448
Partnership.....	3	3,363	3,363	100,032	36.80	29.74	.....	.....	.....	.....	5,713	14,830	6,156
Cooperative, incorporated.....	8	93,566	73,566	659,240	12.41	8.96	.....	.....	.....	.....	54,393	339,892	298,860
Cooperative, unincorporated.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,079	6,595	3,478
Irrigation district.....	36	775,822	712,654	28,278,993	37.78	41.27	10	606,323	543,003	2.44	774,047	1,756,866	1,824,234
Commercial.....	10	584,977	281,657	5,194,123	27.07	20.78	2	.....	.....	.....	330,104	1,805,375	1,320,019
Bureau of Reclamation ⁷	1	74,708	69,010	1,819,000	26.25	26.36	.....	.....	.....	.....	81,979	160,146	277,701
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	427	3,000	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$8.32. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$11.26. ⁵Based on primary enterprises only; State average for supplemental enterprises not shown because less than 3 enterprises reported in the 1940 Census. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁷U. S. Dept. of the Interior. ⁸Data for less than 3 enterprises shown with permission of the enterprises involved. ⁹Represents indebtedness of irrigation districts to the U. S. Government. ⁰For explanation of areas and investment, see text, p. 532.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	1,002,202	3,865,224	51,197	32,666	3.86	0.64	82	1,628,198	1,698
Individual and partnership.....	308,959	920,467	1,694	3,783	2.98	2.23	8	6,650	53
Cooperative, incorporated.....	49,663	252,898	.....	.....	5.09	.....	11	277,857	2150
Cooperative, unincorporated.....	8,038	8,994	(³)	(³)	1.12	(³)	7	2,919	19
Irrigation district.....	382,458	1,340,757	(³)	(³)	3.51	(³)	36	949,798	1,006
Commercial.....	190,763	1,189,616	(³)	(³)	6.24	(³)	18	480,824	397
U. S. Bureau of Reclamation ⁷	61,153	146,140	12,681	13,927	2.39	1.10	1	110,150	73
State.....	307	.....	.....	.....	4.93	.....	.....	.....	.....
City and/or sewage.....	861	4,840	.....	.....	5.62	.....	1	(²)	(³)

¹Only for enterprises serving 5 or more farms. ²Data for 1 "City and/or sewage" enterprise are included with "Cooperative, incorporated" enterprises in the 1940 Census. ³Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁴For explanation of areas and investment, see text, p. 532.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capacity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles	Num-ber	Ac.-ft.	Miles	Num-ber	G. p. m.	Number	Yield	Number	Hp.	Number	G. p. m.
Total.....	244	194	24,813	4,944	992.1	542	1,405,024	923.1	100	39,508	3,396	2,213,230	4,674	195,061	4,754	9,916,225
Individual and partnership....	212	150	3,482	415	55.1	472	26,547	243.3	96	36,418	3,363	2,190,730	4,270	125,667	4,344	3,361,204
Cooperative, incorporated.....	5	3	1,460	388	0.6	4	25,908	2.0	2	1,640	3	2,000	19	4,905	19	435,400
Cooperative, unincorporated...	7	1	394	71	.....	1	105	0.3	2	1,450	11	10,700	21	534	21	36,750
Irrigation district.....	13	26	10,226	2,370	915.7	37	1,032,516	664.8	.....	.....	.....	.....	240	26,383	245	3,166,032
Commercial.....	5	6	7,857	1,438	10.7	17	312,607	5.9	.....	.....	16	7,700	107	37,247	108	2,907,389
Bureau of Reclamation ³	2	.....	1,330	247	8.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State.....	.....	.....	5	.....	0.1	.....	.....	0.4	.....	.....	3	2,100	7	127	7	4,200
City and/or sewage.....	.....	8	59	15	1.2	11	7,341	6.4	.....	.....	.....	.....	10	198	10	5,250

¹Includes main and lateral canals but not farm ditches.

²Includes flumes.

³U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversión	Storage	Diversión	Storage		Diversión	Storage	Diversión	Storage
	Number	Number	Number	Number		Number	Number	Number	Number
Total.....	244	194	107	168	Earth and rock.....	136	134	.....	75
Concrete or masonry.....	76	47	43	60	Other and mixed.....	1 ¹ 27	11	.....	14
Timber.....	4	.....	4	.....	Not reported.....	1	2	.....	19

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940, AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	4,754	100.0	9,916,225	100.0	69	Total, 1940.....	4,674	100.0	195,061	100.0
Electric motor.....	719	15.1	1,658,843	16.7	66	Centrifugal pump.....	1,414	30.3	72,928	37.4
Centrifugal.....	269	5.7	1,199,773	12.1	32	Electric.....	302	6.5	27,417	14.1
Turbine.....	314	6.6	417,560	4.2	84	Internal-combustion.....	1,082	23.2	39,804	15.3
Plunger.....	98	2.1	8,350	0.1	79	Other.....	30	0.6	15,707	8.1
Other.....	38	0.8	33,160	0.3	39	Turbine pump.....	2,123	45.4	97,884	50.2
Internal-combustion engine.....	3,220	67.7	4,138,520	41.7	66	Electric.....	342	7.3	12,158	6.2
Centrifugal.....	1,152	24.2	2,045,791	20.6	25	Internal-combustion.....	1,773	37.9	85,402	43.8
Turbine.....	1,762	37.1	1,649,228	16.6	90	Other.....	8	0.2	324	0.2
Plunger.....	230	4.8	26,727	0.3	74	Plunger pump ²	734	15.7	3,212	1.6
Other.....	76	1.6	416,774	4.2	38	Electric.....	76	1.6	560	0.3
Other kinds of motive power.....	419	8.8	970,940	9.8	101	Internal-combustion.....	230	4.9	1,942	1.0
Centrifugal.....	20	0.4	961,523	9.7	30	Other.....	428	9.2	710	0.4
Turbine.....	2	(¹)	3,400	(¹)	60	Other and mixed types of pumps.....	403	8.6	21,037	10.8
Plunger ²	379	8.0	4,326	(¹)	106	Electric.....	114	2.4	6,539	3.4
Other.....	18	0.4	1,691	(¹)	51	Internal-combustion.....	229	4.9	7,741	4.0
Mixed kinds of motive power.....	396	8.3	3,147,922	31.7	67	Other.....	60	1.3	6,757	3.5
Centrifugal.....	163	3.4	2,588,638	26.1	33	Total, 1930.....	³ 1,828	.....	95,933	.....
Turbine.....	137	2.9	552,635	5.6	84	Increase or decrease (-) 1930-1940.....	2,846	.....	99,126	.....
Plunger ²	84	1.8	3,312	(¹)	76					
Other.....	12	0.3	3,317	(¹)	38					
Total, 1930.....	2,028	.....	6,494,999	.....	55					
Increase or decrease (-) 1930-1940..	2,726	.....	3,421,226	.....	14					

¹ Less than one-tenth of 1 percent.

² Many of these pumps are operated by windmills.

³ Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
	Miles	Miles			Miles	Miles	
Total.....	923.1	³ 319.0	189.4	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	6.0	25.2	-76.2
1 to 12 inches.....	155.6	24.0	548.3	13 to 24 inches.....	16.0	30.8	-47.4
13 to 24 inches.....	434.6	118.8	320.7	Over 24 inches.....	0.2		
Over 24 inches.....	65.2			Clay and other:			
Metal:				1 to 12 inches.....	38.4	1.6	(⁴)
1 to 12 inches.....	189.9	53.9	252.3	13 to 24 inches.....	2.3		
13 to 24 inches.....	13.3	4.7	200.0	Over 24 inches.....	0.8		
Over 24 inches.....	0.8						

¹ Includes siphons and farm pipe lines reported. ² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census. ³ Includes 7.0 miles of concrete pipe lines not segregated by size, and 53.0 miles of pipe lines not segregated by size or material. ⁴ Percent not shown when more than 1,000.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The area credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include that of El Paso Water Improvement District No. 1 of the Rio Grande Project. This area is not reported under any other classification. An area totalling 12,681 acres, irrigated with a supplemental supply from the Rio Grande Project, is reported as receiving a primary supply through other enterprises.

The investment attributed to the Bureau of Reclamation in State tables 8 and 17 relates to these areas and relates to construction costs by the Government of irrigation facilities both for lands within the El Paso District and those receiving supplemental water. The reduction in the investment of the Bureau of Reclamation in Texas from the 1930 total is due to new contracts between the Secretary of the Interior and the water users in New Mexico and

Texas served by the Rio Grande Project, and the exclusion of drainage costs from the irrigation investment. Under these contracts, the major part of the cost of Elephant Butte Dam, which with Caballo Dam serves the project, is to be repaid by power revenues from a power plant at Elephant Butte Dam in New Mexico which began operating in the winter of 1940-41. The principal costs of Caballo Dam, which regulates the Rio Grande flow, are nonreimbursable. It was constructed as a part of the Rio Grande canalization plan under an agreement with Mexico.

The Bureau of Reclamation has under construction on the Colorado River in Texas the Marshall Ford Dam, near Austin. This dam will serve principally for flood control but will also improve the water supply for irrigation of rice lands downstream. However, none of the costs, approximately \$25,000,000, have so far been allocated to irrigation.

CENSUS OF IRRIGATION—TEXAS

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number...	95	150	166
Area irrigable in these enterprises.....acres....	857,141	814,833	¹ 650,822
Area irrigated in these enterprises.....acres....	397,227	(2)	(2)
Area for which drains have been installed.....acres....	553,850	345,926	272,437
Additional area needing drainage.....acres....	106,837	135,936	154,532
Ratio of area drained to area irrigated in—			
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	139.4	³ 42.5	141.9
(b) All irrigation enterprises.....percent..	100.0	43.3	46.5
Ratio of area drained plus area needing drainage to—			
(a) Irrigable area reporting.....percent..	77.1	59.1	165.6
(b) Irrigated area reporting.....percent..	166.3	(2)	(2)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census.

² Not available.

³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,759,935	1,678,988	1,586,840	1,514,718	897,623	204,919	1,245,217	780,765	1,381,821
Area irrigated by these enterprises.....acres....	532,886	501,558	247,619	268,964	185,952	47,325	263,922	315,606	200,294
Average water per acre irrigated.....acre-feet..	5.2	3.3	6.4	5.6	4.8	4.3	4.7	2.5	6.9
Total water delivered to irrigators.....acre-feet..	2,328,835	723,768	385,540	262,120	197,185	100,869	1,766,715	526,583	284,671
Area irrigated by these enterprises.....acres....	743,816	427,419	167,005	91,309	75,138	48,533	652,507	352,281	118,472
Average water per acre irrigated.....acre-feet..	2.7	1.7	2.3	2.9	2.6	2.1	2.7	1.5	2.4
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	375,263	.....	.....	3,150	.....	.....	372,113	.....	.....
Area irrigated by these enterprises.....acres....	273,595	.....	.....	1,725	.....	.....	271,870	.....	.....
Average water per acre irrigated.....acre-feet..	1.4	.....	.....	1.8	.....	.....	1.4	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	176,428	.....	.....	.....	.....	.....	176,428	.....	.....
Area irrigated by these enterprises.....acres....	36,522	.....	.....	.....	.....	.....	36,522	.....	.....
Average water per acre irrigated.....acre-feet..	4.8	.....	.....	.....	.....	.....	4.8	.....	.....
Total water delivered to irrigators.....acre-feet..	32,146	.....	.....	11,381	.....	.....	20,765	.....	.....
Area irrigated by these enterprises.....acres....	22,747	.....	.....	12,681	.....	.....	10,066	.....	.....
Average water per acre irrigated.....acre-feet..	1.4	.....	.....	0.9	.....	.....	2.1	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	66	.....	.....	.....	.....	.....	66	.....	.....
Area irrigated by these enterprises.....acres....	60	.....	.....	.....	.....	.....	60	.....	.....
Average water per acre irrigated.....acre-feet..	1.1	.....	.....	.....	.....	.....	1.1	.....	.....

¹ Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
Total.....	Acres 1,045,224	Percent 100.0	Acres 66,909	Acres 798,917	Percent 100.0	Acres 586,120	Percent 100.0
Appropriation ²	590,640	56.5	49,322	588,626	73.7	416,054	70.9
Riparian.....	66,197	6.3	1,712	48,008	6.0	72,396	12.4
Appropriation and riparian.....	75,016	7.2	15,815	.....	.....	.....	.....
Underground.....	268,352	25.7	60	61,744	7.7	44,649	7.6
Appropriation and underground.....	2,228	0.2	.....	.....	.....	.....	.....
Riparian and underground.....	10,155	1.0	.....	.....	.....	.....	.....
Adjudicated by court.....	26,037	2.5	.....	49,097	6.2	2,755	0.5
Other mixed and not reported.....	6,589	0.6	.....	51,442	6.4	50,266	8.6

¹ Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).

² "Appropriation" includes water rights published in the 1930 and 1920 Census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

CENSUS OF IRRIGATION - TEXAS

STATE TABLE 17.-ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	4,021	307	3,368	245	48	25	18	10
2	Irrigated farms, 1939.....number...	30,670		3,368	599	529	1,154	5,727	19,293
3	Area irrigated, 1939.....acres....	1,045,224		317,561	39,503	39,591	112,230	243,253	293,086
4	(a) From which crops were harvested.....acres....	961,765		278,856	37,004	35,774	110,398	236,635	262,898
5	(b) On which crops failed.....acres....	12,589		3,558	327	1,169	1,270	4,147	2,115
6	(c) Irrigated pasture.....acres....	70,879		35,147	2,172	2,651	566	2,271	28,073
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	64,300,488	928,841	8,571,169	815,745	918,835	5,367,765	23,705,739	23,992,394
8	(a) Cost of irrigation works and equipment.....dollars..	63,744,493	922,281	8,335,973	813,631	916,225	5,236,749	23,527,240	23,992,394
9	(b) Investment in water rights.....dollars..	555,995	6,560	235,196	2,114	2,610	131,016	178,499	.....
10	Area works were capable of supplying with water.....acres....	1,773,812	31,367	489,511	58,069	80,683	215,310	464,596	434,270
11	Average investment per acre irrigated.....dollars..	61.52	.....	26.99	20.65	23.21	47.83	97.45	81.86
12	Average investment per acre which the works could supply with water.....dollars..	36.25	29.61	17.51	14.05	11.39	24.93	51.02	55.25
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	3,277	111	2,863	209	41	25	18	10
14	(a) Area irrigated in these enterprises.....acres....	1,002,202	.....	280,676	35,242	37,715	112,230	243,253	293,086
15	(b) Cost of maintenance and operation.....dollars..	3,865,224	18,860	862,426	84,371	155,560	472,290	1,276,000	995,717
16	(c) Average cost per irrigated acre reporting.....dollars..	3.86	.....	3.07	2.39	4.12	4.21	5.25	3.40
17	Total annual charges ².....dollars..	3,855,789	3,087	.....	.....	207,441	736,433	1,680,864	1,227,944
18	Average charge per irrigated acre reporting.....dollars..	5.61	.....	.....	.....	5.43	6.56	6.91	4.19
19	Area against which charges were assessed.....acres....	1,087,092	5,500	.....	.....	39,384	235,913	350,010	456,285
20	Average annual charge per acre assessed.....dollars..	3.55	0.56	.....	.....	5.27	3.12	4.80	2.69
21	Total charges collected ².....dollars..	3,671,948	360	.....	.....	66,420	674,041	1,532,661	1,398,466
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ³.....number...	57	1	.....	.....	11	19	16	10
23	(a) Area irrigated in these enterprises.....acres....	627,161	.....	.....	.....	14,628	97,090	222,357	293,086
24	(b) Indebtedness.....dollars..	34,699,264	(*)	.....	.....	883,951	2,909,965	18,723,277	12,182,071
25	(c) Average indebtedness per acre irrigated.....dollars..	55.33	.....	.....	.....	60.43	29.97	84.20	41.56
26	(d) Cost of irrigation works and equipment.....dollars..	52,172,371	(*)	.....	.....	681,368	4,639,369	22,859,240	23,992,394
27	(e) Investment in water rights.....dollars..	310,600	.....	.....	.....	1,585	130,516	178,499	.....
28	(f) Total investment.....dollars..	52,482,971	(*)	.....	.....	682,953	4,769,885	23,037,739	23,992,394
29	(g) Maintenance and operation.....dollars..	2,624,390	.....	.....	.....	68,581	1,133,636	995,717	.....
30	(h) Total annual charges ².....dollars..	3,456,739	.....	.....	.....	69,397	657,090	1,502,308	1,227,944
31	(i) Total charges collected ².....dollars..	3,592,485	.....	.....	.....	55,655	605,713	1,532,661	1,398,466
32	(j) Area against which annual charges were assessed.....acres....	998,093	.....	.....	.....	14,698	197,996	329,114	456,285
33	(k) Average indebtedness per acre assessed.....dollars..	34.02	.....	.....	.....	9.61	14.70	56.89	26.70
34	(l) Average charges per acre assessed.....dollars..	3.46	.....	.....	.....	4.72	3.32	4.56	2.69
35	(m) Average charges per acre irrigated.....dollars..	5.51	.....	.....	.....	4.74	6.77	6.76	4.19
36	Enterprises reporting arrearage ³.....number...	13	1	.....	.....	2	6	4	.....
37	(a) Area assessed in these enterprises.....acres....	185,600	.....	.....	.....	477	42,466	142,657	.....
38	(b) Total arrearage.....dollars..	660,944	(*)	.....	.....	207,780	201,661	251,503	.....
39	(c) Average arrearage per acre assessed.....dollars..	2.45	.....	.....	.....	435.60	4.75	1.76	.....
40	(d) Indebtedness.....dollars..	12,026,612	(*)	.....	.....	747,842	859,860	10,418,910	.....
TYPE, 1940									
41	Individual and partnership.....number...	3,910	303	3,350	240	17	.....	.....	.....
42	Cooperative (incorporated and unincorporated).....number...	37	2	5	3	21	6	.....	.....
43	Irrigation district.....number...	39	2	1	.....	1	11	.....	9
44	Commercial.....number...	22	.....	3	1	8	3	.....	7
45	U. S. Bureau of Reclamation.....number...	1	.....	.....	.....	.....	.....	.....	1
46	All other.....number...	12	.....	9	1	1	1	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
47	Enterprises reporting pay roll.....number...	80	1	.....	.....	28	23	18	10
48	Wages and salaries paid and payable for 1939.....dollars..	1,622,840	(*)	.....	.....	43,447	210,574	711,146	657,673
49	Persons employed during week ending April 29, 1939.....number...	1,686	(*)	.....	.....	155	245	522	764
SOURCE OF WATER SUPPLY, 1939									
50	Streams, gravity.....number...	127	6	87	7	14	8	3	2
51	Streams, pumped.....number...	717	123	497	47	18	11	13	8
52	Wells, pumped.....number...	2,833	169	2,494	161	8	1	.....	.....
53	Wells, pumped and flowing; or wells flowing.....number...	71	1	50	15	5	.....	.....	.....
54	Lakes, gravity or pumped.....number...	59	5	48	6	.....	.....	.....	.....
55	Streams and springs; or springs.....number...	86	2	79	2	1	.....	2	.....
56	Mixed, streams and wells.....number...	53	1	46	3	1	2	.....	.....
57	Other mixed or stored storm water.....number...	75	.....	67	4	1	3	.....	.....

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	19	1	13	1	.....	2	2	.....
2	Irrigated farms, 1939.....number...	593	.....	13	2	.....	128	450	.....
3	Area irrigated, 1939.....acres....	66,909	.....	2,126	.....	.....	64,783	.....	.....
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	2,140,888	.....	15,347	.....	.....	2,125,541	.....	.....
5	(a) Cost of irrigation works and equipment.....dollars..	2,139,768	.....	15,145	.....	.....	2,124,623	.....	.....
6	(b) Investment in water rights.....dollars..	1,120	.....	202	.....	.....	918	.....	.....
7	Area works were capable of supplying with water.....acres....	139,231	.....	2,955	.....	.....	136,276	.....	.....
8	Average investment per acre irrigated.....dollars..	32.00	.....	7.22	.....	.....	32.81	.....	.....
9	Average investment per acre which the works could supply with water.....dollars..	15.38	.....	5.19	.....	.....	15.60	.....	.....
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
10	Enterprises reporting maintenance and operation.....number...	14	.....	11	.....	.....	1	2	.....
11	(a) Area irrigated in these enterprises.....acres....	51,197	.....	1,994	.....	.....	49,203	.....	.....
12	(b) Cost of maintenance and operation.....dollars..	32,686	.....	4,683	.....	.....	27,983	.....	.....
13	(c) Average cost per irrigated acre reporting.....dollars..	0.64	.....	2.35	.....	.....	0.67	.....	.....
14	Total annual charges ².....dollars..	230,915	.....	.....	.....	.....	230,915	.....	.....
15	Average charge per irrigated acre reporting.....dollars..	4.69	.....	.....	.....	.....	4.69	.....	.....
16	Area against which charges were assessed.....acres....	165,650	.....	.....	.....	.....	165,650	.....	.....
17	Average annual charge per acre assessed.....dollars..	1.39	.....	.....	.....	.....	1.39	.....	.....
18	Total charges collected ².....dollars..	58,500	.....	.....	.....	.....	58,500	.....	.....

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION—TEXAS

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS, CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT						
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999		
307	2,426	959	274	27	28	3,606	293	71	40	11	1	
.....	2,742	1,217	901	1,688	24,122	3,833	571	473	10,099	15,694	2	
.....	66,247	159,812	134,122	106,797	578,246	264,849	69,005	72,291	305,914	333,165	3	
.....	59,618	146,528	115,390	98,302	541,927	240,187	58,357	64,900	296,444	301,877	4	
.....	1,216	1,934	1,766	780	6,883	4,132	326	296	5,720	2,115	5	
.....	5,413	11,350	16,966	7,715	29,426	20,530	10,322	7,095	3,750	29,173	6	
928,841	3,545,531	3,003,759	3,287,583	8,316,639	45,218,135	5,344,121	2,185,914	2,124,205	18,391,490	36,254,758	7	
922,281	3,530,652	2,991,108	3,201,654	8,113,396	44,985,404	5,321,219	2,175,938	2,078,194	17,914,384	36,254,758	8	
6,560	14,879	12,653	85,929	203,243	232,731	22,902	8,976	46,011	477,106	.....	9
31,367	149,059	229,647	184,929	288,046	890,764	436,395	101,800	122,954	582,601	530,062	10	
.....	53.52	18.80	24.51	77.87	78.20	20.18	31.68	29.38	60.12	108.82	11	
.....	29.61	23.79	13.08	17.78	28.87	12.25	21.47	17.28	31.57	68.40	12	
111	2,035	836	240	27	28	2,922	247	58	39	11	13	
.....	57,279	140,487	119,393	106,797	578,246	230,728	63,466	68,929	305,914	333,165	14	
18,860	242,971	406,898	287,443	451,799	2,457,255	657,681	201,445	294,127	1,597,923	1,114,048	15	
.....	4.24	2.90	2.41	4.23	4.23	2.85	3.17	4.27	5.22	3.34	16	
.....	3,087	4,376	5,900	102,324	502,976	3,237,126	7,069	15,322	286,685	2,014,809	17	
.....	7.12	3.24	4.98	5.88	1.44	1.99	7.02	6.71	7.02	4.60	18	
.....	5,500	630	2,391	30,331	254,102	794,138	4,932	7,711	64,473	490,614	519,562	19
.....	0.56	6.95	2.47	3.37	1.98	4.08	1.99	4.45	4.11	2.95	20	
.....	360	813	2,121	76,657	356,867	3,235,130	1,824	7,668	148,057	1,705,993	1,808,386	21
1	1	2	11	15	27	4	1	10	31	11	22	
.....	392	6,966	59,694	558,109	1,305	28,770	262,921	333,165	23	24	23	
.....	745,162	985,564	7,161,228	25,807,310	5,297	116,749	9,783,031	24,794,187	24	25	24	
.....	1,900.92	109.92	119.97	46.24	4.06	3.92	37.21	74.42	25	26	25	
.....	336,301	796,840	6,714,826	44,324,404	12,300	411,911	15,493,402	36,254,758	26	27	26	
.....	873	68,103	8,893	232,731	78	26,766	283,756	.....	27	28	27
.....	337,174	864,943	6,723,719	44,587,135	12,378	438,677	15,777,158	36,254,758	28	29	28	
.....	200	36,192	271,902	2,316,096	853	165,979	1,343,510	1,114,048	29	30	29	
.....	595	83,984	311,333	3,060,827	1,680	206,882	1,716,273	1,531,904	30	31	30	
.....	560	68,266	288,539	3,235,130	533	145,911	1,637,665	1,808,386	31	32	31	
.....	407	18,189	205,496	774,001	1,320	33,236	444,175	519,362	32	33	32	
.....	5.95	54.18	34.85	33.34	4.01	3.51	20.35	47.74	33	34	33	
.....	1.46	4.62	1.52	3.95	1.27	6.22	3.86	2.95	34	35	34	
.....	1.52	9.37	5.22	5.48	1.29	6.95	6.53	4.60	35	36	35	
.....	1	(5)	6	(5)	2	(5)	1	8	(5)	2	36	
.....	(5)	(5)	13,208	(5)	67,917	(5)	(5)	85,766	(5)	(5)	37	
.....	(5)	(5)	200,311	(5)	85,433	(5)	(5)	471,024	(5)	(5)	38	
.....	(5)	(5)	15.17	(5)	1.26	(5)	(5)	3.08	(5)	(5)	39	
.....	(5)	(5)	861,160	(5)	4,731,974	(5)	(5)	2,342,576	(5)	(5)	40	
303	2,411	949	242	5	.....	3,581	281	45	3	.....	41
.....	6	6	17	3	.....	16	8	11	2	.....	42
.....	.....	1	7	13	16	.....	1	5	24	.....	43
.....	.....	2	5	6	8	.....	2	6	10	.....	44
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	45
.....	8	1	3	.....	.....	6	1	4	1	.....	46
1	6	6	19	20	28	11	8	15	35	11	47	
.....	2,646	825	26,922	308,108	1,284,339	3,648	4,736	69,935	702,061	842,440	48	
.....	38	24	56	203	1,365	66	18	120	674	808	49	
6	76	14	19	6	6	102	7	7	7	4	50	
.....	123	425	87	47	15	630	28	25	27	7	51	
.....	169	1,663	824	176	1	2,587	226	30	.....	.....	52
.....	1	59	9	2	.....	59	9	3	.....	.....	53
.....	5	44	5	5	.....	53	2	4	.....	.....	54
.....	2	74	3	5	1	81	3	1	1	.....	55
.....	1	28	10	12	1	31	14	6	2	.....	56
.....	57	7	8	3	.....	63	4	5	3	.....	57
ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT						
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999		
1	6	4	2	.....	4	15	.....	1	3	.....	1
.....	9	4	2	.....	578	15	.....	66	512	.....	2
.....	304	1,822	.....	.....	64,783	2,126	.....	64,783	.....	.....	3
4,047	.....	11,300	.....	.....	2,125,541	15,347	.....	2,125,541	.....	.....	4
3,845	.....	11,300	.....	.....	2,124,623	15,145	.....	2,124,623	.....	.....	5
202	.....	.....	.....	.....	918	202	.....	918	.....	.....	6
505	.....	2,450	.....	.....	136,276	2,955	.....	136,276	.....	.....	7
13.31	.....	6.20	.....	.....	32.81	7.22	.....	32.81	.....	.....	8
8.01	.....	4.61	.....	.....	15.60	5.19	.....	15.60	.....	.....	9
.....	5	4	2	.....	3	11	.....	.....	3	.....	10
.....	172	1,822	.....	.....	49,203	1,994	.....	.....	49,203	.....	11
.....	210	4,473	.....	.....	27,983	4,683	.....	.....	27,983	.....	12
.....	1.22	2.45	.....	.....	0.57	2.35	.....	.....	0.57	.....	13
.....	.....	.....	.....	.....	230,915	.....	.....	.....	230,915	.....	14
.....	.....	.....	.....	.....	4.69	.....	.....	.....	4.69	.....	15
.....	.....	.....	.....	.....	165,650	.....	.....	.....	165,650	.....	16
.....	.....	.....	.....	.....	1.39	.....	.....	.....	1.39	.....	17
.....	.....	.....	.....	.....	58,500	.....	.....	.....	58,200	.....	18

³ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁴ Data for 1 "No farms" enterprise are included with "5 to 24 farms" enterprises in the 1940 Census.
⁵ Data are included only in State total because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - TEXAS

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
INDEBTEDNESS AND ARREARAGE, 1939									
19	Enterprises reporting indebtedness ².....number...	3	.....	.....	.....	.....	1	2	.....
20	(a) Area irrigated in these enterprises.....acres.....	52,102	.....	.....	.....	.....	52,102	.....	.....
21	(b) Indebtedness.....dollars.....	1,342,124	.....	.....	.....	.....	1,342,124	.....	.....
22	(c) Average indebtedness per acre irrigated.....dollars.....	25.76	.....	.....	.....	.....	25.76	.....	.....
23	(d) Cost of irrigation works and equipment.....dollars.....	1,824,623	.....	.....	.....	.....	1,824,623	.....	.....
24	(e) Investment in water rights.....dollars.....	918	.....	.....	.....	.....	918	.....	.....
25	(f) Total investment.....dollars.....	1,825,541	.....	.....	.....	.....	1,825,541	.....	.....
26	(g) Maintenance and operation.....dollars.....	14,056	.....	.....	.....	.....	14,056	.....	.....
27	(h) Total annual charges ³.....dollars.....	216,988	.....	.....	.....	.....	216,988	.....	.....
28	(i) Total charges collected ³.....dollars.....	37,754	.....	.....	.....	.....	37,754	.....	.....
29	(j) Area against which annual charges were assessed.....acres.....	152,969	.....	.....	.....	.....	152,969	.....	.....
30	(k) Average indebtedness per acre assessed.....dollars.....	8.32	.....	.....	.....	.....	8.32	.....	.....
31	(l) Average charges per acre assessed.....dollars.....	1.42	.....	.....	.....	.....	1.42	.....	.....
32	(m) Average charges per acre irrigated.....dollars.....	5.94	.....	.....	.....	.....	5.94	.....	.....
33	Enterprises reporting arrearage ².....number.....	4 ¹	.....	.....	.....	.....	.....	4 ¹	.....
TYPE, 1940									
34	Individual and partnership.....number.....	14	1	12	1	.....	.....	.....	.....
35	Cooperative (incorporated and unincorporated).....number.....	1	.....	1	.....	.....	.....	.....	.....
36	Irrigation district.....number.....	2	.....	.....	.....	.....	1	1	.....
37	Commercial.....number.....	1	.....	.....	.....	.....	.....	1	.....
38	U. S. Bureau of Reclamation.....number.....	1	.....	.....	.....	.....	1	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
39	Enterprises reporting pay roll.....number.....	4 ²	.....	.....	.....	.....	.....	4 ²	.....
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939									
40	Streams, pumped.....number.....	12	.....	11	1	.....	.....	.....	.....
41	Wells, pumped or flowing.....number.....	2	1	1	.....	.....	.....	.....	.....
42	Streams, gravity or storage.....number.....	5	.....	1	.....	.....	2	2	.....

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Rio Grande River		<i>Feet</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Degrees F.</i>	<i>Degrees F.</i>
El Paso.....	El Paso.....	3,710	4.51	-4.65	0.47	-1.35	1.17	-0.06	0.46	-0.71	2.41	-2.53	64.8	+1.5
Fort Davis.....	Jeff Davis..	4,800	14.19	-1.13	2.66	+0.22	2.41	+1.27	2.46	-1.11	6.66	-1.51	.....	.....
Fort Stockton.....	Pecos.....	3,050	10.69	-3.80	1.73	-1.11	3.50	+2.00	1.66	-2.49	3.80	-2.20	66.8	+1.7
Del Rio.....	Val Verde..	957	13.07	-6.83	1.12	-2.64	2.35	+0.53	3.38	-3.84	6.22	-0.88	70.4	+0.8
Rio Grande.....	Starr.....	168	13.19	-3.34	0.77	-2.81	1.60	-0.84	4.82	-0.57	6.00	+0.88	73.0	-1.0
Brownsville.....	Cameron....	35	28.73	+1.33	3.45	-3.38	2.05	-1.92	16.58	+10.01	6.65	-3.38	73.6	+0.5
Baffins Bay														
Hebbronville.....	Jim Hogg... Neuces River	550	19.69	-0.87	4.76	+0.68	1.24	-1.75	6.50	-0.57	7.19	+0.77	.....	.....
Uvalde.....	Uvalde.....	937	19.47	-6.02	1.69	-3.14	2.73	-0.46	3.24	-7.12	11.81	+4.70	71.4	+1.2
Cotulla.....	La Salle..	425	19.70	-1.78	3.64	-0.54	1.53	-2.05	8.84	+1.07	5.69	-0.26	.....	.....
George West.....	Live Oak... Guadalupe River	161	18.98	-4.22	5.10	-1.64	2.10	-1.78	4.06	-1.69	7.72	+0.89	.....	.....
Boerne.....	Kendall....	1,412	21.68	-12.08	1.93	-6.67	5.05	-0.64	4.62	-6.19	10.08	+1.42	67.6	+1.8
Hallettsville.....	Lavaca....	235	34.70	-0.15	6.49	-3.20	5.97	-1.31	10.02	-0.19	12.22	+4.55	69.5	-0.4
Goliad.....	Goliad.....	164	24.55	-6.44	4.84	-3.47	3.17	-2.65	5.24	-3.58	11.30	+3.26	.....	.....
Colorado River														
Lovington, N. Mex.....	Lea.....	3,900	13.04	-2.13	0.74	-2.20	1.94	+0.64	4.60	+0.67	5.76	-1.24	60.3	+0.3
Seminole.....	Gaines....	3,275	13.35	-2.33	1.57	-1.75	2.18	+0.43	4.67	+0.02	4.93	-1.03	63.0	+2.1
San Angelo.....	Tom Green..	1,847	14.70	-6.61	2.23	-2.44	2.07	-0.76	5.07	-2.00	5.33	-1.31	66.1	+1.3
Llano.....	Llano.....	1,040	17.67	-6.58	1.14	-4.87	4.32	+0.08	6.99	-2.44	6.22	+0.65	68.2	+1.1
Columbus.....	Colorado... Brazos River	206	34.45	-3.98	9.55	-1.51	8.79	+0.55	6.28	-4.76	9.83	+1.74	.....	.....
Portales, N. Mex.....	Roosevelt.. Lubbock.....	4,004	17.44	-4.09	3.14	-3.15	2.34	+1.05	4.86	-1.29	7.10	-0.70	57.0	+0.1
Lubbock.....	Lubbock....	3,242	10.80	-8.73	0.81	-2.98	2.73	+1.07	2.77	-3.94	4.49	-2.88	61.7	+2.1
Abilene.....	Taylor.....	1,726	19.33	-5.84	2.67	-2.52	2.78	-0.48	10.96	+1.30	2.92	-4.14	66.9	+2.9
Hamilton.....	Hamilton..	.....	24.58	-5.92	2.76	-4.18	7.42	+2.44	10.73	-0.88	3.67	-3.30	.....	.....
Cameron.....	Milam.....	393	24.96	-10.52	3.88	-5.45	8.92	+0.86	9.38	-1.68	2.78	-4.25	.....	.....
Richmond.....	Fort Bend..	.....	38.56	-3.35	7.29	-3.60	5.58	-3.02	9.85	-1.88	15.84	+5.15	.....	.....
San Jacinto River														
Houston.....	Harris.....	41	36.38	-10.67	7.03	-4.76	9.60	-0.78	7.54	-5.11	12.21	-0.02	70.4	+1.3
Trinity River														
Weatherford.....	Parker.....	1,010	22.48	-8.77	3.10	-3.77	5.57	+0.18	11.37	-0.40	2.44	-4.78	65.6	+1.5
Corsicana.....	Navarro....	445	29.79	-6.17	4.76	-4.43	10.33	+2.78	11.09	-0.54	3.61	-3.98	68.3	+2.0
Palestine.....	Anderson..	492	31.19	-9.54	6.02	-4.40	11.53	+1.56	10.12	-2.46	3.52	-4.24	67.4	+1.4
Huntsville.....	Walker....	400	48.05	+3.62	11.58	-0.39	14.39	+3.59	17.06	+3.35	5.02	-2.93	68.4	+1.2
Liberty.....	Liberty....	38	43.98	-5.61	7.89	-6.85	15.93	+5.62	7.22	-6.68	12.94	+1.50	69.0	-0.2
Sabine River														
Greenville.....	Hunt.....	550	32.19	-5.08	4.54	-4.37	12.00	+4.48	10.13	-2.00	5.52	-3.19	65.9	+0.8
Marshall.....	Harrison..	375	39.25	-9.97	9.89	-2.47	15.77	+2.15	9.04	-4.48	4.65	-5.17	68.0	+1.8
Lufkin.....	Angelina..	.....	45.15	+14.26	10.75	+14.24	20.14	+8.45	6.48	-6.43	7.78	-2.00	67.7	0.0
Orange.....	Orange....	.....	39.53	-10.68	7.84	-4.60	8.53	-2.88	10.87	-1.84	12.29	-1.36	.....	.....
Canadian River (Arkansas River)														
Clayton, N. Mex.....	Union.....	5,049	12.84	-3.81	2.16	-0.24	2.46	+0.93	5.06	-1.00	3.16	-3.50	53.7	+0.3
Dalhart.....	Dallam....	3,998	16.00	-3.30	3.07	+0.21	2.85	+1.44	5.47	-2.90	4.61	-2.05	55.0	+0.6
Red River														
Dimmitt (near).....	Castro....	3,865	14.39	-4.68	2.97	-0.62	2.74	+1.35	6.09	-0.24	2.59	-5.17	.....	.....
Crowell.....	Foard.....	.....	18.79	-5.93	2.10	-3.16	5.44	+2.18	7.13	-2.12	4.12	-2.83	.....	.....
Henrietta.....	Clay.....	915	17.49	-9.86	2.75	-3.38	6.65	+2.65	5.91	-4.18	2.18	-5.05	65.6	+2.0
Sherman.....	Grayson..	745	34.98	-2.02	3.34	-5.14	12.38	+5.31	12.58	+0.47	6.68	-2.66	65.9	+1.6
Sacramento-Salt Lakes														
Van Horn.....	Culberson..	4,010	(³)	(³)	(³)	(³)	1.19	(³)	2.11	(³)	7.20	(³)	.....	.....
Valentine.....	Jeff Davis..	4,421	9.82	(³)	1.72	(³)	1.68	(³)	1.46	(³)	4.96	(³)	.....	.....

¹Departure from normal.

²Does not include data for December 1938.

³Data not available.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
					3			1	2		19
					52,102			52,102			20
					1,342,124			1,342,124			21
					25.76			25.76			22
					1,824,623			1,824,623			23
					918			918			24
					1,825,541			1,825,541			25
					14,056			14,056			26
					216,988			216,988			27
					37,754			37,754			28
					152,969			152,969			29
					8.32			8.31			30
					1.42			1.42			31
					5.94			5.94			32
					4 1				4 1		33
1	8	4	1			14					34
			1			1					35
					2			1	1		36
					1				1		37
					1				1		38
											39
					4 2				4 2		39
	7	3	2			12					40
1	1					2					41
		1			4	1		1	3		42

³Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁴Data are not shown because less than 3 enterprises reported in the 1940 Census.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation.—The average amount of precipitation, 24.69 inches, was 5.49 inches below normal in Texas for the calendar year 1939, as reported by the U. S. Weather Bureau. Precipitation averaged below normal in all divisions. Annual amounts and departures from normal (in inches) for the three divisions were as follows: Western, 14.75, minus 3.02; middle, 20.99, minus 5.92; eastern, 36.87, minus 4.98. Annual amounts of precipitation ranged from 51.32 inches at Bronson, Sabine County, to 5.91 inches at El Paso, El Paso County. The greatest monthly amount of precipitation was 15.50 inches at Angleton, Brazoria County, in July, and the greatest amount in 24 consecutive hours was 11.55 inches at Richmond, Fort Bend County, on July 12. The number of stations reporting no rain during the several months was as follows: February, 8; March, 4; April, 6; July, 1; and September, 27.

The average precipitation for the water year (October 1938 through September 1939) at the 39 stations shown in State table 18 with full records, and which are representative of the major drainage basins in Texas, was 23.31 inches, indicating an average deficiency of -5.19 inches at these stations.

Local storms occurred frequently during the first half of the year, but were less numerous thereafter. Total damage from tornadoes, straight-line winds, and hail amounted to over \$2,000,000; 7 persons were killed and 130 were injured.

Temperature.—The average temperature for the State for 1939, 67.1°, was 0.9° above normal. Sunshine was deficient during March and November; excessive during May and September; ample during the other months of the year. Temperatures averaged above normal in all divisions. The

highest annual mean temperature was 74.7° at Harlingen, Cameron County, and at Mercedes, Hidalgo County, and the lowest mean was 55.0° at Dalhart, Dallam County. The highest temperature recorded during the year was 114° at Seymour, Baylor County, on July 8; at Encinal, La Salle County, on July 9; and at Cleburne, Johnson County, on September 2. The lowest temperature reported was 9° below zero at Muleshoe, Bailey County, on December 27.

The weather was generally unfavorable for crops during the year. Prospects early in the year were good, but continued dry weather and unusually high temperatures during the middle and latter portions of the summer caused a decline in the expected quality and quantity of most crops. Early cotton matured in mostly good condition, but late cotton was poor to only fair, with much premature opening, blooming on top, and shedding reported in west-central and north-central districts. Little top crop was harvested. Spring wheat was in mostly good condition when harvested, except in the northwestern portion of the State, where poor to only fair. Germination of winter wheat was hindered by lack of moisture, with condition only fair as the year closed. Early corn made good progress and matured in good condition, but late corn wilted badly under high temperatures and matured in poor condition. Truck was in fair to good condition in upper coast areas and in irrigated sections of extreme south, but only poor to fair elsewhere. Ranges dried rapidly during the latter part of the year, necessitating much livestock feeding. Range cattle were beginning to show the effects of subnormal grazing and lack of sufficient range water by the end of the year. After a late start, rice made rapid progress and was in fair to good condition when harvested.

CENSUS OF IRRIGATION — TEXAS

DRAINAGE BASIN TABLE I—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	GULF OF MEXICO			
		Total	Rio Grande River		Total
			Primary	Supplemental	
IRRIGATED FARMS AND AREAS					
1 Irrigated farms.....1939..number.....	30,670	30,667			24,059
2 Area irrigated.....1939..acres.....	1,045,224	1,045,200			462,703
3 (a) Cropland harvested.....1939..acres.....	961,765	961,741			415,442
4 (b) Crop failures.....1939..acres.....	12,589	12,589			8,882
5 (c) Pasture.....1939..acres.....	70,870	70,870			38,379
6 Area irrigated.....1929..acres.....	798,917	798,917			537,327
7 1919..acres.....	586,120	586,120			315,693
8 Increase or decrease (-), 1929-1939.....percent.....	30.8	30.8			-13.9
9 Irrigable area in enterprises.....1940..acres.....	2,180,796	2,180,768			892,827
10 1930..acres.....	1,566,876	1,566,876			806,935
11 1920 ² ..acres.....	1,687,447	1,687,447			883,708
12 Excess of irrigable area over the area irrigated..1940..acres.....	1,135,572	1,135,568			430,124
13 1930..acres.....	767,959	767,959			269,608
14 1920 ² ..acres.....	1,101,327	1,101,327			568,015
15 Area works were capable of supplying with water..1940..acres.....	1,773,812	1,773,784			808,569
16 1930..acres.....	1,177,415	1,177,415			682,547
17 1920..acres.....	1,150,542	1,150,542			681,502
18 Increase or decrease (-), 1930-1940.....percent.....	50.7	50.7			18.5
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	728,588	728,584			345,866
20 1930..acres.....	378,498	378,498			145,220
21 1920..acres.....	564,422	564,422			365,809
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	58.9	58.9			57.2
23 1929..percent.....	67.9	67.9			78.7
24 1919..percent.....	50.9	50.9			46.3
CAPITAL INVESTED TO JANUARY 1					
25 Total investment in irrigation enterprises.....1940..dollars....	66,441,376	66,440,776			41,083,420
26 (a) Cost of irrigation works and equipment.....1940..dollars....	65,884,261	65,883,661			40,682,060
27 (b) Investment in water rights (reported).....1940..dollars....	557,115	557,115			401,360
28 Total investment in irrigation enterprises.....1930..dollars....	49,022,164	49,022,164			30,690,311
29 1920..dollars....	35,072,739	35,072,739			18,925,769
30 Increase or decrease (-), 1930-1940.....percent.....	35.5	35.5			33.9
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	37.46	37.46			50.81
32 1930..dollars....	41.64	41.64			44.96
33 1920..dollars....	30.48	30.48			27.77
34 Average investment per acre irrigated.....1939..dollars....	63.57	63.57			88.79
35 Estimated final investment in existing enterprises..1940..dollars....	67,319,032	67,318,432			41,845,571
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	30.87	30.87			46.87
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
		Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation...1939..number.....	3,277	14	3,277	14	519
38 Area irrigated in these enterprises.....1939..acres.....	1,002,202	51,197	1,002,202	51,197	456,710
39 Cost of maintenance and operation.....1939..dollars....	3,865,224	32,666	3,865,224	32,666	1,595,735
40 Average cost, per acre irrigated.....1939..dollars....	3.86	0.64	3.86	0.64	3.49
41 Total annual charges (reported) ⁴ 5.....1939..dollars....	3,855,789	230,915	3,855,789	230,915	1,896,624
42 Average annual charge per acre irrigated.....1939..dollars....	5.61	4.69	5.61	4.69	4.54
43 Area against which charges were assessed.....1939..acres.....	1,087,092	165,650	1,087,092	165,650	805,100
44 Average annual charge per acre assessed.....1939..dollars....	3.55	1.39	3.55	1.39	2.36
45 Total charges collected ⁴.....1939..dollars....	3,671,948	58,500	3,671,948	58,500	1,859,800
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars....	34,699,264	1,342,124	34,699,264	1,342,124	26,679,351
WATER DELIVERED TO IRRIGATORS, 1939					
47 Enterprises reporting water delivered.....1939..number.....	3,593	16	3,592	16	497
48 Area irrigated by these enterprises.....1939..acres.....	1,017,411	22,807	1,017,391	22,807	443,030
49 Water delivered.....1939..acre-feet..	2,404,098	32,212	2,403,998	32,212	940,788
50 Average water delivered per acre irrigated.....1939..acre-feet..	2.4	1.4	2.4	1.4	2.1
51 Average cost of water per acre irrigated.....1939..dollars....	4.85	1.39	4.85	1.39	4.51
52 Average cost of water per acre-foot delivered..1939..dollars....	2.05	0.98	2.05	0.98	2.12
DRAINAGE OF IRRIGATED LAND					
53 Enterprises reporting land drained or needing drainage.....1939..number.....	95		95		31
54 Irrigable area in these enterprises.....1939..acres.....	857,141		857,141		654,763
55 Irrigated area in these enterprises.....1939..acres.....	397,227		397,227		385,765
56 Area for which drains have been installed.....1939..acres.....	553,850		553,850		438,687
57 Additional area needing drainage.....1939..acres.....	106,837		106,837		86,270

¹ Data for unidentified basins for the 1930 and 1920 Censuses are included only in State totals.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

GULF OF MEXICO—Continued															
Rio Grande River—Continued				Guadalupe River			Colorado River			Brazos River					
Direct	Pecos River	Baffins Bay	Nueces River	Total	Direct	San Antonio River	Total	Direct	Llano River	Total					
(1)	(2)		(4)		(5)	(6)		(7)	(8)						
23,312	747	50	800	1,494	148	1,346	894	803	81	1,243	1				
400,405	62,298	849	49,082	43,133	12,821	30,312	83,479	82,954	525	163,324	2				
365,730	49,712	749	30,709	38,965	12,716	28,249	81,266	80,796	472	158,309	3				
4,333	4,549	88	511	685	41	644	27	26	1	1,079	4				
30,342	8,037	12	17,862	3,483	64	3,419	2,194	2,132	52	3,936	5				
459,557	46,877	.....	38,787	9,686	.....	9,686	61,888	.....	.....	21,560	6
254,186	57,418	.....	13,753	13,179	.....	13,179	71,278	.....	.....	7,535	7
-12.9	33.5	.....	26.5	345.3	.....	212.9	34.9	.....	.....	657.5	8
741,491	151,336	1,475	79,949	74,728	29,719	45,009	269,423	268,599	824	281,241	9				
620,665	132,961	.....	52,859	45,838	.....	45,838	224,368	.....	.....	47,417	10
705,270	172,043	.....	50,006	61,789	.....	61,789	277,268	.....	.....	22,896	11
341,086	89,038	626	30,867	31,595	16,898	14,697	185,944	185,645	299	117,917	12				
161,108	86,284	.....	14,072	36,152	.....	36,152	162,480	.....	.....	25,857	13
451,084	114,625	.....	36,253	48,610	.....	48,610	205,990	.....	.....	15,361	14
682,704	125,865	1,246	77,396	62,566	17,619	44,947	173,601	172,782	819	266,168	15				
574,617	72,054	.....	45,708	35,146	.....	35,146	140,626	.....	.....	30,061	16
555,761	120,492	.....	31,977	60,177	.....	60,177	125,666	.....	.....	19,560	17
18.8	74.7	.....	69.3	78.0	.....	27.9	23.4	.....	.....	785.4	18
282,299	63,567	397	28,314	19,433	4,798	14,635	90,122	89,828	294	102,844	19				
115,260	25,377	.....	6,921	25,460	.....	25,460	78,738	.....	.....	8,501	20
301,575	63,074	.....	18,224	46,998	.....	46,998	54,388	.....	.....	12,025	21
58.6	49.5	68.1	63.4	68.9	72.8	67.4	48.1	48.0	64.1	61.4	22				
79.9	64.8	.....	84.9	27.6	.....	27.6	44.0	.....	.....	71.7	23
45.7	47.7	.....	43.0	21.9	.....	21.9	56.7	.....	.....	38.5	24
37,584,986	3,498,434	107,512	2,434,960	5,178,837	315,393	4,863,444	2,738,613	2,684,325	54,288	3,439,298	25				
37,192,994	3,489,066	102,512	2,420,737	5,176,566	313,442	4,863,124	2,673,835	2,619,552	54,283	3,418,229	26				
391,992	9,368	5,000	14,223	2,271	1,951	320	64,778	64,773	5	21,059	27				
27,068,049	2,243,187	.....	3,071,489	3,038,635	.....	3,038,635	1,914,643	.....	.....	657,855	28
16,208,058	2,219,595	.....	1,326,555	5,087,542	.....	5,087,542	3,560,916	.....	.....	569,543	29
38.9	56.0	.....	-20.7	70.4	.....	60.1	43.0	.....	.....	423.0	30
55.05	27.80	86.29	31.46	82.77	17.90	108.20	15.78	15.54	66.29	12.92	31				
47.09	31.13	.....	67.20	86.46	.....	86.46	13.62	.....	.....	21.87	32
29.16	18.42	.....	41.48	84.54	.....	84.54	28.34	.....	.....	29.12	33
93.87	56.16	.....	19.61	120.07	24.60	160.45	32.81	32.36	103.41	21.06	34			
38,299,562	3,546,009	113,012	2,452,725	5,180,162	316,038	4,864,124	2,744,443	2,687,605	56,838	3,491,716	35				
51.65	23.43	76.62	30.68	69.32	10.63	108.07	10.19	10.01	66.98	12.42	36				
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.				
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises					
417	9	102	(3) 1	44	477	(3) 2	181	99	82	376	312	64	853	(3) 2	37
394,878	13,527	61,832	(3)	682	43,682	(3)	38,930	10,892	28,038	81,194	80,711	483	148,852	(3)	38
1,509,929	15,737	85,806	(3)	11,198	134,951	(3)	151,324	83,204	68,120	482,785	480,286	2,499	552,577	(3)	39
3.82	1.16	1.39	(3)	16.42	3.09	(3)	3.89	7.64	2.43	5.95	5.95	5.17	3.71	(3)	40
1,791,813	13,927	104,811	204,083	10,846	12,905	121,722	29,115	92,607	572,689	572,689	416,370	41
4,815	1.10	2.17	7.16	2.12	1.61	4.31	9.00	3.70	8.27	8.27	9.47	42
646,862	12,681	158,238	138,469	6,984	14,500	39,339	3,235	36,104	69,253	69,253	43,957	43
2.77	1.10	0.66	1.47	1.56	0.89	3.09	9.00	2.57	8.27	8.27	9.47	44
1,806,742	20,746	53,058	24,469	21,397	12,985	94,188	29,115	65,073	394,202	394,202	362,440	300	45
26,047,451	631,900	1,131,624	176,620	140,500	782,793	11,750	771,043	688,162	688,162	586,947	70,000	46
401	12	96	41	532	(3) 2	244	125	119	407	328	79	972	(3) 2	47
383,866	13,659	59,164	680	47,973	(3)	42,833	12,739	30,094	80,486	79,961	525	161,925	(3)	48
714,024	12,641	226,764	1,069	56,506	(3)	108,129	40,156	67,973	363,893	362,996	897	351,355	(3)	49
1.9	0.9	3.8	1.6	1.2	(3)	2.5	3.2	2.3	4.5	4.5	2.2	(3)	50
4.90	1.16	2.01	5.82	2.90	(3)	4.43	6.53	3.70	7.74	7.76	5.17	4.78	(3)	51
2.63	1.26	5.24	3.70	2.46	(3)	1.76	2.01	1.64	1.71	1.71	3.25	2.21	(3)	52
23	8	(3) 2	(3) 1	5	(3) 1	4	6	6	20	53
548,108	106,655	(3)	(3)	195	(3)	45	473	473	42,407	54
307,145	28,620	(3)	(3)	195	(3)	45	435	435	22,033	55
438,577	110	(3)	(3)	195	(3)	45	147	147	22,097	56
31,357	34,913	(3)	300	57

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - TEXAS

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	GULF OF MEXICO—Continued						
	Brazos River—Continued			Sabine River			
	Direct	Little River	San Jacinto River	Trinity River	Total	Direct	
	(9)	(10)	(11)	(12)	(13)	(13)	
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	1,237	6	41	267	321	72
2	Area irrigated.....1939..acres.....	163,253	71	9,365	47,061	56,806	10,618
3	(a) Cropland harvested.....1939..acres.....	158,240	69	8,819	47,054	56,806	10,618
4	(b) Crop failure.....1939..acres.....	1,078	1	76	7	.....	.....
5	(c) Pasture.....1939..acres.....	3,935	1	470	.....	.....	.....
6	Area irrigated.....1929..acres.....	.....	.....	.....	15,724	28,387	162
7	.....1919..acres.....	.....	.....	.....	42,770	77,722	12,822
8	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	199.8	100.1	(1)
9	Irrigable area in enterprises.....1940..acres.....	281,149	92	14,649	186,041	165,512	18,137
10	.....1930..acres.....	.....	.....	.....	36,248	133,429	8,166
11	.....1920 ² ..acres.....	.....	.....	.....	96,320	174,268	24,468
12	Excess of irrigable area over the area irrigated.....1940..acres.....	117,896	21	5,284	138,980	108,706	7,519
13	.....1930..acres.....	.....	.....	.....	20,524	105,042	8,004
14	.....1920 ² ..acres.....	.....	.....	.....	53,550	96,546	11,646
15	Area works were capable of supplying with water.....1940..acres.....	266,076	92	14,507	69,025	88,032	18,137
16	.....1930..acres.....	.....	.....	.....	35,131	68,429	8,166
17	.....1920..acres.....	.....	.....	.....	52,720	102,508	20,508
18	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	96.5	28.6	122.1
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	102,823	21	5,142	21,964	31,226	7,519
20	.....1930..acres.....	.....	.....	.....	19,407	40,042	8,004
21	.....1920..acres.....	.....	.....	.....	9,950	24,786	7,686
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	61.4	77.2	64.6	68.2	64.5	58.5
23	.....1929..percent.....	.....	.....	.....	44.8	41.5	2.0
24	.....1919..percent.....	.....	.....	.....	81.1	75.8	62.5
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	3,432,853	6,435	313,892	909,643	3,571,189	631,622
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	3,411,794	6,435	313,875	906,634	3,528,867	589,336
27	(b) Investment in water rights (reported).....1940..dollars.....	21,059	.....	17	3,009	42,322	42,286
28	Total investment in irrigation enterprises.....1930..dollars.....	.....	.....	.....	480,470	2,808,088	112,960
29	.....1920..dollars.....	.....	.....	.....	1,743,621	1,942,705	345,935
30	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	89.3	27.2	459.2
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	12.90	69.95	21.64	13.18	40.57	34.83
32	.....1930..dollars.....	.....	.....	.....	13.68	41.04	13.83
33	.....1920..dollars.....	.....	.....	.....	33.07	18.95	16.87
34	Average investment per acre irrigated.....1939..dollars.....	21.03	90.63	33.52	19.33	62.87	59.49
35	Estimated final investment in existing enterprises.....1940..dollars.....	3,485,281	6,435	319,692	910,343	3,571,689	631,622
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	12.40	69.95	21.82	4.89	21.58	34.83
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental				
		Enterprises					
37	Enterprises reporting maintenance and operation.....1939..number.....	848	2	5	39	37	5
38	Area irrigated in these enterprises.....1939..acres.....	148,785	(3)	67	9,249	46,845	10,578
39	Cost of maintenance and operation.....1939..dollars.....	552,280	(3)	297	53,592	342,140	29,840
40	Average cost, per acre irrigated.....1939..dollars.....	3.71	(3)	4.43	5.79	7.30	2.82
41	Total annual charges (reported) ⁴.....1939..dollars.....	416,370	.....	.....	415,841	361,845	73,500
42	Average annual charge per acre irrigated.....1939..dollars.....	9.47	.....	.....	9.00	7.63	7.00
43	Area against which charges were assessed.....1939..acres.....	43,957	.....	.....	46,225	47,440	10,500
44	Average annual charge per acre assessed.....1939..dollars.....	9.47	.....	.....	9.00	7.63	7.00
45	Total charges collected ⁴.....1939..dollars.....	362,440	300	.....	310,888	378,543	71,138
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	586,947	70,000	.....	89,672	2,150,031	483,750
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	969	2	3	41	35	5
48	Area irrigated by these enterprises.....1939..acres.....	161,906	(3)	19	9,365	46,988	10,578
49	Water delivered.....1939..acre-feet.....	351,315	(3)	40	22,634	192,405	30,129
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.2	(3)	2.1	2.4	4.1	2.8
51	Average cost of water per acre irrigated.....1939..dollars.....	4.78	(3)	4.80	5.79	9.03	6.96
52	Average cost of water per acre-foot delivered.....1939..dollars.....	2.21	(3)	2.25	2.40	2.20	2.44
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	18	.....	2	4	15	3
54	Irrigable area in these enterprises.....1939..acres.....	42,379	(3)	.....	2,125	150,221	1,410
55	Irrigated area in these enterprises.....1939..acres.....	22,025	(3)	.....	565	33,163	1,032
56	Area for which drains have been installed.....1939..acres.....	22,085	(3)	.....	1,075	85,143	1,206
57	Additional area needing drainage.....1939..acres.....	300	.....	.....	.....	40,022	.....

¹ Percent not shown when more than 1,000.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - TEXAS

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DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	GULF OF MEXICO—Continued							INDEPENDENT BASIN	
	Sabine River—Con.	Mississippi River					Red River		Sacramento-Salt Lakes
	Neches River	Total	Arkansas River			North Canadian River			
			Total	Direct	Mustang Creek				
(14)		(16)	(17)	(18)	(19)	(21)			
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	249	1,508	61	33	10	18	1,447	3
2	Area irrigated.....1939..acres.....	46,188	129,398	1,859	1,211	467	181	127,539	24
3	(a) Cropland harvested.....1939..acres.....	46,188	123,820	1,704	1,178	348	178	121,916	24
4	(b) Crop failure.....1939..acres.....	.....	1,234	145	26	119	.....	1,089	.....
5	(c) Pasture.....1939..acres.....	.....	4,544	10	7	.....	3	4,534	.....
6	Area irrigated.....1929..acres.....	28,225	39,070	466	.....	.....	.....	38,604	.....
7	.....1919..acres.....	64,900	6,963	440	.....	.....	.....	6,523	.....
8	Increase or decrease (-), 1929-1939.....percent.....	63.6	231.2	298.9	.....	.....	.....	230.4	.....
9	Irrigable area in enterprises.....1940..acres.....	147,375	214,923	3,900	1,872	1,539	489	211,023	28
10	.....1930..acres.....	128,263	54,968	766	.....	.....	.....	54,202	.....
11	.....1920 ¹ ..acres.....	149,800	23,353	840	.....	.....	.....	22,513	.....
12	Excess of irrigable area over the area irrigated.....1940..acres.....	101,187	85,525	2,041	661	1,072	308	83,484	4
13	.....1930..acres.....	97,038	15,898	300	.....	.....	.....	15,598	.....
14	.....1920 ¹ ..acres.....	84,900	16,390	400	.....	.....	.....	15,990	.....
15	Area works were capable of supplying with water.....1940..acres.....	69,895	212,674	3,851	1,862	1,539	450	208,823	28
16	.....1930..acres.....	60,263	54,820	766	.....	.....	.....	54,054	.....
17	.....1920..acres.....	82,000	13,025	440	.....	.....	.....	12,585	.....
18	Increase or decrease (-), 1930-1940.....percent.....	16.0	287.9	402.7	.....	.....	.....	286.3	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	23,707	83,276	1,992	651	1,072	269	81,284	4
20	.....1930..acres.....	32,038	15,750	300	.....	.....	.....	15,450	.....
21	.....1920..acres.....	17,100	6,062	.....	.....	.....	.....	6,062	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	66.1	60.8	48.3	65.0	30.3	40.2	61.1	85.7
23	.....1929..percent.....	46.8	71.3	60.8	.....	.....	.....	71.4	.....
24	.....1919..percent.....	79.1	53.5	100.0	.....	.....	.....	51.8	.....
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars.....	2,939,567	6,663,422	84,192	44,492	20,745	18,955	6,579,230	600
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	2,939,531	6,660,346	84,132	44,492	20,745	18,935	6,576,214	600
27	(b) Investment in water rights (reported).....1940..dollars.....	36	3,076	60	.....	.....	60	3,016	.....
28	Total investment in irrigation enterprises.....1930..dollars.....	2,695,128	5,196,305	17,800	.....	.....	.....	5,178,505	.....
29	.....1920..dollars.....	1,596,770	439,272	69,472	.....	.....	.....	369,800	.....
30	Increase or decrease (-), 1930-1940.....percent.....	9.1	28.2	373.0	.....	.....	.....	27.0	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	42.06	31.33	21.86	23.89	13.48	42.12	31.51	21.43
32	.....1930..dollars.....	44.72	94.79	23.24	.....	.....	.....	95.80	.....
33	.....1920..dollars.....	19.47	33.73	157.89	.....	.....	.....	29.38	.....
34	Average investment per acre irrigated.....1939..dollars.....	63.64	51.50	45.29	36.74	44.42	104.72	51.59	25.00
35	Estimated final investment in existing enterprises.....1940..dollars.....	2,940,067	6,689,079	88,677	46,992	22,730	18,955	6,600,402	600
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	19.95	31.12	22.74	25.10	14.77	38.76	31.28	21.43
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
37	Enterprises reporting maintenance and operation.....1939..number.....	32	694	49	27	9	13	645	.....
38	Area irrigated in these enterprises.....1939..acres.....	46,188	119,292	1,529	892	466	171	117,763	.....
39	Cost of maintenance and operation.....1939..dollars.....	205,240	305,842	5,082	2,692	1,455	935	300,760	.....
40	Average cost, per acre irrigated.....1939..dollars.....	4.44	2.56	3.32	3.02	3.12	5.47	2.55	.....
41	Total annual charges (reported) ².....1939..dollars.....	288,345	59,852	.....	.....	.....	.....	59,852	.....
42	Average annual charge per acre irrigated.....1939..dollars.....	7.81	2.08	.....	.....	.....	.....	2.08	.....
43	Area against which charges were assessed.....1939..acres.....	36,940	28,814	.....	.....	.....	.....	28,814	.....
44	Average annual charge per acre assessed.....1939..dollars.....	7.81	2.08	.....	.....	.....	.....	2.08	.....
45	Total charges collected ².....1939..dollars.....	307,405	250,490	.....	.....	.....	.....	250,490	.....
46	Indebtedness to December 31 (reported) ³.....1939..dollars.....	1,666,281	3,545,688	.....	.....	.....	.....	3,545,688	.....
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	30	755	58	30	10	18	697	1
48	Area irrigated by these enterprises.....1939..acres.....	46,182	127,351	1,653	1,005	467	181	125,698	(4)
49	Water delivered.....1939..acre-feet.....	193,096	144,054	2,123	1,399	433	291	141,931	(4)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	4.2	1.1	1.3	1.4	0.9	1.6	1.1	(4)
51	Average cost of water per acre irrigated.....1939..dollars.....	6.55	2.56	3.35	3.06	3.12	5.38	2.55	.....
52	Average cost of water per acre-foot delivered.....1939..dollars.....	1.57	2.26	2.60	2.20	3.37	3.35	2.26	.....
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	3	8	2	.....	.....	2	6	.....
54	Irrigable area in these enterprises.....1939..acres.....	1,410	797	(6)	.....	.....	(6)	(6)	.....
55	Irrigated area in these enterprises.....1939..acres.....	1,032	154	(6)	.....	.....	(6)	(6)	.....
56	Area for which drains have been installed.....1939..acres.....	1,206	615	(6)	.....	.....	(6)	(6)	.....
57	Additional area needing drainage.....1939..acres.....	.....	180	.....	.....	.....	.....	(5)	.....

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁴ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁵ Data are shown in Mississippi River Total only.

CENSUS OF IRRIGATION—TEXAS

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	GULF OF MEXICO									
		Total	Rio Grande River				Guadalupe River				
			Total	Direct	Pecos River	Baffins Bay	Nueces River	Total	Direct	San Antonio River	
											(1)	(2)	(3)	(4)	(5)	(6)
ENTERPRISES AND IRRIGATION WORKS											
JANUARY 1											
1	Enterprises.....1940..number.....	4,040	4,037	649	520	129	50	589	259	131	128
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	439	439	1,246	1,313	976	25	131	242	134	351
3	Diversion dams.....1940..total number.....	244	243	132	70	62	.....	26	18	12	6
4	1930..total number.....	107	107	40	16	19	.....	17	4	.....	4
5	1920..total number.....	165	165	44	11	26	.....	54	4	.....	4
6	(a) Concrete and masonry.....1940..number.....	76	76	36	9	27	.....	5	5	.....	5
7	(b) Timber.....1940..number.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....
8	(c) Earth and rock.....1940..number.....	136	135	85	53	32	.....	9	12	12	.....
9	(d) Other, mixed, and not reported.....1940..number.....	28	28	11	8	3	.....	12	1	.....	1
10	Main canals and laterals.....1940..total length, miles.....	5,936.1	5,936.1	3,407.7	2,921.7	486.0	3.0	68.1	377.1	65.1	312.0
11	1930..total length, miles.....	4,879	4,879	3,096	2,496	413	.....	54	285	.....	285
12	1920..total length, miles.....	4,473	4,473	2,312	1,640	570	.....	138	142	.....	142
13	(a) Earth.....1940..length, miles.....	4,944	4,944	2,450	2,021	429	3	65	369	65	304
14	(b) Lined.....1940..length, miles.....	992.1	992.1	957.7	900.7	57.0	.....	3.1	8.1	0.1	8.0
15	1940..capacity, c.f.s. ²	24,813	24,808	14,701	10,652	4,049	6	412	772	230	542
16	1930..capacity, c.f.s. ²	21,626	21,626	12,669	10,218	1,903	.....	45	711	.....	711
17	1920..capacity, c.f.s. ²	23,261	23,261	12,530	9,319	2,725	.....	163	1,782	.....	1,782
18	Pipe lines ³.....1940..total length, miles.....	923.1	923.1	742.0	704.6	37.4	3.7	21.8	42.9	24.6	18.3
19	1930..total length, miles.....	319.0	319.0	273.6	264.9	0.1	.....	8.1	6.6	.....	6.6
20	1920..total length, miles.....	157.1	157.1	41.1	40.5	0.6	.....	92.6	10.9	.....	10.9
21	(a) Concrete.....1940..length, miles.....	655.4	655.4	639.3	638.3	1.0	3.3	1.1	5.9	1.7	4.2
22	(b) Metal.....1940..length, miles.....	204.0	204.0	50.1	43.7	6.4	0.2	20.2	35.4	22.4	13.0
23	(c) Wood-stave.....1940..length, miles.....	22.2	22.2	19.6	19.6	.....	.....	0.4	1.1	.....	1.1
24	(d) Other.....1940..length, miles.....	41.5	41.5	33.0	3.0	30.0	0.2	0.1	0.5	.....	.....
25	Storage dams.....1940..total number.....	194	193	59	53	6	.....	19	6	.....	6
26	1930..total number.....	168	168	41	34	4	.....	30	4	.....	4
27	1920..total number.....	134	134	33	19	9	.....	29	10	.....	10
28	(a) Concrete and masonry.....1940..number.....	47	47	5	2	3	.....	6	3	.....	3
29	(b) Earth and rock.....1940..number.....	134	134	51	49	2	.....	11	3	.....	3
30	(c) Other, mixed, and not reported.....1940..number.....	13	12	3	2	1	.....	2	.....	.....	.....
31	Reservoirs.....1940..total number.....	542	541	112	85	27	14	227	17	3	14
32	(a) 1-99 acre-feet capacity.....1940..number.....	462	461	66	45	21	14	219	13	3	10
33	(b) 100-999 acre-feet capacity.....1940..number.....	38	38	20	19	1	.....	2	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	42	42	26	21	5	.....	6	4	.....	4
35	1940..total capacity, ac.-ft. ⁴	1,405,023	1,405,023	404,251	93,163	311,088	13	21,872	260,613	30	260,583
36	1930..total number.....	325	325	74	64	5	.....	163	13	.....	13
37	1930..total capacity, ac.-ft.....	935,085	935,085	52,572	21,280	30,688	.....	6,840	263,281	.....	263,281
38	Wells, flowing.....1940..number.....	100	100	25	3	22	.....	37	27	1	26
39	1930..number.....	61	61	11	.....	11	.....	30	6	.....	6
40	1920..number.....	135	135	15	.....	14	.....	81	25	.....	25
41	1940..yield, g.p.m.....	39,508	39,508	8,165	155	8,010	.....	15,970	14,093	(5)	14,078
42	1930..yield, g.p.m.....	36,020	36,020	15,000	.....	15,000	.....	16,173	3,520	.....	3,520
43	1920..yield, g.p.m.....	62,364	62,364	9,110	.....	9,050	.....	26,065	15,465	.....	15,465
44	Wells, pumped.....1940..number.....	3,396	3,396	214	137	77	53	499	176	83	93
45	1930..number.....	1,102	1,102	50	3	23	.....	407	27	.....	27
46	1920..number.....	901	901	49	5	42	.....	275	43	.....	43
47	1940..yield, g.p.m.....	2,213,230	2,213,230	103,447	80,561	22,886	8,922	179,010	126,638	82,449	44,249
48	1930..yield, g.p.m.....	614,395	614,395	16,293	2,320	10,275	.....	155,378	16,947	.....	16,947
49	1920..yield, g.p.m.....	538,565	538,565	23,872	2,026	21,909	.....	72,937	12,864	.....	12,864
50	Pumping plants.....1940..total number.....	4,674	4,674	809	722	87	58	680	262	144	118
51	1930..total number.....	1,828	1,828	279	216	26	.....	445	39	.....	39
52	Prime movers.....1940..capacity, hp.....	195,061	195,061	40,786	39,777	1,009	546	13,663	5,268	3,888	1,380
53	1930..capacity, hp.....	95,933	95,933	38,396	37,142	369	.....	12,553	982	.....	982
54	1920..capacity, hp.....	80,511	80,511	22,590	21,779	719	.....	6,533	1,436	.....	1,436
55	(a) Electric.....1940..number.....	834	834	154	154	4	.....	131	71	.....	71
56	1940..capacity, hp.....	46,674	46,674	8,543	8,494	49	40	3,033	1,737	1,079	658
57	(b) Internal-combustion.....1940..number.....	3,314	3,314	534	496	38	36	517	176	112	64
58	1940..capacity, hp.....	124,889	124,889	21,220	20,418	802	464	10,521	3,512	2,796	716
59	(c) Other.....1940..number.....	526	526	107	62	45	17	32	15	11	4
60	1940..capacity, hp.....	23,498	23,498	11,023	10,865	158	42	109	19	13	6
61	Pumps.....1940..total number.....	4,754	4,754	838	754	84	58	680	269	149	117
62	1930..number.....	2,028	2,028	358	282	35	.....	455	42	.....	42
63	1920..number.....	1,641	1,641	232	172	53	.....	342	80	.....	80
64	1940..capacity, g.p.m.....	9,916,225	9,916,225	4,122,466	4,088,747	33,719	10,900	348,102	214,308	156,247	58,061
65	1930..capacity, g.p.m.....	6,494,999	6,494,999	3,325,623	3,077,125	14,100	.....	217,192	34,267	.....	34,267
66	1920..capacity, g.p.m.....	6,825,998	6,825,998	2,414,876	2,363,251	28,253	.....	160,472	31,039	.....	31,039
67	(a) Centrifugal.....1940..number.....	1,604	1,604	551	534	17	8	243	155	78	77
68	1940..capacity, g.p.m.....	6,795,725	6,795,725	3,532,530	3,516,850	15,730	3,370	192,825	147,398	109,903	37,495
69	1940..average capacity, g.p.m.....	4,237	4,237	6,411	6,586	925	421	794	951	1,409	487
70	(b) Turbine.....1940..number.....	2,215	2,215	112	92	20	8	305	47	27	20
71	1940..capacity, g.p.m.....	2,622,843	2,622,843	144,950	129,500	15,450	2,075	141,763	64,400	44,600	19,800
72	1940..average capacity, g.p.m.....	1,184	1,184	1,294	1,408	772	259	465	1,370	1,652	990
73	(c) Plunger.....1940..number.....	791	791	97	53	44	27	120	54	35	19
74	1940..capacity, g.p.m.....	42,715	42,715	1,416	1,047	369	3,036	8,538	2,090	1,329	761
75	1940..average capacity, g.p.m.....	54	54	15	20	8	112	71	39	38	40
76	(d) Other.....1940..number.....	144	144	78	75	3	15	22	4	3	1
77	1940..capacity, g.p.m.....	454,942	454,942	443,520	441,350	2,170	2,419	4,976	420	415	(6)
78	Pumping lift, from all sources.....1940..average, feet.....	69	69	51	41	108	44	59	49	60	34
79	1930..average, feet.....	55	55	49	50	45	.....	97	32	.....	32
80	1920..average, feet.....	45	45	50	50	53	.....	47	39	.....	39
81	from pumped wells.....1940..average, feet.....	82	82	99	89	117	43	67	55	78	36
82	from surface sources.....1940..average, feet.....	27	27	22	22	32	66	37	35	37	29

¹Data for unidentified basins for the 1930 and 1920 Censuses are included only in State totals.

²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

³Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — TEXAS

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WORKS, 1940, 1930, AND 1920

GULF OF MEXICO—Continued																		INDEPENDENT BASIN
Colorado River			Brazos River				San Jacinto River	Trinity River	Sabine River			Mississippi River						
Total	Direct	Llano River	Total	Direct	Little River	Total			Direct	Neches River	Total	Arkansas River			Red River			
							Canadian River					Sacramento-Salt Lakes						
	(7)	(8)		(9)	(10)	(11)	(12)	(13)	(14)		Total		Direct	Mustang Creek	North Canadian River	(19)	(21)	
472	391	81	1,050	1,044	6	42	71	38	6	32	817	66	34	12	20	751	3	1
368	442	10	253	255	15	345	972	2,317	3,023	2,184	260	58	55	128	22	278	9	2
41	39	2	15	15			5	2		2	4	2	2			2	1	3
15			2				1	4		4	3	1				2		4
46											13					13		5
27	27		2	2							1	1	1					6
4	4																	7
7	5	2	13	13			5	2		2	2					2	1	8
3	3										1	1	1					9
664.0	661.8	2.2	151.8	151.8			486.6	465.6	117.0	348.6	312.2	12.2	8.2		4.0	300.0		10
731			42				61	235	15	220	201	2				199		11
963			266				179	192	75	117	131	4				127		12
644	643	1	151	151			486	465	117	348	311	12	8		4	299		13
20.0	18.8	1.2	0.8	0.8			0.6	0.6		0.6	1.2	0.2	0.2			1.0		14
3,100	3,054	46	1,099	1,096	3		1,203	2,399	261	2,138	1,116	34	16		18	1,082	5	15
1,791			393				2,257	1,178	106	1,072	1,016	16				1,000		16
3,925			287				1,022	1,861	481	1,380	113	4				109		17
38.4	28.7	9.7	14.0	13.0	1.0	2.1	46.0	0.3	0.1	0.2	11.9	7.1	1.5		5.6	4.8		18
7.9			6.1				9.2	0.4	0.4		0.6					0.6		19
8.5			2.2				1.5				0.2		0.2					20
2.9	2.9		0.9	0.7	0.2		2.0											21
29.4	19.8	9.6	12.6	11.8	0.8	2.1	44.0	0.1	0.1		9.9	6.1	1.5		4.6	3.8		22
0.1		0.1									1.0					1.0		23
6.0	6.0		0.5	0.5				0.2		0.2	1.0	1.0			1.0			24
53	50	3	25	24	1	2	5	1	1		23	15	9		6	8	1	25
53			20				2				4	1				3		26
53			2				1				2					2		27
27	27		6	6			6				6					6		28
25	22	3	18	17	1	2	5	1	1		18	10	9		1	8		29
1	1		1	1							5	5			5		1	30
67	60	7	44	43	1	4	11	1	1		44	17	9		8	27	1	31
57	51	6	41	40	1	4	4	1	1		42	17	9		8	25	1	32
8	8		2	2			6											33
2	1	1	1	1			1				2					2		34
8,299	4,296	4,003	3,041	3,037	(5)	8	25,215	(5)	(5)		681,709	44	29		15	681,665	(5)	35
33			20				1				4	1			3		3	36
8,828			3,534				1				600,002	1			1	600,001		37
9	2	7	1	1							1					1		38
13			1	1														39
3			3								2					2		40
742	(5)	142	(5)	(5)							(5)					(5)		41
1,255			72															42
5,400			3,500								2,500					2,500		43
270	228	42	1,137	1,134	3	52	88	3	1	2	904	73	33	16	24	631		44
117			171				65				70	9				61		45
57			150								49	3				46		46
37,555	36,333	1,222	942,099	941,959	140	67,336	13,205	530	(5)	(5)	734,428	24,451	8,117	13,300	3,034	709,977		47
26,143			121,854				9,772				59,800	1,060				58,740		48
30,667			136,332								49,750	2,000				47,750		49
507	435	72	1,201	1,195	6	54	108	61	8	53	934	77	34	16	27	857		50
374			212				80	7	4	3	72	9				63		51
18,750	18,440	310	54,455	54,398	37	2,564	8,746	10,295	1,629	8,666	40,008	1,072	380	567	125	38,936		52
17,507			8,829				2,461	2,887	361	2,526	2,438	125				2,313		53
13,500			6,276				7,688	7,705	1,855	5,850	3,495	115				3,380		54
90	90		115	111	4	33	37			184	14		11		3	170		55
12,858	12,858		7,840	7,823	17	1,619	3,960				7,044	177	138		39	6,867		56
305	274	31	985	983	2	20	62	40	8	32	639	30	13	14	3	609		57
4,592	4,325	267	46,404	46,384	(5)	944	686	3,742	1,629	2,113	32,804	858	223	565	70	31,946		58
112	71	41	101	101		1	9	21		21	111	33	10	2	21	78		59
1,300	1,257	43	191	191		(5)	4,100	6,553		6,553	160	37	19	(5)	16	123		60
545	482	63	1,200	1,194	6	52	110	62	8	54	939	78	36	17	25	861		61
414			219				69	17	4	13	75	9				86		62
359			175				20	39	16	23	63	3				60		63
1,413,973	1,397,942	16,031	1,445,574	1,444,414	1,160	67,936	490,010	1,051,299	49,119	1,002,180	751,657	25,284	8,716	13,305	3,263	726,373		64
1,308,649			268,075				326,717	421,587	26,500	395,087	59,954	1,060				58,894		65
912,048			153,585				445,100	2,116,500	187,000	1,929,500	52,260	2,000				50,260		66
278	258	20	164	160	4	3	94	48	8	40	60	14	9	3	2	46		67
1,225,610	1,209,800	15,810	554,498	553,448	1,050	1,150	488,360	611,269	49,119	562,150	38,665	4,065	1,845	1,700	(5)	34,600		68
4,409	4,689	790	3,381	3,459	262	383	5,195	12,735	6,140	14,054	644	290	205	567	(5)	752		69
26	26		905	904	1	46	2	12		12	752	27	11	12	4	725		70
169,010	169,010		886,440	886,350	(5)	66,715	(5)	440,000		440,000	707,190	20,675	6,475	11,550	2,650	686,515		71
6,500	6,500		979	980	(5)	1,450	(5)	36,667		36,667	940	766	589	962	662	947		72
234	192	42	124	123	1	1	9	2		2	123	37	16	2	19	86		73
17,739	17,534	205	3,334	3,314	(5)	(5)	770	(5)	(5)	(5)	5,757	544	396	(5)	93	5,213		74
76	91	5	27	27	(5)	(5)	86	(5)	(5)	(5)	47	15	25	(5)	5	61		75
7	6	1	7	7		2	5				4					4		76
1,614	1,598	(5)	1,302	1,302		(5)	580				45					45		77
43	42	52	85	85	40	76	24	12	7	13	94	93	87	50	139	95		78
38			54				19	35	12	65	64	200				45		79
30			63				34	18	14	24	81	80				81		80
63	62	63	88	88	57	76	22	12	(5)	(5)	96	99	100	50	146	96		81
26	26	31	23	24	14		27	12	8	12	28	13	14		10	33		82

⁴Total capacity of all reservoirs regardless of size.
⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	STATE TOTAL	Armstrong	Atascosa	Bailey	Bandera	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS¹						
1 All farms.....1940..number.....	418,002	408	2,020	820	656	
2 .....1930..number.....	495,489	472	1,816	758	678	
3 Irrigated farms.....1940..number.....	19,568	6	168	247	8	
4 .....1930..number.....	10,861	.....	45	17	6
5 Increase or decrease (-), 1930-1940.....percent.....	80.2	.....	268.9	(1)	33.3
Operated by—						
6 (a) Owners and managers.....1940..number.....	12,181	5	60	138	7	
7 .....1930..number.....	6,056	.....	29	13	.....
8 (b) Tenants.....1940..number.....	7,387	1	106	109	1	
9 .....1930..number.....	4,805	.....	16	4	.....
10 Land in all farms.....1940..acres.....	137,683,372	² 610,482	700,079	452,350	479,042	
11 Land in irrigated farms.....1940..acres.....	11,619,780	9,684	8,900	96,302	14,676	
12 Average per farm.....1940..acres.....	594	1,614	54	390	1,835	
13 (a) Operated by owners and managers.....1940..acres.....	9,672,335	(3)	5,890	58,609	(3)	
14 Average per farm.....1940..acres.....	794	(3)	98	425	(3)	
15 (b) Operated by tenants.....1940..acres.....	1,947,445	(3)	3,010	37,693	(3)	
16 Average per farm.....1940..acres.....	264	(3)	28	346	(3)	
17 Approximate land area.....1940..acres.....	168,732,160	581,760	771,940	532,480	489,600	
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939..acres.....	1,045,224	535	2,321	5,849	12	
19 (a) Cropland harvested.....1939..acres.....	961,765	434	2,164	5,661	8	
20 (b) Crop failure.....1939..acres.....	12,589	99	40	29	.....
21 (c) Pasture.....1939..acres.....	70,870	2	117	159	4	
22 Area irrigated.....1929..acres.....	798,917	.....	1,452	597	.....
23 .....1919..acres.....	586,120	.....	2,312	2,195	.....
24 Increase or decrease (-), 1929-1939.....percent.....	30.8	.....	59.8	879.7	.....
25 Irrigable area in enterprises.....1940..acres.....	2,180,796	697	3,320	9,524	21	
26 .....1930..acres.....	1,566,876	.....	2,370	2,525	.....
27 .....1920 ⁴ ..acres.....	1,687,447	.....	6,445	4,680	.....
28 Excess of irrigable area over the area irrigated.....1940..acres.....	1,135,572	162	999	3,975	9	
29 .....1930..acres.....	767,959	.....	918	1,928	.....
30 Area works were capable of supplying with water.....1940..acres.....	1,773,812	656	3,320	9,814	21	
31 .....1930..acres.....	1,177,415	.....	2,256	2,256	.....
32 .....1920..acres.....	1,150,542	.....	4,067	3,555	.....
33 Increase or decrease (-), 1930-1940.....percent.....	50.7	.....	47.2	288.7	.....
34 Excess, capability of works over area irrigated.....1940..acres.....	728,588	121	999	3,965	9	
35 .....1930..acres.....	378,498	.....	804	1,928	.....
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	9.0	5.5	26.1	6.1	0.1	
37 .....1929..percent.....	42.1	.....	22.3	11.9	.....
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	58.9	81.6	69.9	59.6	57.1	
39 .....1929..percent.....	67.9	.....	64.4	23.6	.....
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940..dollars.....	66,441,376	9,866	111,477	96,766	800	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	65,884,261	9,866	111,477	96,766	800	
42 (b) Investment in water rights (reported).....1940..dollars.....	557,115	.....	.....	.....	.....
43 Total investment in all enterprises.....1930..dollars.....	49,022,164	.....	187,615	30,100	.....
44 .....1920..dollars.....	35,072,739	.....	142,168	73,900	.....
45 Increase or decrease (-), 1930-1940.....percent.....	35.5	.....	-30.6	221.5	.....
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	37.46	.....	33.58	9.86	38.10
47 .....1930..dollars.....	41.64	.....	83.25	11.92	.....
48 .....1920..dollars.....	30.48	.....	34.96	20.79	.....
49 Average investment per acre irrigated.....1939..dollars.....	63.57	18.44	48.03	16.54	66.67	
50 Estimated final investment in existing enterprises.....1940..dollars.....	67,319,032	10,366	111,477	99,483	800	
51 .....1930..dollars.....	59,555,624	.....	199,815	30,100	.....
52 .....1920..dollars.....	39,860,871	.....	146,218	73,900	.....
53 Increase or decrease (-), 1930-1940.....percent.....	13.0	.....	-44.2	230.5	.....
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	30.87	.....	33.58	10.13	.....
55 .....1930..dollars.....	38.01	.....	84.31	11.92	.....
56 .....1920 ⁴ ..dollars.....	23.62	.....	22.69	15.79	.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
57 Enterprises reporting maintenance and operation.....1939..number.....	Primary		5	46	64	4
	Supplemental					
Enterprises						
58 Area irrigated in these enterprises.....1939..acres.....	3,299	18	535	2,064	3,984	12
59 Cost of maintenance and operation.....1939..dollars.....	1,002,202	51,197	1,073	7,765	4,669	97
60 Average cost, per acre irrigated.....1939..dollars.....	3,855,224	32,866	2.01	3.76	1.17	8.08
61 .....1929..dollars.....	3.86	0.64	5.12	4.93
62 Total annual charges (reported) ⁵.....1939..dollars.....	4.74
63 Average annual charge per acre irrigated.....1939..dollars.....	3,855,789	230,915	2,638
64 Area against which charges were assessed.....1939..acres.....	5.61	4.69	4.62
65 Average annual charge per acre assessed.....1939..dollars.....	1,087,092	165,650	749
66 Total charges collected ⁵.....1939..dollars.....	3.55	1.39	3.79
67 Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	3,671,948	58,500	625
.....	34,699,264	1,342,124	7,729
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939..number.....	3,610	17	5	54	82	4
69 Area irrigated in these enterprises.....1939..acres.....	1,017,411	22,807	535	2,241	5,478	12
70 Water delivered in these enterprises.....1939..acre-feet.....	2,404,098	32,212	613	4,998	9,297	12
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.4	1.4	1.1	2.2	1.7	1.0
72 Average cost of water per acre irrigated.....1939..dollars.....	4.85	1.39	2.01	4.27	1.17	8.08
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939..number.....	99	1
74 Irrigable area in these enterprises.....1939..acres.....	857,141	(3)
75 Irrigated area in these enterprises.....1939..acres.....	397,227	(3)
76 Area for which drains have been installed.....1939..acres.....	553,850	(3)
77 Additional area needing drainage.....1939..acres.....	106,837

¹Census of Agriculture.
²Percent not shown when more than 1,000.
³The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

CENSUS OF IRRIGATION - TEXAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

Irrigation data omitted from any of the counties listed are included under "All other counties"

Bexar	Brazoria	Brewster	Briscoe	Brooks	Callahan	Cameron	Castro	Chambers	Coke	Coleman	Colorado	
3,964	1,824	265	516	397	1,435	3,243	703	368	756	2,049	2,227	1
3,467	2,163	287	679	513	1,451	2,936	751	577	538	2,583	2,569	2
785	58	22	62	20	7	2,590	174	79	12	13	96	3
156	15	57	.....	14	.....	2,395	.....	22	7	5	42	4
146.8	353.3	-61.4	.....	42.9	.....	8.1	.....	259.1	71.4	160.0	128.6	5
257	18	17	43	20	4	1,297	127	19	8	9	40	6
90	8	42	.....	.....	.....	1,258	.....	10	.....	.....	24	7
118	50	5	19	.....	3	1,293	47	60	4	4	56	8
66	7	15	.....	.....	.....	1,137	.....	12	.....	.....	18	9
573,088	578,969	2,916,372	347,220	2,595,051	472,236	318,629	489,121	200,214	2,661,601	747,419	457,586	10
19,224	42,928	16,482	33,395	48,995	645	213,930	127,952	44,637	41,971	2,243	82,425	11
50	631	749	539	2,450	92	83	735	565	3,498	173	859	12
15,615	21,447	15,152	26,815	48,995	573	104,931	104,321	19,408	36,032	1,848	62,974	13
58	1,192	891	624	2,450	143	81	821	1,021	4,504	205	1,574	14
3,609	21,481	1,330	6,580	.....	72	108,999	23,631	25,229	5,939	395	19,451	15
31	430	266	346	.....	24	84	503	420	1,485	99	347	16
798,080	922,240	3,973,120	567,680	581,120	548,480	565,120	560,640	395,520	585,600	820,480	608,000	17
15,515	37,060	1,113	1,233	349	53	88,273	17,739	32,180	200	167	20,910	18
13,658	36,740	646	1,050	327	53	85,696	17,273	32,180	200	167	20,910	19
298	270	80	103	10	.....	1,515	.....	.....	.....	.....	.....	20
1,559	50	387	80	12	.....	1,062	466	.....	.....	.....	.....	21
5,039	3,796	779	.....	.....	.....	155,804	.....	1,444	.....	.....	18,727	22
12,933	350	596	.....	.....	.....	60,008	.....	29,200	.....	.....	15,321	23
207.9	876.3	42.9	.....	.....	.....	-43.3	.....	(¹)	.....	.....	11.7	24
24,901	59,849	1,831	2,773	661	113	209,147	26,939	125,535	390	195	145,937	25
41,152	5,948	1,604	.....	.....	.....	237,308	.....	18,000	.....	.....	135,250	26
59,055	1,000	1,087	.....	.....	.....	178,414	.....	72,200	.....	.....	45,287	27
9,386	22,789	718	1,540	312	60	120,874	9,200	93,355	190	28	125,027	28
36,113	2,152	825	.....	.....	.....	81,504	.....	16,556	.....	.....	116,523	29
24,944	53,849	1,407	2,052	535	113	199,255	25,919	46,500	365	195	55,937	30
30,499	5,548	1,342	.....	.....	.....	210,093	.....	15,000	.....	.....	50,485	31
57,736	1,000	873	.....	.....	.....	120,948	.....	38,700	.....	.....	19,378	32
-16.5	870.6	4.8	.....	.....	.....	-5.2	.....	210.0	.....	.....	10.8	33
9,329	16,789	294	819	186	60	110,982	9,180	14,320	165	28	35,027	34
25,460	1,752	563	.....	.....	.....	54,289	.....	13,556	.....	.....	31,768	35
80.7	86.3	6.8	3.7	0.7	8.2	41.3	13.9	72.1	0.5	7.4	25.4	36
42.6	89.9	0.9	.....	.....	.....	148.5	.....	11.4	.....	.....	84.0	37
62.4	88.8	79.1	50.1	65.2	46.9	41.3	65.9	69.2	54.8	85.6	37.4	38
16.5	68.4	58.0	.....	.....	.....	74.2	.....	9.6	.....	.....	37.1	39
2,112,702	860,563	25,200	26,620	51,592	4,175	8,618,647	238,683	1,160,043	7,525	33,300	665,150	40
2,112,602	846,413	24,800	26,630	51,592	4,175	8,382,352	238,483	1,158,936	7,525	33,300	654,000	41
100	14,150	400	.....	.....	.....	236,295	200	1,107	.....	.....	11,150	42
650,050	102,485	42,675	.....	.....	.....	7,198,289	.....	85,000	.....	.....	485,700	43
4,946,565	10,010	80,955	.....	.....	.....	3,108,489	.....	1,008,802	.....	.....	523,925	44
225.0	739.7	-40.9	.....	.....	.....	19.7	.....	(¹)	.....	.....	36.9	45
55.04	15.98	17.91	12.97	96.43	36.95	43.25	8.87	24.95	20.62	170.77	11.89	46
21.31	18.47	31.80	.....	.....	.....	34.26	.....	5.67	.....	.....	9.62	47
85.68	10.01	92.73	.....	.....	.....	25.70	.....	26.07	.....	.....	27.04	48
136.17	23.22	22.64	21.59	147.83	78.77	97.64	13.46	36.05	37.62	199.40	31.81	49
2,113,062	882,195	30,445	26,770	54,592	4,175	8,955,347	241,408	1,160,043	7,525	33,300	665,150	50
653,050	103,735	51,175	.....	.....	.....	11,563,289	.....	85,000	.....	.....	535,700	51
5,446,566	10,010	90,655	.....	.....	.....	4,098,469	.....	1,008,802	.....	.....	523,925	52
223.6	750.4	-40.5	.....	.....	.....	-22.6	.....	(¹)	.....	.....	24.2	53
84.85	14.74	16.63	9.65	82.59	36.95	42.82	8.96	9.24	19.29	170.77	4.56	54
15.87	17.44	31.90	.....	.....	.....	48.73	.....	4.72	.....	.....	3.96	55
92.23	10.01	83.40	.....	.....	.....	22.97	.....	13.97	.....	.....	11.57	56
	Primary	Sup.				Primary	Sup.					
	Enterprises					Enterprises						
64	12	2	17	19	4	132	3	71	4	3	9	57
13,311	36,825	(³)	933	1,229	299	86,961	103	13,463	32,180	200	37	20,270
35,545	194,235	(³)	4,305	3,465	2,171	475,035	85	28,602	219,497	340	170	126,449
2.67	5.27	(³)	4.61	2.82	7.26	5.46	0.83	2.12	6.82	1.70	4.59	6.24
10.38	4.69	.....	6.04	.....	.....	4.46	.....	20.66	.....	.....	6.83	61
40,135	315,700	.....	.....	.....	.....	545,349	.....	279,470	.....	.....	171,244	62
3.77	9.33	.....	.....	.....	.....	6.86	.....	8.68	.....	.....	8.88	63
14,945	33,850	.....	.....	.....	.....	191,980	.....	32,180	.....	.....	19,285	64
2.69	9.33	.....	.....	.....	.....	2.84	.....	8.66	.....	.....	8.88	65
26,966	305,688	200	.....	.....	.....	384,821	.....	279,361	.....	.....	88,511	66
300,807	462,880	46,669	.....	.....	.....	4,178,800	.....	454,443	.....	.....	9,333	67
98	14	2	20	18	15	89	6	99	4	3	11	14
15,297	37,060	(³)	1,113	1,233	280	86,243	235	17,739	32,180	200	167	20,910
42,434	156,590	(³)	1,425	1,294	719	192,286	295	17,005	135,165	106	477	57,901
2.8	4.2	(³)	1.3	1.0	2.6	1.7	1.3	1.0	4.2	0.5	2.9	71
3.73	8.78	(³)	4.61	2.82	8.87	3.64	6.88	0.83	2.12	8.66	4.59	8.86
3	1	.....	.....	.....	1	8	.....	2	.....	1	.....	73
41	(³)	.....	.....	.....	(³)	127,721	.....	(³)	.....	(³)	.....	74
41	(³)	.....	.....	.....	(³)	52,340	.....	(³)	.....	(³)	.....	75
41	(³)	.....	.....	.....	(³)	119,232	.....	(³)	.....	(³)	.....	76
.....	.....	.....	.....	.....	(³)	7,515	.....	(³)	.....	.....	.....	77

³Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — TEXAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Comal	Concho	Crosby	Dallam	Dallas	Deaf Smith
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940...number.....	732	727	1,288	473	3,510	854
2	.....1930...number.....	897	1,137	1,739	660	4,830	830
3	Irrigated farms.....1940...number.....	5	8	180	60	40	250
4	.....1930...number.....	5	4	.....	.....	19	18
5	Increase or decrease (-), 1930-1940.....percent.....	.....	100.0	.....	.....	110.5	(1)
6	Operated by—						
7	(a) Owners and managers.....1940...number.....	5	4	55	25	28	189
8	.....1930...number.....	.....	.....	.....	.....	.....	15
9	(b) Tenants.....1940...number.....	.....	4	125	35	12	61
10	.....1930...number.....	.....	.....	.....	.....	.....	3
11	Land in all farms.....1940...acres.....	309,811	555,075	452,191	813,936	387,521	939,959
12	Land in irrigated farms.....1940...acres.....	110	1,625	38,525	76,143	1,133	221,690
13	Average per farm.....1940...acres.....	22	203	214	1,269	28	887
14	(a) Operated by owners and managers.....1940...acres.....	110	682	18,230	44,458	828	150,102
15	Average per farm.....1940...acres.....	22	170	350	1,778	30	959
16	(b) Operated by tenants.....1940...acres.....	.....	944	19,295	31,685	305	41,588
17	Average per farm.....1940...acres.....	.....	236	154	905	25	682
17	Approximate land area.....1940...acres.....	362,880	642,560	583,040	956,160	571,520	964,480
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939...acres.....	105	115	1,103	467	287	28,688
19	(a) Cropland harvested.....1939...acres.....	63	115	1,024	348	285	27,053
20	(b) Crop failure.....1939...acres.....	.....	.....	.....	119	2	180
21	(c) Pasture.....1939...acres.....	42	.....	79	.....	.....	1,455
22	Area irrigated.....1929...acres.....	.....	.....	.....	.....	.....	537
23	.....1919...acres.....	.....	.....	.....	.....	.....	6,483
24	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	.....	.....	(1)
25	Irrigable area in enterprises.....1940...acres.....	105	117	1,425	1,539	343	49,930
26	.....1930...acres.....	.....	.....	.....	.....	.....	6,823
27	.....1920 ⁴ ...acres.....	.....	.....	.....	.....	.....	13,341
28	Excess of irrigable area over the area irrigated.....1940...acres.....	.....	2	322	1,072	56	21,242
29	.....1930...acres.....	.....	.....	.....	.....	.....	6,286
30	Area works were capable of supplying with water.....1940...acres.....	105	117	1,424	1,539	343	49,430
31	.....1930...acres.....	.....	.....	.....	.....	.....	6,680
32	.....1920...acres.....	.....	.....	.....	.....	.....	11,945
33	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	640.0
34	Excess, capability of works over area irrigated.....1940...acres.....	.....	2	321	1,072	56	20,742
35	.....1930...acres.....	.....	.....	.....	.....	.....	6,143
36	Proportion which area irrigated is of all lands in irrigated farms.....1939...percent.....	95.5	7.1	2.9	0.6	25.3	12.9
37	.....1929...percent.....	.....	.....	.....	.....	.....	5.9
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	100.0	98.3	77.5	30.3	83.7	58.0
39	.....1929...percent.....	.....	.....	.....	.....	.....	8.0
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940...dollars.....	975	1,900	30,775	20,745	32,754	630,146
41	(a) Cost of irrigation works and equipment.....1940...dollars.....	900	1,900	30,775	20,745	32,754	627,646
42	(b) Investment in water rights (reported).....1940...dollars.....	75	.....	.....	.....	.....	2,500
43	Total investment in all enterprises.....1930...dollars.....	.....	.....	.....	.....	.....	225,500
44	.....1920...dollars.....	.....	.....	.....	.....	.....	290,300
45	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	179.4
46	Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars.....	9.29	16.24	21.61	13.48	95.49	12.75
47	.....1930...dollars.....	.....	.....	.....	.....	.....	33.76
48	.....1920...dollars.....	.....	.....	.....	.....	.....	25.59
49	Average investment per acre irrigated.....1939...dollars.....	9.29	16.52	27.90	44.42	114.13	21.97
50	Estimated final investment in existing enterprises.....1940...dollars.....	1,025	1,900	30,775	22,730	32,854	636,846
51	.....1930...dollars.....	.....	.....	.....	.....	.....	225,500
52	.....1920...dollars.....	.....	.....	.....	.....	.....	290,300
53	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	.....	182.4
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars.....	9.76	16.24	21.60	14.77	95.78	12.75
55	.....1930...dollars.....	.....	.....	.....	.....	.....	33.05
56	.....1920 ⁴ ...dollars.....	.....	.....	.....	.....	.....	21.76
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57	Enterprises reporting maintenance and operation.....1939...number.....	4	2	16	9	34	165
58	Area irrigated in these enterprises.....1939...acres.....	105	(2)	898	466	247	25,955
59	Cost of maintenance and operation.....1939...dollars.....	127	(2)	3,050	1,455	3,586	67,041
60	Average cost, per acre irrigated.....1939...dollars.....	1.21	(2)	3.40	3.12	14.52	2.58
61	.....1929...dollars.....	.....	.....	.....	.....	.....	9.35
62	Total annual charges (reported) ⁷.....1939...dollars.....	.....	.....	.....	.....	.....	.....
63	Average annual charge per acre irrigated.....1939...dollars.....	.....	.....	.....	.....	.....	.....
64	Area against which charges were assessed.....1939...acres.....	.....	.....	.....	.....	.....	.....
65	Average annual charge per acre assessed.....1939...dollars.....	.....	.....	.....	.....	.....	.....
66	Total charges collected ⁷.....1939...dollars.....	.....	.....	.....	.....	.....	.....
67	Indebtedness to December 31 (reported) ⁸.....1939...dollars.....	.....	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939...number.....	3	2	20	10	39	167
69	Area irrigated in these enterprises.....1939...acres.....	31	(2)	1,103	467	287	27,880
70	Water delivered in these enterprises.....1939...acre-feet.....	31	(2)	1,126	433	760	33,256
71	Average water delivered per acre irrigated.....1939...acre-feet.....	1.0	(2)	1.0	0.9	2.6	1.2
72	Average cost of water per acre irrigated.....1939...dollars.....	3.29	.....	3.40	3.12	14.52	2.58
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939...number.....	.....	.....	.....	.....	8	.....
74	Irrigable area in these enterprises.....1939...acres.....	.....	.....	.....	.....	80	.....
75	Irrigated area in these enterprises.....1939...acres.....	.....	.....	.....	.....	54	.....
76	Area for which drains have been installed.....1939...acres.....	.....	.....	.....	.....	40	.....
77	Additional area needing drainage.....1939...acres.....	.....	.....	.....	.....	5	.....

⁴ Census of Agriculture.
¹ Percent not shown when more than 1,000.
² The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.
³ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - TEXAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued
Irrigation data omitted from any of the counties listed are included under "All other counties"

Dickens	Dimmit	Donley	Edwards	El Paso	Fisher	Floyd	Fort Bend	Frio	Galveston	Gillespie	Glasscock	
920	442	877	272	1,075	1,487	1,317	3,644	713	909	1,407	149	1
1,228	241	1,364	258	1,263	2,088	1,671	4,258	943	674	1,444	125	2
65	252	8	53	1,001	13	471	58	53	29	236	44	3
.....	106	.....	(¹) 4	1,150	10	32	25	18	10	.....	.....	4
.....	137.7	.....	.....	-13.0	30.0	(¹)	132.0	194.4	190.0	(¹) 4	.....	5
35	144	3	40	765	12	247	17	40	28	201	32	6
.....	79	.....	.....	779	.....	9	5	11	.....	.....	.....	7
30	108	5	13	236	1	224	41	13	1	35	12	8
.....	27	.....	.....	371	.....	23	20	7	.....	.....	.....	9
320,317	620,614	523,800	1,261,077	325,565	490,141	496,521	404,575	629,645	121,272	2,676,080	2,566,065	10
27,380	144,256	4,017	282,425	122,426	6,737	182,970	27,065	45,826	2,060	130,769	193,298	11
421	572	502	5,329	122	518	388	467	865	71	554	4,393	12
23,327	98,104	1,617	220,378	111,881	(²)	129,035	16,729	37,095	(²)	121,345	167,626	13
666	681	539	5,509	146	(²)	522	984	927	(²)	604	5,238	14
4,053	46,152	2,400	62,047	10,545	(²)	53,935	10,336	8,731	(²)	9,424	25,672	15
135	427	480	4,773	45	(²)	241	252	672	(²)	269	2,139	16
595,200	858,240	581,760	1,328,000	674,560	579,840	635,520	554,880	714,240	275,200	675,200	552,960	17
24	14,305	6	100	61,153	291	39,354	12,209	761	36	48	81	18
23	7,578	6	82	58,978	226	38,291	12,209	362	36	48	15	19
1	168	.....	.....	1,565	23	418	.....	3	.....	.....	.....	20
.....	6,559	.....	.....	610	42	645	.....	396	.....	.....	66	21
.....	13,694	.....	18	65,442	.....	1,733	13,895	1,101	.....	.....	.....	22
.....	5,397	.....	.....	20,259	.....	1,497	.....	655	.....	.....	.....	23
.....	4.5	.....	.....	-6.6	.....	(¹)	-12.1	-30.9	.....	.....	.....	24
28	27,332	47	147	74,708	436	58,782	35,097	1,276	91	61	201	25
.....	18,614	.....	.....	67,000	.....	1,736	34,401	2,466	.....	.....	.....	26
.....	19,792	.....	.....	58,005	.....	5,585	.....	3,369	.....	.....	.....	27
.....	13,027	41	47	13,555	145	19,428	22,888	515	55	13	120	28
.....	4,920	.....	.....	1,558	.....	3	20,506	1,365	.....	.....	.....	29
28	26,844	47	147	69,010	416	57,899	32,097	1,276	59	56	195	30
.....	15,966	.....	.....	66,000	.....	1,736	18,501	1,429	.....	.....	.....	31
.....	10,480	.....	.....	25,005	.....	4,877	.....	1,247	.....	.....	.....	32
.....	67.9	.....	.....	4.6	.....	(¹)	73.5	-10.7	.....	.....	.....	33
.....	12,539	41	47	7,857	125	18,545	19,888	515	23	8	114	34
.....	2,292	.....	.....	538	.....	3	4,606	328	.....	.....	.....	35
0.1	9.9	0.1	(⁵)	50.0	4.3	21.5	45.1	1.7	1.7	(⁵)	(⁵)	36
.....	51.7	.....	.....	83.4	.....	35.4	64.0	18.6	.....	.....	.....	37
85.7	53.3	12.8	68.0	88.6	70.0	68.0	38.0	59.6	61.0	85.7	41.5	38
.....	85.7	.....	.....	99.2	.....	99.8	75.1	77.0	.....	.....	.....	39
2,554	936,095	800	5,495	2,847,764	12,860	647,541	374,955	78,600	2,817	7,200	30,750	40
2,554	935,715	800	5,295	2,847,764	12,850	647,541	374,370	78,600	2,800	7,200	30,750	41
.....	380	.....	200	.....	10	.....	385	.....	17	.....	.....	42
.....	1,130,625	.....	.....	6,238,245	.....	104,300	241,000	158,880	.....	.....	.....	43
.....	578,670	.....	.....	3,670,550	.....	154,100	.....	147,800	.....	.....	.....	44
.....	-17.2	.....	.....	-54.3	.....	520.8	55.6	50.5	.....	.....	.....	45
91.21	34.87	17.02	37.38	41.27	30.91	11.18	11.68	61.60	47.75	128.57	157.69	46
.....	70.73	.....	.....	94.52	.....	60.08	13.03	111.18	.....	.....	.....	47
.....	55.22	.....	.....	146.79	.....	31.60	.....	118.52	.....	.....	.....	48
106.42	65.44	133.33	54.95	46.57	44.19	16.45	30.71	103.29	78.25	150.00	379.63	49
2,554	938,050	1,100	5,495	2,947,764	12,960	648,191	378,373	78,600	3,617	7,900	31,100	50
.....	1,277,125	.....	.....	6,566,245	.....	104,300	291,000	158,880	.....	.....	.....	51
.....	611,720	.....	.....	5,310,550	.....	154,100	.....	149,300	.....	.....	.....	52
.....	-26.5	.....	.....	-55.1	.....	521.5	30.0	-50.5	.....	.....	.....	53
91.21	34.32	23.40	37.38	39.46	29.72	11.03	10.78	61.60	39.75	129.51	154.73	54
.....	68.61	.....	.....	98.00	.....	60.08	8.46	64.43	.....	.....	.....	55
.....	30.91	.....	.....	91.55	.....	27.59	.....	44.32	.....	.....	.....	56
	Primary	Sup.					Primary	Sup.				
	Enterprises	Enterprises					Enterprises	Enterprises				
21	188	(³) 1	3	8	(⁵) 1	8	197	12	24	3	10	5
24	13,023	(³)	6	96	61,153	291	35,127	12,209	568	36	33	77
209	39,819	(³)	105	285	146,140	575	99,642	83,645	2,658	95	281	1,092
8.71	9.06	(³)	17.50	2.97	2.39	1.98	2.84	6.85	4.68	2.64	8.52	14.18
.....	10.15	.....	.....	2.44	.....	.....	2.57	5.09	6.47	.....	.....	.....
.....	2,287	5,340	.....	146,219	.....	.....	.....	100,670	.....	.....	.....	62
.....	5.88	3.90	.....	2.39	.....	.....	.....	9.96	.....	.....	.....	63
.....	959	6,000	.....	69,298	.....	.....	.....	10,107	.....	.....	.....	64
.....	2.38	0.89	.....	2.11	.....	.....	.....	9.96	.....	.....	.....	65
.....	304	5,324	.....	256,955	.....	.....	.....	56,752	.....	.....	.....	66
.....	.....	57,600	.....	1,819,000	.....	.....	.....	124,067	.....	.....	.....	67
21	204	(³) 1	3	9	(⁵) 1	8	215	12	30	3	12	68
24	14,284	(³)	6	100	61,153	291	38,289	12,209	734	36	48	81
34	20,296	(³)	5	76	181,233	441	44,939	63,475	947	32	108	422
1.4	1.4	(³)	0.8	0.8	3.0	1.5	1.2	5.2	1.3	0.9	2.2	5.2
8.71	3.03	(³)	17.50	2.97	2.39	1.98	2.83	9.16	4.68	2.64	8.52	14.18
.....	.....	.....	.....	.....	(⁵) 1	.....	.....	.....	(⁵) 1	.....	.....	73
.....	.....	.....	.....	74,708	240	.....	(⁵)	.....	(⁵)	.....	.....	74
.....	.....	.....	.....	61,153	156	.....	(⁵)	.....	(⁵)	.....	.....	75
.....	.....	.....	.....	69,010	220	.....	(⁵)	.....	(⁵)	.....	.....	76
.....	.....	.....	.....	500	20	.....	.....	.....	.....	.....	.....	77

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵ Less than one-tenth of 1 percent.
⁶ Data for less than 3 enterprises shown with permission of the enterprise involved.
⁷ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁸ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — TEXAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Gray	Guadalupe	Hale	Hansford	Harris	Haskell
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940..number.....	633	2,757	1,628	335	6,949	1,939
2	.....1930..number.....	701	3,820	1,729	430	4,131	2,380
3	Irrigated farms.....1940..number.....	9	8	1,116	4	180	16
4	.....1930..number.....	1	1	59	1	32	9
5	Increase or decrease (-), 1930-1940.....percent.....		700.0	(¹)	300.0	462.5	77.8
Operated by—							
6	(a) Owners and managers.....1940..number.....	5	8	621	4	130	13
7	.....1930..number.....			18		22	
8	(b) Tenants.....1940..number.....	4		495		50	3
9	.....1930..number.....			41		10	
10	Land in all farms.....1940..acres.....	548,955	357,056	608,221	503,430	621,994	547,936
11	Land in irrigated farms.....1940..acres.....	14,050	2,308	438,486	7,787	35,215	2,711
12	Average per farm.....1940..acres.....	1,561	288	393	1,947	196	169
13	(a) Operated by owners and managers.....1940..acres.....	10,505	2,308	277,067	7,787	27,423	2,045
14	Average per farm.....1940..acres.....	2,101	288	445	1,947	211	157
15	(b) Operated by tenants.....1940..acres.....	3,545		161,419		7,792	666
16	Average per farm.....1940..acres.....	886		326		156	222
17	Approximate land area.....1940..acres.....	599,680	457,600	626,560	580,480	1,118,080	568,320
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres.....	28	224	46,212	103	7,487	139
19	(a) Cropland harvested.....1939..acres.....	28	204	44,586	103	7,016	90
20	(b) Crop failure.....1939..acres.....			298		1	
21	(c) Pasture.....1939..acres.....		20	1,328		470	49
22	Area irrigated.....1929..acres.....			3,687		4,421	
23	.....1919..acres.....			3,335		8,000	
24	Increase or decrease (-), 1929-1939.....percent.....			(¹)		69.4	
25	Irrigable area in enterprises.....1940..acres.....	33	235	71,906	363	15,116	250
26	.....1930..acres.....			7,322		7,560	
27	.....1920 ⁴ ..acres.....			10,162		16,000	
28	Excess of irrigable area over the area irrigated.....1940..acres.....	5	11	25,694	260	7,629	111
29	.....1930..acres.....			3,635		3,139	
30	Area works were capable of supplying with water.....1940..acres.....	33	235	71,182	327	11,706	200
31	.....1930..acres.....			6,344		5,044	
32	.....1920..acres.....			8,728		11,000	
33	Increase or decrease (-), 1930-1940.....percent.....			(¹)		132.1	
34	Excess, capability of works over area irrigated.....1940..acres.....	5	11	24,970	224	4,219	61
35	.....1930..acres.....			2,657		623	
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	0.2	9.7	10.5	1.3	21.3	5.1
37	.....1929..percent.....			19.4		44.5	
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.8	95.3	64.9	31.5	64.0	69.5
39	.....1929..percent.....			58.1		87.6	
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars.....	2,900	4,650	855,953	7,150	276,425	5,736
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	2,900	4,650	855,953	7,150	276,425	5,736
42	(b) Investment in water rights (reported).....1940..dollars.....						
43	Total investment in all enterprises.....1930..dollars.....			317,260		170,920	
44	.....1920..dollars.....			280,630		150,000	
45	Increase or decrease (-), 1930-1940.....percent.....			169.8		61.7	
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	87.88	19.79	12.02		23.61	
47	.....1930..dollars.....			50.01		33.89	
48	.....1920..dollars.....			32.15		13.64	
49	Average investment per acre irrigated.....1939..dollars.....	103.57	20.76	18.52		36.92	19.68
50	Estimated final investment in existing enterprises.....1940..dollars.....	2,900	5,150	859,320	7,150	283,425	7,036
51	.....1930..dollars.....			321,910		175,920	
52	.....1920..dollars.....			280,630		150,000	
53	Increase or decrease (-), 1930-1940.....percent.....			166.9		61.1	
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	87.88	21.91	11.95	19.70	18.75	28.14
55	.....1930..dollars.....			43.96		23.27	
56	.....1920 ⁴ ..dollars.....			27.62		9.38	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57	Enterprises reporting maintenance and operation.....1939..number.....	3	3	269	3	28	3
58	Area irrigated in these enterprises.....1939..acres.....	28	224	41,681	100	7,471	139
59	Cost of maintenance and operation.....1939..dollars.....	110	740	118,246	750	41,499	700
60	Average cost, per acre irrigated.....1939..dollars.....	3.93	3.30	2.84	7.50	5.55	5.04
61	.....1929..dollars.....			3.09		6.13	
62	Total annual charges (reported) ⁷.....1939..dollars.....						
63	Average annual charge per acre irrigated.....1939..dollars.....						
64	Area against which charges were assessed.....1939..acres.....						
65	Average annual charge per acre assessed.....1939..dollars.....						
66	Total charges collected ⁷.....1939..dollars.....						
67	Indebtedness to December 31 (reported) ⁸.....1939..dollars.....						
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number.....	3	3	315	5	29	2
69	Area irrigated in these enterprises.....1939..acres.....	28	224	46,166	103	7,487	(⁹)
70	Water delivered in these enterprises.....1939..acre-feet.....	86	502	57,902	232	18,116	(⁹)
71	Average water delivered per acre irrigated.....1939..acre-feet.....	3.1	2.2	1.3	2.3	2.4	(⁹)
72	Average cost of water per acre irrigated.....1939..dollars.....	3.93	3.30	2.83	7.50	5.55	(⁹)
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number.....		1			2	
74	Irrigable area in these enterprises.....1939..acres.....	(⁹)				(⁹)	
75	Irrigated area in these enterprises.....1939..acres.....	(⁹)				(⁹)	
76	Area for which drains have been installed.....1939..acres.....	(⁹)				(⁹)	
77	Additional area needing drainage.....1939..acres.....						

*Census of Agriculture.

¹Percent not shown when more than 1,000.

²The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

³Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — TEXAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued
Irrigation data omitted from any of the counties listed are included under "All other counties"]

Hays	Hemphill	Hidalgo	Hockley	Howard	Hudspeth	Hutchinson	Irion	Jackson	Jeff Davis	Jefferson	Jim Wells		
1,233	349	5,094	1,506	802	140	183	149	1,258	104	2,387	1,234	1	
1,467	414	4,321	1,344	1,194	194	161	160	1,642	99	1,012	1,302	2	
7	6	4,094	187	16	85	16	47	13	42	213	20	3	
3	.....	3,150	.....	.....	115	.....	37	12	23	112	31	4
133.3	.....	30.0	.....	.....	-26.1	.....	27.0	8.3	82.6	90.2	-35.5	5
6	5	2,954	69	13	57	10	30	6	32	70	16	6	
.....	.....	2,039	.....	.....	45	.....	24	5	19	40	.....	7
1	1	1,140	98	3	28	6	17	7	10	143	4	8	
.....	.....	1,111	.....	.....	70	.....	13	7	4	72	.....	9
398,530	529,786	667,225	499,577	492,069	1,889,117	392,052	2 825,695	430,117	2 1,624,366	317,694	494,522	10	
1,039	6,961	239,980	43,700	5,376	803,646	18,212	31,582	50,495	821,268	233,884	4,949	11	
149	1,100	59	282	336	9,455	1,138	672	3,884	19,554	1,098	247	12	
(3)	(3)	167,006	21,795	3,776	787,116	12,192	25,427	9,095	791,472	182,501	4,773	13	
(3)	(3)	57	316	290	13,809	1,219	848	1,516	24,734	2,607	298	14	
(3)	(3)	72,974	21,905	1,600	16,530	6,020	6,155	41,400	29,796	51,383	176	15	
(3)	(3)	64	224	533	590	1,003	362	5,914	2,980	359	44	16	
428,800	581,760	986,240	577,920	583,680	2,901,120	565,760	686,720	546,560	1,445,120	604,800	541,440	17	
9	46	198,141	2,475	12	13,734	7	2,346	3,017	1,158	41,511	400	18	
9	46	173,766	2,361	12	13,560	4	2,172	3,017	616	41,511	322	19	
.....	.....	200	90	.....	1	.....	3	.....	.....	.....	78	20
.....	.....	24,175	24	.....	173	3	171	.....	542	.....	.....	21
.....	.....	229,806	.....	.....	14,010	.....	1,798	2,650	385	37,062	.....	22
.....	.....	160,532	.....	.....	.....	.....	2,133	6,074	1,210	74,002	.....	23
.....	.....	-13.8	.....	.....	-2.0	.....	30.5	13.8	200.8	12.0	.....	24
37	69	311,706	4,621	51	23,716	21	4,807	5,069	1,311	128,330	614	25	
.....	.....	307,671	.....	.....	18,290	.....	1,928	3,989	385	146,815	.....	26
.....	.....	424,538	.....	.....	.....	.....	2,417	8,584	2,094	174,000	.....	27
28	23	113,565	2,146	39	9,982	14	2,461	2,052	153	86,819	214	28	
.....	.....	77,865	.....	.....	4,280	.....	130	1,339	.....	109,753	.....	29
37	59	294,488	4,601	18	23,080	21	4,807	4,069	1,311	57,885	611	30	
.....	.....	284,407	.....	.....	14,590	.....	1,908	3,180	385	80,315	.....	31
.....	.....	388,538	.....	.....	.....	.....	2,062	6,749	1,351	97,100	.....	32
.....	.....	3.5	.....	.....	58.2	.....	151.9	28.0	240.5	-27.9	.....	33
28	13	96,347	2,126	6	9,346	14	2,461	1,052	153	16,374	211	34	
.....	.....	54,601	.....	.....	580	.....	110	530	.....	43,253	.....	35
0.9	0.7	82.6	5.7	0.2	1.7	(5)	7.4	6.0	0.1	17.7	8.1	36	
.....	.....	130.6	.....	.....	59.6	.....	4.1	34.3	1.3	60.9	.....	37
24.3	78.0	67.3	53.8	66.7	59.5	33.3	48.8	74.1	88.3	139.4	65.5	38	
.....	.....	80.8	.....	.....	96.0	.....	94.2	83.3	100.0	46.1	.....	39
1,950	9,300	17,098,240	80,513	2,250	1,359,375	2,285	18,563	89,205	32,105	2,133,163	37,920	40	
1,950	9,300	16,939,993	80,457	2,250	1,359,375	2,285	18,385	88,350	31,655	2,133,127	37,920	41	
.....	.....	158,247	56	.....	.....	.....	178	855	450	36	.....	42
.....	.....	12,789,728	.....	.....	314,951	.....	36,190	39,750	15,262	2,922,744	.....	43
.....	.....	8,024,550	.....	.....	.....	.....	53,400	236,189	59,098	1,785,400	.....	44
.....	.....	33.7	.....	.....	331.6	.....	-48.7	124.4	110.4	-27.0	.....	45
.....	.....	58.06	.....	.....	58.90	.....	3.85	21.92	24.49	36.85	62.06	46
.....	.....	44.97	.....	.....	21.59	.....	18.97	12.50	39.64	36.39	.....	47
.....	.....	20.65	.....	.....	.....	.....	25.90	35.00	43.74	18.39	.....	48
216.67	202.17	86.29	32.53	187.50	98.98	326.43	7.91	29.57	27.72	51.39	94.80	49	
1,950	9,300	17,196,345	80,663	2,250	1,359,375	2,285	18,563	89,205	32,155	2,133,663	37,920	50	
.....	.....	18,029,728	.....	.....	314,951	.....	41,190	39,750	15,262	2,947,744	.....	51
.....	.....	9,349,550	.....	.....	.....	.....	53,600	236,189	59,098	1,815,400	.....	52
.....	.....	-4.6	.....	.....	331.6	.....	-54.9	124.4	110.7	-27.6	.....	53
52.70	134.78	55.17	17.46	44.12	57.32	108.81	3.86	17.59	24.53	16.63	61.76	54	
.....	.....	58.60	.....	.....	17.22	.....	21.36	9.96	39.64	20.08	.....	55
.....	.....	22.02	.....	.....	.....	.....	22.18	27.52	29.06	10.43	.....	56
		Primary	Sup.		Primary	Sup.							
		Enterprises			Enterprises								
.....	5	62	4	28	4	20	6 1	16	9	23	30	24
.....	44	197,725	443	2,242	12	13,179	12,681	2,186	2,892	1,009	41,511	383
.....	120	751,336	825	6,438	191	26,680	13,927	3,265	14,400	1,340	192,849	1,527
.....	2.73	3.80	1.86	2.87	15.92	2.02	1.10	1.49	4.98	1.33	4.65	3.99
.....	4.36	4.60	9.04	7.53	4.97	5.18
.....	901,688	29,750	13,927	282	45	248,969
.....	4.69	2.39	1.10	0.44	0.45	7.72
.....	301,477	17,000	12,681	648	100	32,269
.....	2.99	1.75	1.10	0.44	0.45	7.72
.....	1,053,206	38,893	20,746	275	223,481
.....	13,040,129	249,449	12	1,193,789
.....	5	54	4	31	2	18	6 1	14	10	20	30	26
.....	16	197,686	443	2,475	(3)	757	12,681	1,513	3,017	792	41,511	400
.....	22	270,667	635	2,228	(3)	2,250	11,381	2,685	10,074	605	174,096	350
.....	1.4	1.4	1.4	0.9	(3)	3.0	0.9	1.7	3.3	0.8	4.2	0.9
.....	5.00	4.61	1.86	2.87	(3)	3.07	1.10	1.87	4.98	1.48	6.34	3.99
(3)	1	(3)	1	(3)	1
(3)	242,884	(3)	(3)
(3)	163,660	(3)	(3)
(3)	195,468	(3)	(3)
.....	18,001	(3)	(3)

⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁵Less than one-tenth of 1 percent.

⁶Data for less than 3 enterprises shown with permission of the enterprise involved.

⁷Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁸Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Kendall	Kerr	Kimble	Kinney	Lamb	La Salle
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940..number....	739	729	443	127	2,167	453
2	.....1930..number....	691	691	454	133	2,381	627
3	Irrigated farms.....1940..number....	119	113	81	15	500	53
4	.....1930..number....	1	53	21	5	6	36
5	Increase or decrease (-), 1930-1940.....percent....	(¹)	113.2	285.7	200.0	(¹)	47.2
Operated by—							
6	(a) Owners and managers.....1940..number....	99	91	58	12	321	36
7	.....1930..number....		38				29
8	(b) Tenants.....1940..number....	20	22	23	3	179	17
9	.....1930..number....		15				7
10	Land in all farms.....1940..acres....	370,821	² 780,973	666,366	700,094	618,240	706,591
11	Land in irrigated farms.....1940..acres....	68,600	143,534	69,783	89,615	210,070	111,360
12	Average per farm.....1940..acres....	576	1,270	862	5,974	420	2,101
13	(a) Operated by owners and managers.....1940..acres....	56,384	136,032	54,190	87,953	170,139	108,798
14	Average per farm.....1940..acres....	570	1,495	934	7,329	530	3,022
15	(b) Operated by tenants.....1940..acres....	12,216	7,502	15,593	1,662	39,931	2,562
16	Average per farm.....1940..acres....	611	341	678	554	223	151
17	Approximate land area.....1940..acres....	428,800	704,640	815,360	890,240	654,080	960,640
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres....	109	588	342	1,310	16,497	3,094
19	(a) Cropland harvested.....1939..acres....	102	552	342	817	15,899	2,534
20	(b) Crop failure.....1939..acres....	7	34			31	58
21	(c) Pasture.....1939..acres....		2		493	567	502
22	Area irrigated.....1929..acres....		338				2,419
23	.....1919..acres....						2,531
24	Increase or decrease (-), 1929-1939.....percent....		74.0				28.0
25	Irrigable area in enterprises.....1940..acres....	184	876	588	1,318	26,603	4,819
26	.....1930..acres....		727				3,215
27	.....1920 ⁴ ..acres....						6,574
28	Excess of irrigable area over the area irrigated.....1940..acres....	75	288	246	8	10,106	1,725
29	.....1930..acres....		389				796
30	Area works were capable of supplying with water.....1940..acres....	179	876	584	1,318	26,128	4,794
31	.....1930..acres....		558				2,812
32	.....1920 ⁴ ..acres....						5,292
33	Increase or decrease (-), 1930-1940.....percent....		57.0				70.5
34	Excess, capability of works over area irrigated.....1940..acres....	70	288	242	8	9,631	1,700
35	.....1930..acres....		220				393
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	0.2	0.4	0.5	1.5	7.9	2.8
37	.....1929..percent....		2.0				14.2
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	60.9	67.1	58.6	99.4	63.1	64.5
39	.....1929..percent....		60.6				86.0
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars....	13,727	45,888	19,573	3,471	339,346	171,541
41	(a) Cost of irrigation works and equipment.....1940..dollars....	13,432	45,452	19,568	3,471	337,948	171,181
42	(b) Investment in water rights (reported).....1940..dollars....	295	436	5		1,398	360
43	Total investment in all enterprises.....1930..dollars....		38,872				351,322
44	.....1920 ⁴ ..dollars....						155,450
45	Increase or decrease (-), 1930-1940.....percent....		18.0				-51.2
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	76.69	52.38	33.52	2.63	12.99	35.78
47	.....1930..dollars....		69.65				124.94
48	.....1920 ⁴ ..dollars....						29.37
49	Average investment per acre irrigated.....1939..dollars....	125.94	78.04	57.23	2.65	20.57	55.44
50	Estimated final investment in existing enterprises.....1940..dollars....	14,072	45,958	20,073	3,471	343,070	171,541
51	.....1930..dollars....		38,872				351,322
52	.....1920 ⁴ ..dollars....						155,450
53	Increase or decrease (-), 1930-1940.....percent....		18.2				-51.2
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	76.48	52.46	34.14	2.63	12.90	35.60
55	.....1930..dollars....		53.47				109.28
56	.....1920 ⁴ ..dollars....						23.65
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57	Enterprises reporting maintenance and operation.....1939..number....	30	38	25	13	141	50
58	Area irrigated in these enterprises.....1939..acres....	94	508	340	1,310	16,303	3,081
59	Cost of maintenance and operation.....1939..dollars....	663	3,015	1,179	289	53,955	7,681
60	Average cost, per acre irrigated.....1939..dollars....	7.05	5.94	3.47	0.22	3.31	2.49
61	.....1929..dollars....		17.52				31.83
62	Total annual charges (reported) ⁶.....1939..dollars....						100
63	Average annual charge per acre irrigated.....1939..dollars....						0.22
64	Area against which charges were assessed.....1939..acres....						1,000
65	Average annual charge per acre assessed.....1939..dollars....						0.10
66	Total charges collected ⁶.....1939..dollars....						
67	Indebtedness to December 31 (reported) ⁷.....1939..dollars....						
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number....	34	48	27	12	143	50
69	Area irrigated in these enterprises.....1939..acres....	109	588	342	1,310	16,497	2,946
70	Water delivered in these enterprises.....1939..acre-feet....	187	945	651	769	18,377	4,425
71	Average water delivered per acre irrigated.....1939..acre-feet....	1.7	1.6	1.9	0.6	1.1	1.7
72	Average cost of water per acre irrigated.....1939..dollars....	7.05	5.94	3.47	0.22	3.31	2.60
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number....						
74	Irrigable area in these enterprises.....1939..acres....						
75	Irrigated area in these enterprises.....1939..acres....						
76	Area for which drains have been installed.....1939..acres....						
77	Additional area needing drainage.....1939..acres....						

* Census of Agriculture.
¹ Percent not shown when more than 1,000.
² The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.
³ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - TEXAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Liberty	Llano	Lubbock	Lynn	McCulloch	McLennan	Martin	Mason	Matagorda	Maverick	Medina	Menard	Midland		
1,961	686	2,119	1,471	1,098	4,445	779	714	1,614	272	1,719	380	386	1	
1,535	720	2,495	2,138	1,519	6,641	776	906	1,673	52	1,590	401	361	2	
62	180	616	107	4	22	32	87	84	206	357	57	57	3	
31	3	8	.....	23	30	.....	.....	26	19	67	42	1	4
100.0	(¹)	(¹)	.....	-62.6	-26.7	.....	.....	223.1	984.2	432.8	35.7	(¹)	5
36	142	354	47	3	18	22	70	51	157	235	42	35	6	
12	.....	.....	.....	.....	.....	.....	.....	11	13	38	27	.....	7
26	38	262	60	1	4	10	17	33	49	122	15	22	8	
19	.....	.....	.....	.....	.....	.....	.....	15	6	29	15	.....	9
249,323	527,097	509,000	506,580	615,076	565,672	406,696	² 600,682	524,680	421,664	774,163	² 709,791	596,154	10	
35,940	163,291	169,751	40,628	2,412	2,466	14,508	77,685	77,995	80,661	61,236	171,772	191,688	11	
580	907	276	380	603	112	453	893	929	392	172	3,014	3,363	12	
29,162	140,061	101,614	25,269	(⁵)	1,562	10,339	69,159	56,150	76,401	50,602	164,144	136,761	13	
810	986	288	538	(⁵)	87	470	988	1,101	487	215	3,908	3,907	14	
6,778	23,210	67,937	15,359	(⁵)	904	4,169	8,526	21,845	4,260	10,634	7,628	54,927	15	
261	611	259	256	(⁵)	417	502	662	662	87	87	509	2,487	16	
750,720	606,080	570,880	585,600	682,240	682,400	583,040	598,400	730,240	818,560	865,920	584,960	600,320	17	
18,893	133	15,325	326	17	232	53	90	31,992	15,260	14,231	3,006	92	18	
18,758	67	14,385	268	11	232	53	23	31,842	14,780	12,092	2,606	91	19	
75	.....	57	.....	5	.....	.....	.....	.....	.....	340	.....	1	20
.....	46	882	58	1	.....	.....	6	150	480	1,799	400	.....	21
15,000	.....	.....	.....	.....	.....	.....	.....	12,894	1,962	4,600	3,481	.....	22
13,500	.....	.....	.....	.....	.....	.....	.....	33,510	2,653	.....	5,003	.....	23
25.6	.....	.....	.....	.....	.....	.....	.....	148.3	669.9	.....	-13.6	.....	24
78,700	182	24,730	354	25	325	63	34	47,027	45,800	19,354	3,083	153	25	
35,000	.....	.....	.....	.....	.....	.....	.....	55,960	4,037	4,600	3,866	.....	26
24,000	.....	.....	.....	.....	.....	.....	.....	164,875	6,513	.....	7,120	.....	27
59,867	49	9,405	28	8	93	10	4	15,035	30,540	5,123	77	61	28	
20,000	.....	.....	.....	.....	.....	.....	.....	43,076	2,055	.....	385	.....	29
33,700	181	24,051	354	25	300	53	34	36,027	24,360	19,341	3,083	148	30	
34,000	.....	.....	.....	.....	.....	.....	.....	55,960	3,135	4,600	3,744	.....	31
14,000	.....	.....	.....	.....	.....	.....	.....	86,200	3,913	.....	6,564	.....	32
-0.9	.....	.....	.....	.....	.....	.....	.....	-35.6	677.0	320.5	-17.7	.....	33
14,867	48	8,726	28	8	68	.....	4	4,035	9,100	5,110	77	56	34
19,000	.....	.....	.....	.....	.....	.....	.....	43,076	1,153	.....	263	.....	35
52.4	0.1	9.0	0.8	0.7	9.4	0.4	(⁵)	41.0	18.9	23.2	1.7	(⁵)	36	
49.3	.....	.....	.....	.....	.....	.....	.....	50.5	14.1	67.2	7.7	.....	37
55.9	73.5	63.7	92.1	68	77.3	100.0	88.2	88.8	62.6	73.6	97.5	62.2	38	
44.1	.....	.....	.....	.....	.....	.....	.....	23.0	63.2	100.0	93.0	.....	39
488,370	29,175	421,457	9,728	3,500	9,877	2,050	4,140	896,091	4,625,116	2,698,804	31,650	12,163	40	
486,718	29,175	416,777	9,728	3,500	9,827	2,050	4,140	849,267	4,625,116	2,698,804	31,650	12,163	41	
1,652	.....	4,680	.....	.....	50	.....	.....	46,824	.....	.....	.....	.....	42
405,208	.....	.....	.....	.....	.....	.....	.....	332,918	63,710	2,380,000	38,465	.....	43
732,779	.....	.....	.....	.....	.....	.....	.....	1,323,342	68,078	.....	106,273	.....	44
20.5	.....	.....	.....	.....	.....	.....	.....	169.2	(¹)	13.4	-17.7	.....	45
14.49	161.19	17.52	27.48	140.00	32.92	38.68	121.76	24.87	189.87	139.54	10.27	82.18	46	
11.92	.....	.....	.....	.....	.....	.....	.....	5.95	20.32	517.39	10.27	.....	47
52.34	.....	.....	.....	.....	.....	.....	.....	19.99	17.40	.....	16.19	.....	48
25.93	219.36	27.50	29.84	205.88	42.57	38.68	138.00	28.01	303.09	189.64	10.53	132.21	49	
493,370	30,625	427,727	9,728	3,500	9,927	2,050	4,740	896,091	4,685,042	2,699,154	31,650	12,713	50	
455,208	.....	.....	.....	.....	.....	.....	.....	332,918	63,710	2,380,000	42,025	.....	51
732,779	.....	.....	.....	.....	.....	.....	.....	1,323,342	68,078	.....	108,273	.....	52
8.4	.....	.....	.....	.....	.....	.....	.....	169.2	(¹)	13.4	-24.7	.....	53
6.27	168.27	17.30	27.48	140.00	30.54	32.54	139.41	19.05	102.29	139.46	10.27	.....	54
13.01	.....	.....	.....	.....	.....	.....	.....	5.95	15.78	517.39	10.87	.....	55
30.53	.....	.....	.....	.....	.....	.....	.....	8.03	10.45	.....	15.21	.....	56
4	31	136	25	2	12	3	6	.....	Primary	Sup.	.....	.....	57
18,716	104	12,787	326	(⁵)	212	49	19	31,592	4	1	8	19	21	
127,846	1,050	35,439	630	(⁵)	1,771	476	110	254,110	15,210	(⁵)	14,230	2,970	90	
6.83	10.10	2.78	1.93	(⁵)	8.35	9.71	5.79	8.04	42,878	(⁵)	31,319	1,742	714	
7.88	.....	.....	.....	.....	.....	.....	.....	7.66	2.82	(⁵)	2.20	0.59	7.93
175,747	.....	.....	.....	.....	.....	.....	.....	4.11	4.11	.....	4.32	1.04	.....
9.39	.....	.....	.....	.....	.....	.....	.....	280,571	129,580	.....	51,544	678	.....
18,716	.....	.....	.....	.....	.....	.....	.....	9.00	8.85	.....	3.65	0.31	.....
9.39	.....	.....	.....	.....	.....	.....	.....	31,179	23,560	.....	20,784	2,200	.....
115,451	.....	.....	.....	.....	.....	.....	.....	9.00	5.50	.....	2.48	0.31	.....
107,721	.....	.....	.....	.....	.....	.....	.....	270,574	44,755	.....	37,482	680	.....
.....	.....	.....	.....	.....	.....	.....	.....	643,524	3,957,000	.....	462,527	1,250	.....
5	39	160	25	2	13	5	11	6	4	(⁵)	1	9	19	22
18,816	133	15,325	326	(⁵)	232	53	30	31,992	15,260	(⁵)	14,231	1,406	77	68
73,998	118	16,034	320	(⁵)	597	131	32	224,449	25,010	(⁵)	24,241	3,796	68	70
3.9	0.9	1.0	1.0	(⁵)	2.6	2.5	1.1	7.0	1.6	(⁵)	1.7	2.7	0.9	71
9.39	10.10	2.78	1.93	(⁵)	8.35	9.71	5.79	8.91	8.55	(⁵)	3.69	0.92	5.52	72
(⁵)	2	(⁵)	1	(⁵)	4	(⁵)	(⁵)	(⁵)	1	(⁵)	(⁵)	(⁵)	(⁵)	73
(⁵)	(⁵)	(⁵)	140	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	74
(⁵)	(⁵)	(⁵)	85	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	75
(⁵)	(⁵)	(⁵)	75	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	76
(⁵)	(⁵)	(⁵)	35	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	77

⁴ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

⁵ Less than one-tenth of 1 percent.

⁶ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁷ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Mills	Moore	Oldham	Orange	Parmer	Pecos	
						Primary	Supplemental
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^c							
1 All farms.....1940..number.....	1,364	178	177	1,141	915	326	
2 ..1930..number.....	1,484	171	137	389	818	385	
3 Irrigated farms.....1940..number.....	25	19	5	67	116	160	
4 ..1930..number.....	15	1	1	1	.....	212	
5 Increase or decrease (-), 1930-1940.....percent.....	66.7	.....	400.0	(1)	.....	-24.5	
Operated by—							
6 (a) Owners and managers.....1940..number.....	20	10	4	34	70	83	
7 ..1930..number.....	10	.....	.....	.....	.....	88	
8 (b) Tenants.....1940..number.....	5	9	1	33	46	67	
9 ..1930..number.....	5	.....	.....	.....	.....	121	
10 Land in all farms.....1940..acres.....	447,643	309,491	² 1,189,735	57,221	500,706	2,319,150	
11 Land in irrigated farms.....1940..acres.....	15,450	41,690	12,917	18,688	56,903	87,610	
12 Average per farm.....1940..acres.....	518	2,194	2,563	279	491	548	
13 (a) Operated by owners and managers.....1940..acres.....	9,788	23,003	(3)	10,350	39,116	80,413	
14 Average per farm.....1940..acres.....	489	2,300	(3)	304	559	865	
15 (b) Operated by tenants.....1940..acres.....	5,662	18,687	(3)	8,338	17,787	7,197	
16 Average per farm.....1940..acres.....	1,132	2,076	(3)	253	387	107	
17 Approximate land area.....1940..acres.....	469,760	563,680	936,240	227,840	549,760	3,031,040	
IRRIGATED AND IRRIGABLE AREAS							
18 Area irrigated.....1939..acres.....	140	22	37	10,611	827	23,346	
19 (a) Cropland harvested.....1939..acres.....	140	22	20	10,611	817	16,661	
20 (b) Crop failure.....1939..acres.....	.....	.....	17	.....	.....	605	
21 (c) Pasture.....1939..acres.....	.....	.....	.....	.....	10	6,060	
22 Area irrigated.....1929..acres.....	371	.....	.....	.....	.....	16,166	
23 ..1919..acres.....	.....	.....	.....	.....	.....	22,312	
24 Increase or decrease (-), 1929-1939.....percent.....	-62.3	.....	.....	.....	.....	44.1	
25 Irrigable area in enterprises.....1940..acres.....	218	57	52	18,117	2,024	60,608	
26 ..1930..acres.....	458	.....	.....	.....	.....	44,800	
27 ..1920 ^d ..acres.....	.....	.....	.....	.....	.....	68,653	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	78	35	15	7,506	1,197	37,262	
29 ..1930..acres.....	87	.....	.....	.....	.....	28,764	
30 Area works were capable of supplying with water.....1940..acres.....	215	54	52	18,117	2,024	41,608	
31 ..1930..acres.....	458	.....	.....	.....	.....	29,688	
32 ..1920 ^d ..acres.....	.....	.....	.....	.....	.....	60,453	
33 Increase or decrease (-), 1930-1940.....percent.....	-53.1	.....	.....	.....	.....	40.2	
34 Excess, capability of works over area irrigated.....1940..acres.....	75	32	15	7,506	1,197	18,262	
35 ..1930..acres.....	87	.....	.....	.....	.....	13,522	
Proportion which area irrigated is of all lands in							
36 irrigated farms.....1939..percent.....	0.9	0.1	0.3	56.8	1.5	26.6	
37 ..1929..percent.....	6.3	.....	.....	.....	.....	24.9	
Proportion which area irrigated is of area works							
38 were capable of supplying with water.....1939..percent.....	65.1	40.7	71.2	58.6	40.9	56.1	
39 ..1929..percent.....	81.0	.....	.....	.....	.....	54.5	
CAPITAL INVESTED TO JANUARY 1							
40 Total investment in all enterprises.....1940..dollars.....	3,775	9,420	1,550	631,122	28,893	1,228,577	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	3,775	9,360	1,550	588,836	28,893	1,220,329	
42 (b) Investment in water rights (reported).....1940..dollars.....	.....	60	.....	42,286	.....	8,248	
43 Total investment in all enterprises.....1930..dollars.....	13,912	.....	.....	.....	.....	1,169,035	
44 ..1920 ^d ..dollars.....	.....	.....	.....	.....	.....	1,180,325	
45 Increase or decrease (-), 1930-1940.....percent.....	-72.9	.....	.....	.....	.....	5.1	
Average investment, based on area works were							
46 capable of supplying with water, per acre.....1940..dollars.....	17.56	174.44	29.81	34.84	14.28	29.83	
47 ..1930..dollars.....	30.38	.....	.....	.....	.....	39.38	
48 ..1920 ^d ..dollars.....	.....	.....	.....	.....	.....	19.52	
49 Average investment per acre irrigated.....1939..dollars.....	23.96	428.18	41.69	59.48	34.94	52.62	
50 Estimated final investment in existing enterprises.....1940..dollars.....	3,775	9,420	2,050	631,122	29,668	1,228,577	
51 ..1930..dollars.....	13,912	.....	.....	.....	.....	1,219,035	
52 ..1920 ^d ..dollars.....	.....	.....	.....	.....	.....	1,298,535	
53 Increase or decrease (-), 1930-1940.....percent.....	-72.9	.....	.....	.....	.....	0.8	
Average investment, based on estimated final							
54 investment and irrigable area, per acre.....1940..dollars.....	17.32	165.26	39.42	34.84	14.76	20.27	
55 ..1930..dollars.....	30.38	.....	.....	.....	.....	27.13	
56 ..1920 ^d ..dollars.....	.....	.....	.....	.....	.....	18.91	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57 Enterprises reporting maintenance and operation.....1939..number.....	7	10	1	2	24	10	
58 Area irrigated in these enterprises.....1939..acres.....	137	22	(3)	(3)	827	23,286	
59 Cost of maintenance and operation.....1939..dollars.....	194	165	(3)	(3)	3,105	23,555	
60 Average cost, per acre irrigated.....1939..dollars.....	1.42	7.50	(3)	(3)	3.75	1.01	
61 ..1929..dollars.....	5.10	.....	.....	.....	.....	2.03	
62 Total annual charges (reported) ^e.....1939..dollars.....	.....	.....	.....	73,500	.....	27,649	
63 Average annual charge per acre irrigated.....1939..dollars.....	.....	.....	.....	7.00	.....	1.78	
64 Area against which charges were assessed.....1939..acres.....	.....	.....	.....	10,500	.....	51,936	
65 Average annual charge per acre assessed.....1939..dollars.....	.....	.....	.....	7.00	.....	0.53	
66 Total charges collected ^e.....1939..dollars.....	.....	.....	.....	71,138	.....	17,650	
67 Indebtedness to December 31 (reported) ^e.....1939..dollars.....	.....	.....	.....	483,750	.....	136,500	
WATER DELIVERED TO IRRIGATORS							
68 Enterprises reporting water delivered.....1939..number.....	7	9	3	2	24	8	
69 Area irrigated in these enterprises.....1939..acres.....	137	22	37	(3)	827	21,434	
70 Water delivered in these enterprises.....1939..acre-feet.....	95	19	25	(3)	843	72,604	
71 Average water delivered per acre irrigated.....1939..acre-feet.....	0.7	0.9	0.7	(3)	1.0	3.4	
72 Average cost of water per acre irrigated.....1939..dollars.....	1.42	6.82	1.00	(3)	3.75	1.48	
DRAINAGE OF IRRIGATED LAND							
73 Enterprises reporting land drained or needing drainage.....1939..number.....	.....	2	.....	.....	8	2	
74 Irrigable area in these enterprises.....1939..acres.....	.....	(3)	.....	.....	974	(3)	
75 Irrigated area in these enterprises.....1939..acres.....	.....	(3)	.....	.....	84	(3)	
76 Area for which drains have been installed.....1939..acres.....	.....	(3)	.....	.....	549	.....
77 Additional area needing drainage.....1939..acres.....	.....	.....	.....	.....	425	(3)	

^cCensus of Agriculture.

¹Percent not shown when more than 1,000.

²The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

CENSUS OF IRRIGATION - TEXAS

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939--Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Potter	Presidio	Randall	Real	Reeves	Roberts	Runnels	San Saba	Scurry	Shackelford	Stephens	Sterling	Swisher	
302	490	660	300	277	154	2,103	1,276	1,446	460	810	117	1,035	1
322	532	843	253	327	158	2,544	1,424	1,564	462	765	136	1,021	2
44	326		48	191	8	26	79	133	5	7	6	524	3
5	417	5	16	277		41	103	4	4	15	10	7	4
780.0	-21.8	700.0	200.0	-31.0		-36.6	-23.3	(¹)	25.0	-53.3	-40.0	(¹)	5
32	123	30	36	99	8	16	57	82	4	3	4	328	6
	80		11	77		20	47						3
12	203	10	12	92		10	22	51	1	4	2	196	8
	337		5	200		21	56						4
² 632,559	1,881,564	566,945	² 414,386	1,601,050	² 627,883	603,455	649,969	571,444	560,551	592,497	551,775	569,045	10
187,281	375,949	30,457	56,000	103,231	4,788	11,996	96,141	41,149	1,141	1,657	921	278,361	11
4,256	1,151	761	1,208	540	598	461	1,217	309	228	237	154	531	12
181,781	350,527	25,179	46,732	76,576	4,788	10,600	87,226	29,853	(³)	655	(³)	190,927	13
5,681	2,850	839	1,299	794	598	662	1,530	364	(³)	218	(³)	582	14
5,500	24,822	5,278	11,268	24,655		1,396	8,915	11,296	(³)	1,002	(³)	87,434	15
458	122	528	939	268		140	405	221	(³)	250	(³)	446	16
576,640	2,481,280	586,240	400,000	1,664,000	570,880	678,400	718,080	581,760	567,680	593,280	584,960	568,320	17
407	8,898	2,396	458	18,067	80	544	1,077	70	18	61	82	31,442	18
405	6,275	2,141	410	13,803	73	521	814	70	13	61	77	30,040	19
2	1,008		8	3,219	7		3		5			560	20
	1,615	255	40	1,045		23	260				5	842	21
	3,959		890	16,169		1,548	3,539					830	22
	2,150		452	13,286		467	95						23
	124.8		-48.5	11.7		-64.9						(¹)	24
536	12,624	4,205	1,648	21,282	165	1,104	2,064	71	200	168	107	61,450	25
	5,169		919	18,154		2,421	4,416					1,213	26
	2,550		3,274	26,066		1,535	2,395						27
129	3,726	1,809	1,190	3,215	85	560	987	1	182	107	25	30,008	28
	1,210		29	1,985		873	877					383	29
536	12,324	3,995	1,040	20,211	165	1,090	1,699	71	200	168	107	60,942	30
	4,734		910	17,064		2,103	4,291					830	31
	1,850		3,227	20,553		901	2,221						32
	100.3		14.3	18.4		-48.2	-60.4					(¹)	33
129	3,426	1,599	582	2,144	85	546	622	1	182	107	25	29,500	34
	775		20	895		555	752						35
0.2	2.4	7.9	0.8	17.5	1.7	4.5	1.1	0.2	1.6	3.7	8.9	11.3	36
	9.4		7.0	18.4		21.9	9.7					16.0	37
75.9	72.2	60.0	44.0	89.4	48.5	49.9	63.4	98.6	9.0	36.3	76.6	51.6	38
	83.6		97.8	94.8		73.6	82.5					100.0	39
9,506	154,335	79,020	9,838	631,662	6,786	22,041	30,472	19,600	1,650	850	2,125	511,236	40
9,506	154,160	79,020	9,558	631,634	6,786	21,080	30,435	19,600	1,650	850	2,125	510,606	41
	175		280	28		961	37					630	42
	91,850		5,395	446,550		50,749	106,385					42,000	43
	10,300		13,700	581,475		41,650	117,256						44
	68.0		82.4	41.5		-56.6	-71.3					(¹)	45
17.74	12.52	19.78	9.46	31.25	41.13	20.22	17.94	276.06	8.25	5.06	19.86	8.39	46
	19.40		5.93	26.17		24.13	24.79					50.60	47
	5.57		4.25	28.29		46.23	52.79						48
23.36	17.34	32.98	21.48	34.96	84.82	40.52	28.29	280.00	91.67	13.93	25.91	16.26	49
9,506	157,935	82,175	10,163	634,247	8,786	22,309	30,522	19,600	1,650	850	2,125	519,303	50
	101,850		5,395	446,550		51,636	106,995					42,000	51
	10,300		13,700	587,575		41,850	117,271						52
	55.1		88.4	42.0		-56.8	-71.5					(¹)	53
17.74	12.51	19.54	6.17	29.80	53.25	20.20	14.79	276.06	8.25	5.06	19.86	6.45	54
	19.70		5.87	24.60		21.33	24.23					34.62	55
	4.04		4.18	22.54		27.26	48.96						56
				Primary	Sup.								
				Enterprises									
5	100	34	26	36	1	22	23	3	3	(³)	1	3	204
131	8,419	2,296	154	17,977	(³)	69	518	988	55	11		67	29,353
535	15,411	7,660	337	28,499	(³)	677	1,270	2,110	208	24	(³)	400	75,651
4.08	1.83	3.34	2.19	1.59	(³)	9.81	2.45	2.44	3.78	2.18	(³)	5.97	2.58
	4.41		1.69	2.78			5.72	3.04					2.29
	8,009			18,768									62
	1.44			1.35									63
	5,571			27,475									64
	1.44			0.68									65
	1,544												66
				126,500									67
6	117	35	22	35		6	25	25	4	(³)	2	6	221
231	7,452	2,396	155	17,564		80	544	747	70	(³)		82	31,430
237	17,656	2,933	417	40,317		375	554	756	151	(³)	(³)	81	33,261
1.0	2.4	1.2	2.7	2.3		4.7	1.0	1.0	2.2	(³)	(³)	1.0	1.1
4.08	1.81	3.34	1.98	1.67		9.81	2.45	1.37	3.78	(³)	(³)	5.97	2.58
	(³)	(³)		(³)					(³)				73
	(³)	(³)		(³)					(³)				74
	(³)	(³)		(³)					(³)				75
													76
													77

³Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁵Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁶Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — TEXAS

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	Tarrant	Taylor	Terrell	Terry	Tom Green	Uvalde
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a						
1 All farms.....1940..number.....	3,622	1,871	136	1,305	1,408	755
2 ..1930..number.....	3,366	2,233	141	1,458	1,234	761
3 Irrigated farms.....1940..number.....	34	15	3	7	227	53
4 ..1930..number.....	33	25	2	.....	182	15
5 Increase or decrease (-), 1930-1940.....percent.....	3.0	-40.0	50.0	.....	24.7	253.3
Operated by—						
6 (a) Owners and managers.....1940..number.....	27	8	2	7	146	33
7 ..1930..number.....	.....	.....	.....	.....	105	11
8 (b) Tenants.....1940..number.....	7	7	1	.....	81	20
9 ..1930..number.....	.....	.....	.....	.....	77	4
10 Land in all farms.....1940..acres.....	458,096	507,411	1,511,100	473,063	² 1,031,150	² 1,186,451
11 Land in irrigated farms.....1940..acres.....	1,955	19,791	25,119	1,346	95,818	112,117
12 Average per farm.....1940..acres.....	58	1,319	8,373	192	422	2,115
13 (a) Operated by owners and managers.....1940..acres.....	1,596	19,036	(³)	1,346	65,104	105,037
14 Average per farm.....1940..acres.....	59	2,380	(³)	192	446	3,183
15 (b) Operated by tenants.....1940..acres.....	359	755	(³)	.....	30,715	7,080
16 Average per farm.....1940..acres.....	51	108	(³)	.....	379	354
17 Approximate land area.....1940..acres.....	561,280	584,320	1,528,320	574,720	987,520	1,016,320
IRRIGATED AND IRRIGABLE AREAS						
18 Area irrigated.....1939..acres.....	534	841	347	104	8,728	1,021
19 (a) Cropland harvested.....1939..acres.....	529	441	148	104	7,708	769
20 (b) Crop failure.....1939..acres.....	5	.....	65	.....	14	10
21 (c) Pasture.....1939..acres.....	.....	400	134	.....	1,006	242
22 Area irrigated.....1929..acres.....	.....	.....	.....	.....	10,569	1,693
23 ..1919..acres.....	.....	.....	.....	.....	7,103	484
24 Increase or decrease (-), 1929-1939.....percent.....	.....	.....	.....	.....	-17.4	-39.7
25 Irrigable area in enterprises.....1940..acres.....	650	1,332	675	253	12,592	2,426
26 ..1930..acres.....	.....	.....	.....	.....	11,583	2,119
27 ..1920 ⁴ ..acres.....	.....	.....	.....	.....	14,718	2,032
28 Excess of irrigable area over the area irrigated.....1940..acres.....	116	491	328	149	3,864	1,405
29 ..1930..acres.....	.....	.....	.....	.....	1,014	426
30 Area works were capable of supplying with water.....1940..acres.....	634	1,332	675	253	12,242	2,376
31 ..1930..acres.....	.....	.....	.....	.....	11,575	1,886
32 ..1920..acres.....	.....	.....	.....	.....	10,040	2,032
33 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	5.8	26.0
34 Excess, capability of works over area irrigated.....1940..acres.....	100	491	328	149	3,514	1,955
35 ..1930..acres.....	.....	.....	.....	.....	1,006	193
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	27.3	4.2	1.4	7.7	9.1	0.9
37 ..1929..percent.....	.....	.....	.....	.....	21.9	19.7
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.2	63.1	51.4	41.1	71.3	43.0
39 ..1929..percent.....	.....	.....	.....	.....	91.3	89.8
CAPITAL INVESTED TO JANUARY 1						
40 Total investment in all enterprises.....1940..dollars.....	44,860	37,400	3,200	7,662	299,996	28,942
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	44,610	37,400	3,200	7,662	299,345	28,942
42 (b) Investment in water rights (reported).....1940..dollars.....	250	.....	.....	.....	651	.....
43 Total investment in all enterprises.....1930..dollars.....	.....	.....	.....	.....	261,359	47,060
44 ..1920..dollars.....	.....	.....	.....	.....	401,194	28,550
45 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	14.8	-38.5
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	70.76	28.08	4.74	30.28	24.51	12.18
47 ..1930..dollars.....	.....	.....	.....	.....	22.58	24.95
48 ..1920..dollars.....	.....	.....	.....	.....	39.96	14.05
49 Average investment per acre irrigated.....1939..dollars.....	84.00	44.47	9.22	73.67	34.37	28.35
50 Estimated final investment in existing enterprises.....1940..dollars.....	45,460	37,400	3,200	7,662	301,261	30,077
51 ..1930..dollars.....	.....	.....	.....	.....	261,359	47,060
52 ..1920..dollars.....	.....	.....	.....	.....	402,194	28,550
53 Increase or decrease (-), 1930-1940.....percent.....	.....	.....	.....	.....	15.3	-36.1
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	69.94	28.08	4.74	30.28	23.92	12.40
55 ..1930..dollars.....	.....	.....	.....	.....	22.56	22.21
56 ..1920 ⁴ ..dollars.....	.....	.....	.....	.....	27.33	14.05
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
57 Enterprises reporting maintenance and operation.....1939..number.....	20	3	3	1	138	25
58 Area irrigated in these enterprises.....1939..acres.....	375	753	347	(⁵)	7,989	1,021
59 Cost of maintenance and operation.....1939..dollars.....	3,640	1,040	270	(⁵)	18,609	2,922
60 Average cost, per acre irrigated.....1939..dollars.....	9.71	1.38	0.78	(⁵)	2.33	2.86
61 ..1929..dollars.....	.....	.....	.....	.....	2.79	4.94
62 Total annual charges (reported) ⁶.....1939..dollars.....	.....	.....	.....	.....	469	.....
63 Average annual charge per acre irrigated.....1939..dollars.....	.....	.....	.....	.....	0.20	.....
64 Area against which charges were assessed.....1939..acres.....	.....	.....	.....	.....	2,379	.....
65 Average annual charge per acre assessed.....1939..dollars.....	.....	.....	.....	.....	0.20	.....
66 Total charges collected ⁶.....1939..dollars.....	.....	.....	.....	.....	216	.....
67 Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	.....	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS						
68 Enterprises reporting water delivered.....1939..number.....	26	2	.....	4	135	25
69 Area irrigated in these enterprises.....1939..acres.....	478	(³)	.....	104	8,623	1,021
70 Water delivered in these enterprises.....1939..acre-feet.....	1,690	(³)	.....	148	14,249	1,398
71 Average water delivered per acre irrigated.....1939..acre-feet.....	3.5	(³)	.....	1.4	1.7	1.4
72 Average cost of water per acre irrigated.....1939..dollars.....	9.40	(³)	.....	3.33	2.31	2.86
DRAINAGE OF IRRIGATED LAND						
73 Enterprises reporting land drained or needing drainage.....1939..number.....	5	.....	.....	.....	.....	.....
74 Irrigable area in these enterprises.....1939..acres.....	141	.....	.....	.....	.....	.....
75 Irrigated area in these enterprises.....1939..acres.....	109	.....	.....	.....	.....	.....
76 Area for which drains have been installed.....1939..acres.....	103	.....	.....	.....	.....	.....
77 Additional area needing drainage.....1939..acres.....	17	.....	.....	.....	.....	.....

^a Census of Agriculture.

¹ Data between census years not comparable (see headnote).

² The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county.

³ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - TEXAS

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE
1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Val Verde	Waller	Ward	Webb	Wharton	Wilbarger	Wilson	Zapata	Zavala	All other counties ¹		
309	1,484	169	427	3,746	1,300	2,092	329	316	292,064	1	
250	1,463	303	522	3,965	2,139	2,431	338	304	360,650	2	
161	12	132	57	139	9	11	8	156	1,123	3	
47	5	237	70	106	1	2	1	76	786	4	
242.6	140.0	-44.3	-18.6	31.1	800.0	450.0	700.0	105.3	42.9	5	
113	9	71	39	71	4	9	5	106	651	6	
.....	3	46	56	54	.....	.....	.....	41	652	7
48	3	61	18	68	5	2	3	50	472	8	
.....	2	191	14	52	.....	.....	.....	35	518	9
² 2,096,036	222,165	423,808	1,846,626	491,300	² 842,577	403,370	405,982	791,364	67,015,014	10	
804,668	9,080	88,523	199,494	87,423	1,664	3,873	13,079	143,417	1,731,193	11	
4,998	757	671	3,500	629	185	352	919	1,635	1,542	12	
645,192	6,388	80,461	176,957	54,001	673	(³)	11,880	129,867	1,633,072	13	
5,710	710	1,133	4,537	761	168	(³)	2,376	1,225	2,509	14	
159,476	2,692	8,062	22,537	33,422	991	(³)	1,199	13,550	98,121	15	
3,322	897	132	1,252	492	198	(³)	400	271	208	16	
2,074,880	324,480	529,280	2,108,800	690,560	610,560	513,280	691,200	826,880	85,836,160	17	
2,968	2,496	18,655	5,717	22,468	47	321	1,026	23,384	36,823	18	
1,439	2,496	18,023	5,694	22,468	47	296	1,026	13,374	35,422	19	
9	.....	600	15	.....	.....	.....	.....	230	4	20
1,520	.....	32	8	.....	.....	25	.....	9,780	1,397	21
.....	577	13,900	13,206	30,898	.....	.....	.....	13,126	52,911	22
.....	.....	20,000	7,480	19,516	.....	.....	.....	1,642	21,444	23
.....	332.6	34.2	-56.7	-27.3	.....	.....	.....	78.2	-30.4	24
5,863	5,677	62,127	15,083	73,685	47	421	2,519	34,666	89,809	25	
1,097	1,097	69,295	25,891	109,533	.....	.....	.....	18,091	75,025	26
.....	.....	71,500	31,736	75,612	.....	.....	.....	5,933	66,366	27
2,895	3,181	43,472	9,366	51,217	.....	.....	100	1,493	11,282	28
.....	520	55,395	12,683	78,635	.....	.....	.....	4,965	22,114	29
5,863	5,677	60,037	12,744	68,585	47	421	1,679	33,297	86,312	30	
.....	1,097	24,800	19,188	40,874	.....	.....	.....	15,364	73,481	31
.....	.....	37,000	13,143	40,623	.....	.....	.....	4,645	43,146	32
.....	417.5	142.1	-33.6	67.8	.....	.....	.....	116.7	17.5	33
2,895	3,181	41,382	7,027	46,117	.....	100	653	9,913	49,489	34
.....	520	10,900	5,980	9,976	.....	.....	.....	2,238	20,570	35
0.4	27.5	21.1	2.9	25.7	2.8	8.3	7.8	16.3	2.1	36	
.....	34.3	16.5	18.0	71.9	.....	.....	.....	43.2	12.6	37
50.6	44.0	31.1	44.9	32.8	100.0	76.2	61.1	70.2	42.7	38	
.....	52.6	56.0	68.8	75.6	.....	.....	.....	85.4	72.0	39
424,425	53,350	1,548,085	421,124	747,154	1,050	6,100	13,805	900,253	6,990,327	40	
424,425	53,350	1,547,452	419,249	741,672	1,050	6,100	13,805	887,250	6,990,302	41	
.....	.....	633	1,875	5,482	.....	.....	.....	13,003	25	42
.....	28,500	604,500	1,317,254	795,175	.....	.....	.....	916,548	6,027,928	43
.....	.....	370,000	1,096,640	1,543,808	.....	.....	.....	160,850	1,813,557	44
.....	87.2	156.1	-68.0	6.0	.....	.....	.....	-1.8	16.0	45
72.39	9.40	25.79	33.04	10.89	22.34	14.49	8.22	27.04	80.99	46	
.....	25.98	24.38	68.65	19.45	.....	.....	.....	59.66	82.03	47
.....	.....	10.00	83.59	38.00	.....	.....	.....	34.63	42.03	48
143.00	21.37	82.98	73.66	33.25	22.34	19.00	13.46	38.50	189.84	49	
424,425	53,350	1,563,085	442,624	747,154	1,050	6,100	28,805	914,253	7,098,017	50	
.....	28,500	604,500	1,350,354	795,175	.....	.....	.....	1,030,548	6,065,328	51
.....	.....	370,000	1,139,702	1,574,608	.....	.....	.....	160,850	1,868,212	52
.....	87.2	158.6	-67.22	-6.0	.....	.....	.....	-11.3	17.2	53
72.39	9.40	25.16	29.35	10.14	22.34	14.49	11.44	26.37	79.03	54	
.....	25.98	8.72	7.26	7.26	.....	.....	.....	56.96	80.71	55
.....	.....	5.17	35.91	20.82	.....	.....	.....	27.11	28.15	56
		Primary	Sup.					Primary	Sup.	Primary	Sup.
		Enterprises						Enterprises		Enterprises	
58	9	4	1	38	29	(³) 2	3	(³) 2	102	(³) 2	48
2,964	2,156	18,655	(³)	4,053	20,650	(³)	252	(³)	20,041	(³)	36,088
4,120	10,481	30,632	(³)	28,017	135,082	(³)	1,200	(³)	56,175	(³)	102,368
1.39	4.86	1.64	(³)	6.91	6.54	(³)	4.76	(³)	2.80	(³)	2.84
.....	9.03	1.92	12.27	6.06	7.35	8.02
2,277	56,156	140,817	148,560	125	7,565	97,410
3.00	3.01	7.55	8,880	0.54	1.14	2.73
759	74,317	74,317	16,797	230	8,500	74,841
3.00	0.76	1.89	8.84	0.54	0.89	1.30
.....	35,108	16,883	63,061	560	7,661	297,891
.....	368,900	780,821	45,793	600	82,900	6,524,761
59	10	3	52	41	3	5	6	128	(³) 2	47
2,209	2,496	18,655	4,845	22,468	47	321	1,026	23,154	(³)	36,547
6,142	5,918	112,469	11,136	87,140	106	1,038	2,688	21,680	(³)	35,569
2.8	2.4	6.0	2.3	3.9	2.3	3.2	2.6	9.4	(³)	1.0
1.32	4.86	2.96	6.48	8.13	3.24	4.76	4.08	2.83	(³)	2.68
(³) 1	(³) 1	(³) 3	(³) 2	(³) 1	(³) 1	(³) 1	(³) 1	(³) 1	(³) 1	(³) 10
(³)	(³)	61,037	(³)	(³)	(³)	(³)	(³)	(³)	(³)	41,466
(³)	(³)	18,655	(³)	(³)	(³)	(³)	(³)	(³)	(³)	6,617
.....	17,407	(³)	(³)	(³)	(³)	(³)	(³)	(³)	41,443

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
² Does not include data for Nueces and Wichita Counties. Averages for these are 4.71 and 3.27 respectively.
³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE II--FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Armstrong	Atascosa	Bailey	Bandera	Bexar	Brazoria
FARM VALUES, 1940*								
1	Land and buildings, all farms.....dollars..	2,589,978,936	8,958,491	10,716,395	7,949,641	6,228,843	29,729,522	13,491,181
2	Land and buildings, irrigated farms.....dollars..	248,746,614	173,040	495,441	2,248,836	137,400	2,803,258	1,572,418
Operated by--								
3	(a) Owners and managers.....dollars..	194,702,077	(¹)	296,041	1,445,932	(¹)	2,244,498	893,088
4	(b) Tenants.....dollars..	54,044,537	(¹)	189,400	802,904	(¹)	558,760	679,330
5	Average, land and buildings, per farm.....dollars..	12,711.91	28,840.00	2,994.58	9,104.60	17,175.00	7,281.19	23,123.79
6	per acre in farms.....dollars..	21.41	17.87	55.67	23.35	9.36	145.82	36.63
7	Buildings, irrigated farms reporting value.....number..	16,696	6	138	237	8	380	49
8	Total reported.....dollars..	32,848,639	12,250	99,165	291,255	16,300	664,315	159,883
9	Average, per irrigated farm reporting.....dollars..	1,967.46	2,041.67	718.59	1,226.92	2,037.50	1,748.20	3,262.92
10	per acre on all irrigated farms.....dollars..	2.83	1.26	11.14	3.02	1.11	34.56	3.72
11	Buildings, nonirrigated farms reporting value.....number..	383,227	386	1,794	535	632	3,211	1,653
12	Total reported.....dollars..	385,420,914	830,618	1,539,626	548,730	1,104,710	6,232,030	2,040,116
13	Average, per nonirrigated farm reporting.....dollars..	1,005.72	2,151.86	858.21	1,025.66	1,747.96	1,940.84	1,234.19
14	per acre on all nonirrigated farms.....dollars..	3.06	1.04	2.23	1.54	2.38	11.25	3.81
15	Implements and machinery, irrigated farms reporting value.....number..	16,549	6	129	226	8	373	65
16	Total reported.....dollars..	20,123,937	19,020	77,424	317,990	7,100	251,688	258,725
17	Average, per irrigated farm reporting.....dollars..	1,216.02	3,170.00	600.19	1,407.04	887.50	674.77	3,995.77
18	per acre, on all irrigated farms.....dollars..	1.73	1.96	8.70	3.30	0.48	13.09	6.05
19	Implements and machinery, nonirrigated farms reporting value.....number..	337,983	376	1,700	512	607	3,092	1,504
20	Total reported.....dollars..	160,620,275	531,739	724,783	666,582	240,710	1,775,319	890,874
21	Average, per acre, on all nonirrigated farms.....dollars..	1.27	0.66	1.05	1.87	0.52	3.21	1.74
ENTERPRISES AND IRRIGATION WORKS								
JANUARY 1								
22	Enterprises.....1940...number.....	2,4067	5	57	95	4	105	17
23	.....1930...number.....	2,1736	.....	45	23	4	36	14
24	.....1920...number.....	1,371	.....	35	24	.....	43	1
25	Average size of enterprise based on irrigable area.....1940...acres.....	536	139	58	103	5	237	3,521
26	.....1930...acres.....	903	.....	53	110	.....	1,143	425
27	.....1920 ³ ...acres.....	1,231	.....	184	195	.....	1,373	1,000
28	Diversion dams.....1940...number.....	244	.....	.....	.....	1	2	1
29	Main canals and laterals.....1940...length, miles.....	5,936.1	.....	11.6	.....	.....	139.0	95.0
30	.....1930...length, miles.....	4,879	.....	6	.....	.....	192	2
31	.....1920...length, miles.....	4,473	.....	60	50	.....	127	2
32	.....1940...capacity, c.f.s. ⁴	24,813	.....	.....	.....	2	73	146
33	.....1930...capacity, c.f.s. ⁴	21,626	.....	7	.....	.....	86	138
34	.....1920...capacity, c.f.s. ⁴	23,261	.....	25	50	.....	1,702	1
35	Pipe lines ⁵.....1940...length, miles.....	923.1	.....	0.2	.....	0.2	10.9	0.1
36	Storage dams.....1940...number.....	194	.....	2	.....	1	2	1
37	Reservoirs.....1940...number.....	542	3	17	.....	1	6	2
38	.....1930...number.....	325	.....	31	.....	.....	11	.....
39	.....1920...number.....	368	.....	21	.....	.....	11	.....
40	.....1940...capacity, acre-feet..	1,405,024	5	60	.....	(¹)	7,314	(¹)
41	.....1930...capacity, acre-feet..	935,085	.....	51	.....	.....	8,631	.....
42	.....1920...capacity, acre-feet..	392,999	.....	46	.....	.....	260,316	.....
43	Wells, flowing.....1940...number.....	100	.....	25	.....	.....	25	.....
44	.....1930...number.....	61	.....	27	.....	.....	6	.....
45	.....1920...number.....	135	.....	40	.....	.....	23	.....
46	.....1940...yield, g.p.m.....	39,508	.....	9,240	.....	.....	13,878	.....
47	.....1930...yield, g.p.m.....	36,020	.....	14,233	.....	.....	3,520	.....
48	.....1920...yield, g.p.m.....	62,364	.....	16,540	.....	.....	15,410	.....
49	Wells, pumped.....1940...number.....	3,396	5	43	101	1	81	2
50	.....1930...number.....	1,102	.....	20	24	.....	25	6
51	.....1920...number.....	901	.....	10	27	.....	22	.....
52	.....1940...yield, g.p.m.....	2,213,230	2,954	15,245	99,066	(¹)	42,706	(¹)
53	.....1930...yield, g.p.m.....	614,395	.....	8,610	18,800	.....	16,147	5,952
54	.....1920...yield, g.p.m.....	538,565	.....	7,700	24,150	.....	10,820	.....
55	Pumping plants.....1940...number.....	4,674	6	42	101	3	94	17
56	.....1930...number.....	1,828	.....	20	24	.....	36	16
57	.....1920...number.....	1,369	.....	11	24	.....	31	1
58	Prime movers.....1940...capacity, hp.....	195,061	156	606	3,199	8	1,062	715
59	.....1930...capacity, hp.....	85,933	.....	553	520	.....	863	668
60	.....1920...capacity, hp.....	80,511	.....	141	585	.....	693	125
61	Pumps.....1940...capacity, g.p.m.....	9,916,225	3,354	19,343	99,166	630	49,326	87,850
62	.....1930...capacity, g.p.m.....	6,494,999	.....	8,660	18,800	.....	32,767	51,477
63	.....1920...capacity, g.p.m.....	6,825,998	.....	8,900	24,150	.....	14,220	12,000
64	Pumping lift, from all sources.....1940...average, feet.....	69	85	19	45	34	27	18
65	.....1930...average, feet.....	55	.....	12	22	.....	34	23
66	.....1920...average, feet.....	45	.....	51	24	.....	31	14
67	from pumped wells.....1940...average, feet.....	82	85	19	45	(¹)	28	(¹)
PAY ROLL AND NUMBER OF EMPLOYEES								
1939⁶								
68	Enterprises reporting pay roll.....number.....	102	.....	2	.....	.....	7	3
69	Irrigated area in these enterprises.....acres.....	680,299	.....	(¹)	.....	.....	10,472	33,850
70	Wages and salaries paid and payable.....dollars..	1,628,198	.....	(¹)	.....	.....	12,796	79,313
71	Persons employed during week ending April 29.....number..	1,698	.....	(¹)	.....	.....	47	74

* Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

² Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table I.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - TEXAS

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1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Irewster	Briscoe	Brooks	Callahan	Cameron	Castro	Chambers	Coke	Coleman	Colorado	Comal	Concho	Crosby	Dallam	
11,915,916	6,015,696	5,360,707	8,008,709	21,368,831	10,373,951	3,543,914	9,077,003	16,106,055	10,185,722	6,390,411	12,416,818	12,185,070	5,242,785	1
192,724	789,525	864,653	35,800	18,459,606	2,931,404	1,106,470	598,434	128,325	1,509,848	19,500	48,920	1,242,444	518,155	2
185,164	633,815	864,653	28,700	12,857,316	2,419,664	492,305	512,684	91,350	1,153,107	19,500	27,690	626,305	307,605	3
7,560	149,610	.....	7,100	5,602,290	511,740	614,165	85,750	36,975	356,741	.....	21,230	616,139	210,550	4
8,760.18	12,637.50	43,232.65	5,114.29	7,127.26	16,847.15	14,005.95	49,869.50	9,871.15	15,727.58	3,900.00	6,115.00	6,902.47	8,635.92	5
11.69	23.46	17.65	55.50	86.29	22.91	24.79	14.26	57.21	18.32	177.27	30.09	32.25	6.81	6
21	62	20	7	2,391	156	60	12	10	63	5	7	175	60	7
53,600	89,131	74,100	12,600	2,639,328	349,600	85,225	37,400	48,875	113,760	7,100	11,700	200,480	95,205	8
2,552.38	1,437.60	3,705.00	1,800.00	1,103.86	2,241.03	1,420.42	3,116.67	4,887.50	1,805.71	1,420.00	1,671.43	1,145.60	1,586.75	9
3.25	2.67	1.51	19.53	12.34	2.73	1.91	0.89	21.79	1.38	64.55	7.20	5.20	1.25	10
217	428	362	1,388	601	472	282	711	1,969	2,013	711	695	1,012	355	11
391,380	499,545	320,097	1,240,984	386,997	821,901	355,168	836,616	2,138,523	1,997,105	1,567,265	1,180,560	1,607,563	543,735	12
1,803.59	1,167.16	884.25	894.08	643.92	1,741.10	1,259.46	1,176.68	1,086.10	992.10	2,204.31	1,698.65	1,588.50	1,531.65	13
0.13	1.59	0.59	2.63	3.70	2.28	2.28	1.35	2.87	5.32	5.06	2.13	3.89	0.74	14
21	57	20	5	2,242	164	78	12	12	90	5	6	155	54	15
18,895	86,626	29,523	1,090	1,621,414	353,135	336,033	14,600	13,553	192,485	4,325	5,100	171,287	77,487	16
899.76	1,519.75	1,476.15	218.00	723.20	2,153.26	4,308.12	1,216.67	1,129.42	2,138.72	865.00	850.00	1,105.08	1,434.94	17
1.15	2.59	0.60	1.69	7.58	2.76	7.53	0.35	6.04	2.34	39.32	3.14	4.45	1.02	18
175	420	326	1,091	573	473	229	654	1,755	1,872	630	609	977	303	19
152,675	408,123	130,512	562,142	276,021	794,855	126,989	428,710	1,197,404	481,267	387,002	645,225	1,467,783	394,176	20
0.05	1.30	0.24	1.19	2.64	2.20	0.82	0.69	1.61	1.28	1.25	1.17	3.55	0.53	21
21	18	22	5	164	101	4	7	11	14	4	4	20	12	22
35	.....	5	.....	26	.....	1	4	5	17	4	3	.....	.....	23
16	.....	.....	.....	17	.....	4	.....	.....	31	.....	.....	.....	.....	24
87	154	30	23	1,275	267	31,384	56	18	10,424	26	29	71	128	25
46	.....	.....	.....	9,127	.....	18,000	.....	.....	7,956	.....	.....	.....	.....	26
68	.....	.....	.....	10,495	.....	18,050	.....	.....	1,461	.....	.....	.....	.....	27
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
5.0	.....	.....	.....	905.3	.....	368.2	0.1	4.0	136.0	.....	0.1	.....	.....	29
7	.....	.....	.....	1,042	.....	45	.....	.....	227	.....	.....	.....	.....	30
6	.....	.....	.....	596	.....	121	.....	.....	78	.....	.....	.....	.....	31
38	.....	.....	3	2,604	.....	250	8	40	1,032	1	7	.....	.....	32
22	.....	.....	.....	4,150	.....	300	.....	.....	356	.....	.....	.....	.....	33
132	.....	.....	.....	3,435	.....	865	.....	.....	523	.....	.....	.....	.....	34
2.5	0.5	3.2	.....	177.9	.....	.....	3.9	2.7	.....	0.5	0.5	.....	.....	35
.....	.....	.....	2	22	.....	1	2	1	1	.....	1	.....	.....	36
6	3	3	2	25	.....	1	2	1	1	.....	1	.....	.....	37
3	.....	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
16	.....	.....	.....	3	.....	1	.....	.....	.....	.....	.....	.....	.....	39
2	2	4	(¹)	44,664	.....	(¹)	(¹)	(¹)	(¹)	.....	(¹)	.....	.....	40
36	.....	.....	.....	13,086	.....	.....	.....	.....	6,000	.....	.....	.....	.....	41
15	.....	.....	.....	1,501	.....	25,000	.....	.....	.....	.....	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
13	17	26	6	3	106	.....	.....	1	16	3	2	20	16	49
8	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	.....	.....	50
15	.....	.....	.....	1	.....	.....	.....	.....	39	.....	.....	.....	.....	51
146	12,019	4,467	1,096	463	96,593	.....	(¹)	.....	14,100	1,200	(¹)	7,210	13,300	52
158	.....	.....	.....	.....	.....	.....	.....	.....	26,675	.....	.....	.....	.....	53
964	.....	.....	.....	25	.....	.....	.....	.....	25,850	.....	.....	.....	.....	54
24	17	27	7	291	108	2	7	13	30	5	4	20	16	55
10	.....	.....	.....	58	.....	2	.....	.....	18	.....	.....	.....	.....	56
15	.....	.....	.....	23	.....	7	.....	.....	44	.....	.....	.....	.....	57
225	911	204	28	10,012	5,610	(¹)	70	64	7,883	28	63	459	567	58
146	.....	.....	.....	7,231	.....	1,600	.....	.....	6,333	.....	.....	.....	.....	59
153	.....	.....	.....	5,847	.....	4,672	.....	.....	4,164	.....	.....	.....	.....	60
15,004	12,423	4,242	2,096	1,188,927	100,396	(¹)	4,050	3,463	637,200	525	3,145	7,215	13,305	61
7,788	.....	.....	.....	1,224,300	.....	120,000	.....	.....	556,675	.....	.....	.....	.....	62
6,538	.....	.....	.....	887,212	.....	309,200	.....	.....	328,750	.....	.....	.....	.....	63
74	107	31	22	11	104	(¹)	24	33	62	53	36	160	50	64
53	.....	.....	.....	21	.....	22	.....	.....	76	.....	.....	.....	.....	65
46	.....	.....	.....	15	.....	45	.....	.....	50	.....	.....	.....	.....	66
108	104	31	28	37	104	.....	(¹)	.....	65	67	(¹)	160	50	67
.....	.....	.....	.....	13	.....	4	.....	.....	2	.....	.....	.....	.....	68
.....	.....	.....	.....	79,512	.....	32,180	.....	.....	(¹)	.....	.....	.....	.....	69
.....	.....	.....	.....	292,537	.....	112,813	.....	.....	(¹)	.....	.....	.....	.....	70
.....	.....	.....	.....	328	.....	89	.....	.....	(¹)	.....	.....	.....	.....	71

⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁵Includes siphons and farm pipe lines reported.
⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940.
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920]

ITEM (For definitions and explanations, see text)		Dallas	Deaf Smith	Dickens	Dimmit	Donley	Edwards	El Paso	Fisher
FARM VALUES, 1940*									
1	Land and buildings, all farms.....dollars..	36,632,161	14,507,326	6,550,510	7,148,068	7,985,135	12,026,182	16,133,701	11,803,377
2	Land and buildings, irrigated farms.....dollars..	307,700	5,114,135	554,709	3,066,612	65,640	2,738,339	15,941,582	198,680
Operated by—									
3	(a) Owners and managers.....dollars..	221,950	4,208,915	446,514	2,114,947	40,140	2,240,015	13,222,118	(¹)
4	(b) Tenants.....dollars..	85,750	905,220	108,195	951,665	25,500	498,324	2,119,464	(¹)
5	Average, land and buildings, per farm.....dollars..	7,692.50	20,456.54	8,553.98	12,169.10	8,205.00	51,666.77	15,326.26	15,283.08
6	per acre in farms.....dollars..	271.58	23.07	20.26	21.26	16.34	9.70	125.31	29.49
7	Buildings, irrigated farms reporting value.....number..	39	237	65	223	8	53	945	13
8	Total reported.....dollars..	80,775	666,475	89,700	541,736	9,600	192,011	2,716,536	20,100
9	Average, per irrigated farm reporting.....dollars..	2,071.15	2,812.13	1,360.00	2,429.31	1,200.00	3,622.85	2,874.64	1,546.15
10	per acre on all irrigated farms.....dollars..	71.29	3.01	3.28	3.76	2.39	0.68	22.19	2.98
11	Buildings, nonirrigated farms reporting value.....number..	3,404	401	821	163	849	217	69	1,439
12	Total reported.....dollars..	6,327,111	706,555	863,980	193,065	1,031,170	758,478	276,471	1,730,955
13	Average, per nonirrigated farm reporting.....dollars..	1,858.73	1,761.98	1,052.35	1,184.45	1,214.57	3,495.29	4,006.83	1,202.89
14	per acre on all nonirrigated farms.....dollars..	16.38	0.99	2.95	0.41	1.98	0.78	1.36	3.58
15	Implements and machinery, irrigated farms reporting value.....number..	38	225	54	226	7	51	790	13
16	Total reported.....dollars..	22,775	599,259	58,685	223,022	7,800	50,490	1,097,576	17,950
17	Average, per irrigated farm reporting.....dollars..	599.34	2,663.37	1,086.76	986.82	1,114.29	980.00	1,389.34	1,380.77
18	per acre, on all irrigated farms.....dollars..	20.10	2.70	2.14	1.55	1.94	0.18	8.97	2.66
19	Implements and machinery, nonirrigated farms reporting value.....number..	2,900	410	771	126	811	199	57	1,304
20	Total reported.....dollars..	1,798,346	863,504	672,295	62,190	708,981	204,048	25,331	1,115,361
21	Average, per acre, on all nonirrigated farms.....dollars..	4.65	1.21	2.30	0.13	1.36	0.21	0.12	2.31
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
22	Enterprises.....1940...number.....	39	193	21	237	3	9	² 1	8
23	.....1930...number.....	12	32	.....	147	.....	2	1	8
24	.....1920...number.....	.....	43	.....	146	.....	.....	2	.....
25	Average size of enterprise based on irrigable area.....1940...acres.....	9	259	1	115	16	16	74,708	54
26	.....1930...acres.....	.....	213	.....	127	.....	.....	67,000	.....
27	.....1920 ³ ...acres.....	.....	310	.....	136	.....	.....	29,002	.....
28	Diversion dams.....1940...number.....	4	.....	.....	1	.....	2	2	1
29	Main canals and laterals.....1940...length, miles.....	.....	.....	0.5	5.8	.....	1.1	255.7	4.0
30	.....1930...length, miles.....	.....	.....	.....	4	.....	.....	257	.....
31	.....1920...length, miles.....	.....	113	.....	5	.....	.....	40	.....
32	.....1940...capacity, c.f.s. ⁴	10	.....	.....	79	.....	8	1,330	34
33	.....1930...capacity, c.f.s. ⁴.....	.....	.....	.....	9	.....	.....	1,720	.....
34	.....1920...capacity, c.f.s. ⁴.....	.....	94	.....	39	.....	.....	774	.....
35	Pipe lines ⁵.....1940...length, miles.....	15.0	.....	0.1	4.0	1.0	0.7	.....	3.6
36	Storage dams.....1940...number.....	4	2	.....	4	.....	.....	.....	4
37	Reservoirs.....1940...number.....	4	2	.....	105	.....	.....	.....	4
38	.....1930...number.....	.....	.....	.....	54	.....	.....	.....	.....
39	.....1920...number.....	.....	.....	.....	153	.....	.....	.....	.....
40	.....1940...capacity, acre-feet.....	15	(¹)	.....	14,827	.....	.....	.....	108
41	.....1930...capacity, acre-feet.....	.....	.....	.....	5,047	.....	.....	.....	.....
42	.....1920...capacity, acre-feet.....	.....	.....	.....	1,690	.....	.....	.....	.....
43	Wells, flowing.....1940...number.....	.....	1	.....	.....	.....	.....	.....	.....
44	.....1930...number.....	.....	.....	.....	.....	.....	.....	.....	.....
45	.....1920...number.....	.....	2	.....	27	.....	.....	.....	.....
46	.....1940...yield, g.p.m.....	.....	(¹)	.....	.....	.....	.....	.....	.....
47	.....1930...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
48	.....1920...yield, g.p.m.....	.....	2,500	.....	6,025	.....	.....	.....	.....
49	Wells, pumped.....1940...number.....	65	227	21	251	3	3	.....	.....
50	.....1930...number.....	.....	34	.....	199	.....	.....	.....	.....
51	.....1920...number.....	.....	44	.....	178	.....	.....	.....	.....
52	.....1940...yield, g.p.m.....	9,180	204,115	120	81,046	24	315	.....	.....
53	.....1930...yield, g.p.m.....	.....	39,700	.....	63,425	.....	.....	.....	.....
54	.....1920...yield, g.p.m.....	.....	46,250	.....	48,450	.....	.....	.....	.....
55	Pumping plants.....1940...number.....	49	229	21	289	3	7	.....	8
56	.....1930...number.....	.....	34	.....	198	.....	.....	.....	.....
57	.....1920...number.....	.....	43	.....	181	.....	.....	.....	.....
58	Prime movers.....1940...capacity, hp.....	332	11,146	24	5,429	6	39	.....	153
59	.....1930...capacity, hp.....	.....	1,755	.....	5,920	.....	.....	.....	.....
60	.....1920...capacity, hp.....	.....	2,340	.....	3,851	.....	.....	.....	.....
61	Pumps.....1940...capacity, g.p.m.....	12,460	203,370	120	117,151	24	1,916	.....	20,000
62	.....1930...capacity, g.p.m.....	.....	37,530	.....	66,615	.....	.....	.....	.....
63	.....1920...capacity, g.p.m.....	.....	48,750	.....	74,900	.....	.....	.....	.....
64	Pumping lift, from all sources.....1940...average, feet.....	24	95	40	60	132	90	.....	16
65	.....1930...average, feet.....	.....	65	.....	129	.....	.....	.....	.....
66	.....1920...average, feet.....	.....	79	.....	39	.....	.....	.....	.....
67	from pumped wells.....1940...average, feet.....	25	95	40	65	132	187	.....	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶									
68	Enterprises reporting pay roll.....number.....	.....	.....	.....	3	.....	.....	² 1	.....
69	Irrigated area in these enterprises.....acres.....	.....	.....	.....	300	.....	.....	61,153	.....
70	Wages and salaries paid and payable.....dollars..	.....	.....	.....	784	.....	.....	110,150	.....
71	Persons employed during week ending April 29.....number..	.....	.....	.....	6	.....	.....	73	.....

*Census of Agriculture.

¹Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

²Data for less than 3 enterprises shown with permission of the enterprise involved.

³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - TEXAS

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939-Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Floyd	Fort Bend	Frio	Galveston	Gillespie	Glassecock	Gray	Guadalupe	Hale	Hansford	Harris	Haskell	Heys	Hemphill	
13,971,774	22,286,201	7,437,519	4,309,977	13,727,631	6,313,847	9,945,416	14,810,947	18,197,861	7,736,311	41,269,301	14,998,802	7,501,347	6,155,206	1
5,845,699	1,148,383	826,037	201,420	2,731,551	2,239,588	219,570	106,750	13,035,627	119,488	1,620,171	191,195	69,100	101,300	2
3,916,790	756,713	906,567	(¹)	2,509,351	1,960,098	104,120	106,750	8,265,215	119,488	1,268,015	165,320	(¹)	(¹)	3
1,928,909	391,670	219,470	(¹)	222,200	279,490	115,450	.....	4,770,412	.....	352,156	25,875	(¹)	(¹)	4
12,411.25	19,799.71	15,585.60	6,945.52	11,574.37	50,899.73	24,396.67	13,343.75	11,680.67	29,872.00	9,000.95	11,949.69	9,871.43	16,883.33	5
31.95	42.43	18.03	97.78	20.89	11.59	15.63	46.25	29.73	15.34	46.01	70.53	66.51	14.55	6
464	54	51	29	233	43	9	8	1,094	4	179	16	7	6	7
890,616	134,297	157,975	73,800	527,225	162,556	27,000	19,500	1,833,850	12,950	333,750	46,050	31,300	15,500	8
1,897.88	2,486.98	3,097.53	2,544.83	2,262.77	3,780.37	3,000.00	2,437.50	1,676.28	3,237.50	1,864.53	2,878.12	4,471.43	2,583.33	9
4.81	3.96	3.45	35.83	4.03	0.84	1.82	8.45	4.18	1.66	9.48	16.89	30.13	2.23	10
799	3,297	908	593	1,129	100	518	2,685	451	260	6,657	1,848	1,175	334	11
1,247,825	3,235,287	672,785	1,302,637	2,213,082	267,730	1,293,475	3,654,413	672,430	720,205	9,986,732	2,135,801	1,657,199	614,030	12
1,561.73	981.28	1,115.73	1,563.81	1,960.21	2,677.50	2,099.80	1,361.05	1,490.98	2,770.02	1,500.19	1,155.74	1,410.38	1,838.41	13
3.98	8.57	1.15	10.93	4.06	0.72	2.42	10.30	3.94	1.45	17.02	3.32	4.17	1.17	14
445	55	50	25	229	44	7	7	1,046	4	175	15	7	6	15
628,241	125,101	59,700	18,683	181,165	49,925	12,050	6,935	1,513,807	13,625	271,300	24,220	10,585	3,600	16
1,411.78	2,274.56	1,194.00	747.32	791.11	1,134.66	1,721.43	990.71	1,447.23	3,406.25	1,550.29	1,614.67	1,512.14	600.00	17
3.43	4.62	1.30	9.07	1.39	0.26	0.86	3.00	3.45	1.75	7.70	8.93	10.19	0.52	18
729	3,129	589	732	1,111	100	560	2,558	399	272	5,437	1,746	969	333	19
905,088	1,446,235	376,083	379,887	651,681	128,886	725,618	1,024,498	567,150	748,274	3,039,951	1,679,203	364,476	373,675	20
2.89	3.83	0.64	3.19	1.20	0.35	1.36	2.89	3.32	1.51	5.18	3.08	0.92	0.71	21
225	13	31	3	12	7	3	3	328	6	30	3	3	6	22
29	9	27	6	2	.....	.....	1	61	1	22	3	3	.....	23
47	.....	24	.....	.....	.....	.....	.....	58	.....	1	.....	.....	.....	24
261	2,700	41	30	5	29	11	78	219	60	504	88	12	12	25
50	3,522	91	.....	.....	.....	.....	.....	120	.....	344	.....	.....	.....	26
119	.....	140	.....	.....	.....	.....	.....	175	.....	16,000	.....	.....	.....	27
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	28
.....	45.0	.....	.....	.....	.....	.....	3.0	2.0	4.0	.....	.....	.....	1.2	29
.....	29	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	30
95	.....	2	.....	.....	.....	.....	.....	108	.....	40	.....	.....	.....	31
1	889	3	.....	3	.....	1	14	.....	16	.....	.....	2	3	32
.....	350	.....	.....	.....	.....	.....	.....	.....	.....	30	.....	.....	.....	33
94	.....	10	.....	.....	.....	.....	.....	113	.....	266	.....	.....	.....	34
1.0	0.3	0.2	1.0	1.1	0.5	0.6	1.3	.....	0.2	1.1	.....	1.6	0.4	35
.....	3	1	1	.....	1	2	.....	.....	.....	.....	.....	.....	.....	36
.....	1	8	2	.....	4	2	.....	6	.....	1	.....	.....	.....	37
.....	3	14	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	38
.....	17	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	39
.....	(¹)	18	(¹)	.....	452	(¹)	.....	40	.....	(¹)	.....	.....	26	40
.....	1,800	74	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	41
.....	.....	23	.....	.....	.....	.....	.....	800	.....	.....	.....	.....	.....	42
.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	2,640	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	530	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	1,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
273	9	39	3	14	11	3	.....	394	7	38	6	2	6	49
29	9	33	.....	.....	.....	.....	.....	76	.....	25	.....	.....	.....	50
48	.....	37	.....	.....	.....	.....	.....	68	.....	.....	.....	.....	.....	51
231,537	11,700	5,369	146	1,424	1,915	504	.....	356,392	2,958	55,840	2,350	(¹)	678	52
27,530	18,550	.....	.....	.....	.....	.....	.....	68,529	.....	29,961	.....	.....	.....	53
49,250	.....	7,995	.....	.....	.....	.....	.....	62,797	.....	.....	.....	.....	.....	54
279	20	31	4	14	12	4	3	377	7	38	6	3	7	55
29	11	26	.....	.....	.....	.....	.....	72	.....	24	.....	.....	.....	56
47	.....	27	.....	.....	.....	.....	.....	65	.....	1	.....	.....	.....	57
12,167	5,682	275	11	72	243	32	46	17,481	106	2,094	38	12	22	58
2,165	1,968	352	.....	.....	.....	.....	.....	3,023	.....	1,177	.....	.....	.....	59
1,950	.....	306	.....	.....	.....	.....	.....	3,212	.....	2,400	.....	.....	.....	60
232,702	387,050	6,608	146	2,424	2,141	624	3,650	352,318	3,058	55,040	2,350	370	878	61
27,700	119,050	11,465	.....	.....	.....	.....	.....	70,050	.....	35,882	.....	.....	.....	62
49,250	.....	8,045	.....	.....	.....	.....	.....	62,985	.....	120,000	.....	.....	.....	63
94	64	75	92	64	65	121	28	83	108	73	34	42	34	64
64	27	84	.....	.....	.....	.....	.....	73	.....	65	.....	.....	.....	65
91	.....	63	.....	.....	.....	.....	.....	76	.....	50	.....	.....	.....	66
94	91	78	92	69	65	353	.....	83	108	73	34	(¹)	43	67
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	68
.....	10,107	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	69
.....	19,199	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70
.....	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71

⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁵Includes siphons and farm pipe lines reported.

⁶Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE II--FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Hidalgo	Hockley	Howard	Hudspeth	Hutchinson	Irion	Jackson
FARM VALUES, 1940^a								
1	Land and buildings, all farms.....dollars..	40,312,799	14,297,438	8,930,939	6,212,843	1,396,604	8,580,001	9,640,230
2	Land and buildings, irrigated farms.....dollars..	33,196,286	1,553,629	132,800	3,247,690	317,680	684,605	420,660
Operated by—								
3	(a) Owners and managers.....dollars..	28,502,267	845,672	112,200	2,909,490	221,980	554,005	196,850
4	(b) Tenants.....dollars..	4,694,019	707,957	20,600	338,200	92,700	130,600	223,810
5	Average, land and buildings, per farm.....dollars..	8,108.52	9,303.17	8,300.00	38,208.12	19,855.00	14,566.06	32,358.46
6	per acre in farms.....dollars..	138.33	35.55	24.70	4.04	17.44	21.68	8.33
7	Buildings, irrigated farms reporting value.....number..	2,028	165	16	77	16	47	10
8	Total reported.....dollars..	4,285,547	260,425	22,650	191,075	46,350	87,010	25,550
9	Average, per irrigated farm reporting.....dollars..	2,113.19	1,578.33	1,415.62	2,481.49	2,895.86	1,851.28	2,555.00
10	per acre on all irrigated farms.....dollars..	17.86	5.96	4.21	0.24	2.55	2.76	0.51
11	Buildings, nonirrigated farms reporting value.....number..	1,814	1,287	769	51	146	98	1,227
12	Total reported.....dollars..	643,353	1,408,072	1,063,640	89,355	247,330	233,688	1,391,237
13	Average, per nonirrigated farm reporting.....dollars..	354.66	1,094.07	1,383.15	1,752.06	1,694.04	2,384.57	1,136.29
14	per acre on all nonirrigated farms.....dollars..	1.44	3.09	3.19	0.08	0.66	0.29	3.67
15	Implements and machinery, irrigated farms reporting value.....number..	2,591	159	15	78	16	38	12
16	Total reported.....dollars..	2,207,995	204,902	13,050	198,500	31,925	28,975	44,875
17	Average, per irrigated farm reporting.....dollars..	852.18	1,288.69	870.00	2,544.87	1,995.31	762.50	3,739.58
18	per acre, on all irrigated farms.....dollars..	9.20	4.69	2.43	0.25	1.75	0.92	0.89
19	Implements and machinery, nonirrigated farms reporting value.....number..	770	1,215	697	49	139	94	1,130
20	Total reported.....dollars..	414,903	1,453,408	621,115	52,680	246,082	69,132	584,903
21	Average, per acre, on all nonirrigated farms.....dollars..	0.93	3.19	1.28	0.05	0.66	0.09	1.54
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22	Enterprises.....1940...number.....	67	38	4	27	4	18	11
23	.....1930...number.....	17	.....	.....	9	.....	15	9
24	.....1920...number.....	9	.....	.....	.....	.....	15	44
25	Average size of enterprise based on irrigable area.....1940...acres.....	4,652	122	13	912	5	267	461
26	.....1930...acres.....	18,098	.....	.....	2,032	.....	129	443
27	.....1920 ² ...acres.....	47,171	.....	.....	.....	.....	161	195
28	Diversion dams.....1940...number.....	3	.....	.....	3	.....	3	8
29	Main canals and laterals.....1940...length, miles.....	1,234.8	3.0	.....	61.4	.....	21.5	18.1
30	.....1930...length, miles.....	1,156	.....	.....	39	.....	8	1
31	.....1920...length, miles.....	906	.....	.....	.....	.....	37	16
32	.....1940...capacity, c.f.s. ³	3,230	.....	.....	274	.....	55	72
33	.....1930...capacity, c.f.s. ³	3,702	.....	.....	204	.....	17	2
34	.....1920...capacity, c.f.s. ³	3,191	.....	.....	.....	.....	59	315
35	Pipe lines ⁴.....1940...length, miles.....	444.5	.....	0.2	4.1	0.4	1.6	1.4
36	Storage dams.....1940...number.....	3	1	4	.....	.....	1	.....
37	Reservoirs.....1940...number.....	13	1	4	.....	.....	1	.....
38	.....1930...number.....	8	.....	.....	.....	.....	.....	.....
39	.....1920...number.....	3	.....	.....	.....	.....	1	.....
40	.....1940...capacity, acre-feet..	36,502	(¹)	100	.....	.....	(¹)	.....
41	.....1930...capacity, acre-feet..	6,335	.....	.....	.....	.....	.....	.....
42	.....1920...capacity, acre-feet..	3,400	.....	.....	.....	.....	.....	.....
43	Wells, flowing.....1940...number.....	.....	.....	.....	.....	.....	.....	.....
44	.....1930...number.....	.....	.....	.....	.....	.....	.....	.....
45	.....1920...number.....	.....	.....	.....	.....	.....	.....	.....
46	.....1940...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
47	.....1930...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
48	.....1920...yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....
49	Wells, pumped.....1940...number.....	42	42	7	19	3	.....	8
50	.....1930...number.....	4	.....	.....	.....	.....	3	8
51	.....1920...number.....	.....	.....	.....	.....	.....	1	48
52	.....1940...yield, g.p.m.....	29,328	34,375	164	32,144	11	.....	14,950
53	.....1930...yield, g.p.m.....	3,480	.....	.....	.....	.....	1,813	14,550
54	.....1920...yield, g.p.m.....	.....	.....	.....	.....	.....	1,500	40,600
55	Pumping plants.....1940...number.....	195	42	7	29	4	16	14
56	.....1930...number.....	31	.....	.....	12	.....	14	9
57	.....1920...number.....	10	.....	.....	.....	.....	12	44
58	Prime movers.....1940...capacity, hp.....	23,190	2,052	15	454	4	185	975
59	.....1930...capacity, hp.....	23,138	.....	.....	222	.....	162	725
60	.....1920...capacity, hp.....	11,110	.....	.....	.....	.....	181	1,868
61	Pumps.....1940...capacity, g.p.m.....	2,598,966	34,375	164	55,919	15	15,900	36,200
62	.....1930...capacity, g.p.m.....	1,833,980	.....	.....	22,025	.....	12,338	26,450
63	.....1920...capacity, g.p.m.....	1,366,576	.....	.....	.....	.....	17,800	54,160
64	Pumping lift, from all sources.....1940...average, feet.....	25	110	25	28	156	16	57
65	.....1930...average, feet.....	22	.....	.....	10	.....	19	24
66	.....1920...average, feet.....	21	.....	.....	.....	.....	19	58
67	from pumped wells.....1940...average, feet.....	30	112	25	40	156	.....	58
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶								
68	Enterprises reporting pay roll.....number.....	10	.....	.....	1	.....	1	.....
69	Irrigated area in these enterprises.....acres.....	191,380	.....	.....	(¹)	.....	(¹)	.....
70	Wages and salaries paid and payable.....dollars..	444,687	.....	.....	(¹)	.....	(¹)	.....
71	Persons employed during week ending April 29.....number..	497	.....	.....	(¹)	.....	.....	.....

^a Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — TEXAS

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Jeff Davis	Jefferson	Jim Wells	Kendall	Kerr	Kimble	Kinney	Lamb	La Salle	Liberty	Llano	Lubbock	Lynn	McCulloch	
10,132,526	13,527,944	12,609,927	7,028,365	12,530,320	9,415,726	6,820,532	20,508,430	6,800,225	6,174,430	8,968,565	22,494,911	14,909,564	14,342,272	1
5,119,239	4,997,200	169,700	1,397,220	2,554,470	1,029,957	892,652	7,210,209	1,540,396	763,695	2,875,159	7,708,526	1,292,640	67,100	2
4,887,064	3,032,951	154,700	1,201,360	2,376,870	817,724	870,332	5,796,354	1,449,233	606,380	2,474,924	4,882,917	791,630	(¹)	3
262,175	1,964,249	15,000	192,860	177,600	212,233	22,320	1,413,855	91,163	157,515	400,235	2,825,509	501,010	(¹)	4
122,600.93	23,461.03	8,485.00	11,741.34	22,605.93	12,715.52	59,510.13	14,420.42	29,064.06	12,320.89	15,973.11	12,513.84	12,080.75	16,775.00	5
6.27	21.37	34.29	20.37	17.80	14.76	9.96	31.32	13.83	21.25	17.61	45.41	31.82	27.82	6
42	179	20	119	113	81	15	493	51	49	178	607	105	1	7
165,110	385,164	31,550	399,650	497,416	159,550	43,950	718,368	162,028	128,864	344,300	1,201,063	200,575	8,550	8
3,931.19	2,151.75	1,577.50	3,358.40	4,401.91	1,969.75	2,930.00	1,457.14	3,177.02	2,629.66	1,934.27	1,978.69	1,910.24	2,137.50	9
0.20	1.65	6.38	5.83	3.47	2.29	0.49	3.42	1.45	3.59	2.11	7.08	4.94	3.54	10
56	2,138	1,172	612	604	349	106	1,610	371	1,842	463	1,480	1,292	1,065	11
236,675	3,486,014	1,306,655	1,289,679	1,717,716	843,481	264,940	1,905,755	378,979	1,348,929	633,235	2,438,481	1,853,886	1,631,890	12
4,226.34	1,630.52	1,114.89	2,107.32	2,843.90	2,416.85	2,499.43	1,183.70	1,021.51	732.32	1,367.68	1,647.62	1,434.90	1,532.29	13
0.29	41.60	2.67	4.27	2.69	1.41	0.43	4.67	0.64	6.32	1.74	7.19	3.98	2.66	14
35	198	20	117	108	79	13	474	51	54	177	576	99	3	15
37,930	684,637	22,400	85,608	104,205	55,107	17,052	618,006	106,917	218,966	83,253	935,706	153,766	3,650	16
1,083.71	3,457.76	1,120.00	731.69	964.86	697.56	1,314.00	1,305.08	2,096.41	4,055.30	470.36	1,624.49	1,553.19	1,216.67	17
0.05	2.93	4.63	1.25	0.73	0.79	0.19	2.94	0.96	6.09	0.51	5.51	3.78	1.51	18
48	1,383	1,175	589	541	336	99	1,510	367	1,457	453	1,350	1,234	969	19
44,105	629,691	1,100,910	299,436	358,824	193,919	89,625	1,618,800	206,539	396,161	169,258	1,748,712	1,792,544	977,645	20
0.05	7.51	2.25	0.99	0.56	0.33	0.15	3.97	0.35	1.86	0.47	5.15	3.85	1.60	21
39	30	26	36	49	28	13	158	55	6	40	171	25	3	22
17	23	31	1	42	7	1	3	39	2	1	1	.....	15	23
12	18	.....	.....	.....	.....	.....	.....	38	2	.....	.....	.....	.....	24
34	4,278	24	5	18	21	101	168	86	13,117	5	145	14	8	25
23	6,383	.....	.....	17	.....	.....	.....	82	17,500	.....	.....	.....	.....	26
170	9,667	.....	.....	.....	.....	.....	.....	173	12,000	.....	.....	.....	.....	27
27	.....	2	4	.....	2	.....	.....	1	.....	2	.....	1	.....	28
6.0	325.6	.....	4.0	2.1	14.2	.....	.....	.....	141.4	.....	.....	1.0	.....	29
3	284	.....	2	.....	.....	.....	.....	.....	60	.....	.....	.....	.....	30
3	146	.....	.....	.....	.....	.....	.....	2	58	.....	.....	.....	.....	31
45	2,137	.....	13	30	34	1,820	.....	65	907	10	1	.....	.....	32
3	1,934	.....	.....	2	.....	.....	.....	.....	2,253	.....	.....	.....	.....	33
10	1,936	.....	.....	.....	.....	.....	.....	3	157	.....	.....	.....	.....	34
1.5	.....	.....	14.3	12.4	2.4	0.1	0.1	11.6	2.5	6.7	4.4	0.1	.....	35
.....	.....	.....	.....	.....	.....	.....	.....	6	1	1	.....	2	.....	36
13	.....	11	6	.....	.....	.....	3	21	7	6	8	4	.....	37
.....	.....	.....	2	.....	.....	.....	.....	17	.....	.....	.....	.....	.....	38
8	1	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	39
10	.....	9	32	.....	.....	.....	5	2,051	1,201	4,002	27	14	.....	40
.....	.....	.....	3	.....	.....	.....	.....	77	.....	.....	.....	.....	.....	41
.....	500	.....	.....	.....	.....	.....	.....	13	.....	.....	.....	.....	.....	42
.....	.....	.....	1	.....	.....	.....	.....	5	.....	.....	.....	.....	2	43
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	45
.....	.....	.....	(¹)	.....	.....	.....	.....	4,070	.....	.....	.....	.....	(¹)	46
.....	.....	.....	.....	.....	.....	.....	.....	1,410	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	1,000	.....	.....	.....	.....	.....	48
19	2	27	22	17	3	1	171	20	2	34	191	27	1	49
14	1	.....	.....	13	.....	.....	.....	16	.....	.....	.....	.....	.....	50
7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51
805	(¹)	4,455	423	729	1,054	(¹)	167,990	3,469	(¹)	142	154,122	4,040	(¹)	52
1,765	2,000	.....	.....	618	.....	.....	.....	2,000	.....	.....	.....	.....	.....	53
3,180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
21	53	27	44	47	22	1	173	58	22	44	197	26	1	55
14	26	.....	.....	37	.....	.....	.....	50	3	.....	.....	.....	.....	56
11	19	.....	.....	.....	.....	.....	.....	43	3	.....	.....	.....	.....	57
51	8,666	187	237	400	229	(¹)	9,464	743	7,385	63	8,646	170	(¹)	58
71	4,028	.....	.....	333	.....	.....	.....	757	2,074	.....	.....	.....	.....	59
148	6,770	.....	.....	.....	.....	.....	.....	1,184	3,000	.....	.....	.....	.....	60
960	1,002,180	4,358	4,010	11,082	15,230	(¹)	174,906	32,723	389,000	175	158,764	4,007	(¹)	61
2,290	531,700	.....	.....	11,453	.....	.....	.....	24,205	314,000	.....	.....	.....	.....	62
4,450	2,039,600	.....	.....	.....	.....	.....	.....	45,250	135,000	.....	.....	.....	.....	63
51	13	53	82	58	28	(¹)	98	46	44	58	96	70	(¹)	64
27	13	.....	.....	35	.....	.....	.....	51	39	.....	.....	.....	.....	65
70	15	.....	.....	.....	.....	.....	.....	23	56	.....	.....	.....	.....	66
57	(¹)	53	116	109	37	(¹)	98	87	(¹)	57	97	70	(¹)	67
1	4	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	68
(¹)	32,269	.....	.....	.....	.....	.....	.....	.....	18,716	.....	.....	.....	.....	69
(¹)	90,077	.....	.....	.....	.....	.....	.....	.....	63,084	.....	.....	.....	.....	70
(¹)	86	.....	.....	.....	.....	.....	.....	.....	50	.....	.....	.....	.....	71

³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁴ Includes siphons and farm pipe lines reported.

⁵ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE II—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)	McLennan	Martin	Mason	Matagorda	Maverick	Medina	Monari
FARM VALUES, 1940*							
1 Land and buildings, all farms.....dollars..	25,580,021	7,652,857	10,975,973	11,377,970	4,111,389	14,784,721	11,808,156
2 Land and buildings, irrigated farms.....dollars..	254,930	312,465	1,552,989	1,635,299	1,519,900	2,114,207	2,929,840
Operated by—							
3 (a) Owners and managers.....dollars..	206,950	202,745	1,369,464	1,156,691	1,270,525	1,566,932	2,748,400
4 (b) Tenants.....dollars..	47,980	109,720	163,525	478,608	249,375	527,275	181,440
5 Average, land and buildings, per farm.....dollars..	11,587.73	9,764.53	17,850.45	19,467.85	7,378.16	5,922.15	51,400.70
6 per acre in farms.....dollars..	103.38	21.54	19.99	20.97	18.84	34.53	17.06
7 Buildings, irrigated farms reporting value.....number..	22	32	86	76	192	345	56
8 Total reported.....dollars..	63,050	44,840	250,235	188,991	210,649	371,115	166,600
9 Average, per irrigated farm reporting.....dollars..	2,865.91	1,401.25	2,909.71	2,486.72	1,087.13	1,075.70	2,975.00
10 per acre on all irrigated farms.....dollars..	25.57	3.09	3.22	2.42	2.61	6.06	0.97
11 Buildings, nonirrigated farms reporting value.....number..	4,309	715	696	1,391	55	1,243	316
12 Total reported.....dollars..	5,216,024	809,101	1,113,537	1,081,868	106,690	1,947,484	691,155
13 Average, per nonirrigated farm reporting.....dollars..	1,210.50	1,131.61	1,868.35	777.76	1,939.82	1,566.76	2,187.20
14 per acre on all nonirrigated farms.....dollars..	9.26	2.06	2.13	2.42	0.31	2.73	1.28
15 Implements and machinery, irrigated farms reporting value.....number..	21	28	83	74	156	345	56
16 Total reported.....dollars..	37,305	38,903	66,086	164,187	174,639	177,467	64,750
17 Average, per irrigated farm reporting.....dollars..	1,776.43	1,389.39	796.22	2,218.74	1,119.48	514.40	1,156.25
18 per acre, on all irrigated farms.....dollars..	15.13	2.68	0.85	2.11	2.17	2.90	0.38
19 Implements and machinery, nonirrigated farms reporting value.....number..	3,563	634	586	1,261	45	1,143	290
20 Total reported.....dollars..	2,004,319	757,029	347,529	681,113	70,597	645,903	241,946
21 Average, per acre, on all nonirrigated farms.....dollars..	3.56	1.93	0.66	1.52	0.21	0.91	0.45
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22 Enterprises.....1940...number.....	13	5	11	6	6	9	21
23 ..1930...number.....	23			3	9	1	22
24 ..1920...number.....				15	5		55
25 Average size of enterprise based on irrigable area.....1940...acres.....	25	13	3	7,838	7,633	2,150	147
26 ..1930...acres.....				18,653	449	4,600	176
27 ..1920 ² ...acres.....				10,992	1,303		129
28 Diversion dams.....1940...number.....				1		1	2
29 Main canals and laterals.....1940...length, miles.....		1.0		312.0	194.5	169.0	20.3
30 ..1930...length, miles.....				355	17	92	11
31 ..1920...length, miles.....				21.6	37		456
32 ..1940...capacity, c.f.s. ³			1	737	9	452	108
33 ..1930...capacity, c.f.s. ³				695	532	600	40
34 ..1920...capacity, c.f.s. ³				1,772	60		254
35 Pipe lines ⁴.....1940...length, miles.....	1.8	0.8	0.5		1.4	1.7	0.7
36 Storage dams.....1940...number.....		2	1	1	2	1	
37 Reservoirs.....1940...number.....		4		1	1	2	
38 ..1930...number.....						2	1
39 ..1920...number.....				1			1
40 ..1940...capacity, acre-feet.....		4		(¹)	(¹)	(¹)	
41 ..1930...capacity, acre-feet.....						254,650	20
42 ..1920...capacity, acre-feet.....				3			100
43 Wells, flowing.....1940...number.....			7				
44 ..1930...number.....							
45 ..1920...number.....				2			
46 ..1940...yield, g.p.m.....			142				
47 ..1930...yield, g.p.m.....							
48 ..1920...yield, g.p.m.....				120			
49 Wells, pumped.....1940...number.....	26	6	4	1	1	6	5
50 ..1930...number.....							2
51 ..1920...number.....				8			3
52 ..1940...yield, g.p.m.....	5,945	814	14	(¹)	(¹)	2,850	270
53 ..1930...yield, g.p.m.....							2,470
54 ..1920...yield, g.p.m.....				8,700			1,040
55 Pumping plants.....1940...number.....	25	7	4	11	5	9	20
56 ..1930...number.....				3	10		22
57 ..1920...number.....				20	7		50
58 Prime movers.....1940...capacity, hp.....	116	39	4	3,812	133	137	406
59 ..1930...capacity, hp.....				3,100	455		511
60 ..1920...capacity, hp.....				4,676	540		967
61 Pumps.....1940...capacity, g.p.m.....	6,195	814	14	325,720	5,120	3,910	19,882
62 ..1930...capacity, g.p.m.....				241,800	24,050		30,189
63 ..1920...capacity, g.p.m.....				442,700	15,600		30,095
64 Pumping lift, from all sources.....1940...average, feet.....	16	90	95	26	41	60	43
65 ..1930...average, feet.....				36	52		23
66 ..1920...average, feet.....				26	50		24
67 from pumped wells.....1940...average, feet.....	16	90	95	(¹) 26	(¹) 52	73	72
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁵							
68 Enterprises reporting pay roll.....number.....				3	1	1	2
69 Irrigated area in these enterprises.....acres.....				31,179	(¹)	(¹)	(¹)
70 Wages and salaries paid and payable.....dollars..				51,615	(¹)	(¹)	(¹)
71 Persons employed during week ending April 29.....number..				41	(¹)	(¹)	(¹)

* Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — TEXAS

1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Midland	Mills	Moore	Oldham	Orange	Parmer	Pecos	Potter	Presidio	Randall	Real	Reeves	Roberts	Runnels	
7,862,002	7,247,927	3,638,808	7,785,918	3,169,042	10,207,758	16,045,175	6,026,569	10,407,912	12,339,520	3,876,334	5,548,054	5,447,617	18,534,859	1
2,124,070	315,376	600,462	231,700	600,575	1,345,992	2,181,290	1,321,357	1,905,595	918,911	484,087	1,912,928	47,670	363,575	2
1,491,965	241,576	318,962	(¹)	330,925	948,264	1,630,230	1,223,882	1,566,705	747,106	397,598	1,297,225	47,670	320,825	3
632,105	73,800	281,500	(¹)	289,650	397,726	551,060	97,475	338,890	171,805	86,489	615,703	.....	48,750	4
37,264.39	12,615.04	31,603.26	46,340.00	8,963.81	11,603.38	13,633.06	30,030.84	5,845.38	22,972.78	10,085.15	5,958.75	5,958.75	14,214.42	5
11.08	20.41	14.40	17.94	32.14	23.65	24.90	7.06	5.08	30.17	8.35	18.53	9.96	30.81	6
55	25	19	5	63	116	139	43	244	40	48	177	7	26	7
116,100	32,020	55,250	9,500	78,675	199,760	231,535	135,516	167,345	188,300	83,810	234,725	10,550	55,600	8
2,110.91	1,280.00	2,907.89	1,900.00	1,248.81	1,722.07	1,665.72	3,151.53	685.84	4,707.50	1,746.04	1,326.13	1,507.14	2,146.15	9
0.61	2.07	1.33	0.74	4.21	3.51	2.64	0.72	0.45	6.18	1.44	2.27	2.20	4.65	10
324	1,302	102	101	1,045	720	150	242	133	532	245	75	125	2,025	11
576,964	1,185,686	191,475	292,245	1,038,681	1,075,835	449,735	697,722	282,216	1,347,923	380,585	138,477	294,460	2,737,155	12
1,780.75	910.67	1,877.21	2,893.51	993.95	1,494.22	2,998.23	2,883.15	2,121.92	2,533.69	1,553.41	1,846.36	2,355.68	1,351.68	13
1.43	2.74	0.71	0.25	26.96	2.42	0.20	1.47	0.19	2.51	1.07	0.09	0.47	4.63	14
52	24	18	5	56	108	140	33	290	37	47	161	8	24	15
60,030	16,635	58,020	14,100	129,700	166,635	229,485	40,688	92,271	78,736	27,481	228,019	11,960	31,874	16
1,154.42	693.12	3,223.33	2,820.00	2,316.61	1,542.92	1,639.18	1,232.97	318.18	2,128.00	584.70	1,416.27	1,495.00	1,328.08	17
0.31	1.08	1.39	1.09	6.94	2.93	2.62	0.22	0.25	2.59	0.47	2.21	2.50	2.66	18
309	1,182	105	129	867	678	134	209	115	535	231	63	122	1,699	19
320,292	456,906	240,355	278,319	300,854	1,207,999	180,588	194,431	92,635	1,031,991	98,441	61,400	231,625	1,728,757	20
0.79	1.06	0.90	0.24	7.81	2.72	0.08	0.41	0.06	1.92	0.28	0.04	0.37	2.92	21
26	9	10	4	3	25	12	8	128	40	28	41	6	35	22
1	10	.....	1	2	.....	8	1	31	3	8	14	.....	40	23
.....	.....	.....	.....	.....	.....	16	.....	3	.....	19	28	.....	17	24
6	24	6	13	6,039	81	5,051	67	99	105	59	519	28	32	25
.....	46	.....	.....	.....	.....	5,616	.....	167	.....	115	1,297	.....	61	26
.....	.....	.....	.....	.....	.....	4,291	.....	850	.....	172	931	.....	30	27
1	.....	.....	.....	.....	.....	21	.....	32	2	18	5	.....	2	28
2.0	1.0	.....	117.0	.....	.....	257.0	5.0	97.0	.....	15.0	126.0	2.0	2.0	29
.....	1	.....	.....	.....	.....	126	.....	90	.....	10	156	.....	11	30
.....	.....	.....	.....	.....	.....	347	.....	18	.....	31	100	.....	6	31
1	8	1	3	259	.....	597	5	787	9	33	2,235	3	54	32
.....	1	.....	.....	.....	.....	434	.....	148	.....	12	215	.....	6	33
.....	.....	.....	.....	.....	.....	1,372	.....	28	.....	23	399	.....	22	34
0.5	1.3	5.0	.....	.....	0.1	0.1	0.3	0.6	0.9	.....	.....	0.2	1.0	35
.....	2	5	.....	.....	3	2	.....	16	.....	1	4	1	7	36
.....	5	7	.....	.....	3	2	.....	15	1	1	5	1	6	37
.....	1	.....	.....	.....	.....	3	.....	.....	.....	.....	1	.....	1	38
.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	1	.....	5	39
.....	59	5	.....	.....	122	(¹)	.....	8,213	(¹)	(¹)	306,455	(¹)	217	40
.....	10	.....	.....	.....	.....	24,500	.....	.....	.....	.....	6,155	.....	60	41
.....	.....	.....	.....	.....	.....	56,000	.....	.....	.....	.....	6,155	.....	931	42
.....	.....	.....	.....	.....	.....	10	.....	3	.....	.....	12	.....	.....	43
.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	1	.....	.....	44
.....	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	5	.....	.....	45
.....	.....	.....	.....	.....	.....	5,400	.....	155	.....	.....	2,610	.....	.....	46
.....	.....	.....	.....	.....	.....	13,500	.....	.....	.....	.....	1,500	.....	.....	47
.....	.....	.....	.....	.....	.....	7,200	.....	.....	.....	.....	1,850	.....	.....	48
29	.....	15	1	1	25	2	9	20	37	7	26	7	4	49
.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	7	.....	.....	50
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	22	.....	.....	51
250	.....	70	(¹)	(¹)	5,782	(¹)	782	10,700	22,968	1,225	17,703	1,590	105	52
.....	.....	.....	.....	.....	.....	10	.....	2,300	.....	.....	8,400	.....	.....	53
.....	.....	.....	.....	.....	.....	1,200	.....	.....	.....	.....	16,465	.....	.....	54
34	6	17	2	5	27	2	7	68	44	8	28	6	36	55
.....	23	.....	.....	.....	.....	2	.....	27	.....	3	9	.....	40	56
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	17	.....	16	57
38	58	16	(¹)	1,610	468	(¹)	76	1,190	1,475	37	737	48	464	58
.....	192	.....	.....	.....	.....	15	.....	402	.....	20	258	.....	781	59
.....	.....	.....	.....	.....	.....	20	.....	.....	.....	3	459	.....	262	60
390	2,085	195	(¹)	48,689	5,932	(¹)	826	95,300	28,820	1,070	20,953	1,570	27,455	61
.....	7,400	.....	.....	.....	.....	510	.....	37,880	.....	1,109	11,200	.....	52,230	62
.....	.....	.....	.....	.....	.....	1,200	.....	.....	.....	250	18,065	.....	9,850	63
53	30	154	(¹)	4	125	(¹)	108	23	108	33	39	33	24	64
.....	47	.....	.....	.....	.....	138	.....	14	.....	32	39	.....	24	65
.....	.....	.....	.....	.....	.....	42	.....	.....	.....	40	41	.....	29	66
53	.....	169	(¹)	(¹)	125	(¹)	108	36	126	36	41	33	36	67
.....	.....	.....	.....	1	.....	5	.....	9	.....	.....	4	.....	.....	68
.....	.....	.....	(¹)	.....	.....	15,547	.....	4,111	.....	.....	13,934	.....	.....	69
.....	.....	.....	(¹)	.....	.....	16,165	.....	3,194	.....	.....	9,353	.....	.....	70
.....	.....	.....	(¹)	.....	.....	28	.....	29	.....	.....	29	.....	.....	71

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁴Includes siphons and farm pipe lines reported.

⁵Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - TEXAS

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		San Saba	Scurry	Shackelford	Stephens	Sterling	Swisher	Tarrant	Taylor
FARM VALUES, 1940*									
1	Land and buildings, all farms.....dollars..	12,264,321	10,172,376	7,599,149	5,839,905	5,837,077	12,241,625	29,241,088	12,518,911
2	Land and buildings, irrigated farms.....dollars..	2,043,960	853,345	20,760	22,600	30,990	6,831,132	372,100	420,025
Operated by—									
3	(a) Owners and managers.....dollars..	1,772,360	580,725	(²)	12,500	(²)	4,786,512	333,350	385,915
4	(b) Tenants.....dollars..	271,600	272,620	(²)	10,100	(²)	2,044,620	38,750	34,410
5	Average, land and buildings, per farm.....dollars..	25,872.91	6,416.13	4,152.00	3,228.57	5,165.00	13,036.51	10,944.12	28,021.67
6	per acre in farms.....dollars..	21.26	20.74	18.19	13.64	33.65	24.54	190.33	21.24
7	Buildings, irrigated farms reporting value.....number..	76	131	5	7	6	509	33	15
8	Total reported.....dollars..	169,162	170,100	5,300	4,800	8,100	1,068,325	119,970	53,175
9	Average, per irrigated farm reporting.....dollars..	2,168.74	1,298.47	1,060.00	685.71	1,350.00	2,088.87	3,635.45	3,545.00
10	per acre on all irrigated farms.....dollars..	1.76	4.13	4.65	2.90	8.79	3.84	61.37	2.69
11	Buildings, nonirrigated farms reporting value.....number..	1,137	1,259	446	732	103	435	3,535	1,801
12	Total reported.....dollars..	1,248,503	1,497,109	721,881	744,240	338,448	651,450	6,621,275	2,110,202
13	Average, per nonirrigated farm reporting.....dollars..	1,086.07	1,189.13	1,618.57	1,016.72	3,285.90	1,497.59	1,928.64	1,171.68
14	per acre on all nonirrigated farms.....dollars..	2.25	2.82	1.29	1.26	0.61	2.29	14.95	4.33
15	Implements and machinery, irrigated farms reporting value.....number..	74	126	4	7	3	473	30	14
16	Total reported.....dollars..	58,848	103,185	750	4,525	3,050	778,781	26,765	24,622
17	Average, per irrigated farm reporting.....dollars..	795.24	818.93	187.50	646.43	1,016.67	1,646.47	892.17	1,758.71
18	per acre, on all irrigated farms.....dollars..	0.61	2.51	0.66	2.73	3.31	2.80	13.69	1.24
19	Implements and machinery, nonirrigated farms reporting value.....number..	975	1,024	387	629	60	347	2,888	1,519
20	Total reported.....dollars..	463,105	802,689	301,421	487,748	62,345	472,484	1,624,409	1,013,829
21	Average, per acre, on all nonirrigated farms.....dollars..	0.84	1.51	0.54	0.83	0.11	1.66	3.56	2.08
ENTERPRISES AND IRRIGATION WORKS									
JANUARY 1									
22	Enterprises.....1940.....number.....	28	4	4	5	6	233	28	4
23	.....1930.....number.....	86	1	1	8	10	7	32	5
24	.....1920.....number.....	31							
25	Average size of enterprise based on irrigable area.....1940.....acres.....	74	18	50	34	18	264	23	333
26	.....1930.....acres.....	51					173		
27	.....1920 ⁵.....acres.....	77							
28	Diversion dams.....1940.....number.....	2				1			10
29	Main canals and laterals.....1940.....length, miles.....	10.8	4.0						1.0
30	.....1930.....length, miles.....	1							
31	.....1920.....length, miles.....	13							
32	.....1940.....capacity, c.f.s. ⁴	47	4	6	5	4		36	1
33	.....1930.....capacity, c.f.s. ⁴	7							
34	.....1920.....capacity, c.f.s. ⁴	30							
35	Pipe lines ⁵.....1940.....length, miles.....	1.6			0.4	1.4	0.9	28.9	1.0
36	Storage dams.....1940.....number.....	2	1		2				6
37	Reservoirs.....1940.....number.....	2	3		2		11		7
38	.....1930.....number.....								
39	.....1920.....number.....								
40	.....1940.....capacity, acre-feet.....	(²)	4		(²)		35		103
41	.....1930.....capacity, acre-feet.....								
42	.....1920.....capacity, acre-feet.....								
43	Wells, flowing.....1940.....number.....								
44	.....1930.....number.....								
45	.....1920.....number.....								
46	.....1940.....yield, g.p.m.....								
47	.....1930.....yield, g.p.m.....								
48	.....1920.....yield, g.p.m.....								
49	Wells, pumped.....1940.....number.....		2			3	247	24	1
50	.....1930.....number.....	1					7		
51	.....1920.....number.....								
52	.....1940.....yield, g.p.m.....		(²)			550	221,397	4,065	(²)
53	.....1930.....yield, g.p.m.....	200					8,900		
54	.....1920.....yield, g.p.m.....								
55	Pumping plants.....1940.....number.....	19	3	3	1	6	263	39	1
56	.....1930.....number.....	83					7		
57	.....1920.....number.....	32							
58	Prime movers.....1940.....capacity, hp.....	285	41	48	(²)	30	12,456	519	(²)
59	.....1930.....capacity, hp.....	1,459					430		
60	.....1920.....capacity, hp.....	616							
61	Pumps.....1940.....capacity, g.p.m.....	15,890	2,070	2,800	(²)	1,300	232,849	17,590	(²)
62	.....1930.....capacity, g.p.m.....	84,956					8,900		
63	.....1920.....capacity, g.p.m.....	16,570							
64	Pumping lift, from all sources.....1940.....average, feet.....	29	33	32	(²)	15	97	23	(²)
65	.....1930.....average, feet.....	37					100		
66	.....1920.....average, feet.....	40							
67	from pumped wells.....1940.....average, feet.....		(²)			16	97	18	(²)
PAY ROLL AND NUMBER OF EMPLOYEES									
1939⁶									
68	Enterprises reporting pay roll.....number.....								
69	Irrigated area in these enterprises.....acres.....								
70	Wages and salaries paid and payable.....dollars.....								
71	Persons employed during week ending April 29.....number.....								

* Census of Agriculture.

¹ Data between census years not comparable (see headnote).

² Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - TEXAS

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Irrigation data omitted from any of the counties listed are included under "All other counties"

Terrell	Terry	Tom Green	Uvalde	Val Verde	Waller	Ward	Webb	Wharton	Wilbarger	Wilson	Zapata	Zavala	All other counties ¹		
9,930,121	9,383,585	24,909,070	15,758,873	19,043,098	5,687,530	2,339,896	12,735,827	24,099,863	20,708,576	9,126,996	1,994,855	8,876,181	1,349,673,189	1	
189,512	48,940	3,205,253	1,891,173	7,735,501	176,595	1,244,687	3,077,560	2,460,194	73,620	134,720	102,638	2,617,411	21,799,190	2	
(²)	48,940	2,255,683	1,547,143	5,919,987	131,155	946,527	2,732,105	1,533,987	31,150	(²)	68,713	2,281,591	18,829,736	3	
(²)	.....	949,570	144,030	1,815,514	45,440	298,160	345,455	926,207	42,470	(²)	33,925	335,820	2,969,454	4
63,170.67	6,991.43	14,120.06	31,908.82	48,046.59	14,716.25	9,429.45	53,982.28	17,699.24	8,180.00	12,247.27	12,829.75	16,778.28	19,411.57	5	
7.54	36.36	33.45	15.08	9.61	19.45	14.06	15.43	28.14	44.24	34.78	7.85	18.25	12.59	6	
3	7	226	50	160	11	121	55	120	9	11	8	148	1,105	7	
22,000	8,300	480,941	162,800	473,857	35,190	126,697	294,796	307,545	35,000	17,900	3,625	271,215	3,116,158	8	
7,333.33	1,185.71	2,128.06	3,256.00	2,981.61	3,199.09	1,047.08	5,359.93	2,562.88	3,888.89	1,627.27	453.12	1,832.53	2,820.05	9	
0.88	6.17	5.02	1.45	0.59	3.88	1.43	1.48	3.52	21.03	4.62	0.28	1.89	1.80	10	
120	1,271	1,145	680	143	1,428	30	332	3,428	1,199	2,005	235	142	279,746	11	
398,310	1,322,236	2,068,032	1,420,890	612,730	1,058,678	58,685	332,075	3,475,339	1,876,314	1,817,558	42,920	213,945	242,774,311	12	
3,319.25	1,040.31	1,806.14	2,089.69	4,284.83	741.37	1,956.17	1,000.23	1,013.81	1,564.90	906.51	182.64	1,506.65	867.84	13	
0.27	2.80	2.21	1.32	0.47	4.97	0.17	0.20	8.60	2.23	4.55	0.11	0.33	3.72	14	
3	6	210	50	157	11	97	51	132	8	11	8	117	1,031	15	
3,350	12,600	228,323	65,369	140,314	60,664	200,814	226,990	356,885	12,200	11,800	15,969	218,638	947,225	16	
1,116.67	2,100.00	1,087.25	1,307.38	893.72	5,514.91	2,070.25	4,450.78	2,703.67	1,525.00	1,072.73	1,996.12	1,870.41	918.74	17	
0.13	9.36	2.38	0.58	0.17	6.68	2.27	1.14	4.08	7.33	3.05	1.22	1.53	0.55	18	
124	1,105	930	638	142	1,206	29	287	3,250	1,073	1,897	253	117	246,278	19	
110,210	1,321,297	968,287	473,031	165,964	367,655	40,852	119,096	1,867,560	1,107,276	664,254	41,165	94,732	93,626,223	20	
0.07	2.80	1.04	0.44	0.13	1.73	0.12	0.07	4.62	1.32	1.66	0.10	0.15	1.43	21	
3	4	160	26	60	10	6	61	43	3	5	6	137	63	22	
4	.....	136	22	2	5	3	80	68	1	1	1	83	182	23
.....	.....	50	5	.....	.....	3	58	138	.....	.....	.....	36	262	24
225	63	79	93	98	568	10,354	247	1,714	16	84	420	253	1,426	25	
.....	.....	85	96	219	.....	23,098	324	1,611	.....	.....	.....	218	.....	26
.....	.....	294	406	.....	.....	23,833	547	548	.....	.....	.....	165	253	27
2	.....	23	3	6	.....	4	1	.....	.....	.....	.....	1	3	28
1.0	0.1	49.9	3.0	38.6	.....	91.0	4.8	137.0	.....	2.0	2.0	4.6	445.8	29
.....	.....	34	2	.....	.....	127	11	122	.....	.....	.....	.....	319	30
.....	.....	78	9	.....	.....	113	18	86	.....	.....	.....	20	314	31
3	.....	462	21	330	1	1,150	225	571	2	13	21	152	1,167	32
.....	.....	62	1	.....	.....	1,250	60	802	.....	.....	.....	.....	1,456	33
.....	.....	348	18	.....	.....	925	1,666	1,076	.....	.....	.....	35	1,439	34
.....	.....	7.0	1.8	7.4	.....	31.0	42.2	0.1	0.3	.....	0.7	2.1	33.4	35
.....	.....	21	.....	.....	.....	.....	11	.....	.....	1	.....	4	13	36
.....	.....	22	2	13	.....	.....	20	.....	.....	1	.....	72	14	37
.....	.....	24	4	.....	.....	.....	49	.....	.....	.....	.....	39	41	38
.....	.....	11	.....	.....	.....	.....	45	1	.....	.....	.....	18	39	39
.....	.....	1,601	(²)	12	.....	.....	2,176	.....	.....	(²)	.....	4,875	681,681	40
.....	.....	1,462	3	.....	.....	.....	2,562	.....	.....	.....	.....	1,486	603,036	41
.....	.....	6,750	.....	.....	.....	.....	20,248	100	.....	.....	.....	65	9,343	42
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	44
.....	.....	.....	.....	.....	.....	.....	(²)	1	.....	(²)	.....	8	11	45
.....	.....	.....	.....	.....	.....	72	.....	.....	.....	.....	.....	.....	(²)	46
.....	.....	.....	.....	.....	.....	.....	.....	1,000	.....	.....	.....	1,000	1,255	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,159	48
.....	4	121	16	51	8	1	15	47	2	.....	.....	112	25	49
.....	.....	90	21	.....	4	.....	31	76	.....	.....	.....	100	197	50
.....	.....	7	1	.....	.....	.....	9	192	.....	.....	.....	37	76	51
.....	2,024	19,885	8,818	794	11,850	(²)	4,577	69,925	(²)	.....	.....	61,740	4,176	52
.....	.....	7,086	17,395	.....	4,600	.....	1,633	115,300	.....	.....	.....	51,925	33,383	53
.....	.....	632	50	.....	.....	.....	2,975	160,817	.....	.....	.....	7,942	15,513	54
.....	
.....	4	175	28	55	11	1	79	51	3	6	7	202	56	55	
.....	.....	138	24	.....	4	.....	122	165	.....	.....	.....	103	269	56
.....	.....	48	2	.....	.....	.....	68	173	.....	.....	.....	37	235	57
.....	132	2,536	373	713	836	(²)	3,595	4,405	9	220	405	5,314	1,283	58
.....	.....	2,083	456	.....	.....	181	.....	6,281	5,790	.....	.....	3,697	4,038	59
.....	.....	1,105	20	.....	.....	.....	.....	3,885	6,531	.....	.....	809	5,918	60
.....	2,024	122,075	12,578	24,033	14,630	(²)	89,182	313,425	1,059	6,300	11,050	135,315	46,778	61	
.....	.....	104,611	19,545	.....	4,600	.....	126,178	332,700	.....	.....	.....	65,685	174,055	62
.....	.....	57,020	410	.....	.....	.....	86,950	185,442	.....	.....	.....	20,692	329,418	63
.....	112	46	46	228	95	(²)	74	49	22	56	74	69	48	64
.....	.....	46	37	.....	.....	117	.....	85	33	.....	.....	101	29	65
.....	.....	29	38	.....	.....	.....	.....	72	38	.....	.....	91	36	66
.....	112	69	51	242	100	(²)	126	50	(²)	.....	.....	87	76	67
.....	.....	.....	.....	.....	1	.....	4	.....	4	.....	.....	.....	6	66
.....	.....	.....	.....	(²)	.....	.....	18,655	.....	16,797	.....	.....	(²)	35,232	69
.....	.....	.....	.....	(²)	.....	.....	20,081	.....	20,495	.....	.....	(²)	146,555	70
.....	.....	.....	.....	(²)	.....	.....	25	.....	22	.....	.....	(²)	66	71

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

²Includes siphons and farm pipe lines reported.

³Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - UTAH

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	52,701,440	52,597,760	52,597,760	52,597,760	52,597,760	52,597,760	52,597,760
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	25,411	30,695	27,159	25,662	21,676	19,367	10,517
Land in all farms.....acres....	7,302,007	6,239,318	5,613,101	5,050,410	3,397,699	4,116,951	1,323,705
Farms irrigated: ¹							
Farms.....number...	22,612	24,332	23,847	22,218	19,709	17,924	9,724
Increase or decrease (-) over preceding census.....percent..	² -5.2	.....	7.3	12.7	10.0	84.3	.....
Proportion of all farms.....percent..	89.0	79.3	87.8	86.6	90.9	92.5	92.5
Land in farms.....acres....	4,958,058	(³)	4,137,021	(³)	(³)	(³)	(³)
Proportion of all farm land.....percent..	67.9	(³)	73.7	(³)	(³)	(³)	(³)
Area irrigated.....acres....	⁴ 911,135	⁵ 583,183	⁶ 917,139	(⁷)	(⁷)	629,293	263,473
Increase or decrease (-) over preceding census.....percent..	² -0.7	.....	.....	.....	.....	138.8	.....
Proportion of total land area of State.....percent..	1.7	1.1	1.7	.....	.....	1.2	0.5
Proportion of all farm land.....percent..	12.5	9.3	16.3	.....	.....	15.3	19.9
Value of irrigated farms (land and buildings).....dollars..	137,529,004	(⁸)	199,983,735	(⁸)	(⁸)	(⁸)	(⁸)
Average per farm.....dollars..	6,082.12	(⁸)	8,386.12	(⁸)	(⁸)	(⁸)	(⁸)
Average per acre.....dollars..	27.74	(⁸)	48.34	(⁸)	(⁸)	(⁸)	(⁸)
Value of farm implements and machinery ⁹.....dollars..	10,761,346	(⁸)	12,274,514	(⁸)	(⁸)	(⁸)	(⁸)
Average per farm ⁹.....dollars..	475.91	(⁸)	514.72	(⁸)	(⁸)	(⁸)	(⁸)
Average per acre ⁹.....dollars..	2.17	(⁸)	2.97	(⁸)	(⁸)	(⁸)	(⁸)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number...	2,401	(³)	2,714	2,403	2,472	(³)	(³)
Farms irrigated.....number...	45,220	(³)	(³)	(³)	(³)	(³)	(³)
Area irrigated.....acres....	1,176,116	(³)	1,324,125	1,371,651	999,410	(³)	(³)
Area existing works were capable of supplying with water.....acres....	1,357,714	(³)	1,542,475	1,700,550	1,250,246	(³)	(³)
Area irrigable.....acres....	1,432,533	(³)	1,739,869	⁹ 2,359,244	⁹ 1,947,625	(³)	(³)
Additional area existing works were capable of supplying with water.....acres....	181,598	(³)	218,350	328,899	250,836	(³)	(³)
Additional irrigable area in enterprises not supplied with water.....acres....	256,417	(³)	415,744	⁹ 987,593	⁹ 948,215	(³)	(³)
Investment in irrigation enterprises.....dollars..	41,896,532	(³)	35,669,819	32,037,351	14,028,717	5,865,302	2,780,000
Increase or decrease (-) over preceding census.....percent..	² 17.5	(³)	11.3	128.4	139.2	111.0	.....
Average per acre based on area works were capable of supplying with water.....dollars..	30.86	(³)	23.13	18.84	11.22	(³)	(³)
Increase or decrease (-) over preceding census.....percent..	² 33.4	(³)	22.8	67.9	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	43,380,966	(³)	37,857,011	33,835,641	17,840,775	(³)	(³)
Average per acre based on irrigable area in enterprises.....dollars..	30.28	(³)	21.76	⁹ 14.34	⁹ 9.16	(³)	(³)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	0.85	(³)	1.00	1.08	0.65	(³)	(³)

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ²Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³Not available. ⁴Irrigated land from which crops were harvested plus 150,042 acres of irrigated land used only for pasture. ⁵Irrigated land from which crops were harvested. ⁶Acres of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Irrigated pasture 1939	Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	Number	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Owners and managers.....	25,411	7,302,007	966,088	761,093	150,042	154,358,365	21.14	36,056,891	4.94	11,940,938	1.64
Tenants.....	22,035	6,757,650	843,412	655,342	133,675	137,156,954	20.30	32,898,798	4.87	10,653,200	1.58
	3,376	544,357	122,676	105,751	16,367	17,201,411	31.60	3,158,093	5.80	1,287,738	2.37
Irrigated farms, total.....	22,612	4,958,058	875,245	761,093	150,042	137,529,004	27.74	32,426,080	6.54	10,761,346	2.17
Owners and managers.....	19,583	4,647,567	761,402	655,342	133,675	122,156,713	26.28	29,547,594	6.36	9,576,504	2.06
Tenants.....	3,029	310,491	113,843	105,751	16,367	15,372,291	49.51	2,878,486	9.27	1,184,842	3.82
Wholly irrigated farms.....	18,875	3,749,682	654,912	654,912	127,562	107,249,801	28.60	25,826,934	6.89	8,372,976	2.23
Owners and managers.....	16,241	3,492,739	559,885	559,885	113,082	94,451,739	27.04	23,480,180	6.72	7,377,376	2.11
Tenants.....	2,634	256,943	95,027	95,027	14,480	12,798,062	49.81	2,346,754	9.13	995,600	3.87
Partly irrigated farms.....	3,737	1,208,376	220,333	106,181	22,480	30,279,203	25.06	6,599,146	5.46	2,388,370	1.98
Owners and managers.....	3,342	1,154,828	201,517	95,457	20,593	27,704,974	23.89	6,067,414	5.25	2,199,128	1.90
Tenants.....	395	53,548	18,816	10,724	1,887	2,574,229	48.07	531,732	9.93	189,242	3.53
Nonirrigated farms, total.....	2,799	2,343,949	90,843	.....	.....	16,829,361	7.18	3,630,811	1.55	1,179,592	0.50

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ²Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	2,401	1,432,533	1,357,714	1,176,116	1,324,125	1,371,651	-11.2	1,049,365	1,144,149	1,030,612	2.8	1.16	0.11
Primary sources:													
Streams, gravity.....	1,292	1,099,229	1,031,526	906,958	962,568	1,105,691	-5.8	795,745	884,340	784,457	2.5	0.89	0.36
Streams, pumped.....	64	18,232	15,939	13,445	63,809	10,399	-78.9	11,454	13,395	11,404	3.0	2.70	0.90
Streams, gravity and pumped.....	12	184,850	184,245	151,206	14,200	50	964.8	150,906	151,165	150,865	2.7	1.41	0.52
Wells, pumped.....	173	13,357	11,751	8,925	10,283	7,308	-13.2	8,925	8,109	8,109	3.4	3.71	1.09
Wells, flowing.....	263	7,707	7,488	6,706	8,974	4,908	-25.3	5,668	3,473	3,158	3.8	0.75	0.20
Wells, pumped and flowing.....	6	428	428	307	398	178	-22.9	296	307	296	3.9	2.05	0.53
Lakes, gravity.....	4	937	847	853	5,344	15,218	-84.0	831	785	785	2.2	1.50	0.68
Lakes, pumped.....	5	12,016	12,016	1,371	49,451	11,400	-97.2	671	1,371	671	4.2	4.97	1.14
Springs.....	325	40,870	39,598	35,898	49,593	41,310	-27.6	29,795	31,761	26,384	3.2	0.53	0.17
Springs and streams.....	29	10,153	10,143	9,491	.....	.....	.....	8,185	9,011	7,905	2.0	0.95	0.47
Stored storm water.....	9	897	896	803	3,030	977	-73.5	708	803	708	1.8	0.58	0.32
City water.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sewage.....	3	302	302	297	10	.....	(2)	259	259	259	0.5	0.39	0.78
Streams, gravity; wells, pumped...	10	8,944	8,844	8,271	20	125	(2)	8,271	8,267	8,267	1.6	1.14	0.70
Streams, gravity; wells, flowing...	11	11,784	11,284	10,017	3,590	537	186.2	9,317	9,959	9,259	2.0	1.73	0.85
Streams, pumped; wells, pumped...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waste water, seepage or drainage...	14	1,616	1,616	1,296	.....	.....	.....	1,296	1,246	1,246	5.4	1.33	0.25
Other mixed.....	34	21,211	20,811	20,272	150,671	173,495	-86.5	17,038	19,898	16,839	2.9	1.46	0.51
Other and not reported.....	.....	.....	.....	.....	2,248	40	.....	.....	.....	.....	.....	.....	.....
Supplemental sources:³													
Streams, gravity and/or storage...	81	399,750	367,247	320,369	.....	.....	.....	255,709	319,907	255,335	1.1	0.49	0.45
Streams, pumped.....	1	.....	.....	.....	75	.....	.....	.....	.....	.....	.....	.....	.....
Wells, pumped.....	41	2,527	2,308	1,943	816	.....	138.1	1,697	1,614	1,614	1.3	2.95	1.95
Wells, flowing.....	24	733	729	682	81	.....	742.0	641	302	266	3.7	0.78	0.21

¹ Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges; and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ² Percent not shown when more than 1,000. ³ Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	41,896,532	100.0	30.86	35,669,819	100.0	23.13	7.73	1,144,100	0.85	1,301,098	1.00	-0.15	1,122,456	1.08
Primary sources:														
Streams, gravity.....	19,726,011	47.1	19.12	24,181,708	67.8	21.54	-2.42	884,291	0.63	951,671	0.82	-0.19	910,594	1.01
Streams, pumped.....	834,571	2.0	52.36	4,355,987	12.2	66.70	-14.34	13,395	2.57	63,740	1.29	1.28	7,444	5.16
Streams, gravity and pumped.....	6,048,221	14.4	32.83	105,650	0.3	7.44	25.39	151,165	1.09	14,200	1.73	-0.64	.....	.....
Wells, pumped.....	345,889	0.8	29.43	418,916	1.2	34.64	-5.21	8,109	3.71	9,931	3.58	0.13	6,212	2.08
Wells, flowing.....	185,723	0.4	24.80	292,817	0.8	31.21	-6.41	3,473	0.85	5,823	1.64	-0.79	756	1.79
Wells, pumped and flowing.....	11,265	(3)	26.32	20,870	0.1	40.29	-13.97	307	2.56	368	3.49	-0.93	27	9.48
Lakes, gravity.....	8,651	(3)	10.21	41,044	0.1	5.23	4.98	785	1.29	5,344	0.48	0.81	13,877	0.25
Lakes, pumped.....	606,585	1.4	50.48	1,317,256	3.7	21.04	29.44	1,671	12.07	49,451	2.63	9.47	26,400	3.58
Springs.....	541,542	1.3	13.68	739,489	2.1	14.10	-0.42	31,761	0.50	46,591	0.65	-0.15	25,858	0.75
Springs and streams.....	88,667	0.2	8.74	.....	.....	.....	.....	9,011	0.78	.....	.....	.....	.....	.....
Stored storm water.....	12,810	(3)	14.30	523,300	1.5	147.62	-133.32	803	0.56	2,950	1.75	-1.19	857	2.23
City water.....	.....	.....	.....	100	(3)	3.85	.....	.....	.....	26	0.38	.....	.....	.....
Sewage.....	855	(3)	2.83	800	(3)	40.00	-37.17	259	0.39	.....	.....	.....	.....	.....
Streams, gravity; wells, pumped...	64,948	0.2	7.34	3,500	(3)	175.00	-167.66	8,267	0.81	20	19.00	-18.19	85	2.94
Streams, gravity; wells, flowing...	386,750	0.9	34.27	130,000	0.4	26.00	8.27	9,959	1.45	3,500	1.43	0.02	203	0.49
Streams, pumped; wells, pumped...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waste water, seepage or drainage...	25,219	0.1	15.61	.....	.....	.....	.....	1,246	1.11	.....	.....	.....	.....	.....
Other mixed.....	332,197	0.8	15.96	3,400,511	9.5	18.42	-2.46	19,898	1.26	145,642	1.32	-0.06	130,126	0.94
Other and not reported.....	.....	.....	.....	114,566	0.3	50.96	.....	.....	.....	1,841	4.09	.....	17	1.76
Supplemental sources:⁴														
Streams, gravity and/or storage...	12,602,300	30.1	34.32	.....	.....	.....	.....	319,907	0.25	.....	.....	.....	.....	.....
Streams, pumped.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	5.60	.....	.....	.....
Wells, pumped.....	57,574	0.1	24.95	1,505	(3)	12.75	0.32	.....	.....	693	2.09	0.12	.....	.....
Wells, flowing.....	16,754	(3)	22.98	21,500	0.1	26.35	.....	1,846	2.21	.....	.....	.....	.....	.....
Wells, flowing.....	.....	.....	.....	300	(3)	3.70	19.28	302	0.70	2	2.50	-1.80	.....	.....

¹ Based on irrigated area in enterprises reporting cost of maintenance and operation. ² Based on area works were capable of supplying with water. ³ Less than one-tenth of 1 percent. ⁴ Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—					Increase or decrease (-) 1930-40 primary enterprises
	1940		1930		1920			1940		1930		1920	
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises				Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises		
AREA IRRIGATED							AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued						
Total.....	Acres 1,176,116	Acres 322,994	Acres 1,324,125	Acres 1,371,651	Percent -11.2			Acres	Acres	Acres	Acres	Percent	
Individual and partnership....	107,537	4,652	172,240	166,887	-37.6		Commercial.....	98,375	128,509	126,833	-23.4		
Cooperative, incorporated....	800,866	84,256	934,680	1,014,649	-8.2		Bureau of Reclamation ³ *	40,812	193,021	40,000	50,030	2.0	
Cooperative, unincorporated....	57,328	56,901					Office of Indian Affairs ³	78,404		79,474	49,870	-1.3	
Irrigation district.....	23,394	8,000	8,125	21,143	187.9		City and/or sewage.....	4,174	7,730	14,652	25,552	-71.5	
Commercial.....	85,600		99,834	86,911	14.3		Other.....				3,300		
Bureau of Reclamation ³ *	38,623	161,455	40,000	429,285	-3.4								
Office of Indian Affairs ³	58,594		54,619	25,270	7.3								
City and/or sewage.....	4,174	7,730	14,627	24,206	-71.5								
Other.....				3,300									
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER							IRRIGABLE AREA⁵						
Total.....	1,357,714	370,284	1,542,475	1,700,550	-12.0		Total.....	1,432,533	403,010	1,739,869	2,359,244	-17.7	
Individual and partnership....	142,434	6,600	202,147	195,858	-29.5		Individual and partnership....	152,084	6,877	216,067	261,720	-29.6	
Cooperative, incorporated....	906,530	93,168	1,069,593	1,225,084	-9.4		Cooperative, incorporated....	963,289	113,468	1,211,365	1,736,863	-15.2	
Cooperative, unincorporated....	62,091	61,765					Cooperative, unincorporated....	63,457	67,354				
Irrigation district.....	24,894	8,000	8,100	24,023	207.3		Irrigation district.....	29,193	8,000	18,872	27,933	54.7	
							Commercial.....	99,975		157,139	185,933	-36.4	
							Bureau of Reclamation ³ *	40,812	199,581	42,130	60,030	-3.1	
							Office of Indian Affairs ³	79,549		79,644	55,870	-0.1	
							City and/or sewage.....	4,174	7,730	14,652	27,595	-71.5	
							Other.....				3,300		

¹ Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ² Includes 1 Carey Act enterprise. ³ U. S. Dept. of the Interior. ⁴ Does not include about 23,000 acres to which stored water was supplied under Warren Act. ⁵ For 1920 relates to total area. Irrigable area for that year was not reported. ⁶ For explanation of areas, see text, p. 571.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 2,401	Number 857	Acres 1,432,533	Acres 1,357,714	Dollars 19.93	Dollars 0.77	Dollars 33.85	Dollars 0.26	Number 45,220	Acres 1,176,116	Acres 980,881	Acres 38,487	Acres 156,748
Individual and partnership.....	1,579	77	152,084	142,434	8.92	1.01	13.18	1.23	2,311	107,537	78,547	5,852	23,138
Cooperative, incorporated.....	618	603	963,289	906,530	17.95	0.73	8.80	0.29	34,062	800,866	688,449	29,997	82,420
Cooperative, unincorporated.....	164	141	63,457	62,091	7.19	0.30	19.35	0.12	2,060	57,328	47,419	575	9,334
Irrigation district.....	9	8	29,193	24,894	83.53	2.36	46.68	0.23	1,582	23,394	21,894		1,500
Commercial.....	11	11	99,975	98,375	26.66	0.66			2,060	85,600	82,900	1,300	1,400
U. S. Bureau of Reclamation ³ *	7	7	40,812	40,812	72.64	0.35	50.43	0.26	1,400	38,623	33,381	763	4,479
U. S. Office of Indian Affairs..	7	5	79,549	78,404	14.89	1.04			1,013	58,594	24,452		34,142
City and/or sewage.....	6	5	4,174	4,174	56.03	2.48	41.91	0.64	732	4,174	3,839		335
Other.....													

¹ Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. ² Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³ Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴ For explanation of areas and investment, see text, p. 571.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1								AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940				1930	1920	Increase or decrease (-) 1930-40	Primary enterprises	Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment						Dollars		
Total.....	Dollars 41,696,532	Dollars 29,219,904	Dollars 12,676,628	Dollars 39,590,175	Dollars 2,306,357	Dollars 35,669,819	Dollars 32,037,351	Percent 17.5	Dollars 21.52	Dollars 34.23	Dollars 237,969	Dollars 1,484,434
Individual and partnership.....	1,428,479	1,338,791	89,688	1,357,374	71,105	3,482,497	2,736,804	59.0	9.40	13.59	3,778	93,196
Cooperative, incorporated.....	18,092,636	17,235,428	857,208	17,090,217	1,002,419	16,763,420	20,254,212	18.5	19.01	9.20	144,809	536,350
Cooperative, unincorporated....	1,768,625	471,956	1,296,669	1,641,587	127,038				7.60	20.99	1,477	12,075
Irrigation district.....	2,640,455	2,265,455	375,000	2,454,405	186,050	1,896,590	265,484	39.2	91.00	46.88	4,086	15,000
Commercial.....	3,541,088	3,541,088		2,622,393	918,695	2,720,629	3,698,770	-51.0	36.00		5,071	11,313
U. S. Bureau of Reclamation ³ *	12,698,755	2,964,692	9,734,063	12,698,755		5,181,980	3,567,057	145.1	72.64	50.43	21,551	428,000
U. S. Office of Indian Affairs..	1,167,594	1,167,594		1,167,594		927,202	765,354	25.9	14.89		57,397	388,500
City and/or sewage.....	558,900	234,900	324,000	557,850	1,050	197,501	729,090	183.0	56.28	41.91		
Other.....							20,580					

¹ Only for enterprises serving 5 or more farms.

² Includes 1 Carey Act enterprise.

³ For explanation of investment, see text, p. 571.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²			CHARGES OF ENTERPRISES REPORTING			
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ⁵	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrigable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
		Number	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	155	754,924	709,144	13,766,417	7.53	9.73	16	466,221	476,698	28.34	1,488,866	1,221,591	1,314,787
Partnership.....	2	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	.....	.....	.....	.....	16,051	8,864	3,113
Cooperative, incorporated.....	134	407,607	389,457	1,879,227	2.90	2.73	12	39,671	42,482	2.88	941,905	877,920	865,403
Cooperative, unincorporated.....	5	⁶ 3,837	⁶ 3,837	⁶ 8,806	⁶ 2.33	⁶ 2.30	1	.....	.....	.....	101,312	29,368	8,924
Irrigation district.....	4	23,943	23,943	489,042	30.50	30.50	2	403,300	403,300	125.20	34,029	67,291	66,215
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	87,100	90,262	97,143
Bureau of Reclamation ⁷	7	240,393	233,833	⁸ 11,026,060	43.57	41.23	⁹ 1	⁶ 23,250	⁸ 30,916	.....	222,463	74,547	227,652
Office of Indian Affairs ⁷	3	79,144	78,074	¹⁰ 363,282	4.88	4.65	.....	.....	.....	.....	73,936	56,741	36,659
City and/or sewage.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12,070	14,598	9,678
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$35.33. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$35.70. ⁵Based on primary enterprises only; State average for supplemental enterprises is \$0.85. ⁶Data for 2 "Partnership" enterprises are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁷U. S. Dept. of the Interior. ⁸Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁹Data for less than 3 enterprises shown with permission of the enterprise involved. ¹⁰Represents construction costs of irrigation works less cancellations and repayments. *For explanation of areas and investment, see text, p. 571.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	1,144,100	881,814	322,055	84,981	0.77	0.26	666	518,607	2,689
Individual and partnership.....	93,543	94,130	3,794	4,678	1.01	1.23	34	1,680	14
Cooperative, incorporated.....	794,800	579,577	84,256	24,024	0.73	0.29	529	340,584	2,191
Cooperative, unincorporated.....	46,972	14,322	56,820	6,874	0.30	0.12	72	6,421	123
Irrigation district.....	22,784	53,778	8,000	1,859	2.36	0.23	7	20,196	59
Commercial.....	85,600	56,306	.....	.....	0.66	.....	10	36,628	108
U. S. Bureau of Reclamation ²	38,623	13,873	161,455	42,587	0.35	0.26	7	41,334	31
U. S. Office of Indian Affairs.....	57,604	59,670	.....	.....	1.04	.....	³ 2	60,753	154
City and/or sewage.....	4,174	10,358	7,730	4,959	2.48	0.64	5	11,006	9
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for less than 3 enterprises shown with permission of the enterprises involved. ³For explanation of areas and investment, see text, p. 571.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles	Ac.-ft.	Miles	Miles	G.p.m.	G.p.m.	G.p.m.	Hp.	Number	Rated capac-ity	Number	Rated capac-ity
Total.....	1,973	362	34,579	8,742	262.5	438	3,417,704	172.5	1,216	83,838	286	122,528	411	14,216	409	\$35,862
Individual and partnership....	851	147	3,426	1,192	20.8	216	14,855	34.7	1,105	79,578	273	114,498	345	3,892	344	190,435
Cooperative, incorporated.....	864	166	23,586	5,357	135.5	167	1,118,759	118.3	89	2,270	12	7,130	49	5,724	49	564,127
Cooperative, unincorporated....	169	13	1,556	395	3.5	20	248,022	4.4	22	1,990	1	900	2	40	2	3,150
Irrigation district.....	6	2	659	153	13.5	2	100,000	4.2	.....	.....	.....	.....	8	3,950	7	56,000
Commercial.....	35	6	1,791	641	1.1	6	1,464,700	1.1	.....	.....	.....	.....	5	350	5	13,600
Bureau of Reclamation ³	7	20	1,332	89	87.1	19	470,760	6.5	.....	.....	.....	.....	1	250	1	6,750
Office of Indian Affairs ³	28	2	2,043	811	.....	2	8	3.0	.....	.....	.....	.....	1	10	1	1,800
City and/or sewage.....	13	6	186	104	1.0	6	600	0.3	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
Total.....	Number 1,973	Number 362	Number 1,717	Number 287	Earth and rock.....	Number 778	Number 313	Number	Number 180
Concrete or masonry.....	611	39	314	19	Other and mixed.....	1363	5	1,237	31
Timber.....	217	2	135	.....	Not reported.....	4	3	31	7

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	409	100.0	835,862	100.0	35	Total, 1940.....	411	100.0	14,216	100.0
Electric motor.....	286	69.9	706,585	84.5	40	Centrifugal pump.....	272	66.2	10,037	70.6
Centrifugal.....	196	47.9	237,339	28.4	32	Electric.....	195	47.4	8,651	60.8
Turbine.....	79	19.3	40,820	4.9	56	Internal-combustion.....	73	17.8	1,104	7.8
Plunger.....	3	0.7	345	(¹)	18	Other.....	4	1.0	282	2.0
Other.....	8	2.0	428,081	51.2	10	Turbine pump.....	95	23.1	1,541	10.8
Internal-combustion engine.....	95	23.2	83,516	10.0	23	Electric.....	78	19.0	1,127	7.9
Centrifugal.....	72	17.6	66,545	8.0	19	Internal-combustion.....	15	3.6	374	2.6
Turbine.....	16	3.9	14,063	1.7	36	Other.....	2	0.5	40	0.3
Plunger.....	3	0.7	170	(¹)	40	Plunger pump.....	14	3.4	99	0.7
Other.....	4	1.0	2,738	0.3	24	Electric.....	4	1.0	25	0.2
Other kinds of motive power.....	11	2.7	36,251	4.3	41	Internal-combustion.....	7	1.7	63	0.4
Centrifugal.....	6	1.5	22,200	2.6	38	Other.....	3	0.7	11	0.1
Turbine.....	3	0.7	14,000	1.7	39	Other and mixed types of pumps.....	30	7.3	2,539	17.9
Plunger.....	2	0.5	51	(¹)	51	Electric.....	16	3.9	1,360	9.6
Other.....	.....	.....	.....	.....	.....	Internal-combustion.....	8	1.9	74	0.5
Mixed kinds of motive power.....	17	4.2	9,510	1.1	33	Other.....	6	1.5	1,105	7.8
Centrifugal.....	11	2.8	4,835	0.5	23	Total, 1930.....	² 429	.....	11,381	.....
Turbine.....	4	1.0	3,850	0.5	52	Increase or decrease (-) 1930-1940.....	-18	.....	2,835	.....
Plunger.....	1	0.2	100	(¹)	50					
Other.....	1	0.2	675	0.1	20					
Total, 1930.....	460	.....	877,942	.....	59					
Increase or decrease (-) 1930-1940..	-51	.....	-42,080	.....	-24					

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 172.5	Miles ³ 159.0	Percent 8.5	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	13.3	26.4	-49.6
1 to 12 inches.....	17.8	9.0	97.8	13 to 24 inches.....	0.4	3.9	102.6
13 to 24 inches.....	13.3	15.0	52.0	Over 24 inches.....	7.5		
Over 24 inches.....	9.5					Clay and other:	
Metal:				1 to 12 inches.....	44.9	54.2	-17.2
1 to 12 inches.....	43.5	42.9	1.4	13 to 24 inches.....	2.2	0.3	(4)
13 to 24 inches.....	11.4	6.3	173.0	Over 24 inches.....	2.9		
Over 24 inches.....	5.8						

¹ Includes siphons and farm pipe lines reported. ² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census. ³ Includes 1 mile clay pipe not segregated by size. ⁴ Percent not shown when more than 1,000.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	201	226	143	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	324,771	388,697	¹ 503,212	(a) Enterprises reporting lands drained and/or needing drainage...percent..	32.0	³ 17.7	¹ 17.0
Area irrigated in these enterprises.....acres...	283,314	(²)	(²)	(b) All irrigation enterprises.....percent..	7.7	5.2	6.2
Area for which drains have been installed...acres...	90,657	68,656	85,448	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	28,418	86,338	91,976	(a) Irrigable area reporting.....percent..	36.7	40.4	¹ 35.3
				(b) Irrigated area reporting.....percent..	42.0	(²)	(²)

¹ For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ² Not available. ³ Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,734,088	3,248,945	3,554,233	2,076,273	1,416,475	2,708,931	657,815	1,832,470	845,302
Area irrigated by these enterprises.....acres.....	944,123	925,100	982,514	693,955	517,459	770,348	250,168	407,641	212,166
Average water per acre irrigated.....acre-feet..	2.9	3.5	3.6	3.0	2.7	3.5	2.6	4.5	4.0
Total water delivered to irrigators.....acre-feet..	2,584,915	430,873	1,718,769	1,044,884	329,441	729,360	1,540,031	101,432	989,409
Area irrigated by these enterprises.....acres.....	1,029,584	175,423	353,424	427,167	136,414	188,406	602,417	39,009	165,018
Average water per acre irrigated.....acre-feet..	2.5	2.4	4.9	2.4	2.4	3.9	2.6	2.6	6.0
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	69,310	.....	.....	7,265	.....	.....	62,045	.....	.....
Area irrigated by these enterprises.....acres.....	19,781	.....	.....	1,690	.....	.....	18,091	.....	.....
Average water per acre irrigated.....acre-feet..	3.5	.....	.....	4.3	.....	.....	3.4	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	298,190	.....	.....	269,046	.....	.....	29,144	.....	.....
Area irrigated by these enterprises.....acres.....	258,754	.....	.....	236,212	.....	.....	20,542	.....	.....
Average water per acre irrigated.....acre-feet..	1.2	.....	.....	1.1	.....	.....	1.4	.....	.....
Total water delivered to irrigators.....acre-feet..	274,066	.....	.....	146,302	.....	.....	127,764	.....	.....
Area irrigated by these enterprises.....acres.....	255,709	.....	.....	134,926	.....	.....	120,763	.....	.....
Average water per acre irrigated.....acre-feet..	1.1	.....	.....	1.1	.....	.....	1.1	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	4,599	.....	.....	.....	.....	.....	4,599	.....	.....
Area irrigated by these enterprises.....acres.....	2,338	.....	.....	.....	.....	.....	2,338	.....	.....
Average water per acre irrigated.....acre-feet..	2.0	.....	.....	.....	.....	.....	2.0	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
Total.....	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	1,176,116	100.0	322,994	1,324,125	100.0	1,371,651	100.0
Appropriation ²	544,846	46.3	189,884	554,933	41.8	764,738	55.7
Underground.....	9,056	0.8	1,572	19,608	1.5	8,631	0.6
Appropriation and underground.....	2,535	0.2	9	.....	.....	.....	.....
Adjudicated by court.....	614,499	52.3	131,389	650,811	49.2	581,080	42.4
Other mixed and not reported.....	5,180	0.4	140	98,773	7.5	17,202	1.3

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).

²"Appropriation" includes water rights published in the 1930 and 1920 census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 38,623 acres irrigated in 1939 which were within the Strawberry Valley Project. Areas totaling 161,455 acres which were irrigated with supplemental supplies from the Strawberry Valley, Moon Lake, Ogden River, Salt Lake Basin (Weber River, Echo Dam), and Sanpete Projects, are reported as receiving primary supplies through other enterprises, principally water-user associations.

The investments attributed to the Bureau of Reclamation in State tables 7 and 17 relate to expenditures on the aboved named projects and reflect construction costs incurred by the Bureau of Reclamation. Excluded from the investment are expenditures by the Bureau of Reclamation on the Provo River Project which was under construction in 1939 to provide supplemental water for areas inadequately irrigated by present systems and a supplemental municipal water supply for Salt Lake City, Provo, and Orem, Utah.

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED

PRIMARY ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	2,254	29	1,169	259	470	217	106	4
2	Irrigated farms, 1939.....number...	45,220	.....	1,169	679	5,335	10,116	24,146	3,775
3	Area irrigated, 1939.....acres.....	1,176,116	.....	73,195	33,124	175,141	257,579	522,029	115,048
4	(a) From which crops were harvested.....acres.....	980,881	.....	52,115	25,964	143,332	216,291	434,813	108,366
5	(b) On which crops failed.....acres.....	38,487	.....	4,013	1,092	6,151	11,981	14,287	963
6	(c) Irrigated pasture.....acres.....	156,748	.....	17,067	6,068	25,658	29,307	72,929	5,719
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	29,219,904	66,528	1,527,459	310,940	2,904,253	5,724,742	11,605,709	7,080,273
8	(a) Cost of irrigation works and equipment.....dollars..	27,034,537	62,670	1,498,459	299,568	2,723,023	5,268,561	11,043,560	6,158,696
9	(b) Investment in water rights.....dollars.....	2,163,367	3,850	29,000	11,372	181,230	456,181	562,149	921,577
10	Area works were capable of supplying with water.....acres.....	1,357,714	15,113	94,687	41,517	194,436	309,238	576,911	125,812
11	Average investment per acre irrigated.....dollars.....	24.84	.....	20.87	9.39	16.55	22.23	21.62	49.50
12	Average investment per acre which the works could supply with water.....dollars.....	21.52	4.40	16.13	7.49	14.91	18.51	19.61	46.03
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number...	1,850	9	862	230	430	210	105	4
14	(a) Area irrigated in these enterprises.....acres.....	1,144,100	.....	63,080	30,209	164,535	254,798	516,430	115,048
15	(b) Cost of maintenance and operation.....dollars.....	861,814	1,414	73,545	21,408	86,581	157,666	463,029	78,171
16	(c) Average cost per irrigated acre reporting.....dollars.....	0.77	.....	1.17	0.71	0.53	0.62	0.87	0.55
17	Total annual charges ².....dollars.....	1,079,113	2,055	555	67	120,682	245,332	608,147	102,275
18	Average charge per irrigated acre reporting.....dollars.....	1.02	.....	0.15	0.57	0.73	0.96	1.18	0.89
19	Area against which charges were assessed.....acres.....	1,128,306	2,750	3,700	167	179,139	276,477	551,025	115,048
20	Average annual charge per acre assessed.....dollars.....	0.93	0.75	0.15	0.40	0.67	0.89	1.10	0.71
21	Total charges collected ³.....dollars.....	1,106,871	1,478	265	1,301	95,355	211,898	595,530	201,024
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ⁴.....number.....	136	2	.....	.....	40	55	36	3
23	(a) Area irrigated in these enterprises.....acres.....	365,488	.....	.....	.....	16,610	74,190	231,065	63,623
24	(b) Indebtedness.....dollars.....	4,329,234	(5)	.....	.....	54,612	262,610	1,371,928	2,639,684
25	(c) Average indebtedness per acre irrigated.....dollars.....	10.46	.....	.....	.....	3.23	3.54	5.94	28.81
26	(d) Cost of irrigation works and equipment.....dollars.....	12,368,460	(5)	.....	.....	465,647	2,137,721	5,619,155	4,132,337
27	(e) Investment in water rights.....dollars.....	468,224	(5)	.....	.....	28,562	155,696	273,341	7,125
28	(f) Total investment.....dollars.....	12,836,684	(5)	.....	.....	494,209	2,293,417	5,892,496	4,139,462
29	(g) Maintenance and operation.....dollars.....	367,499	(5)	.....	.....	12,694	59,043	260,868	33,517
30	(h) Total annual charges ².....dollars.....	468,066	(5)	.....	.....	19,201	90,724	324,170	31,923
31	(i) Total charges collected ³.....dollars.....	569,971	(5)	.....	.....	17,171	84,741	336,157	130,424
32	(j) Area against which annual charges were assessed.....acres.....	419,819	(5)	.....	.....	18,966	82,463	252,617	63,623
33	(k) Average indebtedness per acre assessed.....dollars.....	7.53	(5)	.....	.....	2.79	3.16	5.43	18.42
34	(l) Average charges per acre assessed.....dollars.....	1.04	(5)	.....	.....	1.00	1.10	1.28	0.35
35	(m) Average charges per acre irrigated.....dollars.....	1.22	.....	.....	.....	1.16	1.23	1.40	0.50
36	Enterprises reporting arrearage ⁴.....number.....	12	1	.....	.....	3	7	1	.....
37	(a) Area assessed in these enterprises.....acres.....	15,421	(5)	.....	.....	710	11,561	(5)	.....
38	(b) Total arrearage.....dollars.....	437,371	(5)	.....	.....	3,233	34,388	(5)	.....
39	(c) Average arrearage per acre assessed.....dollars.....	28.34	(5)	.....	.....	3.38	2.97	(5)	.....
40	(d) Indebtedness.....dollars.....	452,618	(5)	.....	.....	3,233	49,085	(5)	.....
TYPE, 1940									
41	Individual and partnership.....number.....	1,480	25	1,153	230	72	.....	.....	.....
42	Cooperative (incorporated and unincorporated).....number.....	742	4	12	29	389	211	95	2
43	Irrigation district.....number.....	8	.....	1	.....	.....	2	5	.....
44	Commercial.....number.....	11	.....	.....	.....	5	2	3	1
45	U. S. Bureau of Reclamation.....number.....	1	.....	.....	.....	.....	.....	.....	1
46	U. S. Office of Indian Affairs.....number.....	7	.....	2	.....	3	1	1	.....
47	All other.....number.....	5	.....	1	.....	1	1	2	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....number.....	625	2	1	1	311	202	104	4
49	Wages and salaries paid and payable for 1939.....dollars.....	442,290	.....	383	.....	42,724	89,706	255,074	54,403
50	Persons employed during week ending April 29, 1939.....number.....	2,572	.....	3	.....	487	963	4,009	110
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....number.....	1,292	13	446	177	378	191	84	3
52	Streams, pumped.....number.....	64	1	39	13	6	2	3	.....
53	Wells, pumped.....number.....	173	7	157	8	1	.....	.....	.....
54	Wells, pumped and flowing; or wells flowing.....number.....	269	2	257	9	1	.....	.....	.....
55	Lakes, gravity or pumped.....number.....	9	.....	4	1	2	1	1	.....
56	Streams and springs; or springs.....number.....	354	4	224	42	67	13	4	.....
57	Mixed, streams and wells.....number.....	33	.....	9	1	6	6	10	1
58	Other mixed or stored storm water.....number.....	60	2	33	8	9	4	4	.....
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number.....	147	7	79	15	19	7	17	3
2	Irrigated farms, 1939.....number.....	10,575	.....	79	35	271	405	5,172	4,613
3	Area irrigated, 1939.....acres.....	322,994	.....	2,662	1,115	9,055	8,131	195,653	106,378
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars.....	12,676,628	97,740	63,020	19,457	121,494	138,855	5,222,691	7,013,371
5	(a) Cost of irrigation works and equipment.....dollars.....	12,535,638	96,731	62,304	19,007	110,954	134,580	5,098,691	7,013,371
6	(b) Investment in water rights.....dollars.....	140,990	1,009	716	450	10,540	4,275	124,000	.....
7	Area works were capable of supplying with water.....acres.....	370,284	5,675	3,058	2,492	11,175	9,443	229,287	109,154
8	Average investment per acre irrigated.....dollars.....	39.25	.....	23.67	17.45	13.42	17.08	26.69	65.93
9	Average investment per acre which the works could supply with water.....dollars.....	34.23	17.22	20.61	7.81	10.87	14.70	22.78	64.25

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
² Data for less than 3 enterprises shown with permission of the enterprises involved.
³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
29	1,258	404	426	113	24	.....	1,830	217	165	40	² 2	1
.....	2,176	3,288	13,542	14,540	11,674	.....	9,673	7,535	15,543	9,694	2,775	2
.....	42,739	70,790	295,622	365,605	401,360	.....	257,668	167,414	366,963	294,023	90,048	3
.....	36,058	58,779	245,348	312,211	328,485	.....	210,079	138,128	316,069	234,599	84,006	4
.....	1,426	1,729	11,038	14,881	9,413	.....	7,396	4,377	18,825	6,926	963	5
.....	5,255	10,282	39,236	38,513	63,462	.....	40,193	26,909	32,069	52,498	5,079	6
66,528	997,352	1,155,921	7,063,604	6,654,303	13,282,196	.....	1,827,676	1,802,598	6,228,773	13,455,354	5,905,503	7
62,670	960,433	1,091,831	6,787,969	6,168,426	11,983,208	.....	1,656,886	1,710,821	5,891,002	12,802,777	4,991,051	8
3,658	36,919	64,090	275,635	485,877	1,298,988	.....	168,790	91,777	337,771	652,577	914,452	9
15,113	61,064	79,516	347,028	417,172	437,801	.....	295,903	193,746	411,671	355,582	100,812	10
.....	23.34	16.33	23.87	17.89	30.33	.....	7.09	10.75	16.69	40.71	65.58	11
4.40	16.33	14.54	20.34	15.71	28.00	.....	6.18	9.29	14.90	34.32	58.58	12
9	938	363	404	112	24	.....	1,443	204	161	40	² 2	13
.....	35,488	63,664	283,582	360,006	401,360	.....	234,485	165,180	360,364	294,023	90,048	14
1,414	63,432	53,235	215,011	229,571	319,151	.....	164,702	112,301	230,768	315,716	58,327	15
.....	1.79	0.84	0.76	0.63	0.73	.....	0.70	0.68	0.63	0.96	0.65	16
2,055	9,099	40,548	287,934	350,227	389,250	.....	120,906	141,365	355,814	377,003	84,025	17
.....	1.99	1.23	1.11	0.99	0.97	.....	0.77	0.89	1.00	1.29	0.93	18
2,750	6,388	37,114	282,329	377,130	422,595	.....	168,702	170,720	377,208	321,628	90,048	19
0.75	1.42	1.09	1.02	0.93	0.86	.....	0.72	0.83	0.94	1.08	0.93	20
1,478	7,849	33,044	280,220	313,907	470,373	.....	89,292	124,310	357,114	398,141	138,024	21
2	3	20	68	33	10	.....	28	37	51	19	² 1	22
228	4,025	59,825	109,664	211,746	.....	.....	18,440	37,956	105,041	185,428	38,623	23
15,413	23,042	753,930	314,272	3,222,577	.....	.....	16,532	121,914	445,925	2,061,999	1,682,964	24
67.60	5.72	12.54	2.87	13.44	.....	.....	0.90	3.19	4.25	9.66	43.57	25
48,598	237,420	2,318,553	2,443,897	7,319,992	.....	.....	76,051	325,454	2,114,894	6,887,369	2,964,692	26
3,500	9,270	82,252	195,827	177,375	.....	.....	18,950	17,050	179,997	252,227	.....	27
52,098	246,690	2,400,805	2,639,724	7,497,367	.....	.....	95,001	342,504	2,294,891	7,139,596	2,964,692	28
1,900	7,336	74,319	98,103	185,841	.....	.....	10,658	41,037	84,791	217,340	13,673	29
2,795	11,277	110,682	141,575	201,737	.....	.....	15,438	50,814	139,929	248,212	13,673	30
2,416	12,582	134,367	128,955	292,251	.....	.....	13,360	43,956	170,685	274,546	67,424	31
2,378	5,283	65,395	117,972	228,781	.....	.....	18,010	42,844	111,128	209,214	38,623	32
6.48	4.35	11.43	2.66	8.64	.....	.....	0.79	2.81	4.01	4.68	43.57	33
1.18	2.13	1.68	1.20	0.79	.....	.....	0.86	1.18	1.26	1.05	0.35	34
12.26	2.80	1.87	1.29	0.95	.....	.....	0.87	1.34	1.33	1.34	0.35	35
(⁵)	1	1	8	2	.....	.....	2	4	4	2	.....	36
(⁵)	.....	(⁵)	9,219	(⁵)	.....	.....	(⁵)	1,750	7,469	(⁵)	.....	37
(⁵)	.....	(⁵)	409,731	(⁵)	.....	.....	(⁵)	3,933	30,698	(⁵)	.....	38
(⁵)	.....	(⁵)	44.35	(⁵)	.....	.....	(⁵)	1.77	4.11	(⁵)	.....	39
(⁵)	.....	(⁵)	416,890	(⁵)	.....	.....	(⁵)	9,333	39,557	(⁵)	.....	40
25	1,167	228	59	1	.....	.....	1,446	30	4	.....	.....	41
4	84	173	358	105	18	.....	372	182	156	32	.....	42
.....	.....	.....	4	3	3	.....	2	1	2	3	.....	43
.....	.....	.....	3	3	3	.....	3	2	3	2	.....	44
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	47
2	54	128	308	109	24	.....	279	159	146	39	² 2	48
5,959	14,504	100,836	125,326	196,285	.....	.....	45,836	55,959	130,300	169,604	40,591	49
43	163	1,193	705	468	.....	.....	654	432	919	478	89	50
13	516	287	354	104	18	.....	948	166	148	29	1	51
1	40	14	8	1	.....	.....	55	5	2	.....	.....	52
7	145	20	1	.....	.....	.....	163	8	2	.....	.....	53
2	255	.....	.....	.....	.....	.....	268	1	.....	.....	.....	54
.....	5	.....	3	.....	1	.....	5	2	.....	2	.....	55
4	252	60	36	2	.....	.....	326	21	6	1	.....	56
.....	9	4	12	3	5	.....	16	7	4	5	1	57
2	36	7	12	3	.....	.....	49	7	3	1	.....	58
ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
7	88	13	18	13	7	² 1	113	10	14	7	3	1
.....	109	105	557	2,488	5,245	2,071	317	692	1,519	4,267	3,780	2
.....	2,531	2,381	12,803	48,616	169,679	86,984	9,982	11,708	32,869	128,787	139,648	3
97,740	78,637	30,796	149,803	1,611,400	8,022,381	2,685,871	110,458	89,399	645,519	3,593,516	8,237,736	4
96,731	77,504	30,603	136,298	1,586,250	7,922,381	2,685,871	99,328	86,896	618,162	3,493,516	8,237,736	5
1,009	1,133	193	13,505	25,150	100,000	.....	11,130	2,503	27,357	100,000	.....	6
5,675	3,463	2,402	17,033	51,558	200,669	89,484	13,860	12,088	39,585	139,078	165,673	7
.....	31.07	12.93	11.70	33.15	47.28	30.88	11.07	7.64	19.64	27.90	58.99	8
17.22	22.71	12.82	8.79	31.25	39.98	30.02	7.97	7.40	16.31	25.84	49.72	9

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - UTAH

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
10	Enterprises reporting maintenance and operation.....number...	115	3	58	9	18	7	17	3
11	(a) Area irrigated in these enterprises.....acres.....	322,055	.....	2,168	751	8,974	8,131	195,653	106,378
12	(b) Cost of maintenance and operation.....dollars.....	84,981	3	4,254	373	3,950	2,759	43,363	30,270
13	(c) Average cost per irrigated acre reporting.....dollars.....	0.26	.....	1.96	0.50	0.44	0.34	0.22	0.28
14	Total annual charges ².....dollars.....	142,478	5,240	.....	.....	4,236	6,635	101,286	25,079
15	Average charge per irrigated acre reporting.....dollars.....	0.45	.....	.....	.....	0.48	0.82	0.50	0.25
16	Area against which charges were assessed.....acres.....	360,560	17,465	.....	.....	9,042	9,443	219,077	105,533
17	Average annual charge per acre assessed.....dollars.....	0.40	0.30	.....	.....	0.47	0.70	0.46	0.24
18	Total charges collected ³.....dollars.....	207,916	1,697	.....	.....	4,159	11,255	69,314	121,491
INDEBTEDNESS AND ARREARAGE, 1939									
19	Enterprises reporting indebtedness ⁴.....number.....	19	1	.....	.....	3	4	9	2
20	(a) Area irrigated in these enterprises.....acres.....	225,690	.....	.....	.....	1,850	5,500	119,692	96,648
21	(b) Indebtedness.....dollars.....	9,437,183	(5)	.....	.....	64,739	5,050	2,982,686	6,384,706
22	(c) Average indebtedness per acre irrigated.....dollars.....	41.81	.....	.....	.....	34.99	0.92	24.92	64.72
23	(d) Cost of irrigation works and equipment.....dollars.....	10,628,099	(8)	.....	.....	131,806	112,000	3,692,922	6,689,371
24	(e) Investment in water rights.....dollars.....	29,007	(8)	.....	.....	7,107	3,900	18,000	.....
25	(f) Total investment.....dollars.....	10,657,106	(8)	.....	.....	138,913	115,900	3,710,922	6,689,371
26	(g) Maintenance and operation.....dollars.....	52,239	(8)	.....	.....	899	1,698	24,232	25,320
27	(h) Total annual charges ⁵.....dollars.....	82,861	(8)	.....	.....	6,398	5,002	46,382	25,079
28	(i) Total charges collected ³.....dollars.....	190,032	(8)	.....	.....	3,907	10,548	54,086	121,491
29	(j) Area against which annual charges were assessed.....acres.....	267,152	(8)	.....	.....	19,615	6,812	135,192	105,533
30	(k) Average indebtedness per acre assessed.....dollars.....	35.33	(8)	.....	.....	3.30	0.74	22.06	60.50
31	(l) Average charges per acre assessed.....dollars.....	0.31	(8)	.....	.....	0.39	0.73	0.34	0.24
32	(m) Average charges per acre irrigated.....dollars.....	0.37	.....	.....	.....	3.46	0.91	0.39	0.25
33	Enterprises reporting arrearage ⁶.....number.....	4	1	.....	.....	.....	1	2	.....
34	(a) Area assessed in these enterprises.....acres.....	33,308	(5)	.....	.....	.....	(5)	(5)	.....
35	(b) Total arrearage.....dollars.....	28,350	(5)	.....	.....	.....	(5)	(5)	.....
36	(c) Average arrearage per acre assessed.....dollars.....	0.85	(5)	.....	.....	.....	(5)	(5)	.....
37	(d) Indebtedness.....dollars.....	988,886	(5)	.....	.....	.....	(5)	(5)	.....
TYPE, 1940									
38	Individual and partnership.....number.....	99	4	79	15	1	.....	.....	.....
39	Cooperative (incorporated and unincorporated).....number.....	40	3	.....	.....	18	7	12	.....
40	Irrigation district.....number.....	2	.....	.....	.....	.....	.....	1	.....
41	U. S. Bureau of Reclamation.....number.....	6	.....	.....	.....	.....	.....	4	2
42	All other.....number.....	2	.....	.....	.....	.....	.....	.....	1
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
43	Enterprises reporting pay roll.....number.....	41	2	.....	.....	14	6	17	2
44	Wages and salaries paid and payable for 1939.....dollars.....	76,317	(8)	.....	.....	9,251	1,436	46,227	19,403
45	Persons employed during week ending April 29, 1939.....number.....	117	(8)	.....	.....	6	31	8	64
SOURCE OF SUPPLEMENTAL WATER SUPPLY 1939									
46	Streams, pumped.....number.....	1	1	.....	.....	.....	.....	.....	.....
47	Wells, pumped or flowing.....number.....	65	2	55	4	4	.....	.....	.....
48	Streams, gravity or storage.....number.....	81	4	24	11	15	7	17	3

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

² Data for less than 3 enterprises shown with permission of the enterprises involved.

³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Great Salt Lake														
Ibapah.....	Tooele.....	5,288	12.69	-0.41	3.65	+1.05	3.32	-0.05	3.44	-0.83	2.28	-0.58	46.9	+1.2
Nephi (near).....	Juab.....	(2)	10.95	-1.80	3.03	+0.07	2.23	-1.44	2.11	-1.30	3.58	+0.87	(2)	(2)
Ogden.....	Weber.....	4,458	22.00	+4.43	7.81	+3.19	5.54	+0.06	5.91	+1.21	2.74	-0.03	(2)	(2)
Park Valley.....	Box Elder.....	5,613	8.96	-1.45	2.30	-0.36	2.06	-0.23	2.31	-0.80	2.29	-0.06	48.0	(2)
Payson.....	Utah.....	4,637	14.56	-1.76	4.80	+0.43	2.42	-2.55	3.85	-0.31	3.49	+0.67	(2)	(2)
Salt Lake City.....	Salt Lake.....	4,260	13.89	-2.24	5.29	+1.07	4.30	-0.50	3.35	-1.42	0.86	-1.39	53.9	+2.3
Bear River														
Logan.....	Cache.....	4,778	16.10	-0.43	5.60	+1.42	3.23	-1.77	4.98	+0.22	2.29	-0.30	49.8	+2.3
Woodruff.....	Rich.....	6,343	8.78	-0.96	2.95	+0.84	1.35	-0.76	2.62	-0.22	1.96	-0.82	38.5	-0.2
Sevier River														
Deseret.....	Millard.....	4,541	5.45	-2.71	1.49	-0.42	1.17	-1.08	1.62	-0.69	1.17	-0.52	50.6	+2.0
Fillmore.....	Millard.....	5,100	12.34	-1.96	3.40	-0.20	3.25	-1.20	2.83	-0.80	2.86	+0.24	53.7	+2.0
Panguitch.....	Garfield.....	6,700	12.84	+3.31	1.49	-0.52	2.85	+0.53	1.12	-0.49	7.38	+3.79	43.7	+1.7
Richfield.....	Sevier.....	5,350	7.47	-0.89	1.44	-0.53	1.30	-0.95	1.01	0.78	3.72	+1.37	50.7	+2.2
Colorado River														
Escalante.....	Garfield.....	5,700	12.27	+0.03	2.02	-0.50	3.30	+0.17	0.34	-1.35	6.61	+1.71	(2)	(2)
Hanksville.....	Wayne.....	4,200	4.29	-0.90	0.20	-1.00	1.40	+0.39	0.19	-0.76	2.50	+0.47	53.4	+2.0
Moab.....	Grand.....	4,000	10.46	+0.81	2.12	-0.44	2.87	+0.55	0.75	-1.29	4.72	+1.99	54.8	+0.6
Monticello.....	San Juan.....	7,000	13.55	-3.19	2.23	-2.27	3.89	-0.64	7.03	-1.72	6.40	+1.44	46.5	+1.1
St. George.....	Washington.....	2,880	9.99	+1.13	1.27	-0.84	3.03	+0.13	0.32	-0.94	5.37	+2.78	60.8	+1.4
Green River														
Castle Dale.....	Emery.....	5,500	8.48	-0.37	1.29	-0.69	2.78	+0.80	1.08	-0.60	3.31	+0.12	(2)	(2)
Duchesne.....	Duchesne.....	5,520	9.87	+0.38	1.85	-0.09	2.82	+0.78	1.39	-0.58	3.81	+0.27	45.5	+2.1
Green River.....	Emery.....	4,087	6.73	+0.49	1.69	+0.09	2.12	+0.97	0.51	-0.83	2.41	+0.26	52.0	-0.2
Manila.....	Daggett.....	6,225	8.60	-1.94	3.00	+0.80	1.02	-0.88	2.35	-0.85	2.03	-1.01	(2)	(2)
Price.....	Carbon.....	5,507	12.18	+2.01	2.31	-0.09	3.27	+1.07	1.41	-0.75	5.19	+1.78	(2)	(2)
Beaver River														
Milford.....	Beaver.....	4,962	6.73	-2.24	2.13	-0.03	0.91	-1.83	0.71	-1.35	2.98	+0.97	50.9	+2.1
Coal Creek														
Cedar City.....	Iron.....	5,805	11.98	-1.20	3.24	+0.02	3.52	-0.04	1.74	-0.81	3.48	-0.37	(2)	(2)

¹ Departure from normal.

² Data not available.

CENSUS OF IRRIGATION — UTAH

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999
3	61	12	18	13	7	2 1	81	10	14	7	3
.....	1,842	2,131	12,803	48,616	169,679	86,984	9,043	11,708	32,869	128,787	139,648
3	4,072	1,570	5,734	23,288	42,242	8,072	5,783	5,571	17,860	25,470	30,297
.....	2.21	0.74	0.45	0.48	0.25	0.09	0.64	0.48	0.54	0.20	0.22
5,240	.....	1,134	6,279	61,184	60,812	7,829	1,133	10,724	56,476	26,431	47,714
.....	0.99	0.50	1.26	0.36	0.09	0.19	0.92	1.72	0.21	0.34	0.15
17,465	.....	1,142	14,073	48,832	192,064	86,984	7,202	11,688	50,850	128,787	162,033
0.30	.....	0.99	0.45	1.25	0.32	0.09	0.16	0.92	1.11	0.21	0.29
1,697	.....	1,093	5,541	42,120	51,140	106,325	1,793	5,417	33,161	24,985	142,560
.....
1	.....	1	4	7	5	2 1	2	2	7	5	3
.....	.....	(6)	2,700	25,157	110,699	86,984	5,435	10,800	69,807	139,648	20
(5)	.....	(6)	3,935	1,052,652	5,937,234	2,381,208	4,405	77,810	1,421,625	7,933,343	21
.....	.....	(6)	1.46	41.84	53.63	27.38	0.81	7.20	20.37	56.81	22
(5)	.....	(6)	43,138	1,349,220	6,440,202	2,685,871	32,394	344,632	2,011,337	8,237,736	23
(5)	.....	.....	9,350	19,150	.....	.....	6,850	22,157	.....	.....	24
(5)	.....	(5)	52,488	1,368,370	6,440,202	2,685,871	39,244	366,789	2,011,337	8,237,736	25
(5)	.....	(5)	1,616	10,104	31,822	8,072	1,888	5,004	15,050	30,297	26
(5)	.....	(5)	1,575	17,200	50,393	7,829	1,577	17,458	16,012	47,714	27
(5)	.....	(5)	2,854	27,392	51,140	106,325	2,826	19,661	24,985	142,560	28
(5)	.....	(5)	4,290	25,179	133,084	86,984	6,725	28,587	69,807	162,033	29
(5)	.....	(5)	0.92	41.81	44.61	27.38	0.66	2.72	20.37	48.96	30
(5)	.....	(5)	0.37	0.68	0.38	0.09	0.25	0.61	0.23	0.29	31
.....	.....	(5)	0.58	0.68	0.46	0.09	0.31	1.62	0.23	0.34	32
1	.....	.....	.....	2	1	.....	.....	2	2	.....	33
(5)	.....	.....	.....	(6)	(6)	.....	.....	33,308	.....	.....	34
(5)	.....	.....	.....	(6)	(6)	.....	.....	28,350	.....	.....	35
(5)	.....	.....	.....	(6)	(6)	.....	.....	0.85	.....	.....	36
(5)	.....	.....	.....	(6)	(6)	.....	.....	998,886	.....	.....	37
.....
4	87	6	2	.....	.....	.....	98	1	.....	.....	38
3	1	7	16	11	2	.....	15	9	14	2	39
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	40
.....	.....	.....	.....	2	3	1	.....	.....	.....	3	41
.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	42
.....
2	.....	5	15	11	7	2 1	11	8	12	7	3
(5)	.....	480	3,721	16,732	43,862	4,815	1,177	3,317	19,096	30,089	22,638
(5)	.....	3	27	17	54	4	10	12	32	48	15
.....
1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	46
2	58	5	.....	.....	.....	.....	64	1	.....	.....	47
4	30	8	18	13	7	1	48	9	14	7	48

¹ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
³ Data for 1 enterprise reporting indebtedness and for 2 enterprises reporting pay roll in the "No farms" group are included with the "5 to 24 farms" group.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation.—The general annual precipitation in Utah for the calendar year 1939, as shown by the records of the U. S. Weather Bureau at about 117 stations, was 11.49 inches, or 1.46 inches below the 48-year average; it was 3.70 inches below that of 1938, and the least since 1934. The Northwestern Division had 2.32 inches below normal, and the Southern and Eastern Divisions 0.11 below normal. The greatest annual precipitation was 27.31 at Silver Lake (Brighton), which was 15.71 inches below its normal. The next highest amounts were 25.34 inches at Timpanogos Summit and 24.83 inches at Mt. Baldy R. S.

The least annual precipitation was 2.05 inches at Callao; next lowest was 4.33 inches at Deseret and 4.35 inches at Hanksville. The greatest monthly amounts were 8.83 inches at Bryce Canyon and 7.97 inches at Alton during September. The least monthly amount was none at one station in April and July, two stations in August, three stations in December, eight stations in November, and ten stations in June. The greatest 24-hour amounts were 4.09 inches at Bryce Canyon on the 12th, and 2.96 inches at Elkhorn (Ashley) on the 6th of September.

Only fourteen precipitation stations had above normal amounts for the year, and only one, Wendover, was in the northern half of the State. The excess at southern stations was largely the result of the very wet month of September. January, February, June, and October had moderate excesses, September more than twice its normal,

while the spring, midsummer, and late fall months had deficiencies. The greatest deficiency was 15.71 inches at Silver Lake (Brighton), while the greatest excess departure was 2.52 inches at Panguitch.

The average precipitation for the water year (October 1938 through September 1939) at 24 stations listed in State table 18, which are representative of the irrigated areas in the major drainage basins in Utah, was 10.88 inches, a departure of -0.49 from the average precipitation at these stations.

The general average annual snowfall for 1939 in Utah was 49.0 inches, or 1.7 inches below normal.

Temperature.—The general annual temperature for the State as shown by the records of about 81 stations was 49.0°, or 1.0° above the 48-year average. The year was 0.3° warmer than 1938, and was the warmest since 1936. The highest annual temperature for 1939 was 62.4° at Springdale (Zion Park), which was 3.0° above normal. The lowest annual temperature was 37.2° at Silver Lake (Brighton).

The warmest month was July with a mean temperature of 72.4°, or 0.7° above normal. The highest mean monthly temperature in the State was 87.2° recorded at Springdale in July. The mean daily maximum temperature at St. George for July was 102.7°, the highest in the State. The highest temperature observed was 112° at St. George and Wendover on July 13, and at Springdale (Zion Park) on August 16.

CENSUS OF IRRIGATION - UTAH

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	GREAT SALT LAKE						
		Total		Direct				
				(1)				
IRRIGATED FARMS AND AREAS								
1 Irrigated farms.....1939..number.....	45,220	27,253		1,340				
2 Area irrigated.....1939..acres.....	1,176,116	548,796		25,232				
3 (a) Cropland harvested.....1939..acres.....	980,881	486,265		21,989				
4 (b) Crop failure.....1939..acres.....	38,487	10,735		1,229				
5 (c) Pasture.....1939..acres.....	156,748	51,796		2,064				
6 Area irrigated.....1929..acres.....	1,324,125	593,029						
7 ..1919..acres.....	1,371,651	570,868						
8 Increase or decrease (-), 1929-1939.....percent.....	-11.2	-7.5						
9 Irrigable area in enterprises.....1940..acres.....	1,432,533	630,446		28,227				
10 ..1930..acres.....	1,739,869	710,003						
11 ..1920 ² ..acres.....	2,359,244	836,075						
12 Excess of irrigable area over the area irrigated..1940..acres.....	256,417	81,650		2,945				
13 ..1930..acres.....	415,744	116,974						
14 ..1920 ² ..acres.....	987,593	265,207						
15 Area works were capable of supplying with water...1940..acres.....	1,357,714	599,549		27,153				
16 ..1930..acres.....	1,542,475	642,662						
17 ..1920..acres.....	1,700,550	660,283						
18 Increase or decrease (-), 1930-1940.....percent.....	-12.0	-6.7						
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	181,598	50,753		1,871				
20 ..1930..acres.....	218,350	49,633						
21 ..1920..acres.....	328,899	89,415						
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	86.6	91.5		93.1				
23 ..1929..percent.....	95.8	92.3						
24 ..1919..percent.....	80.7	86.5						
CAPITAL INVESTED TO JANUARY 1								
25 Total investment in irrigation enterprises.....1940..dollars....	41,896,532	24,555,604		2,409,673				
26 (a) Cost of irrigation works and equipment.....1940..dollars....	39,590,175	23,177,280		2,405,343				
27 (b) Investment in water rights (reported).....1940..dollars....	2,306,357	1,378,324		4,330				
28 Total investment in irrigation enterprises.....1930..dollars....	35,669,819	19,407,237						
29 ..1920..dollars....	32,037,351	14,102,393						
30 Increase or decrease (-), 1930-1940.....percent.....	17.5	26.5						
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	30.96	40.96		88.74				
32 ..1930..dollars....	23.13	30.20						
33 ..1920..dollars....	18.84	21.36						
34 Average investment per acre irrigated.....1939..dollars....	35.62	44.74		95.31				
35 Estimated final investment in existing enterprises..1940..dollars....	43,380,966	25,223,024		2,572,882				
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	30.28	40.01		91.15				
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
	Primary		Supplemental		Primary		Supplemental	
	Enterprises				Enterprises			
37 Enterprises reporting maintenance and operation...1939..number.....	1,855	118	810	64	110	13		
38 Area irrigated in these enterprises.....1939..acres.....	1,144,100	322,055	533,596	153,641	23,036	6,235		
39 Cost of maintenance and operation.....1939..dollars....	881,814	84,981	446,866	58,641	17,087	8,420		
40 Average cost, per acre irrigated.....1939..dollars....	0.77	0.26	0.84	0.38	0.74	1.35		
41 Total annual charges (reported) ⁴.....1939..dollars....	1,079,113	142,478	605,952	94,960	22,480	2,190		
42 Average annual charge per acre irrigated.....1939..dollars....	1.02	0.45	1.20	0.62	1.17	0.37		
43 Area against which charges were assessed.....1939..acres.....	1,128,306	360,560	523,341	160,027	19,816	9,349		
44 Average annual charge per acre assessed.....1939..dollars....	0.96	0.40	1.16	0.59	1.13	0.23		
45 Total charges collected ⁴.....1939..dollars....	1,106,871	207,916	666,670	165,561	21,239	7,296		
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars....	4,329,234	9,437,183	3,408,467	7,437,410	21,217	1,802,475		
WATER DELIVERED TO IRRIGATORS, 1939								
47 Enterprises reporting water delivered.....1939..number.....	1,864	129	843	80	99	16		
48 Area irrigated by these enterprises.....1939..acres.....	1,049,365	258,047	475,987	154,024	17,557	6,345		
49 Water delivered.....1939..acre-feet.....	2,654,225	278,665	1,295,794	192,036	48,301	11,835		
50 Average water delivered per acre irrigated.....1939..acre-feet.....	2.5	1.1	2.7	1.2	2.8	1.9		
51 Average cost of water per acre irrigated.....1939..dollars....	1.03	0.50	1.20	0.63	1.20	0.41		
52 Average cost of water per acre-foot delivered..1939..dollars....	0.41	0.46	0.44	0.50	0.44	0.22		
DRAINAGE OF IRRIGATED LAND								
53 Enterprises reporting land drained or needing drainage.....1939..number.....	202		133		10			
54 Irrigable area in these enterprises.....1939..acres.....	324,771		202,024		352			
55 Irrigated area in these enterprises.....1939..acres.....	283,314		186,156		324			
56 Area for which drains have been installed.....1939..acres.....	90,657		47,009		99			
57 Additional area needing drainage.....1939..acres.....	28,418		20,717		67			

¹Data for 1 enterprise in Deep Creek (Box Elder County) Drainage Basin (47) (number refers to separate map) are included with State totals. Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State total.
²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - UTAH

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

GREAT SALT LAKE—Continued													
Bear River						Weber River							
Total	Direct	Little Bear River	Malad River	Total	Direct	Chalk Creek	East Canyon Creek						
	(2)	(3)	(4)		(5)	(6)	(7)						
5,756	2,850	2,867	39	5,469	3,414	115	195					1	
178,656	130,154	47,590	912	109,909	78,297	3,000	4,501					2	
156,048	117,195	38,026	827	99,390	71,014	2,597	4,242					3	
2,844	2,750	94	.....	2,082	1,431	39	.....					4
19,764	10,209	9,470	85	8,437	5,852	364	259					5	
210,726	99,735	41,899	662	109,227	66,179	.....	5,652					6
202,681	104,731	46,541	1,189	97,589	44,726	.....	6,202					7
-15.2	30.5	13.6	37.8	0.1	18.3	.....	-20.4					8
208,408	157,756	49,650	1,002	130,954	94,662	3,084	4,509					9	
247,782	119,900	48,221	693	135,546	86,389	.....	6,103					10
272,100	161,328	48,358	1,935	149,081	83,796	.....	6,538					11
29,752	27,602	2,060	90	21,045	16,365	84	8					12	
37,056	20,165	6,332	31	25,719	20,210	.....	451					13
69,419	56,597	1,817	746	51,492	39,070	.....	336					14
199,615	149,885	48,818	912	114,195	80,940	3,083	4,509					15	
222,787	100,149	44,940	668	113,996	66,388	.....	6,028					16
218,037	117,523	46,890	1,189	112,961	49,341	.....	6,468					17
-10.4	49.7	8.6	36.5	0.2	21.9	.....	-25.2					18
20,959	19,731	1,228	.....	4,286	2,643	83	8					19
12,061	414	3,051	6	4,169	209	.....	376					20
15,356	12,792	349	.....	15,392	4,615	.....	266					21
89.5	86.8	97.5	100.0	96.2	96.7	97.3	99.8					22	
94.6	99.6	93.2	99.1	96.3	99.7	.....	93.8					23
93.0	89.1	99.3	100.0	86.4	90.6	.....	95.9					24
5,697,045	3,779,619	1,896,160	21,266	7,122,978	4,300,535	53,654	168,825					25	
4,737,778	2,849,236	1,869,921	18,621	7,068,721	4,260,207	52,400	167,107					26	
959,267	930,383	26,239	2,645	54,257	40,328	1,254	1,718					27	
5,016,351	3,446,098	703,436	23,384	4,955,769	3,713,175	.....	45,485					28
3,430,663	2,150,603	720,363	18,097	2,106,048	1,353,323	.....	74,010					29
13.6	9.7	169.6	-9.1	43.7	15.8	.....	271.2					30
28.54	25.22	38.84	23.32	62.38	53.13	17.40	37.44					31	
22.52	34.41	15.65	35.01	43.47	55.93	.....	7.55					32
15.73	18.30	15.36	15.22	18.64	27.43	.....	11.44					33
31.89	29.04	39.84	23.32	64.81	54.93	17.88	37.51					34	
5,908,795	3,980,119	1,907,410	21,266	7,359,479	4,346,195	54,654	168,825					35	
28.35	25.23	38.42	21.22	56.20	45.91	17.72	37.44					36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.		
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises			
138	12	73	11	61	³ 1	4	265	8	176	6	16	22	³ 1
176,079	8,094	128,185	2,251	47,034	5,843	860	105,533	82,746	75,802	71,945	2,583	4,421	4,386
117,990	5,398	88,966	761	27,755	4,637	1,269	89,929	16,625	56,618	6,733	2,419	2,452	407
0.67	0.67	0.69	0.34	0.59	0.79	1.48	0.85	0.20	0.75	0.09	0.94	0.55	0.09
156,797	5,093	117,758	419	37,615	4,674	1,424	160,596	25,950	110,499	10,025	2,533	3,358	395
0.93	0.64	0.96	0.20	0.83	0.80	1.74	1.65	0.31	1.59	0.14	1.74	1.03	0.09
173,882	7,959	127,377	2,116	45,685	5,843	820	102,920	86,480	70,875	71,894	1,486	3,946	4,386
0.90	0.64	0.92	0.20	0.82	0.80	1.74	1.56	0.30	1.56	0.14	1.70	0.85	0.09
152,471	5,953	117,967	421	33,319	5,532	1,295	170,763	105,338	116,454	96,998	1,444	7,445
25,256	923,000	24,190	1,066	923,000	1,154,291	4,168,722	1,031,200	1,968,197	441	120,750
122	13	69	12	46	³ 1	5	260	9	171	7	17	23	³ 1
148,644	8,175	115,057	2,332	32,695	5,843	892	91,978	82,789	66,636	71,988	2,680	4,501	4,386
421,629	14,956	318,457	4,883	101,007	10,073	2,165	256,967	76,784	183,510	60,621	7,781	12,484	3,735
2.8	1.8	2.8	2.1	3.1	1.7	2.4	2.8	0.9	2.8	0.8	2.9	2.8	0.9
0.98	0.67	1.05	0.34	0.74	0.80	1.59	1.63	0.31	1.62	0.14	1.17	0.98	0.09
0.35	0.37	0.38	0.16	0.24	0.46	0.65	0.59	0.34	0.59	0.17	0.40	0.35	0.11
20	7	13	44	41
97,572	75,487	22,085	48,593	45,391
88,816	66,862	21,954	44,044	41,105
17,723	14,638	3,085	14,737	14,322
15,145	13,010	2,135	3,446	1,932

³Data for less than 3 enterprises shown with permission of the enterprise involved.

⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - UTAH

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		GREAT SALT LAKE—Continued							
		Weber River—Continued			Jordan River				
		Ogden River	Total		Total		Direct		
		(8)					(9)		
IRRIGATED FARMS AND AREAS									
1	Irrigated farms.....1939..number.....	1,745	14,688		6,618				
2	Area irrigated.....1939..acres.....	24,111	234,949		77,469				
3	(a) Cropland harvested.....1939..acres.....	21,537	208,838		68,873				
4	(b) Crop failure.....1939..acres.....	612	4,580		1,133				
5	(c) Pasture.....1939..acres.....	1,962	21,531		7,463				
6	Area irrigated.....1929..acres.....	20,581	272,476		78,708				
7	.....1919..acres.....	21,884	270,598		71,187			
8	Increase or decrease (-), 1929-1939.....percent.....	17.2	-13.8		-1.6				
9	Irrigable area in enterprises.....1940..acres.....	28,699	262,857		93,299				
10	.....1930..acres.....	24,229	326,675		102,379			
11	.....1920 ¹ ..acres.....	27,097	414,894		120,400			
12	Excess of irrigable area over the area irrigated..1940..acres.....	4,598	27,908		15,830				
13	.....1930..acres.....	3,648	54,199		23,671			
14	.....1920 ¹ ..acres.....	5,213	144,296		49,213			
15	Area works were capable of supplying with water...1940..acres.....	25,663	258,586		91,617				
16	.....1930..acres.....	23,931	305,879		93,479			
17	.....1920..acres.....	26,852	329,265		84,682			
18	Increase or decrease (-), 1930-1940.....percent.....	7.2	-15.5		-2.0				
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,552	23,637		14,148				
20	.....1930..acres.....	3,950	33,403		14,771			
21	.....1920..acres.....	4,968	58,667		13,495			
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	94.0	90.9		84.6				
23	.....1929..percent.....	85.0	89.1		84.2			
24	.....1919..percent.....	81.5	82.2		84.1			
CAPITAL INVESTED TO JANUARY 1									
25	Total investment in irrigation enterprises.....1940..dollars....	2,599,964	9,325,908		3,246,361				
26	(a) Cost of irrigation works and equipment.....1940..dollars....	2,589,007	8,955,438		3,040,425				
27	(b) Investment in water rights (reported).....1940..dollars....	10,957	360,470		205,936				
28	Total investment in irrigation enterprises.....1930..dollars....	925,756	9,435,117		2,288,208				
29	.....1920..dollars....	423,755	8,565,682		1,288,620			
30	Increase or decrease (-), 1930-1940.....percent.....	180.8	-1.2		41.9				
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	101.31	36.07		35.43				
32	.....1930..dollars....	38.68	30.85		24.48			
33	.....1920..dollars....	15.78	26.01		15.22			
34	Average investment per acre irrigated.....1939..dollars....	107.83	39.69		41.91				
35	Estimated final investment in existing enterprises..1940..dollars....	2,789,805	9,381,868		3,294,491				
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	97.21	35.69		35.31				
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS									
		Primary		Supplemental		Primary		Supplemental	
		Enterprises				Enterprises			
37	Enterprises reporting maintenance and operation...1939..number.....	51	² 1		297	31		87	10
38	Area irrigated in these enterprises.....1939..acres.....	22,727	6,415		228,848	56,566		75,360	10,620
39	Cost of maintenance and operation.....1939..dollars....	28,440	9,485		221,860	28,198		120,529	7,473
40	Average cost, per acre irrigated.....1939..dollars....	1.25	1.48		0.97	0.50		1.60	0.70
41	Total annual charges (reported) ⁴ ⁵.....1939..dollars....	44,206	15,530		266,079	61,727		134,217	7,330
42	Average annual charge per acre irrigated.....1939..dollars....	1.92	2.42		1.21	1.10		1.79	0.70
43	Area against which charges were assessed.....1939..acres.....	26,613	10,200		226,723	56,239		80,055	10,518
44	Average annual charge per acre assessed.....1939..dollars....	1.66	1.52		1.17	1.10		1.68	0.70
45	Total charges collected ⁴.....1939..dollars....	45,420	8,340		322,197	46,974		157,466	2,884
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	1,900	2,201,525		2,207,703	542,213		467,766	1,550
WATER DELIVERED TO IRRIGATORS, 1939									
47	Enterprises reporting water delivered.....1939..number.....	49	² 1		362	42		126	20
48	Area irrigated by these enterprises.....1939..acres.....	18,161	6,415		217,808	56,715		71,283	10,747
49	Water delivered.....1939..acre-feet.....	53,092	12,428		568,997	88,461		208,854	28,185
50	Average water delivered per acre irrigated.....1939..acre-feet..	2.9	1.9		2.6	1.6		2.9	2.6
51	Average cost of water per acre irrigated.....1939..dollars....	1.81	2.42		1.17	1.10		1.78	0.72
52	Average cost of water per acre-foot delivered..1939..dollars....	0.65	1.25		0.45	0.71		0.61	0.27
DRAINAGE OF IRRIGATED LAND									
53	Enterprises reporting land drained or needing drainage.....1939..number.....	3			59			12	
54	Irrigable area in these enterprises.....1939..acres.....	3,202			55,507			1,119	
55	Irrigated area in these enterprises.....1939..acres.....	2,939			52,972			1,087	
56	Area for which drains have been installed.....1939..acres.....	415			14,450			171	
57	Additional area needing drainage.....1939..acres.....	1,514			2,059			160	

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data for less than 3 enterprises shown with permission of the enterprise involved.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — UTAH

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

GREAT SALT LAKE—Continued				SEVIER LAKE					
Jordan River—Continued				Sevier River					
Utah Lake				Total	Upper Sevier River				
Total	Direct (10)	Spanish Fork System (11)	Provo River System (12)		Total	Direct (13)	East Fork Sevier River Total		
8,070	573	2,830	4,667	7,415	5,556	2,702	200	1	
157,480	17,146	60,117	80,217	237,569	167,786	93,407	10,715	2	
139,965	15,652	52,733	71,580	208,575	140,143	79,417	8,955	3	
3,447	654	1,474	1,319	8,983	7,998	2,308	145	4	
14,068	840	5,910	7,318	20,011	19,645	11,682	1,615	5	
.....	.....	.....	.....	258,929	.....	.....	.....	6
.....	.....	.....	.....	325,718	.....	.....	.....	7
.....	.....	.....	.....	-8.2	.....	.....	.....	8
169,558	23,463	62,940	83,155	277,779	192,513	103,387	12,040	9	
.....	.....	.....	.....	336,671	.....	.....	.....	10
.....	.....	.....	.....	630,494	.....	.....	.....	11
12,078	6,317	2,823	2,938	40,210	24,727	9,980	1,325	12	
.....	.....	.....	.....	77,742	.....	.....	.....	13
.....	.....	.....	.....	304,766	.....	.....	.....	14
166,969	21,946	62,679	82,344	270,066	188,240	100,564	11,410	15	
.....	.....	.....	.....	303,757	.....	.....	.....	16
.....	.....	.....	.....	402,387	.....	.....	.....	17
.....	.....	.....	.....	-11.1	.....	.....	.....	18
9,489	4,800	2,562	2,127	32,497	20,454	7,157	695	19	
.....	.....	.....	.....	44,828	.....	.....	.....	20
.....	.....	.....	.....	76,669	.....	.....	.....	21
94.3	78.1	95.9	97.4	88.0	89.1	92.9	93.9	22	
.....	.....	.....	.....	85.2	.....	.....	.....	23
.....	.....	.....	.....	80.9	.....	.....	.....	24
6,079,547	536,902	3,719,390	1,821,255	6,092,351	3,177,697	1,923,464	111,900	25	
5,925,013	514,660	3,709,722	1,700,631	5,603,973	2,811,399	1,612,579	92,385	26	
154,534	24,242	9,668	120,624	488,378	366,298	310,885	19,515	27	
.....	.....	.....	.....	6,793,638	.....	.....	.....	28
.....	.....	.....	.....	9,509,836	.....	.....	.....	29
.....	.....	.....	.....	-10.3	.....	.....	.....	30
36.41	24.56	59.34	22.12	22.56	16.88	19.13	9.81	31	
.....	.....	.....	.....	22.37	.....	.....	.....	32
.....	.....	.....	.....	23.63	.....	.....	.....	33
38.61	31.43	61.87	22.70	25.64	18.94	20.59	10.44	34	
6,087,377	540,172	3,719,590	1,827,615	6,138,536	3,203,207	1,944,439	112,935	35	
35.90	23.02	59.10	21.98	22.10	16.64	18.81	9.38	36	
.....	.....	.....	.....	.....	.....	.....	.....	37
.....	.....	.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	39
.....	.....	.....	.....	.....	.....	.....	.....	40
131,862	54,397	18,959	40,551	46,095	72,352	8,302	205,863	16,012	41
0.91	1.19	1.19	0.70	1.82	1.01	0.41	0.94	0.14	42
146,668	45,721	16,432	58,569	25,379	71,667	20,342	232,363	111,859	43
0.90	1.19	1.15	0.69	1.82	1.01	0.41	0.89	0.14	44
164,731	44,090	14,531	80,194	19,476	70,006	24,614	192,841	12,546	45
1,739,937	540,663	1,900	1,687,146	113,926	50,891	426,737	396,197	384,367	46
.....	47
.....	48
.....	49
.....	50
.....	51
.....	52
47	(8) 2	14	31	57	53
54,388	(8)	43,817	10,471	60,062	54
51,885	(8)	41,374	10,416	51,211	55
14,279	(8)	12,625	1,579	38,086	56
1,899	(8)	1,403	491	948	57

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - UTAH

DRAINAGE BASIN TABLE I-- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	SEVIER LAKE--Continued							
	Sevier River--Continued							
	Upper Sevier River--Continued							
	East Fork Sevier River--Continued				San Pitch River		Lower Sevier River	
	Direct (14)		Otter Creek (15)		(16)		(17)	
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....	1939..number.....	96	104	2,654		1,859	
2	Area irrigated.....	1939..acres.....	5,253	5,462	63,664		69,783	
3	(a) Cropland harvested.....	1939..acres.....	4,789	4,166	51,771		68,432	
4	(b) Crop failure.....	1939..acres.....	75	70	5,545		985	
5	(c) Pasture.....	1939..acres.....	399	1,226	6,349		366	
6	Area irrigated.....	1929..acres.....		7,237	63,276			
7		1919..acres.....		7,289	77,616			
8	Increase or decrease (-), 1929-1939.....	percent.....		-24.5	-2.5			
9	Irrigable area in enterprises.....	1940..acres.....	6,291	5,749	77,086		85,266	
10		1930..acres.....		7,782	82,052			
11		1920 ² ..acres.....		7,845	105,519			
12	Excess of irrigable area over the area irrigated.....	1940..acres.....	1,038	287	13,422		15,483	
13		1930..acres.....		545	16,776			
14		1920 ² ..acres.....		556	27,903			
15	Area works were capable of supplying with water.....	1940..acres.....	5,661	5,749	76,286		81,826	
16		1930..acres.....		7,782	74,003			
17		1920..acres.....		7,289	78,348			
18	Increase or decrease (-), 1930-1940.....	percent.....		-26.1	3.1			
19	Excess of area works were capable of supplying with water over area irrigated.....	1940..acres.....	408	287	12,602		12,043	
20		1930..acres.....		545	8,727			
21		1920..acres.....			732			
22	Proportion which area irrigated is of area works were capable of supplying with water.....	1939..percent.....	92.8	95.0	83.5		85.3	
23		1929..percent.....		93.0	86.2			
24		1919..percent.....		100.0	99.1			
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....	1940..dollars.....	22,015	89,885	1,142,333		2,914,654	
26	(a) Cost of irrigation works and equipment.....	1940..dollars.....	19,785	72,600	1,106,435		2,792,574	
27	(b) Investment in water rights (reported).....	1940..dollars.....	2,230	17,285	35,898		122,080	
28	Total investment in irrigation enterprises.....	1930..dollars.....		225,470	1,005,530			
29		1920..dollars.....		151,850	1,142,510			
30	Increase or decrease (-), 1930-1940.....	percent.....		-60.1	13.6			
31	Average investment based on area works were capable of supplying with water, per acre.....	1940..dollars.....	3.89	15.63	14.98		35.62	
32		1930..dollars.....		28.97	13.59			
33		1920..dollars.....		20.83	14.58			
34	Average investment per acre irrigated.....	1939..dollars.....	4.19	16.46	17.94		41.77	
35	Estimated final investment in existing enterprises.....	1940..dollars.....	22,015	90,920	1,145,833		2,935,329	
36	Average investment based on estimated final investment and irrigable area, per acre.....	1940..dollars.....	3.50	15.81	14.86		34.43	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
			Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
			Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....	1939..number.....	12	2	14	8	46	3
38	Area irrigated in these enterprises.....	1939..acres.....	4,503	(³)	5,422	18,938	69,013	51,316
39	Cost of maintenance and operation.....	1939..dollars.....	851	(³)	1,067	8,933	39,818	5,536
40	Average cost, per acre irrigated.....	1939..dollars.....	0.19	(³)	0.20	0.47	0.58	0.11
41	Total annual charges (reported) ⁴	1939..dollars.....	1,320		3,219	9,517	74,739	5,460
42	Average annual charge per acre irrigated.....	1939..dollars.....	0.35		0.75	0.51	1.12	0.11
43	Area against which charges were assessed.....	1939..acres.....	3,743		4,887	63,957	69,474	51,250
44	Average annual charge per acre assessed.....	1939..dollars.....	0.35		0.66	0.52	1.08	0.11
45	Total charges collected ⁴	1939..dollars.....	1,350		3,062	26,492	72,992	
46	Indebtedness to December 31 (reported) ⁵	1939..dollars.....	600		5,870	35,982	187,200	
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....	1939..number.....	9	1	15	6	54	4
48	Area irrigated by these enterprises.....	1939..acres.....	3,731		5,442	6,023	66,276	226
49	Water delivered.....	1939..acre-feet.....	15,236	(³)	17,480	2,910	128,863	832
50	Average water delivered per acre irrigated.....	1939..acre-feet.....	4.1		3.2	0.5	1.9	3.7
51	Average cost of water per acre irrigated.....	1939..dollars.....	0.40		0.65	0.31	1.10	1.14
52	Average cost of water per acre-foot delivered.....	1939..dollars.....	0.10		0.20	0.63	0.58	0.31
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....	1939..number.....		1	6		3	
54	Irrigable area in these enterprises.....	1939..acres.....		(³)	9,231		31,500	
55	Irrigated area in these enterprises.....	1939..acres.....		(³)	6,689		26,000	
56	Area for which drains have been installed.....	1939..acres.....		(³)	237		31,500	
57	Additional area needing drainage.....	1939..acres.....			184			

¹Data for 2 enterprises in White River Drainage Basin (28) (number refers to separate map) are included with Green River "Direct" Drainage Basin (21).

²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - UTAH

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLORADO RIVER											
Total	Direct	Dolores River	Green River							Willow Creek	
			Total	Direct ¹	Henry's Fork	Brush Creek	Ashley Creek	Duchesne River			
	(18)	(20)		(21)	(24)	(25)	(26)	(27)	(29)		
8,632	115	36	6,291	208	21	74	840	2,351	19	1	
324,899	4,996	2,342	283,189	13,980	3,987	5,078	26,843	141,392	1,811	2	
239,502	4,132	2,112	183,670	10,892	3,327	3,806	17,842	80,684	1,379	3	
14,963	638	29	10,549	1,145	.....	1,020	4,527	3,212	58	4
76,414	226	201	68,970	1,943	660	252	4,474	57,496	374	5	
347,452	1,286	.....	278,072	1,908	.....	.....	23,314	167,022	.....	6
362,576	9,740	.....	280,877	2,541	.....	.....	26,787	138,445	.....	7
-6.5	288.5	.....	-5.4	632.7	.....	.....	15.1	-15.3	.....	8
437,909	6,159	4,481	343,510	20,745	6,822	5,515	40,746	189,534	2,758	9	
518,846	1,561	.....	409,701	4,408	.....	.....	37,519	255,894	.....	10
706,095	24,615	.....	510,426	3,629	.....	.....	44,087	322,689	.....	11
113,010	1,183	2,139	80,321	6,765	2,835	437	13,903	48,142	947	12	
171,394	275	.....	131,629	2,500	.....	.....	14,205	88,812	.....	13
343,519	14,875	.....	229,549	1,088	.....	.....	17,300	164,243	.....	14
406,890	5,604	2,679	323,318	15,891	6,392	5,205	40,731	176,530	2,733	15	
439,165	1,286	.....	351,500	2,958	.....	.....	29,519	222,094	.....	16
496,991	18,529	.....	385,612	3,038	.....	.....	44,087	217,809	.....	17
-7.3	335.8	.....	-8.0	437.2	.....	.....	38.0	-20.5	.....	18
81,991	608	337	60,129	1,911	2,405	127	13,888	35,138	922	19	
91,713	.....	.....	73,428	1,050	.....	.....	6,205	55,072	.....	20
134,415	8,789	.....	104,735	497	.....	.....	17,300	79,363	.....	21
79.8	89.2	87.4	81.4	86.0	62.4	97.6	65.9	80.1	66.3	22	
79.1	100.0	.....	79.1	84.5	.....	.....	79.0	75.2	.....	23
73.0	52.6	.....	72.8	83.6	.....	.....	60.8	63.6	.....	24
9,214,146	43,870	51,335	7,599,544	737,273	41,829	92,818	397,061	4,477,764	27,025	25	
9,006,350	41,330	51,030	7,484,159	725,819	40,398	86,645	393,462	4,401,181	25,100	26	
207,786	2,540	305	115,385	11,454	831	6,173	3,599	76,583	1,925	27	
6,734,361	19,300	.....	5,360,798	440,025	.....	.....	402,600	2,977,463	.....	28
6,577,352	219,489	.....	4,154,660	376,325	.....	.....	374,140	2,428,174	.....	29
35.8	149.5	.....	41.8	67.6	.....	.....	-1.4	50.4	.....	30
22.65	8.59	19.16	23.50	46.40	6.54	17.83	9.75	25.37	9.89	31	
15.33	15.01	.....	15.25	148.76	.....	.....	13.64	13.41	.....	32
13.23	11.85	.....	10.77	123.87	.....	.....	8.49	11.15	.....	33
28.36	9.64	21.92	28.87	52.74	10.49	18.28	14.79	31.67	14.92	34	
9,920,759	45,270	51,335	8,180,922	774,403	42,554	92,818	417,061	4,955,124	27,275	35	
22.65	8.05	11.46	23.82	37.33	6.24	16.83	10.24	26.14	9.89	36	
Primary	Sup.		Primary	Sup.			Primary	Sup.	Primary	Sup.	
Enterprises			Enterprises				Enterprises		Enterprises		
599	13	56	15	302	13	68	8	10	15	2	18
321,855	50,157	4,935	2,327	260,845	50,157	13,272	3,492	5,007	26,744	(3)	140,901
237,922	7,372	7,692	1,639	179,321	7,372	13,357	1,295	2,225	8,104	(3)	117,717
0.74	0.15	1.56	0.70	0.69	0.15	1.01	0.37	0.44	0.30	(3)	0.84
236,440	30,067	1,740	620	170,949	30,067	5,372	847	2,015	8,978	5,240	108,922
0.82	0.60	0.87	0.82	0.71	0.60	0.73	0.53	0.44	0.34	0.81
317,628	82,765	2,077	760	264,252	82,765	7,450	1,997	4,590	30,596	17,465	153,755
0.74	0.36	0.84	0.82	0.65	0.36	0.72	0.42	0.44	0.29	0.30	0.71
219,948	27,333	1,631	950	168,367	27,333	5,044	2,066	1,210	9,190	1,697	100,344
508,549	1,613,321	434,187	1,613,321	1,200	100	61,894	406,187
521	11	62	17	307	11	67	10	11	14	1	126
309,959	50,137	4,996	2,342	256,576	50,137	12,042	2,487	5,078	24,908	(3)	141,042
747,718	59,886	13,062	5,521	608,825	59,886	27,660	13,038	11,645	35,519	(3)	370,436
2.4	1.2	2.6	2.4	2.4	1.2	2.3	5.2	2.3	1.4	(3)	2.6
0.82	0.50	1.57	0.69	0.74	0.50	0.97	0.20	0.45	0.37	(3)	0.81
0.34	0.42	0.60	0.29	0.31	0.42	0.42	0.04	0.20	0.25	(3)	0.31
12	8	(3)	1	6
62,685	53,713	(3)	50,813
45,947	37,761	(3)	36,261
5,562	3,062	(3)	3,062
6,753	5,788	(3)	5,698

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - UTAH

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued						
	Green River—Continued		Fremont River			Escalante River	
	Price River	San Rafael River	Total	Direct	Muddy River		
	(30)	(31)		(32)	(33)		(34)
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	506	2,272	468	333	135	142
2	Area irrigated.....1939..acres.....	10,154	59,944	26,204	16,267	9,937	3,282
3	(a) Cropland harvested.....1939..acres.....	8,829	53,911	20,987	14,800	6,187	1,560
4	(b) Crop failure.....1939..acres.....	573	14	1,795	595	1,200	362
5	(c) Pasture.....1939..acres.....	752	3,019	3,422	872	2,550	1,300
6	Area irrigated.....1929..acres.....	18,059	53,538	28,655	.....	.....	.....
7	.....1919..acres.....	23,811	77,290	26,513	.....	.....	.....
8	Increase or decrease (-), 1929-1939.....percent.....	-43.8	12.0	-8.6	.....	.....	.....
9	Irrigable area in enterprises.....1940..acres.....	13,498	63,892	31,795	17,933	13,862	3,410
10	.....1930..acres.....	24,691	56,259	44,794	.....	.....	.....
11	.....1920 ² ..acres.....	37,191	85,028	42,005	.....	.....	.....
12	Excess of irrigable area over the area irrigated..1940..acres.....	3,944	3,948	5,591	1,666	3,925	128
13	.....1930..acres.....	6,632	12,721	16,139	.....	.....	.....
14	.....1920 ² ..acres.....	13,380	7,738	15,492	.....	.....	.....
15	Area works were capable of supplying with water..1940..acres.....	12,033	63,803	27,276	16,739	10,537	3,340
16	.....1930..acres.....	22,953	55,963	29,284	.....	.....	.....
17	.....1920..acres.....	24,848	80,028	34,005	.....	.....	.....
18	Increase or decrease (-), 1930-1940.....percent.....	-47.6	14.0	-6.9	.....	.....	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,879	3,859	1,072	472	600	56
20	.....1930..acres.....	4,894	2,425	639	.....	.....	.....
21	.....1920..acres.....	1,037	2,738	7,492	.....	.....	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.4	94.0	96.1	97.2	94.3	98.3
23	.....1929..percent.....	78.7	95.7	97.9	.....	.....	.....
24	.....1919..percent.....	95.8	96.6	78.0	.....	.....	.....
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	622,544	1,203,230	319,790	151,990	167,800	82,115
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	609,794	1,201,160	306,785	140,335	166,450	81,580
27	(b) Investment in water rights (reported).....1940..dollars.....	12,750	2,070	13,005	11,655	1,350	535
28	Total investment in irrigation enterprises.....1930..dollars.....	1,140,078	258,900	294,955	.....	.....	.....
29	.....1920..dollars.....	458,725	288,100	567,050	.....	.....	.....
30	Increase or decrease (-), 1930-1940.....percent.....	-45.4	364.9	8.4	.....	.....	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	51.74	18.86	11.72	9.08	15.92	24.59
32	.....1930..dollars.....	49.67	4.62	10.07	.....	.....	.....
33	.....1920..dollars.....	18.46	3.60	16.68	.....	.....	.....
34	Average investment per acre irrigated.....1939..dollars.....	61.31	20.07	12.20	9.34	16.89	25.02
35	Estimated final investment in existing enterprises..1940..dollars.....	655,844	1,215,843	329,290	161,490	167,800	82,215
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	48.59	19.03	10.36	9.01	12.11	24.11
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.		
		Enterprises		Enterprises			
37	Enterprises reporting maintenance and operation.....1939..number.....	39	1	24	3	23	14
38	Area irrigated in these enterprises.....1939..acres.....	9,674	(3)	59,944	840	26,189	16,252
39	Cost of maintenance and operation.....1939..dollars.....	11,592	(3)	23,653	365	8,400	5,780
40	Average cost, per acre irrigated.....1939..dollars.....	1.20	(3)	0.39	0.43	0.32	0.36
41	Total annual charges (reported) ⁴.....1939..dollars.....	10,626	1,952	34,189	240	7,469	5,766
42	Average annual charge per acre irrigated.....1939..dollars.....	1.49	0.24	0.58	0.30	0.34	0.39
43	Area against which charges were assessed.....1939..acres.....	7,301	8,000	58,563	800	21,742	14,820
44	Average annual charge per acre assessed.....1939..dollars.....	1.46	0.24	0.58	0.30	0.34	0.39
45	Total charges collected ⁴.....1939..dollars.....	10,404	4,317	40,109	250	9,250	5,330
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	22,200	2,792	4,500	.....	30,800	800
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	39	1	22	2	20	14
48	Area irrigated by these enterprises.....1939..acres.....	9,634	(3)	59,374	(3)	24,774	14,837
49	Water delivered.....1939..acre-feet.....	26,311	(3)	120,156	(3)	57,285	37,679
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.7	(3)	2.0	(3)	2.3	2.5
51	Average cost of water per acre irrigated.....1939..dollars.....	1.50	(3)	0.60	(3)	0.33	0.38
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.56	(3)	0.30	(3)	0.14	0.15
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	(3)	1	.....	.....	(3)	1
54	Irrigable area in these enterprises.....1939..acres.....	(3)	.....	.....	.....	(3)	.....
55	Irrigated area in these enterprises.....1939..acres.....	(3)	.....	.....	.....	(3)	.....
56	Area for which drains have been installed.....1939..acres.....	(3)	.....	.....	.....	(3)	.....
57	Additional area needing drainage.....1939..acres.....	(3)	.....	.....	.....	(3)	.....

¹Data for 2 enterprises in San Juan River "Direct" Drainage Basin (35) (number refers to separate map) are included with San Juan River Drainage Basin total.
²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — UTAH

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLORADO RIVER—Continued					COLUMBIA RIVER					INDEPENDENT BASINS					
San Juan River			Paria River (40)	Kanab Creek (41)	Virgin River				Snake River			Grouse Creek (48)	Deep Creek (Tooele County) (49)	Snake Valley (50)	
Total ¹	Montezuma Creek (37)	Cottonwood Wash (38)			Total	Direct	Ash Creek (43)	Santa Clara River (44)	Total	Raft River (45)	Goose Creek (46)				
135	35	82	43	100	1,302	928	149	225	44	40	4	42	68	71	1
4,784	2,395	2,147	831	1,798	17,473	11,683	2,236	3,554	2,456	2,069	387	2,098	1,480	11,061	2
3,480	1,201	2,047	767	1,708	15,076	9,537	2,183	3,356	2,446	2,069	377	1,834	1,333	4,808	3
1,007	1,007	.....	57	.....	546	493	28	25	.....	.....	.....	9	4	1,982	4
287	187	100	7	90	1,851	1,653	25	173	10	.....	10	255	143	4,271	5
9,868	.....	.....	.....	.....	19,873	.....	.....	.....	4,724	4,471	253	2,408	2,147	.....	6
9,584	.....	.....	.....	.....	27,106	.....	.....	.....	.....	.....	.....	3,469	1,983	.....	7
-51.5	.....	.....	.....	.....	-12.1	.....	.....	.....	-48.0	-53.7	53.0	-12.9	31.1	.....	8
9,304	2,555	5,229	1,673	2,110	35,467	25,496	2,902	7,169	4,422	3,972	450	2,714	1,590	12,378	9
14,680	.....	.....	.....	.....	32,710	.....	.....	.....	7,059	6,806	253	2,578	2,362	.....	10
26,646	.....	.....	.....	.....	82,450	.....	.....	.....	.....	.....	.....	4,599	4,326	.....	11
4,520	160	3,082	842	312	17,994	13,813	566	3,615	1,966	1,903	63	616	110	1,317	12
4,812	.....	.....	.....	.....	12,837	.....	.....	.....	2,335	2,335	.....	170	215	.....	13
17,092	.....	.....	.....	.....	55,344	.....	.....	.....	.....	.....	.....	1,130	2,343	.....	14
8,104	2,445	5,209	1,641	2,110	32,818	24,467	2,577	5,774	3,302	2,852	450	2,214	1,590	12,151	15
14,480	.....	.....	.....	.....	29,089	.....	.....	.....	5,504	5,251	253	2,578	2,172	.....	16
14,158	.....	.....	.....	.....	35,586	.....	.....	.....	.....	.....	.....	3,639	3,446	.....	17
-44.0	.....	.....	.....	.....	12.8	.....	.....	.....	-40.0	-45.7	77.9	-14.1	26.8	.....	18
3,320	50	3,062	810	312	15,345	12,784	341	2,220	846	783	63	116	110	1,090	19
4,512	.....	.....	.....	.....	9,216	.....	.....	.....	780	780	.....	170	25	.....	20
4,604	.....	.....	.....	.....	8,480	.....	.....	.....	.....	.....	.....	170	1,463	.....	21
59.0	98.0	41.2	50.6	85.2	53.2	47.8	86.8	61.6	74.4	72.5	86.0	94.8	93.1	91.0	22
68.1	.....	.....	.....	.....	68.3	.....	.....	.....	85.8	85.1	100.0	93.4	96.8	.....	23
67.5	.....	.....	.....	.....	76.2	.....	.....	.....	.....	.....	.....	95.3	87.5	.....	24
174,865	20,672	137,195	6,998	65,095	870,534	662,415	44,055	164,064	26,935	26,035	900	12,155	11,516	86,576	25
174,168	20,000	137,170	6,775	64,295	796,228	597,305	43,450	155,473	25,935	25,035	900	12,085	8,515	85,501	26
697	672	25	223	800	74,306	65,110	605	8,591	1,000	1,000	.....	70	3,000	1,075	27
274,632	.....	.....	.....	.....	650,176	.....	.....	.....	34,526	33,326	1,200	27,700	12,277	.....	28
206,458	.....	.....	.....	.....	1,257,981	.....	.....	.....	.....	.....	.....	28,338	8,844	.....	29
-36.3	.....	.....	.....	.....	33.9	.....	.....	.....	-22.0	-21.9	-25.0	-56.1	-6.2	.....	30
21.58	8.45	26.34	4.26	30.85	26.53	27.07	17.10	28.41	8.16	9.13	2.00	5.49	7.24	7.13	31
18.97	.....	.....	.....	.....	22.35	.....	.....	.....	6.27	6.35	4.74	10.74	5.65	.....	32
14.58	.....	.....	.....	.....	35.35	.....	.....	.....	.....	.....	.....	7.79	2.57	.....	33
36.55	8.63	63.90	8.42	36.20	49.82	56.70	19.70	46.16	10.97	12.58	2.33	5.79	7.78	7.83	34
240,970	20,672	137,475	7,158	65,095	918,504	697,485	44,055	176,964	34,935	34,035	900	16,655	24,516	88,642	35
25.90	8.09	26.29	4.28	30.85	25.90	27.36	15.72	24.68	7.90	8.57	2.00	6.14	15.42	7.16	36
15	8	5	11	14	89	56	17	16	8	4	4	7	3	29	37
4,784	2,395	2,147	767	1,755	16,971	11,550	2,071	3,350	1,637	1,250	387	1,918	500	9,190	38
4,546	795	2,774	1,105	2,027	29,676	20,065	2,221	7,390	759	434	325	791	296	4,435	39
0.95	0.33	1.29	1.44	1.15	1.75	1.74	1.07	2.21	0.46	0.35	0.84	0.41	0.59	0.48	40
10,677	398	9,300	420	3,501	32,649	22,719	2,031	7,899	401	401	.....	478	250	1,262	41
2.75	0.24	4.65	0.96	2.74	2.14	2.20	1.13	2.53	0.39	0.39	.....	0.38	0.53	0.30	42
6,882	1,640	5,000	577	1,280	18,116	11,541	2,195	4,380	2,670	2,670	.....	1,255	474	4,240	43
1.55	0.24	1.86	0.73	2.74	1.80	1.97	0.93	1.80	0.15	0.15	.....	0.38	0.53	0.30	44
450	450	.....	475	3,458	29,955	20,348	1,230	8,377	387	387	.....	600	.....	980	45
16,413	.....	2,700	.....	.....	21,149	17,824	.....	3,325	.....	.....	.....	.....	2,266	.....	46
14	8	5	8	10	76	48	14	14	6	3	3	7	3	19	47
4,706	2,395	2,147	498	1,543	13,744	9,133	1,851	2,760	946	609	337	823	1,170	6,481	48
5,121	3,675	1,364	2,111	5,853	47,342	32,125	5,314	9,903	1,432	912	540	1,125	2,555	14,172	49
1.1	1.5	0.6	4.2	3.6	3.4	3.5	2.9	3.6	1.5	1.5	1.6	1.4	2.2	2.2	50
2.35	0.33	4.37	1.54	2.43	2.29	2.37	1.08	2.85	0.64	0.89	0.29	0.52	0.52	0.45	51
2.16	0.22	6.88	0.36	0.64	0.66	0.67	0.38	0.80	0.42	0.31	0.56	0.21	0.24	0.20	52
(3)	.....	.....	.....	.....	(3)	(3)	(3)	.....	.....	.....	.....	.....	.....	.....	53
(3)	.....	.....	.....	.....	(3)	(3)	(3)	.....	.....	.....	.....	.....	.....	.....	54
(3)	.....	.....	.....	.....	(3)	(3)	(3)	.....	.....	.....	.....	.....	.....	.....	55
(3)	.....	.....	.....	.....	(3)	(3)	(3)	.....	.....	.....	.....	.....	.....	.....	56
(3)	.....	.....	.....	.....	(3)	(3)	(3)	.....	.....	.....	.....	.....	.....	.....	57

⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - UTAH

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	INDEPENDENT BASINS—Continued						
	Beaver River	Little Salt Lake	Coal Creek	Escalante Desert	Shoal Creek		
	(51)	(52)	(53)	(54)	(55)		
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	723	391	375	66	116	
2	Area irrigated.....1939..acres.....	20,612	8,625	10,269	3,566	3,143	
3	(a) Cropland harvested.....1939..acres.....	17,146	7,670	9,581	3,061	3,118	
4	(b) Crop failure.....1939..acres.....	750	725	238	63	15	
5	(c) Pasture.....1939..acres.....	2,716	230	450	442	10	
6	Area irrigated.....1929..acres.....	25,291	.....	14,488	.....	.....
7	.....1919..acres.....	28,732	.....	27,206	.....	.....
8	Increase or decrease (-), 1929-1939.....percent.....	-18.5	.....	-29.1	.....	.....
9	Irrigable area in enterprises.....1940..acres.....	26,711	10,285	17,694	5,895	3,168	
10	.....1930..acres.....	33,260	.....	21,258	.....	.....
11	.....1920 ¹ ..acres.....	53,729	.....	60,891	.....	.....
12	Excess of irrigable area over the area irrigated..1940..acres.....	6,099	1,660	7,425	2,329	25	
13	.....1930..acres.....	7,969	.....	6,770	.....	.....
14	.....1920 ¹ ..acres.....	24,997	.....	33,685	.....	.....
15	Area works were capable of supplying with water..1940..acres.....	25,518	9,376	17,433	4,915	3,168	
16	.....1930..acres.....	31,132	.....	21,108	.....	.....
17	.....1920..acres.....	46,469	.....	33,893	.....	.....
18	Increase or decrease (-), 1930-1940.....percent.....	-18.0	.....	-17.4	.....	.....
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	4,906	751	7,164	1,349	25	
20	.....1930..acres.....	5,841	.....	6,620	.....	.....
21	.....1920..acres.....	17,737	.....	6,687	.....	.....
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	80.8	92.0	58.9	72.6	99.2	
23	.....1929..percent.....	81.2	.....	68.6	.....	.....
24	.....1919..percent.....	61.8	.....	80.3	.....	.....
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	1,062,563	143,857	167,554	319,973	199,857	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	877,867	142,345	162,828	304,125	180,275	
27	(b) Investment in water rights (reported).....1940..dollars.....	184,696	1,512	4,726	15,848	19,582	
28	Total investment in irrigation enterprises.....1930..dollars.....	793,337	.....	182,140	.....	.....
29	.....1920..dollars.....	842,305	.....	179,171	.....	.....
30	Increase or decrease (-), 1930-1940.....percent.....	33.9	.....	-8.0	.....	.....
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	41.64	15.34	9.61	65.10	63.09	
32	.....1930..dollars.....	25.48	.....	8.63	.....	.....
33	.....1920..dollars.....	18.13	.....	5.29	.....	.....
34	Average investment per acre irrigated.....1939..dollars.....	51.55	16.68	16.32	89.73	63.59	
35	Estimated final investment in existing enterprises..1940..dollars.....	1,065,363	176,462	167,554	321,218	199,857	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	39.88	17.16	9.47	54.49	63.09	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.	Primary	Sup.
	Enterprises	Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	82	7	31	8	47	2
38	Area irrigated in these enterprises.....1939..acres.....	20,196	5,588	8,218	673	3,371	(2)
39	Cost of maintenance and operation.....1939..dollars.....	18,315	695	8,770	11,907	6,898	(2)
40	Average cost, per acre irrigated.....1939..dollars.....	0.91	0.12	1.07	1.17	2.05	(2)
41	Total annual charges (reported) ³.....1939..dollars.....	11,347	1,264	3,129	7,813	1,530	175
42	Average annual charge per acre irrigated.....1939..dollars.....	0.66	0.23	0.52	0.98	1.18	0.35
43	Area against which charges were assessed.....1939..acres.....	19,673	5,409	6,165	14,655	1,300	500
44	Average annual charge per acre assessed.....1939..dollars.....	0.58	0.23	0.51	0.53	1.18	0.35
45	Total charges collected ³.....1939..dollars.....	7,675	2,316	3,989	7,336	1,825	160
46	Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	1,500	2,085	55	12,200
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	74	5	36	37	43	2
48	Area irrigated by these enterprises.....1939..acres.....	17,686	5,541	8,608	10,269	3,465	(2)
49	Water delivered.....1939..acre-feet.....	41,073	1,319	17,843	17,252	9,837	(2)
50	Average water delivered per acre irrigated.....1939..acre-feet.....	2.3	0.2	2.1	1.7	2.8	(2)
51	Average cost of water per acre irrigated.....1939..dollars.....	1.15	0.30	1.23	1.31	3.10	2.07
52	Average cost of water per acre-foot delivered..1939..dollars.....	0.50	1.27	0.59	0.78	0.73	(2)
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....
54	Irrigable area in these enterprises.....1939..acres.....
55	Irrigated area in these enterprises.....1939..acres.....
56	Area for which drains have been installed.....1939..acres.....
57	Additional area needing drainage.....1939..acres.....

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ²Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - UTAH

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DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	GREAT SALT LAKE						
		Total	Direct	Bear River				
				Total	Direct	Little Bear River	Malad River	
			(1)		(2)	(3)	(4)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	² 2,409	1,131	171	174	98	70	6
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	564	530	159	1,147	1,529	697	152
3	Diversion dams.....1940..total number.....	1,973	829	84	185	125	59	1
4	1930..total number.....	1,717	805	.....	235	16	99	4
5	1920..total number.....	1,479	576	.....	118	8	47	2
6	(a) Concrete and masonry.....1940..number.....	611	449	53	98	74	24	.....
7	(b) Timber.....1940..number.....	217	71	3	16	12	4	.....
8	(c) Earth and rock.....1940..number.....	778	222	22	59	37	21	1
9	(d) Other,mixed, and not reported...1940..number.....	367	87	6	12	2	10	.....
10	Main canals and laterals.....1940..total length, miles.....	9,004.5	4,076.6	215.0	1,273.6	917.0	344.6	12.0
11	1930..total length, miles.....	9,237	3,631	.....	940	241	362	17
12	1920..total length, miles.....	11,677	4,503	.....	1,101	396	378	10
13	(a) Earth.....1940..length, miles.....	8,742	3,857	186	1,266	916	338	12
14	(b) Lined.....1940..length, miles.....	262.5	219.6	29.0	7.6	1.0	6.6	.....
15	1940..capacity, c.f.s. ³	34,579	14,046	625	3,690	2,538	1,141	13
16	1930..capacity, c.f.s. ³	30,048	13,465	.....	3,856	2,053	970	24
17	1920..capacity, c.f.s. ³	29,447	13,165	.....	4,253	2,264	1,074	13
18	Pipe lines ⁴.....1940..total length, miles.....	172.5	139.8	28.8	5.5	1.2	1.8	2.5
19	1930..total length, miles.....	159.0	63.2	.....	8.0	1.9	1.7	.....
20	1920..total length, miles.....	154.7	100.3	.....	14.7	1.2	2.0	.....
21	(a) Concrete.....1940..length, miles.....	40.6	40.0	19.9	3.0	.....	0.5	2.5
22	(b) Metal.....1940..length, miles.....	60.7	39.6	6.0	1.3	0.8	0.7	.....
23	(c) Wood-stave.....1940..length, miles.....	21.2	12.6	.....	1.2	0.6	0.6	.....
24	(d) Other.....1940..length, miles.....	50.0	47.6	.....	.....	.....	.....	.....
25	Storage dams.....1940..total number.....	362	138	9	17	12	3	2
26	1930..total number.....	287	112	.....	25	1	3	.....
27	1920..total number.....	307	71	.....	17	1	6	1
28	(a) Concrete and masonry.....1940..number.....	39	29	.....	2	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	313	107	9	15	10	3	2
30	(c) Other,mixed, and not reported...1940..number.....	10	2	.....	.....	.....	.....	.....
31	Reservoirs.....1940..total number.....	438	166	37	19	14	3	2
32	(a) 1-99 acre-feet capacity.....1940..number.....	254	94	36	8	6	2	.....
33	(b) 100-999 acre-feet capacity.....1940..number.....	105	51	.....	6	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	79	21	1	5	2	1	2
35	1940..total capacity, ac.-ft. ⁵	3,417,704	2,475,525	3,934	1,440,927	1,423,664	15,263	(⁶)
36	1930..total number.....	413	128	.....	35	1	4	2
37	1930..total capacity, ac.-ft.	1,093,252	373,106	.....	6,306	50	168	2,001
38	Wells, flowing.....1940..number.....	1,216	799	188	27	12	15	.....
39	1930..number.....	1,663	698	.....	90	.....	53	.....
40	1920..number.....	1,256	395	.....	114	.....	29	2
41	1940..yield, g.p.m.....	83,838	64,451	7,866	1,670	800	1,070	.....
42	1930..yield, g.p.m.....	104,670	34,775	.....	3,795	.....	1,829	.....
43	1920..yield, g.p.m.....	96,371	34,780	.....	5,167	.....	3,025	219
44	Wells, pumped.....1940..number.....	286	86	48	11	8	2	1
45	1930..number.....	346	102	.....	83	.....	1	.....
46	1920..number.....	192	68	.....	57	.....	.....	.....
47	1940..yield, g.p.m.....	122,528	29,515	16,226	4,760	2,160	(⁶)	(⁶)
48	1930..yield, g.p.m.....	120,333	31,186	.....	20,326	.....	300	.....
49	1920..yield, g.p.m.....	39,059	16,067	.....	11,597	902	.....	.....
50	Pumping plants.....1940..total number.....	411	162	49	44	36	7	1
51	1930..total number.....	429	173	.....	131	27	7	.....
52	Prime movers.....1940..capacity, hp.....	14,216	10,153	450	1,283	926	352	(⁶)
53	1930..capacity, hp.....	11,361	8,196	.....	1,785	780	104	.....
54	1920..capacity, hp.....	11,392	9,917	.....	2,443	1,678	50	.....
55	(a) Electric.....1940..number.....	293	141	45	38	33	5	.....
56	1940..capacity, hp.....	11,163	9,670	406	961	861	100	.....
57	(b) Internal-combustion.....1940..number.....	103	20	4	5	3	1	1
58	1940..capacity, hp.....	1,615	233	44	72	65	(⁶)	(⁶)
59	1940..number.....	15	1	.....	1	.....	71	.....
60	1940..capacity, hp.....	1,438	250	.....	250	.....	250	.....
61	Pumps.....1940..total number.....	409	161	49	44	36	7	1
62	1930..number.....	460	204	.....	136	30	7	.....
63	1920..number.....	291	167	.....	103	29	4	.....
64	1940..capacity, g.p.m.....	835,862	656,790	16,217	58,475	45,675	12,200	(⁶)
65	1930..capacity, g.p.m.....	877,942	746,160	.....	82,715	47,334	4,755	.....
66	1920..capacity, g.p.m.....	783,968	686,245	.....	103,370	74,845	3,740	.....
67	(a) Centrifugal.....1940..number.....	285	119	34	37	30	6	1
68	1940..capacity, g.p.m.....	330,989	209,672	8,972	50,950	39,050	11,300	(⁶)
69	1940..average capacity, g.p.m.....	1,161	1,762	264	1,377	1,302	1,883	(⁶)
70	(b) Turbine.....1940..number.....	102	27	14	7	6	1	.....
71	1940..average capacity, g.p.m.....	72,733	18,245	7,145	7,525	6,625	(⁶)	.....
72	1940..number.....	713	676	510	1,075	1,104	(⁶)	.....
73	(c) Plunger.....1940..number.....	9	6	.....	.....	.....	.....	.....
74	1940..capacity, g.p.m.....	666	515	.....	.....	.....	.....	.....
75	1940..average capacity, g.p.m.....	73	86	.....	.....	.....	.....	.....
76	(d) Other.....1940..number.....	13	9	(⁶)	1	.....	.....	.....
77	1940..capacity, g.p.m.....	431,494	428,358	.....	.....	.....	.....	.....
78	Pumping lift, from all sources.....1940..average, feet.....	35	40	45	38	36	47	(⁶)
79	1930..average, feet.....	36	41	.....	43	36	28	.....
80	1920..average, feet.....	25	38	.....	42	41	18	.....
81	from pumped wells.....1940..average, feet.....	38	42	46	43	42	(⁶)	.....
82	from surface sources.....1940..average, feet.....	28	37	.....	36	34	47	(⁶)

¹Data for 1 enterprise in Deep Creek (Box Elder County) Drainage Basin (47) (number refers to separate map) are included with State totals. Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State total. ²Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1. ³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁴Includes siphons and farm pipe lines reported. ⁵Total capacity of all reservoirs regardless of size. ⁶Data are included only in totals because less than 3 enterprises reported in the 1940 Census. ⁷Data for less than 3 enterprises shown with permission of the enterprise involved.

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	GREAT SALT LAKE--Continued							
	Weber River				Jordan River			
	Total	Direct	Chalk Creek	East Canyon Creek	Ogden River	Total	Direct	
	(5)	(6)	(7)	(8)		(9)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	312	206	18	25	63	474	171
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	366	393	171	180	407	546	536
3	Diversion dams.....1940..total number.....	207	131	20	18	38	353	105
4	.....1930..total number.....	314	102		24	53	256	44
5	.....1920..total number.....	256	72		38	27	202	67
6	(a) Concrete and masonry.....1940..number.....	60	35		9	16	238	93
7	(b) Timber.....1940..number.....	17	14	1	1	1	35	4
8	(c) Earth and rock.....1940..number.....	85	58	11	6	10	56	7
9	(d) Other,mixed,and not reported..1940..number.....	45	24	8	2	11	24	1
10	Main canals and laterals.....1940..total length, miles.....	966.6	669.3	28.0	38.0	231.3	1,621.4	575.4
11	.....1930..total length, miles.....	855	318		33	291	1,836	417
12	.....1920..total length, miles.....	676	227		54	138	2,726	516
13	(a) Earth.....1940..length, miles.....	917	642	28	38	209	1,489	524
14	(b) Lined.....1940..length, miles.....	49.6	27.3			22.3	133.4	51.4
15	.....1940..capacity, c.f.s. ¹	3,546	2,408	109	217	812	6,185	1,065
16	.....1930..capacity, c.f.s. ¹	3,029	2,003		180	450	6,580	1,996
17	.....1920..capacity, c.f.s. ¹	2,823	1,417		179	480	6,089	2,029
18	Pipe lines ².....1940..total length, miles.....	25.0	10.1			14.9	80.5	58.9
19	.....1930..total length, miles.....	20.5	0.3			7.6	34.7	13.8
20	.....1920..total length, miles.....	8.2	1.3			1.8	77.4	2.3
21	(a) Concrete.....1940..length, miles.....	3.6	2.4			1.2	13.5	4.5
22	(b) Metal.....1940..length, miles.....	4.8	3.3			1.5	27.5	20.0
23	(c) Wood-stave.....1940..length, miles.....	8.3	0.9			7.4	3.1	1.1
24	(d) Other.....1940..length, miles.....	8.3	3.5			4.8	36.4	33.3
25	Storage dams.....1940..total number.....	44	30	9	2	3	68	17
26	.....1930..total number.....	38	3		1	6	49	3
27	.....1920..total number.....	18	1		1		36	8
28	(a) Concrete and masonry.....1940..number.....	1			1		26	12
29	(b) Earth and rock.....1940..number.....	43	30	9	1	3	40	4
30	(c) Other,mixed,and not reported..1940..number.....						2	1
31	Reservoirs.....1940..total number.....	42	28	9	2	3	68	20
32	(a) 1-99 acre-foot capacity.....1940..number.....	28	16	9	1	2	22	13
33	(b) 100-999 acre-foot capacity.....1940..number.....	7	7				38	7
34	(c) 1,000 and over acre-foot capacity.....1940..number.....	7	5		1	1	8	
35	.....1940..total capacity, ac.-ft. ³	152,488	80,781	181	(⁴)	43,501	878,176	1,635
36	.....1930..total capacity.....	34	5		1	1	59	3
37	.....1920..total capacity, ac.-ft.....	77,358	74,301		9	1	289,442	518
38	Wells, flowing.....1940..number.....	8	5			3	576	208
39	.....1930..number.....	85				9	523	2
40	.....1920..number.....	33	12			9	248	18
41	.....1940..yield, g.p.m.....	216	156			60	54,679	6,576
42	.....1930..yield, g.p.m.....	4,081				1,786	26,999	60
43	.....1920..yield, g.p.m.....	1,358	388			320	28,255	222
44	Wells, pumped.....1940..number.....	4				4	23	13
45	.....1930..number.....	10				3	9	
46	.....1920..number.....	6				1	5	
47	.....1940..yield, g.p.m.....	1,400				1,400	7,129	2,269
48	.....1930..yield, g.p.m.....	7,385				500	3,475	
49	.....1920..yield, g.p.m.....	1,640				230	2,530	
50	Pumping plants.....1940..total number.....	13	6			7	56	29
51	.....1930..total number.....	227	44			183	9,193	3,931
52	Prime movers.....1940..capacity, hp.....	376	142			13	6,035	1,632
53	.....1930..capacity, hp.....	232	106			7	7,242	4,301
54	.....1920..capacity, hp.....	24	8			2	18	4
55	(a) Electric.....1940..number.....	10	8			4	48	24
56	.....1940..capacity, hp.....	179	44			135	8,124	3,899
57	(b) Internal-combustion.....1940..number.....	3				3	8	5
58	.....1940..capacity, hp.....	48				48	69	32
59	(c) Other.....1940..number.....							
60	.....1940..capacity, hp.....							
61	Pumps.....1940..total number.....	13	6			7	53	28
62	.....1930..number.....	26	9			3	42	14
63	.....1920..number.....	25	10			1	39	21
64	.....1940..capacity, g.p.m.....	16,300	3,900			12,400	565,798	61,630
65	.....1930..capacity, g.p.m.....	24,605	9,545			500	638,940	545,000
66	.....1920..capacity, g.p.m.....	27,145	6,815			230	555,730	389,000
67	(a) Centrifugal.....1940..number.....	12	5			7	36	21
68	.....1940..capacity, g.p.m.....	16,075	3,675			12,400	139,675	60,195
69	.....1940..average capacity, g.p.m.....	1,340	735			1,771	3,713	2,566
70	(b) Turbine.....1940..number.....						6	3
71	.....1940..capacity, g.p.m.....						3,875	1,225
72	.....1940..average capacity, g.p.m.....						596	408
73	(c) Plunger.....1940..number.....	1	1				5	4
74	.....1940..capacity, g.p.m.....	(⁴)	(⁴)				290	210
75	.....1940..average capacity, g.p.m.....	(⁴)	(⁴)				58	52
76	(d) Other.....1940..number.....						8	
77	.....1940..capacity, g.p.m.....						428,258	
78	Pumping lift, from all sources.....1940..average, feet.....	19	17			21	44	49
79	.....1930..average, feet.....	20	17			32	56	82
80	.....1920..average, feet.....	16	14			33	38	20
81	from pumped wells.....1940..average, feet.....	17	18			17	41	51
82	from surface sources.....1940..average, feet.....	21	17			28	46	47

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

²Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — UTAH

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WORKS, 1940, 1930, AND 1920—Continued

GREAT SALT LAKE—Continued				SEVIER LAKE								COLORADO RIVER				
Jordan River—Continued				Sevier River								Total	Direct	Dolores River		
Utah Lake				Total	Upper Sevier River						Lower Sevier River					
Total	Direct	Spanish Fork System (11)	Provo River System (12)		Total	Direct	East Fork Sevier River			San Pitch River (16)						
							Total	Direct	Otter Creek (15)							
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(20)							
303	23	64	216	351	285	174	33	17	16	78	66	616	62	17	1	
551	954	979	381	769	660	578	346	333	359	978	1,240	661	90	158	2	
248	40	82	126	310	281	143	36	23	13	102	29	617	45	18	3	
.....	.....	.....	.....	184	.....	.....	.....	.....	12	49	.....	345	.....	.....	4
.....	.....	.....	.....	95	.....	.....	.....	.....	2	26	.....	710	.....	.....	5
145	29	56	58	37	30	14	6	3	3	10	7	80	2	.....	6
31	.....	5	26	40	39	10	3	2	1	26	1	64	2	.....	7
49	10	12	27	132	115	55	19	12	7	41	17	351	38	17	8	
23	1	7	15	101	97	64	8	6	2	25	4	122	3	1	9	
1,046.0	90.1	470.8	485.1	1,306.7	954.7	510.0	90.0	42.0	48.0	354.7	352.0	3,163.4	54.5	43.1	10	
.....	.....	.....	.....	1,487	.....	.....	.....	.....	38	404	.....	2,812	15	.....	11
.....	.....	.....	.....	2,586	.....	.....	.....	.....	51	773	.....	3,396	156	.....	12
964	81	407	476	1,297	951	507	90	42	48	354	346	3,142	54	43	13	
82.0	9.1	63.8	9.1	9.7	3.7	3.0	.....	.....	.....	0.7	6.0	21.4	0.5	0.1	14
5,100	1,416	1,438	2,246	6,760	4,449	2,433	368	208	160	1,648	2,311	11,646	198	171	15	
.....	.....	.....	.....	6,088	.....	.....	.....	.....	534	1,091	.....	7,873	38	.....	16
.....	.....	.....	.....	7,762	.....	.....	.....	.....	86	970	.....	6,026	286	.....	17
21.6	9.9	4.5	7.2	15.4	10.3	4.9	3.0	.....	3.0	2.4	5.1	14.5	2.6	.....	18
.....	.....	.....	.....	5.1	.....	.....	.....	.....	.....	0.1	.....	3.9	.....	.....	19
.....	.....	.....	.....	9.0	.....	.....	.....	.....	.....	3.4	.....	12.9	0.6	.....	20
9.0	4.5	1.5	3.0	0.2	0.2	.....	.....	.....	.....	0.2	.....	0.1	.....	.....	21
7.5	3.4	1.3	2.8	8.7	3.7	2.7	.....	.....	.....	1.0	5.0	11.1	2.5	.....	22
2.0	0.5	0.2	1.3	5.6	5.5	2.2	.....	.....	.....	0.3	0.1	2.8	0.1	.....	23
3.1	1.5	1.5	0.1	0.9	0.9	.....	.....	.....	.....	0.9	.....	0.5	.....	.....	24
51	4	10	37	76	42	18	5	.....	4	19	34	119	3	3	25
.....	.....	.....	.....	51	.....	.....	.....	.....	.....	14	.....	64	.....	.....	26
.....	.....	.....	.....	50	.....	.....	.....	.....	.....	20	.....	145	5	.....	27
14	1	1	12	3	1	1	.....	.....	.....	.....	.....	4	.....	.....	28
36	3	8	25	73	41	17	5	1	4	19	2	110	3	3	29	
1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	30
48	3	9	36	83	44	18	5	1	4	21	39	120	4	2	31	
9	1	2	6	51	18	7	1	.....	1	10	33	56	4	1	32
31	.....	7	24	13	13	4	3	.....	3	6	.....	31	.....	1	33
54	2	.....	6	19	13	7	1	.....	.....	5	6	33	.....	.....	34
876,541	860,020	1,359	15,162	465,872	188,006	99,350	57,391	(⁴)	1	4,801	31,265	277,866	419,549	90	(⁴)	35
.....	47	3	14	75	36
.....	511,227	63,800	7,508	125,536	37
368	10	64	294	362	303	290	13	59	38
.....	106	1	2	39
.....	258	6	16	6	40
48,103	918	4,098	43,087	17,604	9,710	9,105	605	7,894	41
.....	10,423	900	70	42
.....	38,863	112	3	196	43
10	2	8	14	12	8	4	2	44
.....	3	1	1	45
.....	3	1	4	46
4,860	(⁴)	3,860	7,069	6,389	3,929	2,460	(⁴)	(⁴)	47
.....	2,170	6,389	1,000	1,360	48
.....	178	150	2,850	49
27	14	.....	13	16	13	9	.....	.....	.....	4	3	47	11	.....	50
4,262	4,000	.....	262	267	232	137	.....	.....	.....	95	35	1,803	235	.....	51
.....	.....	.....	.....	122	.....	.....	.....	.....	.....	25	.....	1,086	55	.....	52
.....	.....	.....	.....	117	.....	.....	.....	.....	.....	5	.....	789	212	.....	53
24	14	.....	10	5	5	3	.....	.....	.....	2	.....	12	3	.....	54
4,225	4,000	.....	225	95	95	65	.....	.....	.....	(⁴)	.....	42	.....	.....	55
3	.....	.....	3	9	7	5	.....	.....	.....	2	.....	35	10	.....	56
37	.....	.....	37	146	136	71	.....	.....	.....	(⁴)	(⁴)	629	215	.....	57
.....	.....	.....	.....	2	1	1	.....	.....	.....	.....	.....	9	1	.....	58
.....	.....	.....	.....	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	(⁴)	1,132	(⁴)	.....	59
27	14	.....	13	16	13	9	.....	.....	.....	4	3	44	11	.....	60
.....	.....	.....	.....	5	.....	.....	.....	.....	.....	1	.....	13	3	.....	61
.....	.....	.....	.....	10	.....	.....	.....	.....	.....	1	.....	26	10	.....	62
504,168	488,250	.....	15,918	19,068	12,988	9,628	.....	.....	.....	3,360	6,080	68,845	19,200	.....	63
.....	.....	.....	.....	5,770	.....	.....	.....	.....	.....	1,100	.....	19,320	6,350	.....	64
.....	.....	.....	.....	18,318	.....	.....	.....	.....	.....	450	.....	58,027	17,812	.....	65
15	8	.....	7	7	6	6	.....	.....	.....	.....	.....	39	11	.....	66
73,480	60,750	.....	12,730	7,525	7,225	7,225	.....	.....	.....	.....	(⁴)	58,570	19,200	.....	67
4,899	7,594	.....	1,619	1,075	1,204	1,204	.....	.....	.....	.....	(⁴)	1,502	1,745	.....	68
3	.....	.....	3	7	6	2	.....	.....	.....	.....	.....	2	.....	.....	69
2,350	.....	.....	2,350	11,160	5,760	(⁴)	.....	.....	.....	3,360	(⁴)	(⁴)	.....	.....	70
783	.....	.....	783	1,594	960	(⁴)	.....	.....	.....	840	(⁴)	(⁴)	.....	.....	71
(⁴)	.....	.....	1	1	1	1	.....	.....	.....	.....	.....	1	.....	.....	72
(⁴)	.....	.....	(⁴)	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	.....	(⁴)	.....	.....	73
8	6	.....	2	1	.....	(⁴)	.....	.....	.....	.....	.....	(⁴)	.....	.....	74
428,258	427,500	.....	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....	(⁴)	(⁴)	2	.....	75
.....	.....	.....	.....	31	31	35	.....	.....	.....	50	16	20	15	.....	76
.....	.....	.....	.....	27	.....	.....	.....	.....	.....	40	.....	25	15	.....	77
.....	.....	.....	.....	30	.....	.....	.....	.....	.....	4	.....	31	19	.....	78
.....	.....	.....	.....	40	46	41	.....	.....	.....	50	(⁴)	(⁴)	.....	.....	79
.....	.....	.....	.....	13	14	14	.....	.....	.....	.....	.....	19	15	.....	80

³Total capacity of all reservoirs regardless of size.
⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — UTAH

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued							
	Green River							
	Total	Direct ¹ (21)	Henry's Fork (24)	Brush Creek (25)	Ashley Creek (26)	Duchesne River (27)	Willow Creek (28)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	342	73	12	11	19	138	18
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	945	218	533	473	2,144	1,279	152
3	Diversion dams.....1940..total number.....	345	57	11	11	18	159	21
4	.....1930..total number.....	167	2			8	86	
5	.....1920..total number.....	414	2			109	156	
6	(a) Concrete and masonry.....1940..number.....	48	4	1		5	17	
7	(b) Timber.....1940..number.....	57	10		2	3	36	4
8	(c) Earth and rock.....1940..number.....	180	36	10	6	4	87	5
9	(d) Other, mixed, and not reported.....1940..number.....	60	7		3	6	19	12
10	Main canals and laterals.....1940..total length, miles.....	2,593.9	154.8	27.0	26.2	85.0	1,871.0	48.0
11	.....1930..total length, miles.....	2,157	20			78	1,583	
12	.....1920..total length, miles.....	2,451	29			90	1,314	
13	(a) Earth.....1940..length, miles.....	2,588	152	27	26	85	1,869	48
14	(b) Lined.....1940..length, miles.....	5.9	2.8		0.2		2.0	
15	.....1940..capacity, c.f.s. ³	9,818	370	113	114	1,002	4,982	65
16	.....1930..capacity, c.f.s. ³	6,264	71			646	4,066	
17	.....1920..capacity, c.f.s. ³	4,047	71			113	2,416	
18	Pipe lines ⁴.....1940..total length, miles.....	3.8	1.4		0.2	0.2	1.3	
19	.....1930..total length, miles.....	0.7					0.6	
20	.....1920..total length, miles.....	0.9	0.3					
21	(a) Concrete.....1940..length, miles.....							
22	(b) Metal.....1940..length, miles.....	1.4	0.7				0.3	
23	(c) Wood-stave.....1940..length, miles.....	2.3	0.7		0.2	0.2	1.0	
24	(d) Other.....1940..length, miles.....	0.2						
25	Storage dams.....1940..total number.....	56	7	3	1	2	30	
26	.....1930..total number.....	28					14	
27	.....1920..total number.....	11					8	
28	(a) Concrete and masonry.....1940..number.....							
29	(b) Earth and rock.....1940..number.....	52	6	3	1	2	30	
30	(c) Other, mixed, and not reported.....1940..number.....	4	1					
31	Reservoirs.....1940..total number.....	54	6	3	1	2	30	
32	(a) 1-99 acre-feet capacity.....1940..number.....	6	2				2	
33	(b) 100-999 acre-feet capacity.....1940..number.....	18	3			1	7	
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	30	1	3	1	1	21	
35	.....1940..total capacity, ac.-ft. ⁶	401,140	2,565	6,900	(?)	(?)	346,851	
36	.....1930..total capacity, ac.-ft. ⁶	39					24	
37	.....1920..total capacity, ac.-ft. ⁶	112,587					39,745	
38	Wells, flowing.....1940..number.....							
39	.....1930..number.....	1					1	
40	.....1920..number.....							
41	.....1940..yield, g.p.m.....							
42	.....1930..yield, g.p.m.....	30					30	
43	.....1920..yield, g.p.m.....							
44	Wells, pumped.....1940..number.....							
45	.....1930..number.....							
46	.....1920..number.....	1	1					
47	.....1940..yield, g.p.m.....							
48	.....1930..yield, g.p.m.....							
49	.....1920..yield, g.p.m.....	1,350	1,350					
50	Pumping plants.....1940..total number.....	30	27				5	1
51	.....1930..total number.....	8	7					
52	Prime movers.....1940..capacity, hp.....	1,525	1,420				10	
53	.....1930..capacity, hp.....	991	951					
54	.....1920..capacity, hp.....	543	537					
55	(a) Electric.....1940..number.....	1	1					
56	.....1940..capacity, hp.....	(?)	(?)					
57	(b) Internal-combustion.....1940..number.....	23	20				1	
58	.....1940..capacity, hp.....	408	303				10	
59	(c) Other.....1940..number.....	6	6					
60	.....1940..capacity, hp.....	1,102	1,102					
61	Pumps.....1940..total number.....	28	25				1	
62	.....1930..number.....	9	8					
63	.....1920..number.....	13	10				2	
64	.....1940..capacity, g.p.m.....	48,550	42,450				1,800	
65	.....1930..capacity, g.p.m.....	11,470	10,120					
66	.....1920..capacity, g.p.m.....	39,315	11,580				27,000	
67	(a) Centrifugal.....1940..number.....	28	24					
68	.....1940..capacity, g.p.m.....	38,750	34,450					
69	.....1940..average capacity, g.p.m.....	1,490	1,435					
70	(b) Turbine.....1940..number.....	1	1					
71	.....1940..capacity, g.p.m.....	(?)	(?)					
72	.....1940..average capacity, g.p.m.....	(?)	(?)					
73	(c) Flunger.....1940..number.....							
74	.....1940..capacity, g.p.m.....							
75	.....1940..average capacity, g.p.m.....							
76	(d) Other.....1940..number.....	5					1	
77	.....1940..capacity, g.p.m.....	1,800					1,800	
78	Pumping lift, from all sources.....1940..average, feet.....	19	19				8	
79	.....1930..average, feet.....	22	24					
80	.....1920..average, feet.....	29	26				70	
81	from pumped wells.....1940..average, feet.....							
82	from surface sources.....1940..average, feet.....	19	19				8	

¹Data for 2 enterprises in White River Drainage Basin (28) (number refers to separate map) are included with Green River "Direct" Drainage Basin (21).
²Data for 2 enterprises in San Juan River "Direct" Drainage Basin (35) (number refers to separate map) are included in San Juan River Drainage Basin total.
³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁴Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — UTAH

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WORKS, 1940, 1930, AND 1920—Continued

COLORADO RIVER—Continued													
Green River—Continued		Fremont River				Escalante River (34)	San Juan River			Paria River (40)	Kanab Creek (41)	Virgin River	
Price River (30)	San Rafael River (31)	Total	Direct (32)	Muddy River (33)	Total ²		Montezuma Creek (37)	Cottonwood Wash (38)	Total			Direct (42)	
44	27	24	18	6	14	15	8	5	14	15	113	70	1
373	2,363	1,136	930	1,756	239	540	306	1,042	117	141	290	350	2
35	33	26	20	6	17	22	13	7	16	8	120	72	3
21	13	31	.....	.....	.....	9	.....	.....	.....	.....	118	.....	4
13	11	148	.....	.....	.....	16	.....	.....	.....	.....	85	.....	5
8	13	7	5	2	1	7	3	2	.....	.....	15	.....	6
.....	2	2	2	.....	.....	.....	.....	.....	.....	.....	3	.....	7
19	13	9	6	3	10	7	5	2	14	7	69	41	8
8	5	8	7	1	6	8	5	3	2	1	33	20	9
147.9	234.0	109.2	81.2	28.0	52.0	52.0	18.0	25.0	23.3	20.5	214.9	127.4	10
126	155	127	.....	.....	.....	95	.....	.....	.....	.....	303	.....	11
155	740	186	.....	.....	.....	122	.....	.....	.....	.....	349	.....	12
147	234	109	81	28	52	52	18	2	23	20	201	115	13
0.9	.....	0.2	0.2	.....	.....	.....	.....	.....	0.3	0.5	13.9	12.4	14
571	2,621	557	276	281	50	162	50	88	41	48	601	385	15
353	930	477	.....	.....	.....	200	.....	.....	.....	.....	732	.....	16
636	591	548	.....	.....	.....	332	.....	.....	.....	.....	645	.....	17
0.8	.....	0.4	0.4	.....	.....	.....	.....	.....	.....	.....	7.6	6.2	18
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.1	.....	19
0.6	.....	1.0	.....	.....	.....	7.0	.....	.....	.....	.....	3.2	.....	20
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.1	0.1	21
0.4	.....	0.2	0.2	.....	.....	.....	.....	.....	.....	.....	7.0	5.9	22
0.2	.....	0.2	0.2	.....	.....	.....	.....	.....	.....	.....	0.2	0.2	23
0.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.3	.....	24
10	3	16	10	6	3	1	.....	.....	3	9	25	15	25
7	4	10	.....	.....	.....	.....	.....	.....	.....	.....	23	.....	26
1	2	117	.....	.....	.....	4	.....	.....	.....	.....	7	.....	27
.....	.....	3	3	.....	.....	.....	.....	.....	.....	.....	1	.....	28
7	3	12	6	6	3	1	.....	.....	3	9	24	14	29
3	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
10	2	18	12	6	3	5	.....	.....	4	9	25	14	31
2	.....	8	4	4	.....	1	.....	.....	4	9	23	13	32
5	2	7	5	2	3	.....	.....	.....	.....	.....	2	1	33
3	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	34
34,736	(?)	15,353	14,468	865	1,450	3	.....	.....	18	133	903	190	35
6	4	11	.....	.....	.....	.....	.....	.....	.....	.....	21	.....	36
50,685	17,007	4,376	.....	.....	.....	.....	.....	.....	.....	.....	1,761	.....	37
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	39
.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	4	.....	40
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	42
.....	.....	.....	.....	.....	.....	90	.....	.....	.....	.....	106	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,380	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,500	.....	49
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	50
(?)	(?)	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	51
40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43	.....	52
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	55
(?)	(?)	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	.....	56
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	57
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	(?)	58
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	59
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	60
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	61
(?)	(?)	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	62
1,350	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,095	1,125	63
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,500	.....	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	900	.....	65
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
(?)	(?)	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	67
(?)	(?)	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	(?)	68
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	69
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	.....	70
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	.....	71
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	72
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	(?)	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	(?)	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	75
(?)	(?)	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	(?)	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34	.....	77
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	82	.....	78
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50	.....	79
(?)	(?)	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	.....	80
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	.....	81
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	82

⁵Data for less than 3 enterprises shown with permission of the enterprise involved.
⁶Total capacity of all reservoirs regardless of size.
⁷Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — UTAH

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Con.		COLUMBIA RIVER			INDEPENDENT BASINS		
	Virgin River—Continued		Snake River			Grouse Creek (48)	Deep Creek (Tooele County) (49)	
	Ash Creek (43)	Santa Clara River (44)	Total	Raft River (45)	Goose Creek (46)			
	(43)	(44)		(45)	(46)			
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
1	Enterprises.....1940..number.....	19	24	11	7	4	10	5
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	136	241	300	407	112	221	318
3	Diversion dams.....1940..total number.....	20	28	33	31	2	9	13
4	.....1930..total number.....			58	44	14	12	1
5	.....1920..total number.....						14	3
6	(a) Concrete and masonry.....1940..number.....	3	4	4	2	2		
7	(b) Timber.....1940..number.....			7	7			11
8	(c) Earth and rock.....1940..number.....	14	14	1	1		8	2
9	(d) Other, mixed, and not reported.....1940..number.....	3	10	21	21		1	
10	Main canals and laterals.....1940..total length, miles.....	31.5	56.0	18.0	18.0		23.0	32.0
11	.....1930..total length, miles.....			33	21	12	35	37
12	.....1920..total length, miles.....						45	36
13	(a) Earth.....1940..length, miles.....	30	56	18	18		23	32
14	(b) Lined.....1940..length, miles.....	1.5						
15	.....1940..capacity, c.f.s. ¹	81	135	155	130	25	37	51
16	.....1930..capacity, c.f.s. ¹			43	34	9	26	37
17	.....1920..capacity, c.f.s. ¹						35	50
18	Pipe lines ².....1940..total length, miles.....		1.4					
19	.....1930..total length, miles.....			0.7	0.7			
20	.....1920..total length, miles.....							
21	(a) Concrete.....1940..length, miles.....							
22	(b) Metal.....1940..length, miles.....		1.1					
23	(c) Wood-stave.....1940..length, miles.....							
24	(d) Other.....1940..length, miles.....		0.3					
25	Storage dams.....1940..total number.....	2	8	3	3		2	1
26	.....1930..total number.....			2	1	1	2	1
27	.....1920..total number.....						3	
28	(a) Concrete and masonry.....1940..number.....							
29	(b) Earth and rock.....1940..number.....	2	8	1	1		2	1
30	(c) Other, mixed, and not reported.....1940..number.....			2	2			
31	Reservoirs.....1940..total number.....	2	9	3	3		2	1
32	(a) 1-99 acre-feet capacity.....1940..number.....	2	8	2	2		2	1
33	(b) 100-999 acre-feet capacity.....1940..number.....		1	1	1			
34	(c) 1,000 and over acre-feet capacity.....1940..number.....							
35	.....1940..total capacity, ac.-ft. ³	(⁴)	708	315	315		(⁴)	(⁴)
36	.....1930..total capacity, ac.-ft. ³			3	3		2	2
37	.....1920..total capacity, ac.-ft. ³			367	367		462	1
38	Wells, flowing.....1940..number.....						1	
39	.....1930..number.....							
40	.....1920..number.....							
41	.....1940..yield, g.p.m.....						(⁴)	
42	.....1930..yield, g.p.m.....							
43	.....1920..yield, g.p.m.....							
44	Wells, pumped.....1940..number.....	1	1					
45	.....1930..number.....							
46	.....1920..number.....						1	
47	.....1940..yield, g.p.m.....	(⁴)	(⁴)					
48	.....1930..yield, g.p.m.....							
49	.....1920..yield, g.p.m.....						265	
50	Pumping plants.....1940..total number.....	1	1					
51	.....1930..total number.....							
52	Prime movers.....1940..capacity, hp.....	(⁴)	(⁴)					
53	.....1930..capacity, hp.....							
54	.....1920..capacity, hp.....						6	
55	(a) Electric.....1940..number.....	(⁴)	1	(⁴)	1			
56	.....1940..capacity, hp.....							
57	(b) Internal-combustion.....1940..number.....							
58	.....1940..capacity, hp.....							
59	(c) Other.....1940..number.....							
60	.....1940..capacity, hp.....							
61	Pumps.....1940..total number.....	1	1					
62	.....1930..number.....							
63	.....1920..number.....						3	
64	.....1940..capacity, g.p.m.....	(⁴)	(⁴)					
65	.....1930..capacity, g.p.m.....							
66	.....1920..capacity, g.p.m.....						265	
67	(a) Centrifugal.....1940..number.....			1				
68	.....1940..capacity, g.p.m.....		(⁴)					
69	.....1940..average capacity, g.p.m.....		(⁴)					
70	(b) Turbine.....1940..number.....		1					
71	.....1940..capacity, g.p.m.....	(⁴)						
72	.....1940..average capacity, g.p.m.....	(⁴)						
73	(c) Plunger.....1940..number.....							
74	.....1940..capacity, g.p.m.....							
75	.....1940..average capacity, g.p.m.....							
76	(d) Other.....1940..number.....							
77	.....1940..capacity, g.p.m.....							
78	Pumping lift, from all sources.....1940..average, feet.....	(⁴)	(⁴)					
79	.....1930..average, feet.....							
80	.....1920..average, feet.....						240	
81	from pumped wells.....1940..average, feet.....	(⁴)	(⁴)					
82	from surface sources.....1940..average, feet.....							

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³Total capacity of all reservoirs regardless of size. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

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DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920—Continued

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	INDEPENDENT BASINS—Continued					
	Snake Valley	Beaver River	Little Salt Lake	Coal Creek	Escalante Desert	Shoal Creek
	(50)	(51)	(52)	(53)	(54)	(55)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1						
1 Enterprises.....1940..number.....	35	98	40	45	54	12
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	347	260	234	387	91	264
3 Diversion dams.....1940..total number.....	42	53	9	14	27	17
4 .....1930..total number.....	.....	57	.....	14	.....	.....
5 .....1920..total number.....	.....	36	.....	22	.....	.....
6 (a) Concrete and masonry.....1940..number.....	13	10	4	3	.....	11
7 (b) Timber.....1940..number.....	8	15	.....	1	.....	4
8 (c) Earth and rock.....1940..number.....	17	21	5	8	7	2
9 (d) Other, mixed, and not reported.....1940..number.....	4	7	.....	2	20	2
10 Main canals and laterals.....1940..total length, miles.....	62.0	99.4	70.0	66.4	48.0	23.0
11 .....1930..total length, miles.....	.....	238	.....	92	.....	.....
12 .....1920..total length, miles.....	.....	439	.....	199	.....	.....
13 (a) Earth.....1940..length, miles.....	52	98	70	66	48	23
14 (b) Lined.....1940..length, miles.....	10.0	1.4	.....	0.4	.....	.....
15 .....1940..capacity, c.f.s. ¹	147	1,198	93	260	121	65
16 .....1930..capacity, c.f.s. ¹.....	.....	794	.....	467	.....	.....
17 .....1920..capacity, c.f.s. ¹.....	.....	775	.....	1,158	.....	.....
18 Pipe lines ².....1940..total length, miles.....	.....	0.3	0.2	.....	1.0	1.3
19 .....1930..total length, miles.....	.....	1.7	.....	.....	.....	.....
20 .....1920..total length, miles.....	.....	1.5	.....	0.7	.....	.....
21 (a) Concrete.....1940..length, miles.....	.....	0.3	.....	.....	.....	.....
22 (b) Metal.....1940..length, miles.....	.....	.....	0.2	.....	.....	1.1
23 (c) Wood-stave.....1940..length, miles.....	.....	.....	.....	.....	.....	0.2
24 (d) Other.....1940..length, miles.....	.....	.....	.....	.....	1.0	.....
25 Storage dams.....1940..total number.....	2	8	3	.....	6	4
26 .....1930..total number.....	.....	7	.....	1	.....	.....
27 .....1920..total number.....	.....	14	.....	2	.....	.....
28 (a) Concrete and masonry.....1940..number.....	.....	.....	.....	.....	.....	3
29 (b) Earth and rock.....1940..number.....	2	7	3	.....	6	1
30 (c) Other, mixed, and not reported.....1940..number.....	.....	1	.....	.....	.....	.....
31 Reservoirs.....1940..total number.....	2	9	36	3	8	5
32 (a) 1-99 acre-feet capacity.....1940..number.....	1	1	34	3	7	2
33 (b) 100-999 acre-feet capacity.....1940..number.....	.....	7	2	.....	.....	.....
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	1	1	.....	.....	1	3
35 .....1940..total capacity, ac.-ft. ³	(⁴)	28,296	1,639	7	10,029	12,366
36 .....1930..total capacity, ac.-ft.....	.....	5	.....	4	.....	.....
37 .....1920..total capacity, ac.-ft.....	.....	31,905	.....	50	.....	.....
38 Wells, flowing.....1940..number.....	.....	1	52	.....	1	.....
39 .....1930..number.....	.....	9	.....	1	.....	.....
40 .....1920..number.....	.....	1	.....	135	.....	.....
41 .....1940..yield, g.p.m.....	.....	(⁴)	1,548	.....	(⁴)	.....
42 .....1930..yield, g.p.m.....	.....	81	.....	35	.....	.....
43 .....1920..yield, g.p.m.....	.....	.....	.....	9,955	.....	.....
44 Wells, pumped.....1940..number.....	.....	82	30	36	34	2
45 .....1930..number.....	.....	90	.....	13	.....	.....
46 .....1920..number.....	.....	11	.....	41	.....	.....
47 .....1940..yield, g.p.m.....	.....	34,108	12,208	16,030	22,028	(⁴)
48 .....1930..yield, g.p.m.....	.....	32,962	.....	6,969	.....	.....
49 .....1920..yield, g.p.m.....	.....	3,610	.....	10,500	.....	.....
50 Pumping plants.....1940..total number.....	.....	83	31	36	34	2
51 .....1930..total number.....	.....	89	.....	12	.....	.....
52 Prime movers.....1940..capacity, hp.....	.....	509	362	521	575	(⁴)
53 .....1930..capacity, hp.....	.....	528	.....	179	.....	.....
54 .....1920..capacity, hp.....	.....	91	.....	270	.....	.....
55 (a) Electric.....1940..number.....	.....	76	27	31	9	1
56 .....1940..capacity, hp.....	.....	458	312	423	145	(⁴)
57 (b) Internal-combustion.....1940..number.....	.....	7	4	3	24	1
58 .....1940..capacity, hp.....	.....	51	50	73	425	(⁴)
59 (c) Other.....1940..number.....	.....	.....	.....	2	1	.....
60 .....1940..capacity, hp.....	.....	.....	.....	(⁴)	(⁴)	.....
61 Pumps.....1940..total number.....	.....	83	30	36	37	2
62 .....1930..number.....	.....	89	.....	12	.....	.....
63 .....1920..number.....	.....	9	.....	24	.....	.....
64 .....1940..capacity, g.p.m.....	.....	34,308	13,003	18,220	23,978	(⁴)
65 .....1930..capacity, g.p.m.....	.....	33,412	.....	7,139	.....	.....
66 .....1920..capacity, g.p.m.....	.....	4,010	.....	10,400	.....	.....
67 (a) Centrifugal.....1940..number.....	.....	76	4	15	24	1
68 .....1940..capacity, g.p.m.....	.....	30,807	1,700	7,210	15,335	(⁴)
69 (b) Turbine.....1940..average capacity, g.p.m.....	.....	405	425	481	639	(⁴)
70 .....1940..number.....	.....	6	26	21	12	1
71 .....1940..capacity, g.p.m.....	.....	3,220	11,303	11,010	8,595	(⁴)
72 .....1940..average capacity, g.p.m.....	.....	537	435	524	716	(⁴)
73 (c) Plunger.....1940..number.....	.....	.....	.....	.....	1	.....
74 .....1940..capacity, g.p.m.....	.....	.....	.....	.....	(⁴)	.....
75 .....1940..average capacity, g.p.m.....	.....	.....	.....	.....	(⁴)	.....
76 (d) Other.....1940..number.....	.....	1	.....	.....	.....	.....
77 .....1940..capacity, g.p.m.....	.....	(⁴)	.....	.....	.....	.....
78 Pumping lift, from all sources.....1940..average, feet.....	.....	23	46	46	37	(⁴)
79 .....1930..average, feet.....	.....	28	.....	38	.....	.....
80 .....1920..average, feet.....	.....	21	.....	47	.....	.....
81 from pumped wells.....1940..average, feet.....	.....	23	46	46	37	(⁴)
82 from surface sources.....1940..average, feet.....	.....	.....	.....	.....	.....	.....

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ²Includes siphons and farm pipe lines reported. ³Total capacity of all reservoirs regardless of size. ⁴Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - UTAH

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

ITEM (For definitions and explanations, see text)	STATE TOTAL	Beaver		Box Elder		Cache		
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*								
1 All farms.....1940..number.....	25,411	329		1,805		2,253		
2 ..1930..number.....	27,159	395		1,977		2,372		
3 Irrigated farms.....1940..number.....	22,612	309		1,543		1,955		
4 ..1930..number.....	23,847	366		1,623		1,992		
5 Increase or decrease (-), 1930-1940.....percent.....	-5.2	-15.6		-4.9		-1.9		
Operated by—								
6 (a) Owners and managers.....1940..number.....	19,583	243		1,323		1,778		
7 ..1930..number.....	20,886	313		1,369		1,805		
8 (b) Tenants.....1940..number.....	3,029	86		220		177		
9 ..1930..number.....	2,961	53		234		187		
10 Land in all farms.....1940..acres.....	7,302,007	76,886		688,677		329,962		
11 ..1930..acres.....	4,958,058	41,878		401,975		204,825		
12 Average per farm.....1940..acres.....	219	136		261		105		
13 (a) Operated by owners and managers.....1940..acres.....	4,647,567	34,757		381,243		192,933		
14 ..1930..acres.....	237	143		288		108		
15 (b) Operated by tenants.....1940..acres.....	310,491	7,121		20,732		11,992		
16 ..1930..acres.....	103	108		94		68		
17 Approximate land area.....1939..acres.....	52,701,440	1,655,680		3,580,160		752,000		
IRRIGATED AND IRRIGABLE AREAS								
18 Area irrigated.....1939..acres.....	1,176,116	20,584		73,406		82,160		
19 (a) Cropland harvested.....1939..acres.....	980,881	17,114		70,610		70,228		
20 (b) Crop failure.....1939..acres.....	38,487	754		378		94		
21 (c) Pasture.....1939..acres.....	156,748	2,716		2,418		11,838		
22 Area irrigated.....1929..acres.....	1,324,125	25,291		76,324		94,952		
23 ..1919..acres.....	1,371,651	28,103		86,734		94,705		
24 Increase or decrease (-), 1929-1939.....percent.....	-11.2	-18.6		-3.8		-13.5		
25 Irrigable area in enterprises.....1940..acres.....	1,432,533	26,736		85,850		87,333		
26 ..1930..acres.....	1,739,869	33,260		103,008		109,861		
27 ..1920 ¹ ..acres.....	2,359,244	52,180		148,465		100,507		
28 Excess of irrigable area over the area irrigated.....1940..acres.....	256,417	6,152		12,444		5,173		
29 ..1930..acres.....	415,744	7,969		26,684		14,909		
30 Area works were capable of supplying with water.....1940..acres.....	1,957,714	25,943		83,335		84,335		
31 ..1930..acres.....	1,542,475	31,132		81,266		105,605		
32 ..1920 ¹ ..acres.....	1,700,550	45,829		100,633		98,619		
33 Increase or decrease (-), 1930-1940.....percent.....	-12.0	-18.0		2.5		-20.1		
34 Excess, capability of works over area irrigated.....1940..acres.....	181,598	4,959		9,929		2,235		
35 ..1930..acres.....	218,350	5,841		4,942		10,653		
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	23.7	49.2		18.3		40.1		
37 ..1929..percent.....	32.0	40.3		20.9		42.0		
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	86.6	80.6		88.1		97.4		
39 ..1929..percent.....	85.8	81.2		93.9		89.9		
CAPITAL INVESTED TO JANUARY 1								
40 Total investment in all enterprises.....1940..dollars.....	41,896,532	1,062,866		5,180,073		2,438,380		
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	39,590,175	878,217		4,259,395		2,406,891		
42 (b) Investment in water rights (reported).....1940..dollars.....	2,306,357	184,649		920,678		31,489		
43 Total investment in all enterprises.....1930..dollars.....	35,669,819	793,337		3,483,384		1,479,508		
44 ..1920 ¹ ..dollars.....	32,037,351	831,344		1,806,863		1,436,207		
45 Increase or decrease (-), 1930-1940.....percent.....	17.5	34.0		48.7		64.8		
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	30.86	41.61		62.16		28.89		
47 ..1930..dollars.....	23.13	25.48		42.86		14.01		
48 ..1920 ¹ ..dollars.....	18.84	18.14		17.95		14.86		
49 Average investment per acre irrigated.....1939..dollars.....	35.62	51.64		70.57		29.68		
50 Estimated final investment in existing enterprises.....1940..dollars.....	43,380,966	1,065,666		5,349,232		2,449,630		
51 ..1930..dollars.....	37,857,011	795,087		3,497,084		1,510,538		
52 ..1920 ¹ ..dollars.....	33,835,641	859,444		2,064,063		1,472,007		
53 Increase or decrease (-), 1930-1940.....percent.....	14.6	34.0		53.0		62.2		
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	30.28	39.86		62.31		28.05		
55 ..1930..dollars.....	21.76	23.90		33.95		13.75		
56 ..1920 ¹ ..dollars.....	14.34	16.47		14.08		14.65		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
	Primary		Primary		Primary		Primary	
	Enterprises	Sup.	Enterprises	Sup.	Enterprises	Sup.	Enterprises	Sup.
57 Enterprises reporting maintenance and operation.....1939..number.....	1,870	124	82	7	95	21	101	2
58 Area irrigated in these enterprises.....1939..acres.....	1,144,100	322,055	20,148	5,588	70,948	6,266	81,381	(²)
59 Cost of maintenance and operation.....1939..dollars.....	881,814	84,981	18,345	695	60,601	8,616	61,536	(²)
60 Average cost, per acre irrigated.....1939..dollars.....	0.77	0.26	0.91	0.12	0.85	1.38	0.76	(²)
61 ..1929..dollars.....	1.00	0.26	1.05	0.12	1.08	1.38	1.24	(²)
62 Total annual charges (reported) ³ 4.....1939..dollars.....	1,079,113	142,478	11,347	1,264	89,375	1,876	76,301	4,887
63 Average annual charge per acre irrigated.....1939..dollars.....	1.02	0.45	0.66	0.23	1.33	0.32	0.98	0.75
64 Area against which charges were assessed.....1939..acres.....	1,128,306	360,560	19,673	5,409	69,580	8,945	79,008	6,488
65 Average annual charge per acre assessed.....1939..dollars.....	0.96	0.40	0.58	0.23	1.28	0.21	0.97	0.75
66 Total charges collected ³.....1939..dollars.....	1,106,871	207,916	7,675	2,316	86,839	6,982	71,272	5,747
67 Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	4,329,234	9,437,183	1,500	2,085	650	1,801,975	24,531	823,000
WATER DELIVERED TO IRRIGATORS								
68 Enterprises reporting water delivered.....1939..number.....	1,874	135	74	5	93	25	83	2
69 Area irrigated in these enterprises.....1939..acres.....	1,049,365	258,047	17,638	5,541	66,672	6,457	62,965	(²)
70 Water delivered in these enterprises.....1939..acre-feet.....	2,654,225	278,665	41,115	1,319	202,931	14,013	173,071	(²)
71 Average water delivered per acre irrigated.....1939..acre-feet.....	2.5	1.1	2.3	0.2	3.0	2.2	2.7	(²)
72 Average cost of water per acre irrigated.....1939..dollars.....	1.03	0.50	1.16	0.30	1.37	0.41	1.01	(²)
DRAINAGE OF IRRIGATED LAND								
73 Enterprises reporting land drained or needing drainage.....1939..number.....	204	.....	.....	.....	10	.....	15	.....
74 Irrigable area in these enterprises.....1939..acres.....	324,771	.....	.....	.....	60,344	.....	35,721	.....
75 Irrigated area in these enterprises.....1939..acres.....	283,314	.....	.....	.....	51,765	.....	35,590	.....
76 Area for which drains have been installed.....1939..acres.....	90,657	.....	.....	.....	13,063	.....	4,585	.....
77 Additional area needing drainage.....1939..acres.....	28,418	.....	.....	.....	12,062	.....	3,140	.....

* Census of Agriculture.

¹ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

² Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

Main data table with columns for counties: Carbon, Daggett, Davis, Duchesne, Emery, Garfield, Grand, Iron. Rows include various metrics like area, capital, and maintenance costs.

Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — UTAH

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

ITEM (For definitions and explanations, see text)		Juab	Kane	Millard	Morgan	Piute	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940...number.....	395	210	967	247	315	
2	.....1930...number.....	496	200	1,243	247	229
3	Irrigated farms.....1940...number.....	305	166	903	235	210	
4	.....1930...number.....	381	167	1,186	229	219
5	Increase or decrease (-), 1930-1940.....percent.....	-19.9	-0.6	-23.9	2.6	-4.1	
6	Operated by—						
7	(a) Owners and managers.....1940...number.....	272	160	816	208	180	
8	.....1930...number.....	347	157	1,043	198	203
9	(b) Tenants.....1940...number.....	33	6	87	27	30	
10	.....1930...number.....	34	10	143	31	15
11	Land in all farms.....1940...acres.....	180,851	187,251	287,800	97,152	47,515	
12	Land in irrigated farms.....1940...acres.....	110,386	128,622	205,244	83,180	47,197	
13	Average per farm.....1940...acres.....	363	775	227	354	225	
14	(a) Operated by owners and managers.....1940...acres.....	100,075	127,909	194,872	80,339	43,877	
15	Average per farm.....1940...acres.....	368	799	239	386	244	
16	(b) Operated by tenants.....1940...acres.....	10,611	713	10,372	2,841	3,320	
	Average per farm.....1940...acres.....	322	119	119	105	111	
17	Approximate land area.....1940...acres.....	2,183,680	2,627,200	4,254,720	390,400	481,920	
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939...acres.....	17,998	3,431	72,897	9,810	15,720	
19	(a) Cropland harvested.....1939...acres.....	13,758	3,223	68,849	9,294	12,249	
20	(b) Crop failure.....1939...acres.....	2,751	44	860	76	875	
21	(c) Pasture.....1939...acres.....	1,489	164	3,188	440	2,596	
22	Area irrigated.....1929...acres.....	13,297	4,170	90,638	11,534	15,475	
23	.....1919...acres.....	10,008	4,088	137,980	12,242	8,511
24	Increase or decrease (-), 1929-1939.....percent.....	35.4	-17.7	-14.9		1.6	
25	Irrigable area in enterprises.....1940...acres.....	20,605	4,018	87,285	10,159	15,730	
26	.....1930...acres.....	25,566	6,210	125,448	12,469	17,047
27	.....1920 ¹ ...acres.....	14,707	7,114	373,925	13,809	10,938
28	Excess of irrigable area over the area irrigated.....1940...acres.....	2,607	587	14,388	349	10	
29	.....1930...acres.....	12,269	2,040	34,810	935	1,572
30	Area works were capable of supplying with water.....1940...acres.....	20,065	3,986	84,083	10,025	15,730	
31	.....1930...acres.....	18,968	5,210	123,229	11,977	16,345
32	.....1920...acres.....	12,372	4,469	209,694	13,506	10,268
33	Increase or decrease (-), 1930-1940.....percent.....	5.8	-23.5	-31.8	-16.3	-3.8	
34	Excess, capability of works over area irrigated.....1940...acres.....	2,067	555	11,186	215	10	
35	.....1930...acres.....	5,671	1,040	32,591	443	870
36	Proportion which area irrigated is of all lands in irrigated farms.....1939...percent.....	16.3	2.7	35.5	11.8	33.3	
37	.....1929...percent.....	11.3	4.4	35.3	10.8	39.1
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	89.7	86.1	86.7	97.9	99.9	
39	.....1929...percent.....	70.1	80.0	73.6	96.3	94.7
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940...dollars....	210,021	91,573	2,902,475	355,049	95,828	
41	(a) Cost of irrigation works and equipment.....1940...dollars....	197,286	90,695	2,780,280	349,925	65,588	
42	(b) Investment in water rights (reported).....1940...dollars....	12,735	878	122,195	5,124	30,240	
43	Total investment in all enterprises.....1930...dollars....	698,527	92,725	1,951,754	324,394	1,684,471	
44	.....1920...dollars....	562,687	150,188	5,148,282	147,278	253,688
45	Increase or decrease (-), 1930-1940.....percent.....	-69.9	-1.2	48.0	9.4	-94.3	
46	Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars....	10.47	22.97	34.52	35.42	6.09	
47	.....1930...dollars....	36.83	17.90	15.92	27.08	103.06
48	.....1920...dollars....	45.48	33.61	24.55	10.90	24.73
49	Average investment per acre irrigated.....1939...dollars....	11.67	26.69	39.82	36.19	6.10	
50	Estimated final investment in existing enterprises.....1940...dollars....	237,216	92,023	2,911,941	355,049	97,128	
51	.....1930...dollars....	703,239	92,725	1,969,869	331,194	1,685,476
52	.....1920...dollars....	564,667	152,968	5,210,982	147,378	255,168
53	Increase or decrease (-), 1930-1940.....percent.....	-66.3	-0.1	47.8	7.2	-94.2	
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars....	11.51	23.05	33.36	34.95	6.17	
55	.....1930...dollars....	27.51	14.93	15.70	26.56	98.87
56	.....1920 ¹ ...dollars....	38.39	21.46	13.94	10.67	23.33
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
57	Enterprises reporting maintenance and operation.....1939...number.....	34	23	53	4	22	7
58	Area irrigated in these enterprises.....1939...acres.....	15,897	3,320	71,157	51,316	9,334	8,060
59	Cost of maintenance and operation.....1939...dollars....	8,750	4,070	38,863	5,536	5,133	748
60	Average cost, per acre irrigated.....1939...dollars....	0.55	1.23	0.55	0.11	0.55	0.09
611929...dollars....	0.92	2.01	0.87	0.61
62	Total annual charges (reported) ^{4 5}.....1939...dollars....	8,272	5,047	73,001	5,460	7,814	726
63	Average annual charge per acre irrigated.....1939...dollars....	0.76	2.00	1.06	0.11	1.08	0.09
64	Area against which charges were assessed.....1939...acres.....	11,382	2,520	70,714	51,250	7,881	8,060
65	Average annual charge per acre assessed.....1939...dollars....	0.73	2.00	1.03	0.11	0.99	0.09
66	Total charges collected ⁴.....1939...dollars....	8,078	4,892	70,972	5,120	9,856
67	Indebtedness to December 31 (reported) ⁶.....1939...dollars....	7,366	183,900	18,578	220,738
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939...number.....	25	16	59	4	46	21
69	Area irrigated in these enterprises.....1939...acres.....	12,780	2,490	71,338	226	9,011	8,060
70	Water delivered in these enterprises.....1939...acre-feet....	18,239	8,110	136,255	832	30,212	6,860
71	Average water delivered per acre irrigated.....1939...acre-feet....	1.4	3.3	1.9	3.7	3.4	0.9
72	Average cost of water per acre irrigated.....1939...dollars....	0.78	2.10	1.05	1.14	1.07	0.09
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939...number.....	3
74	Irrigable area in these enterprises.....1939...acres.....	31,500
75	Irrigated area in these enterprises.....1939...acres.....	26,000
76	Area for which drains have been installed.....1939...acres.....	31,500
77	Additional area needing drainage.....1939...acres.....

*Census of Agriculture.

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

²Data for less than 3 enterprises shown with permission of the enterprise involved.

CENSUS OF IRRIGATION - UTAH

595

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued

Rich	Salt Lake	San Juan	Sanpete	Sevier	Summit	Tooele	Uintah								
249	2,515	675	1,426	959	513	368	1,123	1							
273	2,932	442	1,703	1,038	509	434	1,076	2							
234	2,050	348	1,291	933	494	261	1,047	3							
201	2,443	181	1,558	971	480	349	1,001	4							
16.4	-16.1	92.3	-17.1	-3.9	2.9	-25.2	4.6	5							
214	1,818	332	1,061	772	439	216	835	6							
165	2,135	167	1,363	849	420	318	825	7							
20	232	16	230	161	55	45	212	8							
16	308	14	195	122	60	31	176	9							
540,984	128,486	776,751	396,310	148,705	107,302	154,276	349,754	10							
492,176	101,053	294,960	315,322	119,760	104,264	86,663	185,287	11							
2,103	49	848	244	128	211	332	177	12							
488,507	86,951	290,700	283,394	107,492	93,832	75,641	160,163	13							
2,283	46	876	267	139	214	350	192	14							
3,669	14,102	4,260	31,928	12,268	10,432	11,022	25,124	15							
183	61	266	139	76	190	245	119	16							
654,080	488,960	5,045,760	1,022,080	1,236,480	1,190,400	4,423,040	2,828,800	17							
43,995	72,668	7,450	80,336	57,186	27,031	9,445	77,344	18							
34,228	64,397	5,909	66,133	50,224	23,129	7,743	43,370	19							
2,550	1,193	1,017	5,945	445	204	1,054	6,366	20							
7,217	7,138	524	8,258	6,517	3,698	648	25,508	21							
54,825	93,633	10,895	89,126	65,626	28,451	11,052	86,231	22							
42,913	102,051	13,469	90,153	68,839	32,139	9,652	80,789	23							
-19.8	-22.4	-31.6	-9.9	-12.9	-5.0	-14.5	-12.3	24							
59,905	86,656	14,244	95,924	62,985	29,807	11,129	109,008	25							
56,622	120,477	15,982	112,117	72,281	28,544	11,484	130,161	26							
50,238	176,122	40,511	127,708	81,548	34,795	17,405	147,608	27							
15,910	13,988	6,794	15,588	5,799	2,776	1,684	31,664	28							
1,797	26,844	5,087	22,991	6,655	93	432	41,930	29							
54,140	84,974	11,116	95,104	61,237	29,399	10,906	105,702	30							
56,035	113,002	15,507	97,702	67,991	28,494	11,217	115,631	31							
43,503	125,194	23,283	91,885	69,178	32,394	11,453	127,787	32							
-3.4	-24.8	-28.3	-2.7	-9.9	3.2	-2.8	-8.6	33							
10,145	12,306	3,666	14,768	4,051	2,368	1,461	28,358	34							
1,210	19,369	4,612	8,576	2,365	43	165	27,400	35							
8.9	71.9	2.5	25.5	47.8	25.9	10.9	41.7	36							
23.3	79.7	23.0	22.2	62.0	14.9	9.3	62.2	37							
81.3	85.5	67.0	84.5	93.4	91.9	86.6	73.2	38							
97.8	82.9	70.3	91.2	96.5	99.8	98.5	76.3	39							
280,698	2,277,415	226,575	1,574,262	1,414,572	525,285	171,457	1,684,488	40							
270,100	2,082,866	225,428	1,474,777	1,198,269	510,853	167,595	1,562,867	41							
10,598	194,549	1,147	99,485	216,303	14,432	3,862	21,621	42							
290,735	2,405,028	297,032	1,487,922	959,465	2,248,199	207,806	1,578,349	43							
319,225	2,096,530	259,287	1,268,433	2,083,537	229,639	136,263	1,488,111	44							
-3.5	-5.3	-21.1	5.8	47.4	-76.6	-17.5	6.7	45							
5.18	26.80	20.38	16.55	23.10	17.87	15.72	15.94	46							
5.19	21.28	18.51	15.23	14.11	78.90	18.52	13.65	47							
7.34	16.75	11.14	14.02	30.12	7.09	11.90	11.65	48							
6.38	31.34	30.41	19.60	24.74	19.43	18.15	21.78	49							
481,198	2,325,545	292,830	1,577,762	1,417,982	538,670	178,957	1,900,928	50							
291,785	2,450,328	290,032	1,553,222	962,465	3,373,977	207,806	1,845,224	51							
319,225	2,154,030	319,162	1,346,933	2,206,437	242,839	136,263	1,711,468	52							
64.9	-5.1	1.0	1.6	47.3	-84.0	-13.9	3.0	53							
8.03	26.84	20.56	16.45	22.51	18.07	16.08	17.44	54							
5.15	20.34	18.15	13.85	13.32	118.20	18.10	14.18	55							
6.35	12.23	7.88	10.55	27.08	6.98	7.83	11.59	56							
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.				
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises					
27	1	70	3	32	72	10	71	4	85	39	88	57			
42,355	(3)	71,654	9,017	7,435	74,066	19,758	56,352	40,631	25,389	10,705	8,371	77,065	107	58	
10,311	(3)	99,447	5,550	7,226	37,573	9,283	7,226	1,175	15,624	1,050	4,426	54,906	137	59	
0.24	(3)	1.39	0.62	0.87	0.51	0.47	0.95	0.03	0.62	0.10	0.53	0.71	1.28	60	
0.18	1.92	0.86	0.65	0.94	0.58	1.19	0.84	61	
8,720	50	113,026	5,460	11,297	48,837	9,757	65,528	1,035	17,645	4,513	5,420	53,121	5,240	62	
0.23	0.06	1.58	0.61	2.43	0.67	0.50	1.26	0.03	0.90	0.42	0.81	0.75	63	
42,829	875	74,940	8,982	7,642	80,635	20,942	54,340	40,467	19,781	10,654	6,812	85,752	17,465	64	
0.30	0.06	1.51	0.61	1.48	0.61	0.47	1.21	0.03	0.89	0.42	0.80	0.62	0.30	65	
9,314	50	141,939	500	1,400	42,081	9,796	64,476	3,000	14,942	16,776	6,215	38,918	1,697	66	
725	67,166	16,413	81,344	375,387	118,844	8,980	13,091	171,575	18,417	186,476	294,148	67	
26	1	70	3	33	55	7	100	4	85	8	31	91	4	68	
33,216	(3)	66,770	9,017	7,372	60,254	6,823	56,993	40,631	23,276	10,998	5,771	75,409	107	69	
74,551	(3)	197,241	25,917	11,268	95,791	3,710	178,293	19,529	69,378	8,691	25,147	171,132	113	70	
2.2	(3)	3.0	2.9	1.5	1.6	0.5	3.1	0.5	3.0	0.8	4.4	2.3	1.1	71	
0.29	(3)	1.55	0.62	1.86	0.55	0.31	1.20	0.03	0.69	0.42	0.47	0.76	1.26	72	
(3)	7	(3)	7	47	(3)	2	(3)	2	73
(3)	229	(3)	12,231	16,331	(3)	(3)	(3)	74	
(3)	214	(3)	9,669	15,522	(3)	(3)	(3)	75	
(3)	29	437	6,149	76	
(3)	92	(3)	164	784	(3)	(3)	77	

³Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - UTAH

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)		Utah	Wasatch	Washington	Wayne	Weber	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^a							
1	All farms.....1940..number.....	3,055	431	681	259	1,693	
2	.....1930..number.....	3,561	450	656	256	1,776
3	Irrigated farms.....1940..number.....	2,830	415	627	285	1,522	
4	.....1930..number.....	3,191	428	619	243	1,631
5	Increase or decrease (-), 1930-1940.....percent.....	-11.3	-3.0	1.3	4.9	-4.8	
6	Operated by—(a) Owners and managers.....1940..number.....	2,469	378	578	235	1,297	
7	.....1930..number.....	2,874	384	589	228	1,406
8	(b) Tenants.....1940..number.....	361	37	49	19	255	
9	.....1930..number.....	317	44	30	15	225
10	Land in all farms.....1940..acres.....	388,693	257,172	252,547	46,289	1 414,282	
11	Land in irrigated farms.....1940..acres.....	250,875	189,683	194,794	34,272	272,119	
12	Average per farm.....1940..acres.....	89	457	311	134	175	
13	(a) Operated by owners and managers.....1940..acres.....	219,177	186,519	191,829	32,669	259,207	
14	Average per farm.....1940..acres.....	89	493	332	138	200	
15	(b) Operated by tenants.....1940..acres.....	31,698	3,104	2,935	1,603	12,912	
16	Average per farm.....1940..acres.....	88	86	84	84	51	
17	Approximate land area.....1940..acres.....	1,278,720	764,160	1,552,000	1,592,960	351,360	
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres.....	119,230	24,659	16,947	16,267	47,744	
19	(a) Cropland harvested.....1939..acres.....	107,404	19,870	15,096	14,800	43,264	
20	(b) Crop failure.....1939..acres.....	1,917	456	514	595	1,524	
21	(c) Pasture.....1939..acres.....	9,909	4,333	1,337	872	2,956	
22	Area irrigated.....1929..acres.....	145,436	23,501	18,747	16,890	44,894	
23	.....1919..acres.....	138,143	22,797	20,898	16,198	56,973
24	Increase or decrease (-), 1929-1939.....percent.....	-18.0	4.9	-9.6	-3.7	6.3	
25	Irrigable area in enterprises.....1940..acres.....	130,433	35,924	34,300	17,933	56,938	
26	.....1930..acres.....	165,723	26,337	35,356	22,020	55,560
27	.....1920 ² ..acres.....	203,065	24,883	43,387	19,690	105,897
28	Excess of irrigable area over the area irrigated.....1940..acres.....	11,203	11,265	17,353	1,666	9,194	
29	.....1930..acres.....	20,287	2,836	16,609	5,130	10,666
30	Area works were capable of supplying with water.....1940..acres.....	127,854	25,674	31,876	16,739	51,321	
31	.....1930..acres.....	158,110	24,587	27,695	17,510	48,562
32	.....1920.....acres.....	173,487	22,892	29,077	18,690	70,846
33	Increase or decrease (-), 1930-1940.....percent.....	-19.1	4.5	15.1	-4.4	5.7	
34	Excess, capability of works over area irrigated.....1940..acres.....	8,624	1,015	14,929	472	3,577	
35	.....1930.....acres.....	12,674	1,066	8,948	620	3,658
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	47.5	13.0	8.7	47.5	17.5	
37	.....1929.....percent.....	44.0	26.2	16.8	48.1	25.5
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	93.3	96.0	53.2	97.2	93.0	
39	.....1929.....percent.....	92.0	95.7	67.7	96.5	92.5
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars.....	5,636,998	342,283	990,771	151,990	4,391,601	
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	5,515,880	321,134	903,508	140,335	4,363,955	
42	(b) Investment in water rights (reported).....1940..dollars.....	121,118	31,119	87,263	11,655	27,646	
43	Total investment in all enterprises.....1930..dollars.....	5,871,486	311,377	639,386	191,115	1,714,137	
44	.....1920.....dollars.....	5,880,832	410,198	576,824	453,600	1,756,652
45	Increase or decrease (-), 1930-1940.....percent.....	-4.0	9.9	55.0	-20.5	156.2	
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	44.09	13.33	31.08	9.08	85.57	
47	.....1930.....dollars.....	37.14	12.67	23.09	10.91	35.30
48	.....1920.....dollars.....	33.90	17.92	19.84	24.27	24.80
49	Average investment per acre irrigated.....1939..dollars.....	47.28	13.68	58.46	9.34	91.98	
50	Estimated final investment in existing enterprises.....1940..dollars.....	5,640,558	371,453	1,037,691	161,490	4,587,442	
51	.....1930.....dollars.....	5,874,286	336,877	723,341	203,765	1,718,207
52	.....1920.....dollars.....	6,010,982	450,198	628,774	467,200	1,764,392
53	Increase or decrease (-), 1930-1940.....percent.....	-4.0	10.3	43.5	-20.7	167.0	
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	43.24	10.34	30.25	9.01	80.57	
55	.....1930.....dollars.....	35.45	12.79	20.46	9.25	30.92
56	.....1920 ².....dollars.....	29.88	18.09	14.49	23.73	16.66
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number.....	158	19	42	3	90	17
58	Area irrigated in these enterprises.....1939..acres.....	116,078	40,760	23,491	5,186	16,465	16,252
59	Cost of maintenance and operation.....1939..dollars.....	79,608	17,606	16,859	3,119	28,317	5,780
60	Average cost, per acre irrigated.....1939..dollars.....	0.69	0.43	0.72	0.60	1.72	0.36
611929.....dollars.....	1.02	0.91	1.95	0.64
62	Total annual charges (reported) ⁴.....1939..dollars.....	107,240	47,857	16,719	6,540	32,751	5,766
63	Average annual charge per acre irrigated.....1939..dollars.....	0.96	1.18	0.83	1.26	2.15	0.39
64	Area against which charges were assessed.....1939..acres.....	113,132	40,535	20,061	5,186	17,876	14,820
65	Average annual charge per acre assessed.....1939..dollars.....	0.95	1.18	0.83	1.26	1.83	0.39
66	Total charges collected ⁴.....1939..dollars.....	141,524	37,045	15,519	7,045	30,150	6,330
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	1,713,326	497,082	23,611	43,601	30,149	800
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number.....	182	20	44	3	73	14
69	Area irrigated in these enterprises.....1939..acres.....	109,534	40,532	24,112	5,186	13,788	14,837
70	Water delivered in these enterprises.....1939..acre-feet.....	268,999	49,453	78,224	10,655	49,131	37,679
71	Average water delivered per acre irrigated.....1939..acre-feet.....	2.5	1.2	3.2	2.1	3.6	2.5
72	Average cost of water per acre irrigated.....1939..dollars.....	0.93	1.18	0.76	1.26	2.32	0.38
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number.....	47	2
74	Irrigable area in these enterprises.....1939..acres.....	54,388	(⁶)	24,749
75	Irrigated area in these enterprises.....1939..acres.....	51,885	(⁶)	20,801
76	Area for which drains have been installed.....1939..acres.....	14,279	(⁶)	4,993
77	Additional area needing drainage.....1939..acres.....	1,899	(⁶)	2,821

^aCensus of Agriculture. ¹The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county. ²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³Data for less than 3 enterprises shown with permission of the enterprises involved. ⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - UTAH

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

ITEM (For definitions and explanations, see text)	STATE TOTAL	Beaver	Box Elder	Cache	Carbon	Daggett	Davis	Duchesne
FARM VALUES, 1940^a								
1 Land and buildings, all farms.....dollars..	154,358,365	1,875,430	17,988,763	18,195,509	1,732,947	463,711	10,774,029	3,529,531
2 Land and buildings, irrigated farms.....dollars..	137,529,004	1,679,388	14,392,750	15,821,382	1,581,422	456,161	10,318,499	3,350,076
Operated by—								
3 (a) Owners and managers.....dollars..	122,156,713	1,370,918	12,915,008	14,693,488	1,295,312	421,532	8,906,635	2,875,056
4 (b) Tenants.....dollars..	15,372,291	308,470	1,477,742	1,127,894	286,110	34,629	1,411,864	475,020
5 Average, land and buildings, per farm.....dollars..	6,082.12	5,434.91	9,327.77	8,092.78	3,885.56	7,017.86	7,542.76	3,215.04
6 Average, land and buildings, per acre in farms.....dollars..	27.74	40.10	35.81	77.24	18.37	10.63	151.46	13.02
7 Buildings, irrigated farms reporting value.....number..	19,759	232	1,436	1,758	377	65	1,275	984
8 Total reported.....dollars..	32,426,080	222,605	2,866,515	4,054,414	467,010	84,550	2,820,365	841,904
9 Average, per irrigated farm reporting.....dollars..	1,641.08	959.60	1,996.18	2,306.27	1,238.75	1,300.77	2,212.07	652.34
10 Average, per acre on all irrigated farms.....dollars..	6.54	5.32	7.13	19.79	5.42	1.97	41.40	2.49
11 Buildings, nonirrigated farms reporting value.....number..	2,211	7	218	244	40	1	87	50
12 Total reported.....dollars..	3,630,811	6,035	409,995	423,960	40,990	(¹)	136,970	51,820
13 Average, per nonirrigated farm reporting.....dollars..	1,642.16	862.14	1,890.71	1,749.43	1,024.75	(¹)	1,574.37	1,036.40
14 Average, per acre on all nonirrigated farms.....dollars..	1.55	0.17	1.43	3.41	0.86	(¹)	4.84	1.21
15 Implements and machinery, irrigated farms reporting value.....number..	19,084	239	1,364	1,718	326	65	1,096	945
16 Total reported.....dollars..	10,761,946	100,726	1,277,437	1,152,012	200,294	37,525	727,379	367,285
17 Average, per irrigated farm reporting.....dollars..	563.89	421.45	936.54	670.55	614.21	577.31	663.67	388.66
18 Average, per acre, on all irrigated farms.....dollars..	2.17	2.41	3.18	5.62	2.33	0.87	10.68	1.43
19 Implements and machinery, nonirrigated farms reporting value.....number..	1,691	9	201	238	27	1	43	33
20 Total reported.....dollars..	1,179,592	1,660	422,727	199,643	16,390	(¹)	15,479	9,212
21 Average, per acre, on all nonirrigated farms.....dollars..	0.50	0.05	1.47	1.60	0.34	(¹)	0.55	0.21
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22 Enterprises.....1940.....number.....	2,430	99	142	116	52	20	135	107
23 .....1930.....number.....	2,731	147	219	162	33	9	280	70
24 .....1920.....number.....	2,403	95	220	133	40	8	187	71
25 Average size of enterprise based on irrigable area.....1940.....acres.....	590	270	605	753	246	688	290	1,232
26 .....1930.....acres.....	607	226	470	678	756	1,383	243	2,447
27 .....1920.....acres.....	982	549	661	756	835	1,325	109	3,183
28 Diversion dams.....1940.....number.....	1,973	52	100	73	51	28	35	121
29 Main canals and laterals.....1940.....length, miles.....	9,004.5	100.4	715.1	463.8	157.9	85.0	295.9	1,291.9
30 .....1930.....length, miles.....	9,237	238	352	563	153	72	219	985
31 .....1920.....length, miles.....	11,677	436	477	573	165	33	144	1,014
32 .....1940.....capacity, c.f.s. ⁴	34,579	1,196	1,455	1,329	579	142	1,030	3,530
33 .....1930.....capacity, c.f.s. ⁴	30,648	794	1,092	1,591	367	133	1,145	2,804
34 .....1920.....capacity, c.f.s. ⁴	29,447	759	1,411	1,820	546	153	114	1,588
35 Pipe lines.....1940.....length, miles.....	172.5	0.3	10.6	2.4	0.8	.....	48.2	.....
36 Storage dams.....1940.....number.....	362	8	10	5	8	3	5	19
37 .....1930.....number.....	438	9	10	5	8	3	8	20
38 .....1920.....number.....	413	5	39	6	5	2	41	21
39 .....1940.....capacity, acre-feet.....	476	7	46	6	.....	.....	72	7
40 .....1930.....capacity, acre-feet.....	3,417,704	28,286	1,426,228	16,673	30,736	500	3,350	53,377
41 .....1920.....capacity, acre-feet.....	1,093,252	31,805	5,952	1,784	50,660	6	3,719	13,745
42 Wells, flowing.....1940.....number.....	1,600,505	40,451	3,597	1,509	1,248	.....	23,135	41,871
43 .....1930.....number.....	1,216	1	27	.....	.....	.....	182	.....
44 .....1920.....number.....	1,663	9	32	58	.....	.....	642	1
45 .....1940.....yield, g.p.m.....	1,256	(¹)	82	32	.....	.....	379	.....
46 .....1930.....yield, g.p.m.....	83,838	(¹)	190	1,670	.....	.....	5,375	.....
47 .....1920.....yield, g.p.m.....	104,670	81	876	2,319	.....	.....	31,713	30
48 Wells, pumped.....1940.....number.....	96,371	.....	1,890	3,287	.....	.....	8,185	.....
49 .....1930.....number.....	286	82	52	2	.....	.....	13	.....
50 .....1920.....number.....	946	90	82	1	.....	.....	48	.....
51 .....1940.....yield, g.p.m.....	192	11	61	(¹)	.....	.....	54	.....
52 .....1930.....yield, g.p.m.....	122,528	34,108	17,986	300	.....	.....	1,846	.....
53 .....1920.....yield, g.p.m.....	120,333	32,962	20,026	.....	.....	.....	5,885	.....
54 .....1940.....yield, g.p.m.....	38,059	3,610	12,932	.....	.....	.....	4,319	.....
55 Pumping plants.....1940.....number.....	411	83	57	24	.....	.....	18	.....
56 .....1930.....number.....	429	89	94	35	1	.....	54	.....
57 .....1920.....number.....	250	9	27	.....	.....	2	50	1
58 Prime movers.....1940.....capacity, hp.....	14,216	508	825	707	.....	.....	2,932	.....
59 .....1930.....capacity, hp.....	11,381	528	944	787	40	.....	630	.....
60 .....1920.....capacity, hp.....	11,392	91	762	1,664	.....	13	179	.....
61 Pumps.....1940.....capacity, g.p.m.....	835,862	34,308	30,837	33,715	.....	.....	38,525	.....
62 .....1930.....capacity, g.p.m.....	877,942	33,412	45,576	37,099	1,350	.....	31,095	.....
63 .....1920.....capacity, g.p.m.....	783,588	4,010	25,205	76,200	.....	965	5,253	27,000
64 Pumping lift, from all sources.....1940.....average, feet.....	35	23	44	37	.....	.....	49	.....
65 .....1930.....average, feet.....	36	28	45	36	6	.....	40	.....
66 .....1920.....average, feet.....	25	21	46	.....	.....	11	9	70
67 from pumped wells.....1940.....average, feet.....	38	23	45	(¹)	.....	.....	40	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939^e								
68 Enterprises reporting pay roll.....number.....	689	15	28	58	13	2	42	24
69 Irrigated area in these enterprises.....acres.....	1,008,119	12,492	66,435	75,687	6,361	(¹)	33,837	90,957
70 Wages and salaries paid and payable.....dollars..	518,607	3,483	46,094	33,632	7,380	(¹)	25,845	56,270
71 Persons employed during week ending April 29.....number.....	2,689	35	128	354	34	(¹)	153	205

^a Census of Agriculture.
¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
² Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.
³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁵ Includes siphons and farm pipe lines reported.
⁶ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — UTAH

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,

ITEM (For definitions and explanations, see text)	Emery	Garfield	Grand	Iron	Juab	Kane	Millard	Morgan
FARM VALUES, 1940*								
1 Land and buildings, all farms.....dollars..	2,192,867	1,769,322	761,478	3,685,210	2,242,325	932,202	4,991,359	1,871,205
2 Land and buildings, irrigated farms.....dollars..	2,087,813	1,683,980	608,578	3,149,580	1,649,860	695,250	4,720,341	1,784,655
Operated by—								
3 (a) Owners and managers.....dollars..	1,779,873	1,551,425	499,178	3,035,730	1,489,740	686,700	4,325,084	1,640,286
4 (b) Tenants.....dollars..	307,940	132,555	109,400	113,850	160,120	8,550	395,257	144,369
5 Average, land and buildings, per farm.....dollars..	2,652.88	4,295.87	4,378.26	7,014.85	5,409.38	4,188.25	5,227.40	7,594.28
6 per acre in farms.....dollars..	14.67	17.37	9.93	9.31	14.91	5.41	23.00	21.46
7 Buildings, irrigated farms reporting value.....number...	560	304	130	351	226	128	676	223
8 Total reported.....dollars..	435,165	260,335	137,747	451,970	249,630	142,030	745,861	440,879
9 Average, per irrigated farm reporting.....dollars..	777.08	922.15	1,059.59	1,287.66	1,104.56	1,109.61	1,103.34	1,977.04
10 per acre on all irrigated farms.....dollars..	3.06	2.89	2.25	1.34	2.26	1.10	3.63	5.30
11 Buildings, nonirrigated farms reporting value.....number...	26	8	12	61	54	14	38	11
12 Total reported.....dollars..	15,750	3,575	13,750	60,043	42,005	17,100	45,625	15,641
13 Average, per nonirrigated farm reporting.....dollars..	605.77	446.88	1,145.83	984.31	777.87	1,221.43	1,200.66	1,421.91
14 per acre on all nonirrigated farms.....dollars..	0.77	0.20	0.18	0.53	0.60	0.29	0.55	1.12
15 Implements and machinery, irrigated farms reporting value.....number...	684	358	126	395	271	77	776	218
16 Total reported.....dollars..	293,658	173,793	60,035	284,896	149,608	26,038	520,967	158,494
17 Average, per irrigated farm reporting.....dollars..	429.32	485.43	476.47	721.26	552.06	338.16	671.35	727.04
18 per acre, on all irrigated farms.....dollars..	2.06	1.79	0.98	0.84	1.35	0.20	2.54	1.91
19 Implements and machinery, nonirrigated farms reporting value.....number...	10	9	10	65	74	10	41	7
20 Total reported.....dollars..	3,330	3,910	6,395	36,285	54,885	5,425	14,867	2,695
21 Average, per acre, on all nonirrigated farms.....dollars..	0.16	0.22	0.08	0.32	0.78	0.09	0.18	0.19
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22 Enterprises.....1940..number.....	40	82	76	136	43	28	74	51
23 ..1930..number.....	21	62	17	115	36	20	90	84
24 ..1920..number.....	31	82	37	86	27	25	66	95
25 Average size of enterprise based on irrigable area.....1940..acres.....	2,026	347	96	260	479	144	1,180	199
26 ..1930..acres.....	4,319	378	253	406	710	310	1,394	148
27 ..1920 ² ..acres.....	3,643	671	298	1,145	545	285	5,665	145
28 Diversion dams.....1940..number.....	41	114	48	40	71	28	36	59
29 Main canals and laterals.....1940..length, miles.....	273.1	214.3	72.3	185.4	47.7	61.4	366.8	102.0
30 ..1930..length, miles.....	165	238	25	225	209	57	606	135
31 ..1920..length, miles.....	853	278	84	231	125	54	823	182
32 ..1940..capacity, c.f.s. ³	2,965	711	228	492	420	89	2,289	453
33 ..1930..capacity, c.f.s. ³	1,034	535	59	730	702	53	1,714	483
34 ..1920..capacity, c.f.s. ³	1,061	464	150	1,242	156	89	3,560	748
35 Pipe lines ⁴.....1940..length, miles.....	.....	.....	2.6	1.2	5.8	.....	7.0	0.1
36 Storage dams.....1940..number.....	12	8	5	6	8	12	29	6
37 ..1940..number.....	10	9	6	44	8	11	34	6
38 ..1930..number.....	8	4	2	50	9	1	9	4
39 ..1920..number.....	9	5	3	66	3	9	21	3
40 ..1940..capacity, acre-feet.....	5,903	23,629	489	11,689	239,395	143	42,559	28,187
41 ..1930..capacity, acre-feet.....	17,083	23,072	232	11,914	254,951	6,480	58,602	28,110
42 ..1920..capacity, acre-feet.....	8,675	24,521	2,752	9,968	3,100	218	672,617	104
43 Wells, flowing.....1940..number.....	.....	.....	.....	53	7	.....	56	.....
44 ..1930..number.....	.....	.....	.....	24	16	.....	136	.....
45 ..1920..number.....	.....	.....	.....	139	11	.....	178	.....
46 ..1940..yield, g.p.m.....	.....	.....	.....	1,648	408	.....	7,594	.....
47 ..1930..yield, g.p.m.....	.....	.....	.....	550	1,070	.....	26,517	.....
48 ..1920..yield, g.p.m.....	.....	.....	.....	10,061	342	.....	28,955	.....
49 Wells, pumped.....1940..number.....	.....	1	.....	101	.....	.....	2	.....
50 ..1930..number.....	.....	.....	.....	82	.....	.....	6	.....
51 ..1920..number.....	.....	.....	.....	41	1	.....	.....	.....
52 ..1940..yield, g.p.m.....	.....	(1)	.....	50,966	.....	.....	(1)	.....
53 ..1930..yield, g.p.m.....	.....	.....	.....	42,322	.....	.....	2,600	.....
54 ..1920..yield, g.p.m.....	.....	.....	.....	10,500	28	.....	.....	.....
55 Pumping plants.....1940..number.....	9	1	21	102	.....	.....	3	.....
56 ..1930..number.....	1	.....	7	76	.....	.....	9	.....
57 ..1920..number.....	2	.....	11	21	3	.....	1	.....
58 Prime movers.....1940..capacity, hp.....	1,218	(1)	323	1,478	.....	.....	35	.....
59 ..1930..capacity, hp.....	900	.....	77	1,069	.....	.....	105	.....
60 ..1920..capacity, hp.....	425	.....	227	272	28	.....	.....	.....
61 Pumps.....1940..capacity, g.p.m.....	25,350	(1)	23,100	55,901	.....	.....	6,080	.....
62 ..1930..capacity, g.p.m.....	6,600	.....	7,620	55,110	.....	.....	5,700	.....
63 ..1920..capacity, g.p.m.....	8,000	.....	17,812	10,400	2,468	.....	11,250	.....
64 Pumping lift, from all sources.....1940..average, feet.....	27	(1)	17	42	.....	.....	16	.....
65 ..1930..average, feet.....	50	.....	17	40	.....	.....	21	.....
66 ..1920..average, feet.....	46	.....	18	56	40	.....	.....	.....
67 from pumped wells.....1940..average, feet.....	.....	(1)	.....	42	.....	.....	(1)	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁵								
68 Enterprises reporting pay roll.....number.....	9	18	2	17	3	3	16	18
69 Irrigated area in these enterprises.....acres.....	65,677	17,430	(1)	14,287	10,000	1,685	66,692	6,659
70 Wages and salaries paid and payable.....dollars..	8,981	5,940	(1)	6,940	3,978	1,781	28,167	2,931
71 Persons employed during week ending April 29.....number..	68	34	(1)	25	9	14	105	32

*Census of Agriculture.

¹Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - UTAH

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Piute	Rich	Salt Lake	San Juan	Sarpete	Sevier	Summit	Tooele	Uintah	Utah	Wasatch	Washington	Wayne	Weber	
1,329,680	3,538,238	15,307,174	1,883,120	6,354,156	5,922,729	3,312,957	1,867,879	4,794,439	16,049,924	3,470,444	3,090,399	1,173,955	13,457,389	1
1,321,180	3,347,538	13,077,218	861,610	5,802,475	5,717,154	3,235,827	1,462,821	4,261,399	14,945,034	3,269,606	2,801,464	1,120,255	12,325,688	2
1,190,480	3,266,388	11,626,493	799,050	4,929,583	4,826,864	2,775,565	1,269,212	3,492,119	13,154,901	3,061,716	2,651,164	1,045,915	10,581,298	3
130,700	81,150	1,450,725	62,560	872,892	890,290	460,262	193,609	769,280	1,790,133	207,890	150,300	74,340	1,744,390	4
6,291.33	14,305.72	6,379.13	2,475.89	4,494.56	6,127.71	6,550.26	5,604.68	4,070.10	5,280.93	7,878.57	4,468.04	4,393.16	7,941.81	5
27.99	6.80	129.41	2.92	18.40	47.74	31.03	16.88	23.00	59.57	17.24	14.38	32.69	45.30	6
151	219	1,972	333	832	785	483	229	1,011	2,348	384	581	229	1,477	7
196,870	357,950	4,976,052	168,623	818,442	975,693	791,065	306,181	928,254	4,023,492	785,747	867,070	238,641	2,951,000	8
1,303.77	1,634.47	2,523.35	506.38	983.70	1,242.92	1,637.82	1,337.03	918.15	1,713.58	2,046.22	1,492.38	1,042.10	1,997.97	9
4.17	0.73	49.24	0.57	2.80	8.15	7.59	3.53	5.01	16.04	4.14	4.45	6.96	10.84	10
3	11	436	301	62	21	18	69	59	175	13	49	3	120	11
1,800	11,550	1,234,147	77,208	70,560	37,775	37,940	67,417	50,365	386,150	51,550	84,115	2,625	231,850	12
600.00	1,050.00	2,830.61	256.50	1,138.06	1,798.81	2,074.44	977.06	853.64	2,206.57	3,965.38	1,716.63	875.00	1,932.08	13
5.66	0.24	44.99	0.16	0.87	1.31	12.29	1.00	0.31	2.80	0.76	1.46	0.22	1.63	14
170	206	1,457	326	1,032	843	435	215	877	2,325	359	558	230	1,393	15
110,220	179,447	640,945	95,509	502,000	488,033	233,983	135,278	375,261	1,098,672	201,002	288,261	99,789	782,869	16
648.35	871.10	439.91	292.97	486.43	578.92	537.89	629.20	427.89	472.55	559.69	516.60	433.87	562.00	17
2.34	0.36	6.34	0.32	1.59	4.08	2.24	1.56	2.03	4.38	1.06	1.43	2.91	2.88	18
2	10	212	277	58	10	10	48	44	101	10	45	2	84	19
(1)	4,650	95,653	89,240	34,340	10,470	6,270	19,915	22,200	41,037	7,900	24,687	(1)	28,422	20
(1)	0.10	3.49	0.19	0.42	0.36	2.06	0.29	0.13	0.30	0.12	0.43	(1)	0.27	21
31	32	94	34	91	115	107	72	100	243	51	115	18	126	22
33	35	135	23	80	64	153	126	60	259	60	134	31	173	23
22	37	135	42	91	82	132	69	42	210	48	126	29	135	24
507	1,872	922	419	1,054	548	279	155	1,090	537	704	288	996	452	25
517	1,618	892	695	1,101	1,129	187	.91	2,169	640	439	264	710	321	26
497	1,358	1,305	965	1,403	994	264	252	3,514	967	518	344	679	784	27
35	90	96	44	108	54	102	46	93	158	43	101	20	56	28
113.0	256.0	554.7	91.0	442.7	278.0	220.3	117.5	746.3	905.3	123.2	201.5	81.2	420.8	29
114	147	580	106	512	320	261	140	764	995	235	323	99	399	30
110	210	1,446	197	836	586	255	184	432	1,005	250	306	116	272	31
354	1,420	958	348	1,969	1,605	1,075	298	2,669	3,971	872	593	276	1,251	32
865	1,308	2,501	231	1,695	1,907	914	145	2,051	3,263	745	745	251	791	33
722	1,205	2,330	475	1,159	1,979	665	146	996	2,725	766	527	174	1,517	34
.....	.....	19.5	.....	2.6	5.7	0.7	17.5	3.1	15.9	.....	8.9	0.4	19.2	35
4	9	17	3	20	14	38	8	13	19	26	31	10	6	36
4	11	16	2	22	14	39	36	13	16	25	33	12	5	37
5	7	11	.....	19	16	10	36	5	26	18	25	6	23	38
3	4	14	14	23	16	18	16	.....	32	16	18	10	33	39
123,590	2,254	1,632	(1)	32,117	10,623	87,566	44	18,074	862,089	297,171	13,275	14,488	43,569	40
141,372	2,457	1,359	.....	29,420	21,113	54,462	359	26,030	273,193	11,578	17,580	3,800	2,934	41
55,000	52	3,051	11,885	30,708	87,779	1,810	21	.....	527,715	3,581	10,654	4,003	30,280	42
.....	.....	28	.....	13	290	.....	176	.....	364	.....	.....	.....	8	43
.....	.....	15	.....	40	.....	.....	242	.....	312	.....	.....	.....	85	44
.....	.....	20	2	33	46	.....	80	.....	220	.....	.....	.....	33	45
.....	.....	1,221	.....	605	9,105	.....	7,601	.....	47,995	.....	.....	.....	216	46
.....	.....	1,728	.....	1,688	2,885	.....	15,106	.....	15,426	.....	.....	.....	4,081	47
.....	.....	222	90	505	9,395	.....	4,362	.....	27,729	.....	.....	.....	1,358	48
.....	.....	1	.....	5	5	.....	4	.....	10	.....	3	.....	4	49
.....	.....	.....	.....	2	.....	.....	17	.....	7	.....	1	.....	10	50
.....	.....	.....	.....	1	1	.....	7	.....	4	.....	3	.....	6	51
(1)	.....	(1)	.....	3,660	1,626	.....	955	.....	4,860	.....	870	.....	1,400	52
.....	.....	.....	.....	1,470	.....	.....	3,683	.....	3,400	.....	300	.....	7,385	53
.....	.....	.....	.....	150	.....	.....	200	.....	2,830	.....	1,500	.....	1,640	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	56
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58
(1)	155	1,011	.....	120	96	.....	34	219	4,262	.....	49	.....	227	59
.....	54	2,562	.....	32	30	6	72	29	3,150	.....	6	.....	370	58
.....	46	4,323	.....	5	84	6	.....	92	2,919	.....	30	.....	226	60
.....	(1)	8,400	.....	4,850	7,025	.....	1,020	19,300	504,166	.....	2,045	.....	16,300	61
.....	.....	541,400	.....	1,570	1,800	1,000	4,190	2,250	78,225	.....	300	.....	23,605	62
.....	.....	524,900	.....	450	4,150	900	.....	3,350	30,830	.....	900	.....	26,245	63
(1)	40	.....	.....	47	18	.....	51	.....	35	.....	35	.....	19	64
.....	.....	.....	.....	24	33	.....	26	.....	42	.....	40	.....	20	65
.....	.....	.....	.....	4	32	.....	12	.....	43	.....	30	.....	17	66
(1)	.....	(1)	.....	47	32	.....	51	.....	25	.....	41	.....	17	67
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	68
10	15	60	6	54	32	33	12	18	66	18	25	6	66	68
12,166	33,259	70,266	4,478	70,833	50,854	18,301	6,203	67,603	108,608	17,964	13,287	14,420	43,188	69
2,164	3,674	45,799	3,311	28,347	33,254	8,247	2,565	43,697	55,060	9,787	10,976	1,985	35,997	70
12	48	216	29	329	81	115	23	177	124	23	48	27	226	71

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁴Includes siphons and farm pipe lines reported.
⁵Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — WASHINGTON

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—						
	1940	1935	1930	1920	1910	1900	1890
Approximate land area of State.....acres....	° 42,865,280	42,775,040	42,775,040	42,775,040	42,775,040	42,775,040	42,775,040
CENSUS OF AGRICULTURE							
All farms (irrigated and nonirrigated).....number...	81,686	84,381	70,904	66,288	56,192	33,202	18,056
Land in all farms.....acres.....	15,181,815	14,680,097	13,533,778	13,244,720	11,712,235	8,499,297	4,179,190
Farms irrigated: ¹							
Farms.....number.....	17,426	18,186	15,949	13,271	7,664	3,513	1,046
Increase or decrease (-) over preceding census.....percent...	2 9.3	.....	20.2	73.2	118.2	235.9	.....
Proportion of all farms.....percent..	21.3	21.6	22.5	20.0	13.6	10.6	5.8
Land in farms.....acres.....	2,108,197	(³)	1,923,337	(³)	(³)	(³)	(³)
Proportion of all farm land.....percent..	13.9	(³)	14.2	(³)	(³)	(³)	(³)
Area irrigated.....acres.....	⁴ 493,982	⁵ 422,335	⁶ 405,027	(⁷)	(⁷)	135,470	48,799
Increase or decrease (-) over preceding census.....percent..	² 22.0	.....	.....	.....	.....	177.6	.....
Proportion of total land area of State.....percent..	1.2	1.0	0.9	.....	.....	0.3	0.1
Proportion of all farm land.....percent..	3.3	2.9	3.0	.....	.....	1.6	1.2
Value of irrigated farms (land and buildings).....dollars..	121,212,949	(³)	195,394,180	(³)	(³)	(³)	(³)
Average per farm.....dollars..	6,955.87	(³)	12,251.19	(³)	(³)	(³)	(³)
Average per acre.....dollars..	57.50	(³)	101.59	(³)	(³)	(³)	(³)
Value of farm implements and machinery ⁸.....dollars..	13,082,573	(³)	13,343,847	(³)	(³)	(³)	(³)
Average per farm ⁹.....dollars..	750.75	(³)	836.66	(³)	(³)	(³)	(³)
Average per acre ⁹.....dollars..	6.21	(³)	6.94	(³)	(³)	(³)	(³)
CENSUS OF IRRIGATION							
Irrigation enterprises:							
Enterprises.....number.....	4,120	(³)	2,986	2,692	1,934	(³)	(³)
Farms irrigated.....number.....	24,648	(³)	(³)	(³)	(³)	(³)	(³)
Area irrigated.....acres.....	615,013	(³)	499,283	529,899	334,378	(³)	(³)
Area existing works were capable of supplying with water.....acres.....	731,527	(³)	631,511	637,151	470,514	(³)	(³)
Area irrigable.....acres.....	837,096	(³)	915,379	⁹ 836,795	⁹ 617,032	(³)	(³)
Additional area existing works were capable of supplying with water.....acres.....	116,514	(³)	132,228	107,252	136,136	(³)	(³)
Additional irrigable area in enterprises not supplied with water.....acres.....	222,083	(³)	416,096	⁹ 306,896	⁹ 482,654	(³)	(³)
Investment in irrigation enterprises.....dollars..	56,415,196	(³)	40,561,895	29,299,011	16,219,149	1,722,369	196,660
Increase or decrease (-) over preceding census.....percent..	² 39.1	(³)	.....	80.6	841.7	775.8	.....
Average per acre based on area works were capable of supplying with water.....dollars..	77.12	(³)	64.23	45.98	34.47	(³)	(³)
Increase or decrease (-) over preceding census.....percent..	² 20.1	(³)	39.7	33.4	.....	.....	.....
Estimated completed cost of existing enterprises.....dollars..	58,141,097	(³)	53,232,477	37,684,591	22,322,856	(³)	(³)
Average per acre based on irrigable area in enterprises.....dollars..	69.46	(³)	58.15	⁹ 45.03	⁹ 27.32	(³)	(³)
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars..	2.80	(³)	4.14	3.45	3.08	(³)	(³)

¹ Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. ² Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. ³ Not available. ⁴ Irrigated land from which crops were harvested plus 84,821 acres of irrigated land used only for pasture. ⁵ Irrigated land from which crops were harvested. ⁶ Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. ⁷ Data were secured for crops irrigated but the returns were considered relatively incomplete. ⁸ Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. ⁹ For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. ¹⁰ The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for earlier years.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939			Irrigated pasture 1939	VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹	Acres		Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
All farms.....	81,686	15,181,815	3,569,603	409,161	84,821	593,366,445	39.08	154,520,136	10.18	56,101,147	3.70	
Owners and managers.....	67,224	12,139,554	2,671,177	303,282	61,132	473,199,299	38.98	132,485,253	10.91	44,379,625	3.66	
Tenants.....	14,462	3,042,261	898,426	105,879	23,689	120,167,146	39.50	22,034,883	7.24	11,721,522	3.85	
Irrigated farms, total.....	17,426	2,108,197	504,310	409,161	84,821	121,212,949	57.50	36,111,810	17.13	13,082,573	6.21	
Owners and managers.....	14,069	1,762,907	382,353	303,282	61,132	100,900,376	57.24	31,613,019	17.93	10,955,063	6.21	
Tenants.....	3,357	345,290	121,957	105,879	23,689	20,312,573	58.83	4,498,791	13.03	2,127,510	6.16	
Wholly irrigated farms.....	14,273	1,119,045	364,938	364,938	71,215	93,218,122	83.30	28,746,120	25.69	10,237,116	9.15	
Owners and managers.....	11,510	890,256	267,687	267,687	50,577	77,159,082	86.67	25,191,137	28.30	8,531,085	9.58	
Tenants.....	2,763	228,789	97,251	97,251	20,638	16,059,040	70.19	3,554,983	15.54	1,706,031	7.46	
Partly irrigated farms.....	3,153	989,152	139,372	44,223	13,606	27,994,827	28.30	7,365,690	7.45	2,845,457	2.88	
Owners and managers.....	2,559	872,651	114,666	35,595	10,555	23,741,294	27.21	6,121,882	7.36	2,423,978	2.78	
Tenants.....	594	116,501	24,706	8,628	3,051	4,253,533	36.51	943,808	8.10	421,479	3.62	
Nonirrigated farms, total.....	64,260	13,073,618	3,065,293	.....	.....	472,153,496	36.11	118,408,326	9.06	43,018,574	3.29

¹ Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. ² Based on all land in farms for each tenure group.

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water.	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	acre-feet			Dollars	Dollars
Total.....	4,120	897,096	731,527	615,013	499,289	529,899	23.2	590,627	602,594	583,205	5.5	3.57	0.65
Primary sources:													
Streams, gravity.....	1,382	445,246	387,078	329,397	308,185	352,199	7.6	306,939	318,779	301,235	3.9	2.38	0.60
Streams, pumped.....	885	57,182	51,120	44,187	139,738	26,244	-68.4	44,146	43,649	43,628	4.1	9.36	2.26
Streams, gravity and pumped.....	35	294,281	226,781	191,824	4,144	92,702	(2)	191,824	191,820	191,820	5.0	2.23	0.44
Wells, pumped.....	831	24,647	23,280	17,926	19,456	17,504	-7.9	17,845	17,676	17,595	4.5	11.18	2.47
Wells, flowing.....	28	2,791	2,509	2,073	1,436	1,671	44.4	2,072	1,636	1,635	3.2	0.77	0.24
Wells, pumped and flowing.....	.....	.....	.....	.....	103	1,490	.....	.....	.....	.....	.....	.....	.....
Lakes, gravity.....	12	1,501	1,247	966	3,107	3,442	-68.8	968	961	961	6.2	4.84	0.77
Lakes, pumped.....	110	3,594	3,432	2,948	3,395	4,662	-13.2	2,948	2,917	2,917	4.2	16.90	4.02
Springs.....	377	12,319	11,584	5,752	4,033	7,869	42.6	5,661	5,380	5,358	3.1	2.83	0.93
Springs and streams.....	84	4,995	4,741	4,076	.....	.....	.....	2,436	3,977	2,945	2.7	3.50	1.29
Stored storm water.....	3	50	50	35	625	129	-94.4	35	35	35	0.9	7.86	8.33
City water.....	44	.....	.....	.....	46	42	.....	.....	.....	.....	.....	.....	.....
Sewage.....	1	542	540	358	35	.....	342.0	346	350	342	1.1	10.01	15.81
Streams, gravity; wells, pumped... Streams, gravity; wells, flowing... Streams, pumped; wells, pumped... Waste water, seepage or drainage... Other mixed..... Other and not reported.....	22 2 18 79 73 1	1,087 1,306 1,074 16,561	1,065 1,271 1,056 15,761	936 1,018 955 12,580	708 16,155 117	2,415 441 19,027 82	29.4 -22.7	936 1,018 915 12,538	936 960 940 12,578	936 960 900 12,538	3.5 3.9 1.1 3.9	5.23 12.98 2.57 7.71	1.49 3.34 2.36 1.98
Supplemental sources:³													
Streams, gravity and/or storage... Streams, pumped..... Wells, pumped..... Wells, flowing.....	95 7 30 1	220,068 160 965	217,970 160 879	183,644 145 875	..... 4,600 157 2	..... ..... ..... .....	..... -96.8 450.3	183,524 145 865	10,967 145 850	10,967 145 840	3.8 2.5 2.7	0.40 6.61 4.32	0.10 2.66 1.61

¹ Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ² Percent not shown when more than 1,000. ³ Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	56,415,196	100.0	77.12	40,561,895	100.0	64.23	12.89	602,414	2.80	487,977	4.14	-1.34	465,758	3.45
Primary sources:														
Streams, gravity.....	19,417,319	34.4	50.16	22,549,053	55.6	55.45	-5.29	318,779	1.68	300,194	2.50	-0.82	308,899	2.49
Streams, pumped.....	4,781,231	8.5	93.53	11,170,037	27.5	71.63	21.90	43,649	8.81	138,807	3.84	4.97	23,129	11.16
Streams, gravity and pumped.....	20,513,648	36.4	90.46	280,321	0.7	56.30	34.16	191,820	2.08	4,144	8.24	-6.16	92,574	1.99
Wells, pumped.....	1,468,048	2.6	63.03	1,785,628	4.4	82.24	-19.21	17,496	10.34	18,418	15.43	-5.09	16,158	12.71
Wells, flowing.....	81,184	0.1	32.36	153,630	0.4	78.79	-46.43	1,636	0.77	304	10.92	-10.15	1,076	2.03
Wells, pumped and flowing.....	.....	.....	.....	36,900	(5)	36.28	.....	.....	.....	103	2.91	.....	1,490	1.86
Lakes, gravity.....	155,329	0.3	124.56	260,684	0.6	59.04	65.52	961	2.61	3,087	6.70	-4.09	4,371	3.96
Lakes, pumped.....	286,284	0.5	86.91	558,096	1.4	160.15	-63.24	2,917	15.65	3,232	19.73	-4.08	2,976	13.05
Springs.....	275,428	0.5	23.78	173,304	0.4	16.72	7.06	5,380	2.82	2,868	3.90	-1.08	4,857	7.08
Springs and streams.....	192,933	0.3	40.69	.....	(5)	.....	.....	3,977	2.27	.....	.....	.....	.....	.....
Stored storm water.....	2,250	(5)	45.00	13,370	(5)	19.15	25.85	35	7.86	250	2.44	5.42	65	11.85
City water.....	.....	(5)	.....	420	(5)	9.13	.....	.....	.....	33	33.33	.....	.....	.....
Sewage.....	18,006	(5)	33.34	160	(5)	4.57	26.18	350	16.65	35	1.57	-0.34	.....	.....
Streams, gravity; wells, pumped... Streams, gravity; wells, flowing... Streams, pumped; wells, pumped... Waste water, seepage or drainage... Other mixed..... Other and not reported.....	35,875 66,295 26,736 2,549,058	0.1 0.1 (5) 4.5	33.69 52.16 25.27 161.73	43,836 3,197,398 1,382	0.1 7.9 (5)	45.42 170.10 11.81	-16.62 -7.39	936 960 940 12,578	5.23 12.68 2.51 5.79	685 15,817	8.86 15.89	-3.56 -10.10	2,158 324 7,681	20.70 4.97 6.14
Supplemental sources:⁴														
Streams, gravity and/or storage... Streams, pumped..... Wells, pumped..... Wells, flowing.....	6,495,870 7,204 30,398	11.5 (5) 0.1	29.80 45.02 34.58	..... 320,866 9,370 1,500	..... 0.8 (5) (5)	..... 65.04 59.68 107.14	..... -20.02 -28.99	21,301 145 850	0.31 6.61 4.50	..... 4,347 156 2	..... 13.55 8.09 15.00	..... -6.94 -3.68	....................	....................

¹ Based on irrigated area in enterprises reporting cost of maintenance and operation. ² Based on area works were capable of supplying with water. ³ Less than one-tenth of 1 percent. ⁴ Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

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STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

Table with columns for ITEM AND TYPE OF ENTERPRISE, CENSUS OF (1940, 1930, 1920), Increase or decrease (-) 1930-40 primary enterprises, and AREA IRRIGATED/AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER.

1Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). 2U. S. Dept. of the Interior. 3For 1920 relates to total area. Irrigable area for that year was not reported. 4For explanation of areas, see text, p. 605.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

Table with columns for TYPE OF ENTERPRISE, ENTERPRISES (Total, Serving 5 or more farms), AREAS (Irrigable, Works were capable of supplying with water), AVERAGE COST (Primary, Supplemental enterprises), and AREA IRRIGATED, 1939 (Farms served, Total area, Cropland, Irrigated pasture).

1Reported by enterprises in the Census of Irrigation, 1940, not by the Census of Agriculture. 2Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. 3Based on irrigated area in enterprises reporting maintenance and operation in 1939. 4For explanation of areas and investment, see text, p. 605.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

Table with columns for TYPE OF ENTERPRISE, TOTAL INVESTMENT, TO JANUARY 1 (1940, 1930, 1920, Increase or decrease (-) 1930-40), AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER, Capital expenditures during 1939, and Estimated investment required to complete works.

1Only for enterprises serving 5 or more farms.

2For explanation of investment, see text, p. 605.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter-prises 1940	Area		Total indebtedness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter-prises 1940	Total arrearages		Average per acre assessed 1939 ⁵	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irrigable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1938				
	Number	Acres	Acres	Dollars	Dollars	Dollars	Number	Dollars	Dollars	Dollars	Acres	Dollars	Dollars
Total.....	95	820,492	726,245	22,621,604	43.52	41.69	17	605,398	494,978	2.73	582,034	1,545,582	1,088,155
Partnership.....	1	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	3	14,578	16,680	3.42	5,152	3,484	1,376
Cooperative, incorporated.....	23	35,878	32,688	213,274	7.46	7.77	.....	.....	.....	.....	61,302	176,207	156,208
Cooperative, unincorporated.....	2	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	.....	.....	.....	.....	21,751	18,585	12,967
Irrigation district.....	53	153,608	145,556	4,287,148	31.27	31.25	6	30,160	38,868	1.85	150,956	711,324	726,590
Commercial.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,610	48,991	43,184
Bureau of Reclamation ⁷	12	471,194	399,189	⁸ 14,262,702	64.56	63.82	8	⁸ 560,680	⁸ 439,430	2.79	208,082	420,625	124,585
Office of Indian Affairs ⁹	3	149,985	138,985	⁹ 3,843,179	32.42	27.65	.....	.....	.....	.....	118,537	147,325	6,248
State.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City and/or sewage.....	1	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	.....	.....	.....	.....	8,644	19,040	16,997
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$1.96. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$4.20. ⁵Based on primary enterprises only; no supplemental enterprises reported both arrearage and assessed area. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁷U. S. Dept. of the Interior. ⁸Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ⁹Represents construction costs of irrigation works less cancellations and repayments. ¹⁰For explanation of areas and investment, see text, p. 605.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (for definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹		
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939			
	Acres	Dollars	Acres	Dollars	Dollars	Dollars	Number	Dollars	Number
Total.....	602,414	1,673,992	22,296	11,314	2.78	0.51	201	784,904	937
Individual and partnership.....	98,551	453,691	10,229	6,055	4.60	0.59	11	1,513	28
Cooperative, incorporated.....	56,508	149,097	6,720	801	2.64	0.12	64	54,814	137
Cooperative, unincorporated.....	21,160	15,355	.....	.....	0.73	.....	42	5,023	4
Irrigation district.....	124,380	449,823	5,347	4,458	3.62	0.83	65	264,480	419
Commercial.....	7,290	45,695	.....	.....	6.27	.....	4	32,507	2
U. S. Bureau of Reclamation ³	167,085	392,991	.....	.....	2.35	.....	11	263,642	204
U. S. Office of Indian Affairs.....	118,637	148,647	.....	.....	1.25	.....	3	162,925	117
State.....	159	376	.....	.....	2.36	.....	.....	.....	.....
City and/or sewage.....	8,644	18,317	.....	.....	2.12	.....	1	(²)	(²)
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Only for enterprises serving 5 or more farms. ²Data for 1 "City and/or sewage" enterprise are included with "Commercial" enterprises in the 1940 Census. ³For explanation of areas and investment, see text, p. 605.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles	Ac.-ft.	Miles		G. p. m.	G. p. m.		Hp.		G. p. m.		
Total.....	1,755	125	15,104	3,581	667.6	114	1,165,527	2,612.7	50	21,192	1,041	287,327	2,487	37,131	2,488	953,751
Individual and partnership....	1,581	97	3,792	863	152.9	83	5,158	1,170.2	49	20,942	1,009	199,475	2,342	18,655	2,346	527,143
Cooperative, incorporated.....	44	4	1,658	279	74.0	5	6,033	225.6	.....	.....	12	33,650	34	4,065	33	71,350
Cooperative, unincorporated...	74	2	758	160	5.2	2	1,080	38.1	.....	.....	8	9,562	18	515	18	12,832
Irrigation district.....	42	13	3,239	498	240.8	12	64,490	669.5	1	250	11	43,890	56	5,370	55	100,584
Commercial.....	3	.....	150	24	1.5	1	57	52.5	.....	.....	.....	.....	2	400	2	3,350
Bureau of Reclamation ³	4	8	3,040	953	193.1	8	1,088,700	349.3	.....	.....	.....	.....	21	3,979	21	95,150
Office of Indian Affairs ³	5	.....	2,322	789	.....	.....	.....	67.8	.....	.....	.....	.....	7	3,975	7	136,900
State.....	1	1	4	.....	.....	3	9	7.2	.....	.....	1	750	7	172	6	6,142
City and/or sewage.....	1	.....	141	25	0.1	.....	.....	32.5	.....	.....	.....	.....	.....	.....	.....	.....
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³U. S. Dept. of the Interior.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
Total.....	Number 1,755	Number 125	Number 499	Number 100	Earth and rock.....	Number 725	Number 81	Number	Number 52
Concrete or masonry.....	166	21	101	11	Other and mixed.....	1 384	11	1 217	30
Timber.....	453	12	149	.....	Not reported.....	27	.....	32	7

¹Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	2,488	100.0	953,751	100.0	47	Total, 1940.....	2,487	100.0	37,131	100.0
Electric motor.....	2,039	81.9	574,308	60.2	51	Centrifugal pump.....	2,013	80.9	33,230	89.5
Centrifugal.....	1,731	69.5	526,559	55.2	47	Electric.....	1,725	69.4	23,974	64.6
Turbine.....	99	4.0	29,442	3.1	92	Internal-combustion.....	257	10.3	3,788	10.2
Plunger.....	183	7.4	13,807	1.4	64	Other.....	31	1.2	5,468	14.7
Other.....	26	1.0	4,500	0.5	32	Turbine pump.....	112	4.5	1,670	4.5
Internal-combustion engine.....	330	13.3	134,508	14.1	30	Electric.....	91	3.7	1,335	3.6
Centrifugal.....	248	10.0	119,562	12.6	25	Internal-combustion.....	13	0.5	217	0.6
Turbine.....	12	0.5	7,079	0.7	45	Other.....	8	0.3	118	0.3
Plunger.....	54	2.2	3,697	0.4	56	Plunger pump.....	233	9.4	956	2.6
Other.....	16	0.6	4,170	0.4	25	Electric.....	172	6.9	633	1.7
Other kinds of motive power.....	45	1.8	76,799	8.1	45	Internal-combustion.....	49	2.0	288	0.8
Centrifugal.....	22	0.9	72,275	7.7	52	Other.....	12	0.5	35	0.1
Turbine.....	6	0.2	3,950	0.4	36	Other and mixed types of pumps.....	129	5.2	1,275	3.4
Plunger.....	12	0.5	362	(¹)	44	Electric.....	83	3.3	1,001	2.7
Other.....	5	0.2	212	(¹)	43	Internal-combustion.....	34	1.4	267	0.7
Mixed kinds of motive power.....	74	3.0	168,136	17.6	42	Other.....	2 12	0.5	7	(¹)
Centrifugal.....	43	1.7	168,043	17.4	45	Total, 1930.....	3 1,951	.....	33,187	.....
Turbine.....	.....	.....	.....	.....	.....	Increase or decrease (-) 1930-1940.....	536	.....	3,944	.....
Plunger.....	17	0.7	1,022	0.1	40					
Other.....	14	0.6	1,071	0.1	37					
Total, 1930.....	2,023	.....	993,303	.....	59					
Increase or decrease (-) 1930-1940..	465	.....	-39,552	.....	-12					

¹Less than one-tenth of 1 percent.

²Includes water wheels for which no horsepower was reported.

³Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 2,612.7	Miles 1,136.9	Percent 129.8	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	474.0	260.6	81.9
1 to 12 inches.....	489.5	139.7	250.4	13 to 24 inches.....	101.4	126.5	42.5
13 to 24 inches.....	103.6	.....	.....	Over 24 inches.....	78.9	.....	.....
Over 24 inches.....	21.8	110.0	14.0	Clay and other:			
Metal:				1 to 12 inches.....	92.1	67.6	36.2
1 to 12 inches.....	1,171.5	290.4	303.4	13 to 24 inches.....	8.5	6.0	106.7
13 to 24 inches.....	62.5	.....	.....	Over 24 inches.....	3.9	.....	.....
Over 24 inches.....	5.0	10.2	561.8				

¹Includes siphons and farm pipe lines reported. ²Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census. ³Includes 26.0 miles clay pipe lines not segregated by size; 86.3 miles other materials not segregated by size; and 13.6 miles, 1 to 12 inches in size, material not specified.

STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	208	74	103	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	448,702	460,861	1 218,763	(a) Enterprises reporting lands drained and/or needing drainage...percent..	59.3	3 37.3	1 36.2
Area irrigated in these enterprises.....acres...	300,362	(²)	(²)	(b) All irrigation enterprises.....percent..	29.0	34.5	14.9
Area for which drains have been installed...acres...	178,212	172,039	79,168	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	18,673	28,084	43,461	(a) Irrigable area reporting.....percent..	43.9	43.4	1 56.1
				(b) Irrigated area reporting.....percent..	65.5	(²)	(²)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census. ²Not available. ³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

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STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	2,702,120	1,022,946	2,168,818	2,033,320	1,557,214	1,513,616	668,800	365,732	655,202
Area irrigated by these enterprises.....acres.....	474,131	352,894	341,569	361,507	291,521	264,558	112,624	61,473	77,011
Average water per acre irrigated.....acre-feet..	5.7	5.4	6.3	5.6	5.3	5.7	5.9	5.9	8.5
Total water delivered to irrigators.....acre-feet..	2,454,200	886,739	594,479	1,013,980	650,152	139,232	1,440,220	36,587	455,247
Area irrigated by these enterprises.....acres.....	568,182	190,009	174,969	249,791	179,529	77,235	318,391	10,480	97,754
Average water per acre irrigated.....acre-feet..	4.3	3.6	3.4	4.1	3.6	1.8	4.5	3.5	4.7
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	94,381	.....	.....	22,395	.....	.....	71,986	.....	.....
Area irrigated by these enterprises.....acres.....	22,445	.....	.....	4,886	.....	.....	17,559	.....	.....
Average water per acre irrigated.....acre-feet..	4.2	.....	.....	4.6	.....	.....	4.1	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	17,221	.....	.....	4,800	.....	.....	12,421	.....	.....
Area irrigated by these enterprises.....acres.....	8,453	.....	.....	6,600	.....	.....	1,853	.....	.....
Average water per acre irrigated.....acre-feet..	2.0	.....	.....	0.7	.....	.....	6.7	.....	.....
Total water delivered to irrigators.....acre-feet..	701,830	.....	.....	15,120	.....	.....	686,710	.....	.....
Area irrigated by these enterprises.....acres.....	183,669	.....	.....	10,214	.....	.....	173,455	.....	.....
Average water per acre irrigated.....acre-feet..	3.8	.....	.....	1.5	.....	.....	4.0	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	2,322	.....	.....	.....	.....	.....	2,322	.....	.....
Area irrigated by these enterprises.....acres.....	865	.....	.....	.....	.....	.....	865	.....	.....
Average water per acre irrigated.....acre-feet..	2.7	.....	.....	.....	.....	.....	2.7	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED:
1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	615,013	100.0	184,664	499,283	100.0	529,899	100.0
Appropriation ²	501,882	81.6	176,144	344,469	68.9	423,545	80.0
Riparian.....	51,326	8.3	2,590	29,295	5.9	17,095	3.2
Appropriation and riparian.....	9,014	1.5	3,993	.....	.....	.....	.....
Underground.....	16,446	2.7	646	17,309	3.5	20,859	3.9
Appropriation and underground.....	284	(3)	.....	.....	.....	.....	.....
Riparian and underground.....	1,214	0.2	118	.....	.....	.....	.....
Adjudicated by court.....	25,661	4.2	81	74,907	15.0	56,309	10.6
Other mixed and not reported.....	9,186	1.5	1,092	33,303	6.7	12,091	2.3

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ²"Appropriation" includes water rights published in the 1930 and 1920 census reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State." ³Less than one-tenth of 1 percent.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 167,085 acres irrigated in 1939 which were within the Sunnyside, Tieton, and Kittitas Districts of the Yakima Project and within the Okanogan Irrigation District of the Okanogan Project. These are indicated as separate enterprises under the Bureau of Reclamation and their areas are not duplicated under any other classification. Areas totaling 161,876 acres, classified as irrigated with a supplemental supply from the Yakima Project under the Warren Act or special contracts, include 106,497 acres under the Wapato Division of the Yakima Indian Reservation and a number of small districts are reported as receiving a primary supply through other enterprises, principally the Office of Indian Affairs and irrigation districts.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 relates to these areas and reflects construction costs incurred by the United States for irrigation facilities which were in operation in 1939. It also includes an investment of \$247,868 expended by

irrigation districts within the Yakima Project. Costs of drainage works and power facilities on the Yakima Project which were not to be repaid directly by water users are excluded. Construction costs of the Roza Division, the Yakima Project which was not in operation in 1939, and data relating to Grand Coulee Dam and the Columbia Basin Irrigation District are omitted. The dam which was under construction on the Columbia River was to store 10,000,000 acre-feet of water for the irrigation of 1,200,000 acres of land in the Upper Columbia Basin, regulate the Columbia River, and provide for the ultimate installation of 1,964,000 kilowatts of electric power. As Grand Coulee Dam was nearing completion, initial operations of the power plant were scheduled to begin in 1941. Construction of the irrigation carriage and distribution facilities was to begin when repayment contracts were signed as required by law. It was anticipated (before the United States entered World War II) that irrigation of the first lands in the Columbia Basin Project would begin in 1945.

STATE TABLE 17.-ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

PRIMARY ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	3,987	31	3,446	272	139	62	34	3
2	Irrigated farms, 1939.....number...	24,648		3,446	679	1,467	3,051	10,122	5,883
3	Area irrigated, 1939.....acres.....	615,013		81,153	20,439	44,363	69,295	195,486	204,277
4	(a) From which crops were harvested.....acres.....	520,424		67,377	17,278	36,474	59,407	172,703	167,185
5	(b) On which crops failed.....acres.....	6,113		629	260	1,343	858	2,055	968
6	(c) Irrigated pasture.....acres.....	88,476		13,147	2,901	6,546	9,030	20,728	36,124
CAPITAL INVESTMENT, 1940									
7	Total capital investment in all enterprises.....dollars..	49,881,624	13,272	3,570,184	594,461	1,268,736	4,503,709	28,704,369	11,226,893
8	(a) Cost of irrigation works and equipment.....dollars..	49,149,404	13,107	3,526,030	573,469	1,236,511	4,413,389	28,160,005	11,226,893
9	(b) Investment in water rights.....dollars.....	732,220	165	44,154	20,992	32,225	90,320	544,364	.....
10	Area works were capable of supplying with water.....acres..	731,527	454	104,947	23,760	47,995	79,538	226,950	247,893
11	Average investment per acre irrigated.....dollars.....	81.11	.....	43.99	29.08	28.60	63.17	146.45	54.96
12	Average investment per acre which the works could supply with water.....dollars..	68.19	29.23	34.02	25.02	26.43	55.21	126.17	45.29
MAINTENANCE AND OPERATION, AND CHARGES, 1939									
13	Enterprises reporting maintenance and operation.....number..	3,742	30	3,235	250	129	61	34	3
14	(a) Area irrigated in these enterprises.....acres.....	602,414	.....	76,482	19,313	41,551	65,295	195,486	204,277
15	(b) Cost of maintenance and operation.....dollars.....	1,673,992	900	399,133	56,088	79,132	151,121	627,166	360,452
16	(c) Average cost per irrigated acre reporting.....dollars..	2.78	.....	5.22	2.90	1.90	2.25	3.20	1.76
17	Total annual charges ³.....dollars.....	1,542,453	.....	.....	.....	100,791	230,432	831,129	380,101
18	Average charge per irrigated acre reporting.....dollars..	3.04	.....	.....	.....	2.42	3.53	4.25	1.86
19	Area against which charges were assessed.....acres.....	573,094	.....	.....	.....	44,921	73,410	226,363	228,400
20	Average annual charge per acre assessed.....dollars.....	2.69	.....	.....	.....	2.24	3.14	3.67	1.66
21	Total charges collected ³.....dollars.....	1,062,485	.....	.....	.....	80,174	186,724	795,587	.....
INDEBTEDNESS AND ARREARAGE, 1939									
22	Enterprises reporting indebtedness ⁴.....number.....	92	.....	.....	.....	20	38	31	3
23	(a) Area irrigated in these enterprises.....acres.....	439,839	.....	.....	.....	6,891	41,740	186,931	204,277
24	(b) Indebtedness.....dollars.....	21,764,676	.....	.....	.....	153,165	1,385,715	14,853,205	5,372,591
25	(c) Average indebtedness per acre irrigated.....dollars..	49.48	.....	.....	.....	22.23	33.20	79.46	26.30
26	(d) Cost of irrigation works and equipment.....dollars..	42,904,126	.....	.....	.....	427,114	3,981,036	27,269,083	11,225,893
27	(e) Investment in water rights.....dollars.....	632,570	.....	.....	.....	7,626	80,580	544,364	.....
28	(f) Total investment.....dollars.....	43,536,696	.....	.....	.....	434,740	4,061,616	27,813,447	11,226,893
29	(g) Maintenance and operation.....dollars.....	1,076,592	.....	.....	.....	35,629	126,572	553,939	360,452
30	(h) Total annual charges ³.....dollars.....	1,382,790	.....	.....	.....	54,824	189,942	757,923	380,101
31	(i) Total charges collected ³.....dollars.....	928,742	.....	.....	.....	42,689	159,344	726,709	.....
32	(j) Area against which annual charges were assessed.....acres..	500,154	.....	.....	.....	7,423	47,163	217,168	228,400
33	(k) Average indebtedness per acre assessed.....dollars..	43.52	.....	.....	.....	20.63	29.36	66.39	23.52
34	(l) Average charges per acre assessed.....dollars.....	2.76	.....	.....	.....	7.39	4.03	3.49	1.66
35	(m) Average charges per acre irrigated.....dollars.....	3.14	.....	.....	.....	7.96	4.55	4.05	1.86
36	Enterprises reporting arrearage ⁴.....number.....	16	.....	.....	.....	4	2	8	2
37	(a) Area assessed in these enterprises.....acres.....	219,571	.....	.....	.....	949	3,515	99,224	115,893
38	(b) Total arrearage.....dollars.....	598,398	.....	.....	.....	7,828	13,333	202,161	374,476
39	(c) Average arrearage per acre assessed.....dollars.....	2.73	.....	.....	.....	8.25	3.96	2.04	3.23
40	(d) Indebtedness.....dollars.....	13,451,027	.....	.....	.....	65,006	325,655	11,302,775	1,757,591
TYPE, 1940									
41	Individual and partnership.....number.....	3,746	31	3,432	261	22	.....	.....	.....
42	Cooperative (incorporated and unincorporated).....number..	149	.....	10	9	95	27	8	.....
43	Irrigation district.....number.....	64	.....	.....	1	17	27	19	.....
44	Commercial.....number.....	4	.....	.....	.....	2	1	1	.....
45	U. S. Bureau of Reclamation.....number.....	11	.....	.....	.....	1	3	5	2
46	U. S. Office of Indian Affairs.....number.....	4	.....	.....	1	.....	2	.....	1
47	All other.....number.....	9	.....	4	.....	2	2	1	.....
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939									
48	Enterprises reporting pay roll.....number.....	198	.....	.....	.....	102	59	34	3
49	Wages and salaries paid and payable for 1939.....dollars..	781,924	.....	.....	.....	30,609	73,046	357,093	321,176
50	Persons employed during week ending April 29, 1939.....number..	936	.....	.....	.....	128	181	420	207
SOURCE OF WATER SUPPLY, 1939									
51	Streams, gravity.....number.....	1,382	6	1,047	158	104	47	18	2
52	Streams, pumped.....number.....	885	7	807	44	16	5	6	.....
53	Wells, pumped.....number.....	831	12	782	25	7	3	2	.....
54	Wells, pumped and flowing; or wells flowing.....number....	28	.....	26	2	.....	.....	.....	.....
55	Lakes, gravity or pumped.....number.....	122	.....	109	9	3	1	.....	.....
56	Streams and springs; or springs.....number.....	461	5	433	19	4	.....	.....	.....
57	Mixed, streams and wells.....number.....	77	.....	58	8	2	3	5	1
58	Other mixed or stored storm water.....number.....	201	1	184	7	3	3	3	.....
SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS						
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more
1	Enterprises, 1940.....number...	133	1	119	8	.....	2 2	2 2	2 1
2	Irrigated farms, 1939.....number...	4,238	.....	119	16	.....	125	460	3,518
3	Area irrigated, 1939.....acres.....	184,664	.....	9,928	793	.....	8,333	3,734	161,876
CAPITAL INVESTMENT, 1940									
4	Total capital investment in all enterprises.....dollars..	6,533,572	.....	61,799	6,045	.....	87,591	281,100	6,097,037
5	(a) Cost of irrigation works and equipment.....dollars..	6,529,274	.....	61,401	6,045	.....	84,891	279,900	6,097,037
6	(b) Investment in water rights.....dollars.....	4,298	.....	398	.....	.....	2,700	1,200	.....
7	Area works were capable of supplying with water.....acres..	219,009	.....	10,233	.....	.....	15,540	3,734	188,677
8	Average investment per acre irrigated.....dollars.....	35.38	.....	.....	7.62	.....	10.51	75.28	37.66
9	Average investment per acre which the works could supply with water.....dollars..	29.83	.....	6.04	7.33	.....	5.64	75.28	32.31

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

²Data for less than 3 enterprises shown with permission of the enterprises involved.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

No acres ¹	ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT						
	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	\$10,000,000 and more	
31	3,536	257	120	34	8	² 1	3,690	163	91	39	3	² 1	1
.....	4,102	1,139	3,594	7,058	6,971	1,784	5,004	964	3,195	8,791	5,883	791	2
.....	64,968	41,432	78,799	122,942	195,055	112,517	114,646	29,973	67,222	142,372	204,277	56,523	3
.....	55,912	34,367	63,602	112,424	189,208	94,911	92,960	25,525	56,862	132,922	167,185	44,970	4
.....	615	378	1,965	485	2,670	.....	1,219	819	1,594	811	968	702	5
.....	8,941	6,687	13,232	9,433	33,177	17,606	20,467	3,629	8,766	8,639	36,124	10,851	6
13,272	3,312,452	1,260,636	5,821,222	12,274,930	22,162,112	5,037,000	2,695,866	1,302,433	3,320,830	19,165,568	11,364,240	12,032,567	7
13,107	3,255,459	1,244,842	5,726,051	12,098,180	21,774,765	5,037,000	2,635,026	1,278,320	3,264,037	18,712,571	11,226,893	12,032,567	8
165	56,993	15,794	95,171	176,750	387,347	.....	60,840	24,113	56,903	453,017	137,347	.....	9
454	83,497	51,449	93,595	135,044	235,488	132,000	137,488	34,278	78,782	162,910	247,883	70,186	10
.....	51.06	30.43	71.59	100.33	113.82	44.77	23.25	43.45	49.40	133.48	55.63	212.88	11
29.23	39.67	24.50	60.55	90.90	94.11	38.16	19.42	38.00	42.15	116.75	45.65	171.44	12
30	3,310	245	115	33	8	² 1	3,456	157	87	38	3	² 1	13
.....	60,950	39,568	75,982	118,942	195,055	112,517	107,597	29,550	66,095	138,372	204,277	56,523	14
900	367,739	137,872	214,235	409,474	401,150	142,622	343,637	117,907	203,970	543,727	360,452	104,299	15
.....	6.03	3.48	2.73	3.46	2.06	1.27	3.16	3.99	3.09	3.90	1.76	1.85	16
.....	14,658	67,585	291,007	543,106	484,326	141,771	29,538	31,290	238,379	724,920	425,731	92,595	17
.....	7.66	6.53	4.24	4.59	2.48	1.26	0.92	1.62	3.82	5.86	2.00	1.64	18
.....	1,999	11,902	84,662	128,936	233,084	112,517	34,968	20,762	67,399	143,343	238,540	68,082	19
.....	7.35	5.68	3.44	4.21	2.08	1.26	0.84	1.51	3.54	5.06	1.78	1.36	20
.....	9,543	52,656	245,034	483,757	271,495	.....	19,278	28,577	200,464	667,370	50,076	96,720	21
.....	4	16	36	27	8	² 1	3	10	41	33	4	² 1	22
.....	220	3,215	29,245	99,587	195,055	112,517	159	6,506	46,157	117,724	212,770	56,523	23
.....	9,941	111,329	1,087,524	3,735,896	13,205,586	3,615,000	6,806	30,959	762,138	5,017,985	5,512,591	10,434,297	24
.....	42.46	34.63	37.19	37.51	67.70	32.13	42.81	4.74	16.51	42.62	25.91	184.60	25
.....	29,919	380,268	4,627,416	11,054,758	21,774,765	5,037,000	12,279	111,821	1,909,417	15,880,708	12,957,334	12,032,567	26
.....	100	3,126	65,247	176,750	387,347	.....	100	6,500	35,606	453,017	137,347	.....	27
.....	30,019	383,394	4,692,663	11,231,508	22,162,112	5,037,000	12,379	118,321	1,945,023	16,333,725	13,094,681	12,032,567	28
.....	3,758	34,060	160,491	334,511	401,150	142,622	2,518	8,895	134,294	438,952	387,634	104,299	29
.....	4,328	49,661	238,972	463,732	484,326	141,771	3,367	12,457	202,251	646,389	425,731	92,595	30
.....	3,517	39,532	201,273	412,925	271,495	.....	2,657	13,944	172,785	593,160	50,076	96,720	31
.....	272	3,906	40,834	109,541	233,084	112,517	166	7,026	50,442	135,898	238,540	68,082	32
.....	34.34	28.50	26.63	34.11	56.66	32.13	41.00	4.39	15.11	36.92	2.00	153.26	33
.....	15.91	12.71	5.85	4.23	2.08	1.26	20.28	1.77	4.01	4.76	1.78	1.36	34
.....	19.67	15.45	8.17	4.66	2.48	1.26	21.18	1.91	4.38	5.49	2.00	1.64	35
.....	3	3	3	6	4	.....	.....	.....	5	8	² 2	² 1	36
.....	.....	591	3,873	22,867	192,240	.....	.....	.....	9,224	26,382	115,883	68,082	37
.....	.....	6,828	14,933	60,649	515,988	.....	.....	.....	8,628	74,582	374,476	140,712	38
.....	.....	11.55	3.86	2.65	2.68	.....	.....	.....	0.94	2.83	3.23	2.07	39
.....	.....	30,016	360,645	861,278	12,199,088	.....	.....	.....	72,206	1,186,933	1,757,591	10,434,297	40
31	3,489	203	23	.....	.....	.....	3,598	120	28	.....	.....	.....	41
.....	36	39	64	10	.....	.....	76	36	28	9	.....	.....	42
.....	4	13	28	15	4	.....	9	5	29	21	.....	.....	43
.....	.....	.....	2	.....	.....	.....	1	.....	2	1	.....	.....	44
.....	1	.....	2	5	3	.....	.....	.....	1	7	2	1	45
.....	.....	1	.....	2	.....	.....	1	.....	1	1	.....	.....	46
.....	6	1	1	.....	1	.....	5	2	2	.....	.....	.....	47
.....	21	46	89	33	8	² 1	64	33	60	36	4	² 1	48
.....	2,406	14,175	88,006	228,152	292,185	157,000	9,474	14,110	66,801	279,049	347,060	65,430	49
.....	16	56	310	258	183	113	43	51	164	411	221	46	50
6	1,091	162	95	21	7	.....	1,264	49	46	21	2	.....	51
7	829	34	10	5	.....	.....	811	50	16	8	.....	.....	52
12	795	21	2	1	.....	.....	794	27	8	2	.....	.....	53
.....	21	6	1	.....	.....	.....	23	2	.....	.....	.....	.....	54
.....	114	5	3	.....	.....	.....	109	7	6	.....	.....	.....	55
5	439	14	3	.....	.....	.....	446	10	5	.....	.....	.....	56
.....	58	9	4	4	1	1	56	9	5	5	1	1	57
1	189	6	2	3	.....	.....	187	3	3	.....	.....	.....	58

No acres ¹	ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT						
	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	\$10,000,000 and more	
1	90	34	5	² 2	.....	² 1	126	3	² 2	² 1	² 1	.....	1
.....	93	158	54	415	.....	3,518	251	4	125	340	3,518	.....	2
.....	3,241	5,786	3,547	10,214	.....	161,876	10,066	775	8,333	3,614	161,876	.....	3
35,658	26,219	34,958	339,700	.....	.....	6,097,037	48,944	23,000	87,591	277,000	6,097,037	.....	4
36,260	25,019	34,958	337,000	.....	.....	6,097,037	47,346	23,000	84,891	277,000	6,097,037	.....	5
398	1,200	.....	2,700	.....	.....	.....	1,598	.....	.....	.....	.....	.....	6
3,470	5,844	10,804	10,214	.....	.....	188,677	10,353	825	15,540	3,614	188,677	.....	7
.....	4.53	9.86	33.26	.....	.....	37.66	4.86	29.68	10.51	76.65	37.66	.....	8
10.28	4.49	3.24	33.26	.....	.....	32.31	4.73	27.88	5.64	76.65	32.31	.....	9

⁸ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁴ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — WASHINGTON

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED FARMS,

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS							
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms	1,000 farms and more	
MAINTENANCE AND OPERATION, AND CHARGES, 1939										
10	Enterprises reporting maintenance and operation.....number...	125	1	113	7			² 2	² 2	
11	(a) Area irrigated in these enterprises.....acres.....	22,296		9,616	613			8,333	3,734	
12	(b) Cost of maintenance and operation.....dollars...	11,314		5,339	116			825	4,434	
13	(c) Average cost per irrigated acre reporting.....dollars..	0.51			0.19			0.10	1.19	
14	Total annual charges ³.....dollars.....	3,129						3,129		
15	Average charge per irrigated acre reporting.....dollars..	1.81						1.81		
16	Area against which charges were assessed.....acres.....	8,940						8,940		
17	Average annual charge per acre assessed.....dollars...	0.35						0.35		
18	Total charges collected ³.....dollars.....	25,670						5,353	20,317	
INDEBTEDNESS AND ARREARAGE, 1939										
19	Enterprises reporting indebtedness ⁴.....number.....	3								² 1
20	(a) Area irrigated in these enterprises.....acres.....	170,209								161,876
21	(b) Indebtedness.....dollars.....	856,928						28,050		828,878
22	(c) Average indebtedness per acre irrigated.....dollars..	5.03						3.37		5.12
23	(d) Cost of irrigation works and equipment.....dollars...	6,181,928						84,891		6,097,037
24	(e) Investment in water rights.....dollars.....	2,700						2,700		
25	(f) Total investment.....dollars.....	6,184,628						87,591		6,097,037
26	(g) Maintenance and operation.....dollars.....	825						825		
27	(h) Total annual charges ³.....dollars.....	3,129						3,129		
28	(i) Total charges collected ³.....dollars.....	5,353						5,353		
29	(j) Area against which annual charges were assessed.....acres..	8,940						8,940		
30	(k) Average indebtedness per acre assessed.....dollars.....	1.96						1.96		
31	(l) Average charges per acre assessed.....dollars.....	0.35						0.35		
32	(m) Average charges per acre irrigated.....dollars.....	1.81						1.81		
33	Enterprises reporting arrearage ⁴.....number.....	² 1								² 1
34	(a) Total arrearage.....dollars.....	7,000						7,000		
35	(b) Indebtedness.....dollars.....	10,550						10,550		
TYPE, 1940										
36	Individual and partnership.....number.....	128	1	119	8					
37	Cooperative (incorporated and unincorporated).....number...	2							1	1
38	Irrigation district.....number.....	2							1	1
39	U. S. Bureau of Reclamation.....number.....	1								1
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939										
40	Enterprises reporting pay roll.....number.....	3							² 2	² 1
41	Wages and salaries paid and payable for 1939.....dollars...	2,980						980		2,000
42	Persons employed during week ending April 29, 1939.....number...	1							1	1
SOURCE OF SUPPLEMENTAL WATER SUPPLY 1939										
43	Streams, pumped.....number.....	7		7						
44	Wells, pumped or flowing.....number.....	31		30	1					
45	Streams, gravity or storage.....number.....	95	1	82	7				2	2

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Data for less than 3 enterprises shown with permission of the enterprises involved.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Approximate elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.—Dec.		Jan.—Mar.		Apr.—June		July—Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Columbia River														
Colville.....	Stevens.....	1,635	13.05	-3.27	5.07	-0.20	4.71	+0.52	2.58	-1.59	0.69	-2.00	47.1	+0.7
Ephrata.....	Grant.....	1,275	6.08	-2.22	1.88	-1.04	2.69	+0.30	0.89	-0.93	0.62	-0.55	54.9	+3.0
Goldendale.....	Klickitat.....	1,635	18.45	+2.84	9.57	+3.15	6.93	+1.05	1.34	-0.79	0.61	-0.57	51.1	+2.9
Okanogan.....	Okanogan.....	910	8.08	-1.45	2.32	-1.39	3.11	+0.61	2.40	+0.51	0.25	-1.18	52.2	+1.9
Prosser.....	Benton.....	675	5.47	-1.92	2.06	-0.75	1.98	-0.25	0.40	-1.04	1.03	+0.12	53.9	+2.1
Ritzville.....	Adams.....	1,825	6.91	-3.71	2.75	-1.08	2.95	-0.38	0.76	-1.47	0.45	-0.78	51.1	+2.1
Spokane.....	Spokane.....	1,879	10.76	-5.86	3.35	-2.10	5.12	-0.01	1.62	-2.21	0.67	-1.54	50.7	+2.5
Walla Walla.....	Walla Walla.....	952	12.38	-4.63	4.61	-1.00	5.15	-0.18	1.70	-2.54	0.92	-0.91	56.2	+3.1
Waterville.....	Douglas.....	2,676	7.25	-3.28	2.57	-1.20	2.57	-0.72	1.44	-0.53	0.67	-0.83	46.8	+2.0
Yakima.....	Yakima.....	1,068	4.83	-3.32	2.13	-0.67	1.71	-0.95	0.65	-1.04	0.34	-0.66	54.3	+3.8
Snake River														
Colfax.....	Whitman.....	1,950	14.70	-4.72	6.15	-0.47	5.87	-0.62	1.93	-2.10	0.75	-1.53	50.5	+3.0
Pomeroy.....	Garfield.....	1,864	14.07	-3.13	5.22	-0.35	6.69	-0.75	1.55	-2.21	0.61	-1.32	52.0	+1.2
Strait of Juan de Fuca and Georgia Strait														
Bellingham (near).....	Whatcom.....	107	34.69	+0.06	14.88	+1.56	11.78	+1.06	5.84	-0.42	2.19	-2.14	49.8	+1.0
Everett.....	Snohomish.....	127	32.17	-3.08	10.41	-2.60	11.16	-0.31	5.90	-0.74	4.70	+0.57	51.4	+1.7
Olympia.....	Thurston.....	69	43.68	-7.66	16.62	-4.65	21.05	+1.71	3.84	-3.25	2.17	-1.47	52.0	+1.3
Seattle.....	King.....	14	24.70	-9.33	8.77	-1.70	10.39	-1.49	3.01	-2.57	2.53	-0.57	54.1	+3.1
Sequim.....	Clallam.....	200	16.11	-0.71	5.25	-1.28	7.15	+2.02	2.91	-0.08	0.80	-1.37	51.4	+3.2
Pacific Slope														
Aberdeen.....	Grays Harbor.....	105	77.63	-4.45	31.34	-1.55	32.99	+2.23	8.99	-3.17	4.31	-1.96	50.8	+1.1
Centralia.....	Lewis.....	182	36.53	-8.15	14.10	-3.61	15.81	-0.09	4.06	-3.14	2.56	-1.31	53.2	+2.1
South Bend.....	Pacific.....	150	74.18	-9.54	28.97	-3.97	32.12	+0.65	9.43	-3.45	3.66	-2.77	52.6	+1.7
Vancouver.....	Clark.....	100	28.28	-8.52	10.44	-3.89	11.78	-1.40	3.47	-2.54	2.59	-0.69	54.6	+2.0

¹Departure from normal.

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940—Continued

ACRES IRRIGATED							COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	75,000 acres and more	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	\$10,000,000 and more
1	85	32	5	2			119	3	2	2	1	
.....	3,127	5,408	3,547	10,214	.....	.....	9,574	775	8,333	3,614	.....	.....
.....	4,037	1,814	230	5,233	.....	.....	5,391	665	825	4,433	.....	.....
.....		0.34	0.06	0.51	.....	.....	0.56	0.86	0.10	1.23	.....	.....
.....			3,129	.....	.....	.....	.....	.....	3,129	.....	.....	.....
.....			1.81	.....	.....	.....	.....	.....	1.81	.....	.....	.....
.....			8,940	.....	.....	.....	.....	.....	8,940	.....	.....	.....
.....			0.35	.....	.....	.....	.....	.....	0.35	.....	.....	.....
.....			2,705	22,965	.....	.....	.....	.....	5,353	20,317	.....	.....
.....			2	2		2						
.....			1,733	6,600	.....	161,876	.....	.....	8,333	.....	161,876	.....
.....			17,500	10,550	.....	828,876	.....	.....	28,050	.....	828,876	.....
.....			10.10	1.60	.....	5.12	.....	.....	3.37	.....	5.12	.....
.....			24,891	60,000	.....	6,097,037	.....	.....	81,891	.....	6,097,037	.....
.....			.....	2,700	.....	.....	.....	.....	2,700	.....	.....	.....
.....			24,891	62,700	.....	6,097,037	.....	.....	87,591	.....	6,097,037	.....
.....			25	800	.....	.....	.....	.....	825	.....	.....	.....
.....			3,129	.....	.....	.....	.....	.....	3,129	.....	.....	.....
.....			2,705	2,648	.....	.....	.....	.....	5,353	.....	.....	.....
.....			8,940	.....	.....	.....	.....	.....	8,940	.....	.....	.....
.....			1.96	.....	.....	.....	.....	.....	1.96	.....	.....	.....
.....			0.35	.....	.....	.....	.....	.....	0.35	.....	.....	.....
.....			1.81	.....	.....	.....	.....	.....	1.81	.....	.....	.....
.....			.....	2	.....	.....	.....	.....	2	.....	.....	.....
.....			.....	7,000	.....	.....	.....	.....	7,000	.....	.....	.....
.....			.....	10,550	.....	.....	.....	.....	10,550	.....	.....	.....
1	90	33	4	.....	.....	.....	125	3	.....	.....	.....	.....
.....		1	.....	1	.....	.....	1	.....	1	.....	.....	.....
.....			1	1	.....	.....	.....	.....	1	.....	.....	.....
.....			.....	.....	.....	1	.....	.....	.....	.....	1	.....
.....			2	2		2						
.....			180	2,800	.....	.....	.....	.....	980	.....	2,000	.....
.....			.....	1	.....	.....	.....	.....	.....	.....	1	.....
.....		
.....	7	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....
.....	29	2	.....	.....	.....	.....	30	1	.....	.....	.....	.....
1	54	32	5	2	.....	1	69	2	2	1	1	.....

³ Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

As reported by the U. S. Weather Bureau, the year 1939, for Washington as a whole, was warmer and drier than normal. It was warmer than 1938 but not quite so dry.

Precipitation.—The State average precipitation for the calendar year 1939 was 32.00 inches which is about four-fifths of the normal amount. There was a considerable excess in December and comparatively small excesses in the months of January, February, June, and July. All other months were deficient in precipitation, especially March, April, and November. The average for eastern Washington from April to September, inclusive, was but 2.53 inches. It was fortunate that June averaged 0.85 inch in that section, as, combined with the rain in the latter part of May, it saved the wheat crop. Mansfield and Okanogan were the only stations in the east that had more than their normal annual precipitation, while in western Washington, 82 percent of the stations were deficient in precipitation. The stations in this section that had an excess were northeast of the Olympic Mountains, north of the Chehalis River in Grays Harbor County, and on the west slopes of the northern Cascade Range.

With a total of 145.58 inches, Wynocsee Oxbow had the most precipitation for the year (with the first 14 days of April interpolated). Yakima had the least precipitation for the year, 4.21 inches. Cushman Dam had the greatest monthly amount, 35.29 inches in December.

State table 18 shows precipitation in the State of Washington for the water year (October 1938 through

September 1939) at 21 Weather Bureau stations located in typical irrigated areas in the major drainage basins. The average rainfall at 12 of these stations in the eastern half of the State, all of which lies east of the Cascade Range and in the Columbia River Drainage Basin, was 10.19 inches, a departure of -2.89 inches from the normal. Similarly, the average rainfall for 5 stations in that portion of the State draining into Puget Sound, Strait of Juan de Fuca, and Georgia Strait was 30.27 inches, a departure of -4.14 inches, and for 4 stations representing the Pacific Slope, 54.15 inches, a departure of -7.66 inches from the water year normal for these stations.

The snowfall for the year was less than normal. The greatest annual snowfall occurred at Mt. Baker Lodge with 435.0 inches.

Temperature.—The only stations in the State whose average temperature was below normal were Kosmos and Longview, where the deficiency was but 0.1°. The maximum for the State of 115° in July has been exceeded but twice since 1890 and has been equalled four additional times. February and June were the only months in which the State average temperature was below normal, while January and December were decidedly warmer than normal. Although the highest temperature for any day occurred in July, August averaged the warmest month of the year; and February averaged the coldest and had the lowest single temperature, 27° below zero. Normally January is the coldest month.

CENSUS OF IRRIGATION - WASHINGTON

DRAINAGE BASIN TABLE I-- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER			
		Total	Direct (1)	Clark Fork	
				Total	Direct (2)
IRRIGATED FARMS AND AREAS					
1 Irrigated farms.....1939..number.....	21,648	22,866	1,626	81	81
2 Area irrigated.....1939..acres.....	615,013	592,527	26,166	1,642	1,642
3 (a) Cropland harvested.....1939..acres.....	520,424	507,069	24,316	1,220	1,220
4 (b) Crop failure.....1939..acres.....	6,113	6,109	233	5	5
5 (c) Pasture.....1939..acres.....	88,476	79,329	1,617	417	417
6 Area irrigated.....1928..acres.....	499,283	481,019	10,065	896	.....
7 Area irrigated.....1919..acres.....	529,899	521,462	24,471	306	.....
8 Increase or decrease (-), 1929-1939.....percent.....	23.2	23.2	160.7	83.3	.....
9 Irrigable area in enterprises.....1940..acres.....	837,096	792,166	36,768	3,614	3,614
10 Area irrigated.....1930..acres.....	915,379	882,074	22,546	3,334	.....
11 Area irrigated.....1920 ² ..acres.....	836,795	816,266	49,209	1,431	.....
12 Excess of irrigable area over the area irrigated..1940..acres.....	222,083	199,639	10,602	1,972	1,972
13 Area irrigated.....1930..acres.....	416,096	401,055	12,511	2,438	.....
14 Area irrigated.....1920 ² ..acres.....	306,896	294,804	24,738	1,125	.....
15 Area works were capable of supplying with water..1940..acres.....	731,527	690,595	31,281	2,600	2,600
16 Area irrigated.....1930..acres.....	631,511	601,824	13,678	2,705	.....
17 Area irrigated.....1920..acres.....	637,151	621,458	32,492	1,064	.....
18 Increase or decrease (-), 1930-1940.....percent.....	15.8	14.8	128.7	-3.9	.....
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	116,514	98,068	5,115	958	958
20 Area irrigated.....1930..acres.....	132,228	120,805	3,643	1,809	.....
21 Area irrigated.....1920..acres.....	107,252	99,996	8,021	768	.....
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.1	85.8	83.6	63.2	63.2
23 Area irrigated.....1929..percent.....	79.1	79.9	73.4	33.1	.....
24 Area irrigated.....1919..percent.....	83.2	83.9	75.3	28.8	.....
CAPITAL INVESTED TO JANUARY 1					
25 Total investment in irrigation enterprises.....1940..dollars.....	56,415,196	55,371,733	3,556,136	67,725	67,725
26 (a) Cost of irrigation works and equipment.....1940..dollars.....	55,678,678	54,640,628	3,484,531	66,970	66,970
27 (b) Investment in water rights (reported).....1940..dollars.....	736,518	731,105	71,605	755	755
28 Total investment in irrigation enterprises.....1930..dollars.....	40,561,895	39,351,909	1,377,002	50,956	.....
29 Total investment in irrigation enterprises.....1920..dollars.....	29,299,011	28,990,618	2,229,066	7,293	.....
30 Increase or decrease (-), 1930-1940.....percent.....	39.1	40.7	158.3	32.9	.....
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	77.12	80.18	113.68	26.05	26.05
32 Area irrigated.....1930..dollars.....	64.23	65.39	100.67	18.84	.....
33 Area irrigated.....1920..dollars.....	45.98	46.65	68.60	6.85	.....
34 Average investment per acre irrigated.....1939..dollars.....	81.73	93.45	135.91	41.25	41.25
35 Estimated final investment in existing enterprises.....1940..dollars.....	58,141,087	56,891,620	3,641,732	68,650	68,650
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	69.46	71.82	99.05	19.00	19.00
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
	Primary	Supplemental	Primary	Supplemental	
	Enterprises		Enterprises		
37 Enterprises reporting maintenance and operation.....1939..number.....	3,742	125	3,015	124	45
38 Area irrigated in these enterprises.....1939..acres.....	602,414	22,296	580,083	22,261	1,274
39 Cost of maintenance and operation.....1939..dollars.....	1,673,992	11,314	1,597,619	11,289	1,173
40 Average cost, per acre irrigated.....1939..dollars.....	2.78	0.51	2.75	0.51	0.92
41 Total annual charges (reported) ³.....1939..dollars.....	1,542,453	3,129	1,474,678	3,129	79
42 Average annual charge per acre irrigated.....1939..dollars.....	3.04	1.81	3.00	1.81	0.46
43 Area against which charges were assessed.....1939..acres.....	573,094	8,940	548,066	8,940	790
44 Average annual charge per acre assessed.....1939..dollars.....	2.69	0.35	2.69	0.35	0.10
45 Total charges collected ³.....1939..dollars.....	1,062,485	25,670	1,010,728	25,670	.....
46 Indebtedness to December 31 (reported) ⁴.....1939..dollars.....	21,764,676	856,928	21,529,336	856,928	.....
WATER DELIVERED TO IRRIGATORS, 1939					
47 Enterprises reporting water delivered.....1939..number.....	3,847	130	3,151	129	56
48 Area irrigated by these enterprises.....1939..acres.....	590,627	184,534	571,261	184,499	1,642
49 Water delivered.....1939..acre-feet.....	2,548,581	704,152	2,500,619	704,142	3,006
50 Average water delivered per acre irrigated.....1939..acre-feet.....	4.3	3.8	4.4	3.8	1.8
51 Average cost of water per acre irrigated.....1939..dollars.....	3.35	0.75	3.28	0.75	0.97
52 Average cost of water per acre-foot delivered.....1939..dollars.....	0.78	0.20	0.75	0.20	0.53
DRAINAGE OF IRRIGATED LAND					
53 Enterprises reporting land drained or needing drainage.....1939..number.....	208	.....	61	.....	2
54 Irrigable area in these enterprises.....1939..acres.....	448,702	.....	442,694	.....	(5)
55 Irrigated area in these enterprises.....1939..acres.....	300,363	.....	296,021	.....	(5)
56 Area for which drains have been installed.....1939..acres.....	178,212	.....	177,194	.....	(5)
57 Additional area needing drainage.....1939..acres.....	18,673	.....	18,395	.....	(5)

¹Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State totals.
²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

COLUMBIA RIVER—Continued										
Kettle River	Colville River	Spokane River			Sampoil River	Okanogan River	Methow River	Lake Chelan	Entiat River	
		Total	Direct	Latah Creek						
(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
43	103	1,838	1,826	12	10	979	512	322	187	1
878	3,629	16,924	16,553	371	226	18,765	12,875	5,837	2,561	2
876	3,230	16,114	15,908	206	221	18,150	11,077	5,647	2,499	3
.....	6	285	285	.....	.....	122	55	40	60	4
2	393	525	360	165	5	493	1,743	150	2	5
.....	2,176	18,422	.....	.....	.....	21,462	11,720	.....	1,912	6
.....	6,960	16,453	.....	.....	.....	20,583	12,579	.....	2,054	7
.....	66.8	-8.1	.....	.....	.....	-12.6	9.9	.....	33.9	8
2,066	4,492	19,771	19,400	371	231	26,255	17,043	6,491	2,939	9
.....	3,622	38,220	.....	.....	.....	29,000	19,674	.....	2,154	10
.....	18,200	40,391	.....	.....	.....	42,042	24,017	.....	2,652	11
1,188	863	2,947	2,847	.....	5	7,490	4,168	654	378	12
.....	1,446	19,798	.....	.....	.....	7,538	7,954	.....	242	13
.....	11,240	23,938	.....	.....	.....	21,459	11,438	.....	598	14
1,167	4,288	19,595	19,224	371	226	23,818	15,166	6,348	2,925	15
.....	2,447	30,482	.....	.....	.....	27,790	17,346	.....	2,135	16
.....	13,993	21,675	.....	.....	.....	30,261	16,529	.....	2,251	17
.....	75.2	-35.7	.....	.....	.....	-14.3	-12.6	.....	37.0	18
289	659	2,671	2,671	.....	.....	5,053	2,291	511	364	19
.....	271	12,060	.....	.....	.....	6,328	5,626	.....	223	20
.....	7,033	5,222	.....	.....	.....	9,678	3,950	.....	197	21
75.2	84.6	86.4	86.1	100.0	100.0	78.8	84.9	92.0	87.6	22
.....	88.9	60.4	.....	.....	.....	77.2	67.6	.....	89.6	23
.....	49.7	75.9	.....	.....	.....	68.0	76.1	.....	91.2	24
11,680	39,202	2,387,514	2,378,374	9,140	1,055	3,601,840	681,331	866,494	163,675	25
11,275	37,775	2,375,776	2,366,636	9,140	855	3,577,846	674,473	865,736	163,050	26
406	1,427	11,738	11,738	.....	200	23,994	6,858	758	625	27
.....	355,290	1,352,395	.....	.....	.....	3,233,799	770,183	.....	184,922	28
.....	466,747	1,637,743	.....	.....	.....	2,259,018	483,809	.....	73,889	29
.....	-89.0	76.5	.....	.....	.....	11.4	-11.5	.....	-11.5	30
10.01	9.14	121.84	123.72	24.64	4.67	151.22	44.92	136.50	55.96	31
.....	145.19	44.37	.....	.....	.....	116.37	44.40	.....	86.65	32
.....	34.79	75.56	.....	.....	.....	74.65	29.27	.....	32.82	33
13.30	10.80	141.07	143.68	24.64	4.67	191.94	52.92	148.45	63.91	34
12,680	41,102	2,488,110	2,478,470	9,640	1,055	3,870,947	698,951	873,455	163,725	35
6.14	9.15	125.85	127.76	25.98	4.57	147.44	41.01	134.56	55.71	36
						Primary	Supplemental	Primary	Supplemental	
						Enterprises		Enterprises		
38	80	90	79	11	10	235	4	134	3	37
846	3,144	16,620	16,259	361	226	18,314	178	12,709	5,762	38
1,296	2,461	121,617	120,437	1,180	168	97,928	253	22,544	676	39
1.46	0.78	7.32	7.41	3.27	0.74	5.35	1.42	1.77	22.53	40
.....	151	147,323	147,323	.....	.....	82,720	.....	24,015	67,634	41
.....	0.20	9.57	9.57	.....	.....	6.53	.....	2.94	18.33	42
.....	755	16,830	16,830	.....	.....	15,656	.....	8,501	3,727	43
.....	0.20	8.75	8.75	.....	.....	5.28	.....	2.82	18.15	44
.....	150	142,640	142,640	.....	.....	90,799	.....	23,405	61,606	45
.....	.....	681,066	681,066	.....	.....	675,576	.....	137,940	413,669	46
40	96	97	85	12	10	247	3	137	3	47
878	3,578	16,924	16,553	371	226	18,761	58	9,900	5,837	48
2,627	6,936	77,694	76,680	954	904	103,125	129	50,200	17,028	49
3.0	1.9	4.6	4.6	2.6	4.0	5.5	2.2	5.1	4.1	50
1.46	0.76	9.34	9.48	3.27	0.74	6.86	1.08	2.33	22.63	51
0.49	0.39	2.04	2.05	1.27	0.74	1.25	0.49	0.46	22.53	52
.....	5	1	(6)	1	(6)	2	4	.....	.....	3
.....	425	(6)	(6)	.....	(6)	2,496	.....	.....	.....	54
.....	296	(6)	(6)	.....	(6)	1,694	.....	.....	.....	55
.....	.....	(6)	(6)	.....	(6)	22	.....	.....	.....	56
.....	92	(6)	(6)	.....	(6)	217	.....	.....	.....	57

⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁶ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - WASHINGTON

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER-Continued					
	Wenatchee River		Crab Creek		Yakima River	
	(13)	(14)			Total	
IRRIGATED FARMS AND AREAS						
1 Irrigated farms.....1939..number.....	1,829	149			13,629	
2 Area irrigated.....1939..acres.....	22,091	6,007			433,191	
3 (a) Cropland harvested.....1939..acres.....	21,934	5,074			362,613	
4 (b) Crop failure.....1939..acres.....	34	39			4,389	
5 (c) Pasture.....1939..acres.....	123	894			66,189	
6 Area irrigated.....1929..acres.....	24,606	1,761			325,299	
7 ..1919..acres.....	23,734	6,088			337,293	
8 Increase or decrease (-), 1929-1939.....percent.....	-10.2	241.1			33.2	
9 Irrigable area in enterprises.....1940..acres.....	27,781	8,043			587,001	
10 ..1930..acres.....	27,548	1,983			636,343	
11 ..1920 ¹ ..acres.....	39,288	10,400			436,797	
12 Excess of irrigable area over the area irrigated..1940..acres.....	5,690	2,036			153,810	
13 ..1930..acres.....	2,942	222			311,044	
14 ..1920 ¹ ..acres.....	15,554	4,312			99,504	
15 Area works were capable of supplying with water...1940..acres.....	24,474	7,628			503,375	
16 ..1930..acres.....	25,717	1,885			399,726	
17 ..1920..acres.....	34,568	8,048			353,644	
18 Increase or decrease (-), 1930-1940.....percent.....	-4.8	304.7			25.9	
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	2,383	1,621			70,184	
20 ..1930..acres.....	1,111	124			74,427	
21 ..1920..acres.....	10,834	1,960			16,351	
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	90.3	78.7			86.1	
23 ..1929..percent.....	95.7	93.4			81.4	
24 ..1919..percent.....	68.7	75.6			95.4	
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars....	2,954,690	250,287			39,033,395	
26 (a) Cost of irrigation works and equipment.....1940..dollars....	2,844,168	240,092			38,605,392	
27 (b) Investment in water rights (reported).....1940..dollars....	110,522	10,195			428,003	
28 Total investment in irrigation enterprises.....1930..dollars....	2,922,367	55,950			25,282,348	
29 ..1920..dollars....	1,868,541	859,050			14,849,689	
30 Increase or decrease (-), 1930-1940.....percent.....	1.1	347.3			54.4	
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	120.73	32.81			77.54	
32 ..1930..dollars....	113.64	29.68			63.25	
33 ..1920..dollars....	74.05	106.74			41.99	
34 Average investment per acre irrigated.....1939..dollars....	133.75	41.67			90.11	
35 Estimated final investment in existing enterprises..1940..dollars....	2,959,227	253,948			40,030,657	
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	106.52	31.57			68.20	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary		Supplemental		Primary	
	Enterprises		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation...1939..number.....	237	4	128	1	621	105
38 Area irrigated in these enterprises.....1939..acres.....	21,830	3,632	5,780	(²)	426,121	9,887
39 Cost of maintenance and operation.....1939..dollars....	113,057	4,561	32,006	(²)	786,672	4,728
40 Average cost, per acre irrigated.....1939..dollars....	5.18	1.26	5.54	(²)	1.85	0.48
41 Total annual charges (reported) ^{3 4}.....1939..dollars....	119,083			3,129	848,085	
42 Average annual charge per acre irrigated.....1939..dollars....	6.73			1.81	2.14	
43 Area against which charges were assessed.....1939..acres.....	19,914			8,940	439,466	
44 Average annual charge per acre assessed.....1939..dollars....	5.98			0.35	1.93	
45 Total charges collected ³.....1939..dollars....	102,351	20,317		2,705	428,989	
46 Indebtedness to December 31 (reported) ⁴.....1939..dollars....	467,011			17,500	18,734,915	828,878
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number.....	247	4	131	1	629	108
48 Area irrigated by these enterprises.....1939..acres.....	20,837	3,632	5,738	(²)	419,442	172,040
49 Water delivered.....1939..acre-feet..	80,266	10,836	28,347	(²)	1,884,813	675,275
50 Average water delivered per acre irrigated.....1939..acre-feet..	3.9	3.0	4.9	(²)	4.5	3.9
51 Average cost of water per acre irrigated.....1939..dollars....	7.47	7.11	5.66	(²)	2.15	0.48
52 Average cost of water per acre-foot delivered..1939..dollars....	1.94	2.42	1.15	(²)	0.48	0.12
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number.....		1			23	
54 Irrigable area in these enterprises.....1939..acres.....	(²)				438,032	
55 Irrigated area in these enterprises.....1939..acres.....	(²)				292,634	
56 Area for which drains have been installed.....1939..acres.....	(²)				176,549	
57 Additional area needing drainage.....1939..acres.....					17,922	

¹For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - WASHINGTON

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER—Continued												
Yakima River—Continued				Snake River				Walla Walla River				
Direct	Naches River	Ahtanum Creek	Total	Direct	Grande Ronde River	Asotin Creek	Palouse River	Walla Walla River				
(15)	(16)	(17)		(18)	(19)	(20)	(21)	(22)				
9,246	3,978	407	490	133	9	316	22	825				1
364,134	56,300	12,757	7,448	2,757	121	3,530	1,040	21,831				2
303,314	51,302	7,987	7,055	2,631	121	3,430	879	17,416				3
3,369	20	1,000	55	33	.....	.....	22	536				4
57,451	4,978	3,760	398	98	.....	100	145	3,879				5
257,220	29,956	8,172	8,715	1,640	.....	3,513	980	18,508				6
254,262	19,864	9,287	11,788	4,047	.....	3,051	1,735	22,270				7
41.6	87.9	56.1	-14.5	68.1	.....	0.5	.....	18.0				8
500,361	71,957	14,663	8,789	3,596	125	3,875	1,193	26,421				9
507,193	30,514	8,996	10,375	1,719	.....	4,341	1,320	21,729				10
345,373	21,656	9,982	36,295	21,233	.....	4,051	3,645	36,157				11
136,247	15,657	1,906	1,341	839	4	345	153	4,590				12
249,973	558	824	1,660	79	.....	828	340	3,221				13
91,111	1,792	695	24,507	20,186	.....	1,000	1,910	13,887				14
426,851	61,861	14,663	8,618	3,425	125	3,875	1,193	25,243				15
317,165	30,386	8,936	9,894	1,659	.....	4,341	1,150	20,000				16
269,163	20,284	9,342	30,269	20,130	.....	4,051	2,020	29,965				17
34.6	103.6	64.1	-12.9	106.4	.....	-10.7	3.7	26.2				18
62,717	5,561	1,906	1,170	668	4	345	153	3,412				19
59,945	430	764	1,179	19	.....	828	170	1,492				20
14,901	420	55	18,481	16,083	.....	1,000	285	7,695				21
85.3	91.0	87.0	86.4	80.5	96.8	91.1	87.2	86.5				22
81.1	98.6	91.5	88.1	98.9	.....	80.9	85.2	92.5				23
94.5	97.9	99.4	38.9	20.1	.....	75.3	85.9	74.3				24
32,502,040	6,386,795	144,560	908,893	139,957	1,475	722,589	44,872	609,276				25
32,376,491	6,084,341	144,560	900,163	139,777	1,475	714,089	44,822	558,381				26
125,549	302,454	.....	8,730	180	.....	8,500	50	50,895				27
22,644,214	1,745,759	103,747	493,192	74,361	.....	250,331	42,595	551,351				28
13,912,727	458,027	88,443	1,398,296	471,772	.....	606,084	175,100	890,980				29
43.5	265.6	39.3	84.3	88.2	.....	188.7	5.3	10.5				30
76.14	103.24	9.86	105.46	40.86	11.80	186.47	37.61	24.14				31
71.40	57.49	11.61	49.85	44.82	.....	57.67	37.04	27.57				32
51.69	22.58	9.47	46.20	23.44	.....	149.61	86.68	29.73				33
89.26	113.44	11.33	122.03	50.76	12.19	204.70	43.15	27.91				34
33,497,467	6,388,530	144,660	917,116	147,762	1,483	722,589	45,292	612,758				35
66.94	88.78	9.87	104.35	41.09	11.86	186.47	37.96	23.19				36
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
501	90	99	5	21	10	143	100	8	13	22	274	5
357,322	9,340	56,278	121	12,521	426	7,261	2,573	118	3,530	1,040	20,959	101
641,253	3,929	138,375	135	7,044	664	63,264	15,270	1,020	44,018	2,956	26,989	236
1.79	0.42	2.46	1.12	0.56	1.56	8.71	5.93	8.64	12.47	2.64	1.29	2.34
673,004	.....	166,561	.....	8,520	.....	46,456	2,000	.....	44,456	.....	22,278	.....
2.04	.....	3.15	.....	0.72	.....	12.98	8.00	.....	13.36	.....	1.70	.....
368,048	.....	58,846	.....	12,572	.....	3,897	250	.....	3,647	.....	13,643	.....
1.83	.....	2.83	.....	0.68	.....	11.92	8.00	.....	12.19	.....	1.63	.....
327,936	.....	92,257	.....	8,774	.....	41,980	2,080	.....	39,900	.....	22,158	.....
17,464,152	828,878	1,187,732	.....	83,031	.....	.....	.....	.....	.....	.....	68,306	.....
509	99	97	5	23	10	153	109	9	13	22	286	7
352,535	171,493	54,150	121	12,757	426	7,420	2,729	121	3,530	1,040	20,845	126
1,635,410	673,653	224,102	325	25,401	1,297	23,766	10,615	443	9,398	3,110	82,072	297
4.6	3.9	4.1	2.7	2.0	3.0	3.2	4.0	3.7	2.7	3.0	3.9	2.4
2.06	0.42	3.04	1.12	0.76	1.56	8.89	5.93	8.64	12.83	2.84	1.62	2.34
0.44	0.11	0.74	1.12	0.38	1.56	2.78	1.50	2.36	12.83	2.94	0.41	0.99
16	.....	5	.....	2	.....	2	.....	.....	.....	.....	2	.....
387,372	.....	42,032	.....	(5)	.....	(5)	.....	(5)	.....	(5)	.....	.....
257,976	.....	27,041	.....	(5)	.....	(5)	.....	(5)	.....	(5)	.....	.....
173,476	.....	3,025	.....	(5)	.....	(5)	.....	(5)	.....	(5)	.....	.....
16,872	.....	50	.....	(5)	.....	(5)	.....	(5)	.....	(5)	.....	.....

³ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WASHINGTON

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER—Continued			
	Klickitat River	White Salmon River	Lewis River	Cowlitz River
	(23)	(24)	(25)	(26)
IRRIGATED FARMS AND AREAS				
1 Irrigated farms.....1939..number.....	98	110	24	21
2 Area irrigated.....1939..acres.....	7,251	4,717	269	219
3 (a) Cropland harvested.....1939..acres.....	5,886	3,247	264	150
4 (b) Crop failure.....1939..acres.....	200	50	.....	.....
5 (c) Pasture.....1939..acres.....	1,065	1,420	5	69
6 Area irrigated.....1929..acres.....	6,797	4,034	.....	.....
7 1919..acres.....	12,332	6,247	.....	.....
8 Increase or decrease (-), 1929-1939.....percent.....	6.7	16.9	.....	.....
9 Irrigable area in enterprises.....1940..acres.....	7,702	5,482	768	509
10 1930..acres.....	7,538	5,609	.....	.....
11 1920 ¹ ..acres.....	19,241	11,958	.....	.....
12 Excess of irrigable area over the area irrigated..1940..acres.....	451	765	499	290
13 1930..acres.....	741	1,575	.....	.....
14 1920 ¹ ..acres.....	6,909	5,711	.....	.....
15 Area works were capable of supplying with water..1940..acres.....	7,702	5,375	372	394
16 1930..acres.....	7,004	4,897	.....	.....
17 1920..acres.....	13,440	7,277	.....	.....
18 Increase or decrease (-), 1930-1940.....percent.....	10.0	14.4	.....	.....
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	451	658	103	175
20 1930..acres.....	207	683	.....	.....
21 1920..acres.....	1,108	1,030	.....	.....
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	94.1	87.8	72.3	55.6
23 1929..percent.....	97.0	85.9	.....	.....
24 1919..percent.....	91.8	85.8	.....	.....
CAPITAL INVESTED TO JANUARY 1				
25 Total investment in irrigation enterprises.....1940..dollars....	79,743	137,700	9,935	11,262
26 (a) Cost of irrigation works and equipment.....1940..dollars....	76,855	136,390	9,705	11,195
27 (b) Investment in water rights (reported).....1940..dollars....	2,888	1,310	130	67
28 Total investment in irrigation enterprises.....1930..dollars....	6,125	111,862	.....	.....
29 1920..dollars....	64,423	91,786	.....	.....
30 Increase or decrease (-), 1930-1940.....percent.....	(²)	23.1	.....	.....
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	10.35	25.62	26.44	28.58
32 1930..dollars....	0.87	23.82	.....	.....
33 1920..dollars....	4.79	12.61	.....	.....
34 Average investment per acre irrigated.....1939..dollars....	11.00	29.19	36.56	51.42
35 Estimated final investment in existing enterprises..1940..dollars....	84,268	147,850	10,902	14,487
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	10.94	26.97	14.20	28.46
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS				
	Primary		Sup.	
	Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation..1939..number....	15	(³) 1	20	(³) 1
38 Area irrigated in these enterprises.....1939..acres.....	7,241	(³)	4,616	(³)
39 Cost of maintenance and operation.....1939..dollars....	753	(³)	2,895	(³)
40 Average cost, per acre irrigated.....1939..dollars....	0.10	(³)	0.63	(³)
41 Total annual charges (reported) ⁴.....1939..dollars....	3,023	.....	2,495	.....
42 Average annual charge per acre irrigated.....1939..dollars....	0.43	.....	0.58	.....
43 Area against which charges were assessed.....1939..acres.....	6,973	.....	4,852	.....
44 Average annual charge per acre assessed.....1939..dollars....	0.43	.....	0.51	.....
45 Total charges collected ⁴.....1939..dollars....	320	2,648	2,373	.....
46 Indebtedness to December 31 (reported) ⁵.....1939..dollars....	.....	10,550	7,000	.....
WATER DELIVERED TO IRRIGATORS, 1939				
47 Enterprises reporting water delivered.....1939..number....	13	(³) 1	24	(³) 2
48 Area irrigated by these enterprises.....1939..acres.....	7,219	(³)	4,217	(³)
49 Water delivered.....1939..acre-feet....	7,405	(³)	13,604	(³)
50 Average water delivered per acre irrigated.....1939..acre-feet....	1.0	(³)	3.2	(³)
51 Average cost of water per acre irrigated.....1939..dollars....	0.47	.....	0.59	(³)
52 Average cost of water per acre-foot delivered..1939..dollars....	0.46	.....	0.18	(³)
DRAINAGE OF IRRIGATED LAND				
53 Enterprises reporting land drained or needing drainage.....1939..number....	.....	.....	1	.....
54 Irrigable area in these enterprises.....1939..acres.....	.....	.....	(³)	.....
55 Irrigated area in these enterprises.....1939..acres.....	.....	.....	(³)	.....
56 Area for which drains have been installed.....1939..acres.....	.....	.....	(³)	.....
57 Additional area needing drainage.....1939..acres.....	.....	.....	(³)	.....

¹ Data for 4 enterprises (40 acres irrigated) in drainage basin (35), Sumas River, Washington (tributary of the Fraser River, Canada), are included in drainage basin (34), Nooksack River Area.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Percent not shown when more than 1,000.

CENSUS OF IRRIGATION — WASHINGTON

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

STRAIT OF JUAN DE FUCA										GEORGIA STRAIT	PACIFIC SLOPE				
Total	Puget Sound							Skagit and Samish Rivers	Dungeness River	Nooksack River Area ^a	Total	Chehalis River	Other Pacific Slope Streams		
	Total	Direct	Nisqually River	White and Puyallup Rivers	Lake Washington	Snohomish River	Total								
														(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(36)	(37)
1,548	1,072	179	451	376	56	10	9	467	39	195	159	36			
20,248	9,236	1,000	3,899	3,634	590	113	143	10,869	528	1,710	1,381	329			
12,017	6,354	766	2,447	2,575	481	85	90	5,573	463	855	596	259			
4	4	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
8,227	2,878	231	1,452	1,068	109	28	53	5,296	65	855	785	70			
8,960	.....	.....	.....	.....	.....	.....	.....	8,960	.....	.....	.....	.....
6,160	.....	.....	.....	.....	.....	.....	.....	6,160	.....	.....	.....	.....
126.0	.....	.....	.....	.....	.....	.....	.....	21.3	.....	.....	.....	.....
40,942	19,629	6,185	5,808	6,543	905	188	269	21,044	1,140	2,848	2,417	431			
20,142	.....	.....	.....	.....	.....	.....	.....	20,142	.....	.....	.....	.....
12,660	.....	.....	.....	.....	.....	.....	.....	12,660	.....	.....	.....	.....
20,694	10,393	5,185	1,909	2,909	315	75	126	10,175	612	1,136	1,036	102			
11,182	.....	.....	.....	.....	.....	.....	.....	11,182	.....	.....	.....	.....
6,500	.....	.....	.....	.....	.....	.....	.....	6,500	.....	.....	.....	.....
37,367	17,854	5,850	5,808	4,972	886	138	269	19,444	1,024	2,541	2,120	421			
17,607	.....	.....	.....	.....	.....	.....	.....	17,607	.....	.....	.....	.....
9,860	.....	.....	.....	.....	.....	.....	.....	9,860	.....	.....	.....	.....
112.2	.....	.....	.....	.....	.....	.....	.....	10.4	.....	.....	.....	.....
17,119	8,418	4,850	1,909	1,338	296	25	126	8,575	496	831	739	92			
8,647	.....	.....	.....	.....	.....	.....	.....	8,647	.....	.....	.....	.....
3,700	.....	.....	.....	.....	.....	.....	.....	3,700	.....	.....	.....	.....
54.2	52.3	17.1	67.1	73.1	66.6	81.9	53.2	55.9	.....	.....	.....	.....
50.9	.....	.....	.....	.....	.....	.....	.....	50.9	.....	.....	.....	.....
62.5	.....	.....	.....	.....	.....	.....	.....	62.5	.....	.....	.....	.....
934,501	628,122	125,029	265,142	190,215	41,792	5,944	6,805	299,574	27,116	81,846	65,585	16,261			
929,711	625,472	123,107	265,142	189,710	41,598	5,915	6,780	297,459	26,970	81,369	65,134	16,235			
4,790	2,650	1,922	.....	505	194	29	25	2,115	146	477	451	26		
296,126	.....	.....	.....	.....	.....	.....	.....	296,126	.....	.....	.....	.....
94,010	.....	.....	.....	.....	.....	.....	.....	94,010	.....	.....	.....	.....
215.6	.....	.....	.....	.....	.....	.....	.....	1.2	.....	.....	.....	.....
25.01	35.58	21.37	45.65	38.26	47.17	43.07	25.30	15.41	26.48	32.21	30.94	38.62			
16.82	.....	.....	.....	.....	.....	.....	.....	16.82	.....	.....	.....	.....
9.53	.....	.....	.....	.....	.....	.....	.....	9.53	.....	.....	.....	.....
46.15	68.01	125.03	68.00	52.34	70.83	52.60	47.59	27.56	51.36	47.86	47.49	49.43			
1,121,362	814,633	143,455	426,642	196,505	42,037	5,994	7,155	299,574	31,586	96,529	79,768	16,761			
27.39	41.50	23.19	73.46	30.03	46.45	31.88	26.60	14.24	27.71	33.89	33.00	38.89			
Primary	Sup.											Primary	Sup.		
Enterprises												Enterprises			
503	1	486	145	42	241	49	9	8	9	33	191	156	35		
20,141	(3)	9,136	968	3,899	3,592	564	113	136	10,869	(3)	512	1,678	325		
65,417	(3)	50,925	6,485	10,075	27,094	6,035	1,236	666	13,826	(3)	2,100	8,856	2,014		
3.25	(3)	5.57	6.70	2.58	7.54	10.70	10.94	4.90	1.27	(3)	4.10	5.28	6.20		
67,700	23,773	1,526	11,851	7,695	2,701	43,927	75		
4.65	5.36	8.57	3.95	14.80	73.00	4.06	1.00		
24,953	6,002	178	5,267	520	37	18,951	75		
2.71	3.96	8.57	2.25	14.60	73.00	2.32	1.00		
51,657	23,394	12,000	7,695	2,699	29,263	100		
235,340	138,500	138,500	96,840		
475	1	461	120	42	244	49	6	8	6	1	29	158	34		
17,208	(3)	8,946	879	3,899	3,542	544	82	133	8,129	(3)	493	1,665	285		
46,376	(3)	15,961	1,471	9,448	3,824	1,062	156	65	30,350	(3)	511	1,075	394		
2.7	(3)	1.8	1.7	2.4	1.1	2.0	1.9	0.5	3.7	(3)	1.0	0.6	0.8		
5.41	(3)	6.03	7.19	3.44	7.67	11.23	13.23	5.28	4.73	(3)	4.35	5.38	7.06		
2.01	(3)	3.38	4.30	3.44	7.10	5.76	13.23	10.73	4.73	(3)	4.20	8.33	8.34		
54	50	22	3	17	4	4	3	1	3	90	4		
5,097	4,937	239	4,459	145	13	81	80	(3)	268	643	12		
3,651	3,596	107	3,322	100	13	54	15	(3)	102	588	10		
253	203	91	63	12	37	40	(3)	152	613	10		
276	271	19	230	15	7	(3)	2		

³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WASHINGTON

DRAINAGE BASIN TABLE II - ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL ¹	COLUMBIA RIVER					
		Total	Direct (1)	Clark Fork		Kettle River (4)	Colville River (5)
				Total	Direct (2)		
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1 Enterprises.....1940..number.....	4,120	3,346	825	56	56	40	98
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	178	206	38	46	46	29	44
3 Diversion dams.....1940..total number.....	1,755	1,681	251	44	44	25	59
4 1930..total number.....	499	482	2	9	.....	.....	18
5 1920..total number.....	579	570	9	5	.....	.....	40
6 (a) Concrete and masonry.....1940..number.....	166	164	6	1	1	.....	1
7 (b) Timber.....1940..number.....	453	422	93	12	12	6	18
8 (c) Earth and rock.....1940..number.....	725	702	127	15	15	15	21
9 (d) Other, mixed, and not reported.....1940..number.....	411	393	25	16	16	4	19
10 Main canals and laterals.....1940..total length, miles.....	4,248.6	4,094.6	185.4	37.0	37.0	27.4	38.8
11 1930..total length, miles.....	3,635	3,468	51	15	.....	.....	33
12 1920..total length, miles.....	5,615	5,519	198	12	.....	.....	195
13 (a) Earth.....1940..length, miles.....	3,581	3,446	132	34	34	23	33
14 (b) Lined.....1940..length, miles.....	667.6	648.6	53.4	3.0	3.0	4.4	5.8
15 1940..capacity, c.f.s. ²	15,104	14,072	761	89	89	50	146
16 1930..capacity, c.f.s. ²	14,987	14,443	205	81	.....	.....	61
17 1920..capacity, c.f.s. ²	16,242	15,607	630	99	.....	.....	393
18 Pipe lines ³.....1940..total length, miles.....	2,612.7	2,304.1	542.9	9.7	9.7	1.7	1.8
19 1930..total length, miles.....	1,136.9	1,082.5	148.4	2.5	.....	.....	2.4
20 1920..total length, miles.....	790.0	785.9	162.2	1.0	.....	.....	14.6
21 (a) Concrete.....1940..length, miles.....	614.9	608.8	63.7	.....	.....	.....	.....
22 (b) Metal.....1940..length, miles.....	1,239.0	951.6	338.5	6.4	6.4	0.7	1.1
23 (c) Wood-stave.....1940..length, miles.....	654.3	640.3	126.9	2.0	2.0	.....	0.6
24 (d) Other.....1940..length, miles.....	104.5	103.4	13.8	1.3	1.3	1.0	0.1
25 Storage dams.....1940..total number.....	125	108	31	11	11	.....	1
26 1930..total number.....	100	91	1	1	.....	.....	2
27 1920..total number.....	115	113	18	1	.....	.....	1
28 (a) Concrete and masonry.....1940..number.....	21	16	3	.....	.....	.....	.....
29 (b) Earth and rock.....1940..number.....	81	75	24	2	2	.....	1
30 (c) Other, mixed, and not reported.....1940..number.....	23	17	4	9	9	.....	.....
31 Reservoirs.....1940..total number.....	114	93	23	11	11	.....	1
32 (a) 1-99 acre-feet capacity.....1940..number.....	81	61	19	11	11	.....	1
33 (b) 100-999 acre-feet capacity.....1940..number.....	9	8	4	.....	.....	.....	.....
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	24	24	.....	.....	.....	.....	.....
35 1940..total capacity, ac.-ft. ⁴	1,165,527	1,165,263	1,681	20	20	.....	(5)
36 1930..total capacity, ac.-ft.....	78	1	1	.....	.....	.....	.....
37 1930..total capacity, ac.-ft.....	699,807	699,764	60	3,060	.....	.....	.....
38 Wells, flowing.....1940..number.....	50	43	16	.....	.....	.....	1
39 1930..number.....	42	42	1	.....	.....	.....	.....
40 1920..number.....	60	59	8	.....	.....	.....	.....
41 1940..yield, g.p.m.....	21,192	19,685	4,070	.....	.....	.....	(5)
42 1930..yield, g.p.m.....	27,290	27,290	300	.....	.....	.....	.....
43 1920..yield, g.p.m.....	14,925	14,925	4,390	.....	.....	.....	.....
44 Wells, pumped.....1940..number.....	1,041	799	315	.....	.....	.....	.....
45 1930..number.....	1,019	879	11	.....	.....	.....	3
46 1920..number.....	520	517	166	.....	.....	.....	1
47 1940..yield, g.p.m.....	287,327	263,181	70,489	.....	.....	.....	.....
48 1930..yield, g.p.m.....	306,800	269,274	11,325	.....	.....	.....	975
49 1920..yield, g.p.m.....	227,744	227,624	58,223	.....	.....	.....	40
50 Pumping plants.....1940..total number.....	2,487	1,923	607	3	3	1	5
51 1930..total number.....	1,951	1,748	219	.....	.....	.....	3
52 Prime movers.....1940..capacity, hp.....	37,131	34,274	8,526	65	65	(5)	16
53 1930..capacity, hp.....	33,187	30,783	6,625	.....	.....	.....	15
54 1920..capacity, hp.....	22,929	22,901	6,451	.....	.....	.....	23
55 (a) Electric.....1940..number.....	2,071	1,622	531	.....	.....	.....	1
56 1940..capacity, hp.....	26,943	25,239	7,542	.....	.....	.....	(5)
57 (b) Internal-combustion.....1940..number.....	353	248	75	.....	.....	.....	2
58 1940..capacity, hp.....	4,560	3,442	984	.....	.....	.....	(5)
59 (c) Other ⁶.....1940..number.....	63	53	1	3	3	1	2
60 1940..capacity, hp.....	5,628	5,593	.....	65	65	(5)	(5)
61 Pumps.....1940..total number.....	2,488	1,917	605	1	1	1	5
62 1930..number.....	2,023	1,819	228	.....	.....	.....	3
63 1920..number.....	1,059	1,050	347	.....	.....	.....	5
64 1940..capacity, g.p.m.....	953,751	874,008	196,667	1,800	1,800	(5)	2,096
65 1930..capacity, g.p.m.....	893,303	908,708	215,538	.....	.....	.....	975
66 1920..capacity, g.p.m.....	636,552	635,735	231,463	.....	.....	.....	8,450
67 (a) Centrifugal.....1940..number.....	2,044	1,654	528	.....	.....	1	5
68 1940..capacity, g.p.m.....	884,439	817,962	180,501	.....	.....	(5)	2,096
69 1940..average capacity, g.p.m.....	423	495	342	.....	.....	(5)	419
70 (b) Turbine.....1940..number.....	117	99	33	1	1	.....	.....
71 1940..capacity, g.p.m.....	40,471	39,501	12,279	(5)	(5)	.....	.....
72 1940..average capacity, g.p.m.....	346	399	372	(5)	(5)	.....	.....
73 (c) Plunger.....1940..number.....	266	129	36	.....	.....	.....	.....
74 1940..capacity, g.p.m.....	18,888	10,413	2,841	.....	.....	.....	.....
75 1940..average capacity, g.p.m.....	71	81	79	.....	.....	.....	.....
76 (d) Other ⁷.....1940..number.....	61	35	8	.....	.....	.....	.....
77 1940..capacity, g.p.m.....	9,953	6,132	1,046	.....	.....	.....	.....
78 Pumping lift, from all sources.....1940..average, feet.....	47	55	59	32	32	(5)	12
79 1930..average, feet.....	59	59	78	.....	.....	.....	38
80 1920..average, feet.....	60	67	67	.....	.....	.....	55
81 from pumped wells.....1940..average, feet.....	43	46	48	.....	.....	.....	.....
82 from surface sources.....1940..average, feet.....	51	60	71	32	32	(5)	12

¹Data for unidentified independent basins for the 1930 and 1920 Censuses are included only in State totals.
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
³Includes siphons and farm pipe lines reported.
⁴Total capacity of all reservoirs regardless of size.

CENSUS OF IRRIGATION - WASHINGTON

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WORKS, 1940, 1930, AND 1920

COLUMBIA RIVER—Continued														
Spokane River											Yakima River			
Total	Direct	Latah Creek	Sanpoll River	Okanogan River	Methow River	Lake Chelan	Entiat River	Wenatchee River	Crab Creek	Total	Direct	Naches River	Ahtanum Creek	
	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)		(15)	(16)	(17)	
100	88	12	10	254	145	95	36	255	134	752	613	106	33	1
196	218	31	23	94	105	67	81	96	57	669	696	584	444	2
27	27		4	46	109	25	21	80	32	616	515	90	11	3
6				16	41		5	42	7	126	21	25	19	4
15				12	52		5	41	24	105	12	2	10	5
5	5			2	1	1	1	6	9	52	38	11	3	6
8	8		1	10	74	5		17	14	59	31	28		7
4	4		3	28	29	18	11	52	6	248	199	41	8	8
10	10			6	5	1	9	5	3	257	247	10		9
113.1	113.1		3.0	280.7	226.5	43.1	50.3	146.4	36.3	2,622.8	2,093.7	494.9	34.2	10
25				195	192		34	187	5	2,295	1,871	169	52	11
235				290	276		41	213	43	2,226	1,552	134	83	12
67	67		3	97	207	21	39	81	34	2,404	1,951	419	34	13
46.1	46.1			183.7	19.5	22.1	11.3	65.4	2.3	218.8	142.7	75.9	0.2	14
102	90	12	13	719	652	180	132	798	194	9,008	7,542	1,160	306	15
289				602	1,014		62	686	260	10,155	7,294	923	605	16
802				552	1,230		85	553	100	7,486	4,823	724	180	17
164.6	164.6			176.8	19.4	129.3	23.4	401.2	38.7	647.4	527.0	119.7	0.7	18
98.5				52.7	8.8		6.9	62.1	2.2	380.6	371.0	6.2	0.3	19
132.7				20.9	4.8		1.5	26.0	34.9	161.1	154.6	4.1		20
124.4	124.4			17.5	3.4	0.5	0.2	19.8	6.9	337.0	265.2	71.5	0.3	21
22.1	22.1			112.9	9.5	61.8	19.5	278.5	18.1	28.5	24.4	3.8	0.3	22
15.8	15.8			38.7	6.3	66.8	3.7	102.9	13.3	207.6	168.1	39.4	0.1	23
2.3	2.3			7.7	0.2	0.2			0.4	74.3	69.3	5.0		24
5	5			15	6	5	1	13	6	9	6	3		25
3				12	10		1	3	8	6				26
8				11	11		1	6	9	10	7			27
2	2			1		1		2	5	1	1			28
3	3			14	6	3	1	8	1	8	5	3		29
								3						30
12	11	1		12	5	2	1	11	2	9	5	4		31
12	11	1		2	4			7		1	1			32
				1		2		1						33
				9	1		1	3	2	8	4	4		34
70	69	(5)		43,501	6,138	(5)	(5)	4,523	(5)	1,065,870	828,770	237,100		35
3				11	8			9	1	8	7			36
1,607				43,085	4,374			6,203	70	629,487	628,437			37
										5	3		2	38
				1				1		4				39
					1				3		3			40
				50						938	652	(5)		41
								10		3,350				42
									60	285	285			43
49	38	11		105	3	1	1	46	89	87	60	13	14	44
80				196	2		1	71	14	58	8	2	5	45
47				48	2			7	111	45	41	1	1	46
79,643	78,373	1,270		15,330	450	(5)	(5)	2,582	43,249	30,009	22,797	2,065	5,147	47
74,059				27,970	800		30	6,728	7,835	21,768	1,465	580	1,990	48
58,504				13,278	115			1,300	36,285	9,680	7,870	335	125	49
85	70	15		237	37	87	10	182	130	311	281	15	15	50
95				326	21		16	236	17	152	88	2	9	51
3,794	3,756	38		2,606	334	1,306	78	1,927	1,534	11,817	11,700	32	85	52
3,822				4,079	226		93	1,853	161	7,498	6,510	24	93	53
3,476				1,599	44		18	337	2,321	3,492	3,447	8	2	54
68	54	14		226	32	74	10	170	95	261	235	14	12	55
3,624	3,589	35		2,414	283	1,198	78	1,774	1,061	5,993	5,895	23	75	56
15	14	1		11	4	13		9	35	24	20	1	3	57
170	167	(5)		192	51	108		149	473	391	372	(5)	10	58
2	2				1			3		26	26			59
								4		5,433	5,433			60
84	70	14		237	37	88	10	181	129	310	280	15	15	61
105				335	22		16	240	17	169	103	2	9	62
93				119	9		4	40	145	87	78	3	1	63
78,595	76,600	1,995		58,115	6,787	15,298	1,912	20,963	68,569	347,320	339,376	2,715	5,229	64
72,534				104,329	7,464		1,920	34,451	10,947	237,533	206,020	580	2,321	65
68,643				47,993	1,318		310	21,114	66,270	78,975	75,715	1,285	125	66
65	51	14		233	34	57	10	157	100	267	247	12	8	67
73,499	71,504	1,995		56,995	6,447	12,995	1,912	19,302	59,500	333,206	327,254	2,525	3,427	68
1,131	1,402	142		245	190	228	191	123	595	1,248	1,325	210	428	69
6	6			2		1		8	18	27	25		2	70
3,570	3,570			(5)		(5)		656	5,657	11,639	11,245		(5)	71
595	595			(5)		(5)		82	314	431	450		(5)	72
10	10			2	2	30		15	10	7	5	1	1	73
1,251	1,251			(5)	(5)	2,153		965	1,912	597	337	(5)	(5)	74
125	125			(5)	(5)	72		64	191	85	67	(5)	(5)	75
3	3				1			(5)	1	9	3	2	4	76
275	275				(5)			(5)	(5)	1,878	540	(5)	1,158	77
53	59	14		43	73	128	59	73	53	46	48	12	46	78
77				45	67		64	66	20	38	24	9	39	79
79				40	56		59	65	38	39	55	18	18	80
70	80	17		44		(5)		34	63	53	62	13	48	81
39	41	10		42	73	131	66	86	31	43	44	10	20	82

⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

⁶Includes water wheels for which no horsepower was reported.

⁷Includes 2 hydraulic rams for which no capacity was reported.

CENSUS OF IRRIGATION — WASHINGTON

DRAINAGE BASIN TABLE II.— ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLUMBIA RIVER—Continued								
	Snake River					Walla Walla River	Klickitat River	White Salmon River	
	Total	Direct	Grande Ronde River	Asotin Creek	Palouse River				
		(18)	(19)	(20)	(21)	(22)	(23)	(24)	
ENTERPRISES AND IRRIGATION WORKS									
JANUARY 1									
1	Enterprises.....1940..number.....	155	111	9	13	22	304	17	27
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	56	31	14	298	54	83	453	199
3	Diversion dams.....1940..total number.....	95	50	15	21	9	183	32	20
4	1930..total number.....	30	.....	.....	1	12	99	3	11
5	1920..total number.....	48	1	.....	2	13	135	19	19
6	(a) Concrete and masonry.....1940..number.....	12	4	.....	2	6	64	.....	3
7	(b) Timber.....1940..number.....	5	5	.....	.....	.....	53	27	10
8	(c) Earth and rock.....1940..number.....	59	27	15	15	2	57	3	5
9	(d) Other, mixed, and not reported.....1940..number.....	19	14	.....	4	1	9	2	2
10	Main canals and laterals.....1940..total length, miles.....	61.9	19.1	12.1	15.6	15.1	162.9	24.3	32.1
11	1930..total length, miles.....	38	.....	.....	1	23	135	17	35
12	1920..total length, miles.....	137	41	.....	.....	42	1,158	70	114
13	(a) Earth.....1940..length, miles.....	57	16	12	15	14	160	24	30
14	(b) Lined.....1940..length, miles.....	4.9	3.1	0.1	0.6	1.1	2.9	0.3	2.1
15	1940..capacity, c.f.s. ¹	229	146	8	55	20	585	227	156
16	1930..capacity, c.f.s. ¹	70	.....	.....	1	23	391	37	169
17	1920..capacity, c.f.s. ¹	1,075	427	.....	1	219	1,049	352	478
18	Pipe lines ².....1940..total length, miles.....	92.6	34.0	0.2	51.8	6.6	40.8	0.2	5.2
19	1930..total length, miles.....	45.7	10.7	.....	12.5	7.1	18.1	0.7	1.9
20	1920..total length, miles.....	94.1	33.6	.....	46.0	1.4	56.4	2.5	2.5
21	(a) Concrete.....1940..length, miles.....	13.5	8.6	.....	.....	4.9	21.9	.....	.....
22	(b) Metal.....1940..length, miles.....	34.1	16.3	0.2	16.7	0.9	10.8	.....	0.9
23	(c) Wood-stave.....1940..length, miles.....	43.6	8.4	.....	35.1	0.1	7.5	0.1	4.3
24	(d) Other.....1940..length, miles.....	1.4	0.7	.....	.....	0.7	0.6	0.1	.....
25	Storage dams.....1940..total number.....	4	1	.....	.....	3	.....	.....	.....
26	1930..total number.....	2	.....	.....	1	.....	1	.....	1
27	1920..total number.....	9	2	.....	1	5	7	.....	3
28	(a) Concrete and masonry.....1940..number.....	1	1	.....	.....	.....	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	3	.....	.....	.....	3	.....	.....	.....
30	(c) Other, mixed, and not reported.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Reservoirs.....1940..total number.....	4	3	.....	1	.....	.....	.....	.....
32	(a) 1-99 acre-feet capacity.....1940..number.....	4	3	.....	1	.....	.....	.....	.....
33	(b) 100-999 acre-feet capacity.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....
35	1940..total capacity, ac.-ft. ³	59	2	.....	(*)	.....	.....	.....	.....
36	1930..total number.....	2	.....	.....	1	.....	2	.....	.....
37	1920..total capacity, ac.-ft. ³	83	.....	.....	80	.....	2	.....	.....
38	Wells, flowing.....1940..number.....	8	1	.....	.....	7	13	.....	.....
39	1930..number.....	7	.....	.....	.....	7	17	.....	.....
40	1920..number.....	8	.....	.....	.....	8	33	.....	.....
41	1940..yield, g.p.m.....	7,165	(*)	.....	.....	7,140	7,495	.....	.....
42	1930..yield, g.p.m.....	1,300	.....	.....	.....	1,300	10,600	.....	.....
43	1920..yield, g.p.m.....	1,100	.....	.....	.....	1,100	6,080	.....	.....
44	Wells, pumped.....1940..number.....	10	7	.....	.....	3	82	.....	.....
45	1930..number.....	22	.....	.....	.....	5	86	1	.....
46	1920..number.....	37	35	.....	.....	.....	36	.....	2
47	1940..yield, g.p.m.....	1,710	1,260	.....	.....	450	18,871	.....	.....
48	1930..yield, g.p.m.....	4,656	.....	.....	.....	680	13,580	33	.....
49	1920..yield, g.p.m.....	13,365	13,015	.....	.....	.....	32,510	.....	24
50	Pumping plants.....1940..total number.....	68	51	1	2	14	120	5	2
51	1930..total number.....	80	40	.....	1	11	132	5	.....
52	Prime movers.....1940..capacity, hp.....	1,303	798	(*)	(*)	65	604	45	(*)
53	1930..capacity, hp.....	1,172	765	.....	150	103	753	60	.....
54	1920..capacity, hp.....	3,559	3,186	.....	.....	40	681	26	42
55	(a) Electric.....1940..number.....	35	24	.....	2	9	99	.....	.....
56	1940..capacity, hp.....	755	315	.....	(*)	40	449	.....	.....
57	(b) Internal-combustion.....1940..number.....	28	23	1	.....	4	17	3	.....
58	1940..capacity, hp.....	543	479	(*)	.....	24	153	40	.....
59	(c) Other ⁶.....1940..number.....	5	4	.....	.....	1	4	2	2
60	1940..capacity, hp.....	5	4	.....	.....	(*)	2	(*)	(*)
61	Pumps.....1940..total number.....	66	50	1	2	13	124	4	2
62	1930..number.....	79	41	.....	1	11	139	5	.....
63	1920..number.....	74	58	.....	.....	3	62	5	4
64	1940..capacity, g.p.m.....	33,489	26,411	(*)	(*)	2,838	31,667	3,633	(*)
65	1930..capacity, g.p.m.....	79,499	18,624	.....	1,000	5,126	20,286	908	.....
66	1920..capacity, g.p.m.....	47,849	33,177	.....	.....	4,400	20,840	3,875	320
67	(a) Centrifugal.....1940..number.....	56	42	1	2	11	115	3	2
68	1940..capacity, g.p.m.....	30,865	23,695	(*)	(*)	2,820	31,487	3,300	(*)
69	1940..average capacity, g.p.m.....	548	562	(*)	(*)	256	274	1,100	(*)
70	(b) Turbine.....1940..number.....	2	2	.....	.....	.....	.....	.....	.....
71	1940..capacity, g.p.m.....	(*)	(*)	.....	.....	.....	.....	.....	.....
72	1940..average capacity, g.p.m.....	(*)	(*)	.....	.....	.....	.....	.....	.....
73	(c) Plunger.....1940..number.....	6	5	.....	.....	1	4	.....	.....
74	1940..capacity, g.p.m.....	219	216	.....	.....	(*)	15	.....	.....
75	1940..average capacity, g.p.m.....	36	43	.....	.....	(*)	4	.....	.....
76	(d) Other ⁶.....1940..number.....	2	1	.....	.....	1	5	1	.....
77	1940..capacity, g.p.m.....	(*)	(*)	.....	.....	(*)	165	(*)	.....
78	Pumping lift, from all sources.....1940..average, feet.....	47	46	(*)	(*)	33	19	15	(*)
79	1930..average, feet.....	48	59	.....	400	26	22	24	.....
80	1920..average, feet.....	46	46	.....	.....	16	21	28	83
81	from pumped wells.....1940..average, feet.....	31	25	.....	.....	40	22	.....	.....
82	from surface sources.....1940..average, feet.....	51	49	(*)	(*)	29	14	15	(*)

⁰Data for 4 enterprises (40 acres irrigated) in drainage basin (35), Sumas River, Washington (tributary of the Fraser River, Canada), are included in drainage basin (34), Nooksack River Area.
¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
²Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - WASHINGTON

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WORKS, 1940, 1930, AND 1920—Continued

COLUMBIA RIVER—Con.			STRAIT OF JUAN DE FUCA								GEORGIA STRAIT		PACIFIC SLOPE			
Lewis River (25)	Cowlitz River (26)	Total	Puget Sound						Skagit and Samish Rivers (32)	Dungeness River (33)	Nooksack River Area ^a (34)	Total	Chehalis River (36)	Other Pacific Slope Streams (37)		
			Total	Direct	Nisqually River (28)	White and Puyallup Rivers (29)	Lake Washington (30)	Snohomish River (31)								
24	19	538	519	159	42	258	51	9	9	10	35	201	164	37	1	
16	21	69	34	37	138	19	17	15	30	1,944	29	13	13	11	2	
10	2	60	56	36	1	13	2	4		4	4	10	7	3	3	
		4								4					4	
		6								6					5	
		1	1			1						1			6	
10		24	21	9	1	6	2	3		3	2	5	4	1	7	
		18	17	10		6		1		1	2	3	2	1	8	
		17	17	17								1	1		9	
2.5	0.1	151.8	67.3	8.4	49.5	9.3		0.1		84.5		2.2	2.2		10	
		99								99					11	
		68								68					12	
		133	54	7	39	8				79		2	2		13	
2.5	0.1	18.8	13.3	1.4	10.5	1.3		0.1		5.5		0.2	0.2		14	
18	13	872	474	132	85	193	58	6	3	395	15	145	125	20	15	
		414								414					16	
		570								570					17	
4.3	4.1	271.6	267.5	51.6	9.1	187.6	17.2	2.0	2.1	2.0	4.9	32.1	27.1	5.0	18	
		1.3								1.3					19	
		1.0								1.0					20	
		5.7	5.6		1.9	3.1	0.4	0.2		0.1		0.4	0.2	0.2	21	
4.1	4.1	255.3	253.5	48.6	4.9	182.5	16.5	1.0	1.6	0.2	4.2	27.9	23.9	4.0	22	
0.2		9.8	7.6	2.9	2.3	1.3	0.3	0.8	0.5	1.7		3.8	3.0	0.8	23	
		0.8	0.8	0.1		0.7					0.3				24	
1		14	14	13		1						3	2	1	25	
															26	
		4	4	4								1		1	27	
1		5	5	5								1	1		28	
		5	5	4		1						1	1		29	
		15	15	10	1	3	1					6	3	3	31	
		14	14	10	1	2	1					6	3	3	32	
		1	1			1									33	
															34	
		242	242	36	(*)	202	(*)					22	13	9	35	
															36	
		6	6	3		3					1				37	
															38	
		707	707	200		507					(*)				39	
															40	
															41	
															42	
															43	
7	4	177	165	52	34	67	11	1	12		22	43	25	18	44	
															45	
680	88	11,158	10,168	2,703	1,539	3,918	1,608	(*)	990		6,089	6,899	1,150	5,749	46	
															47	
															48	
															49	
16	17	363	354	96	39	172	44	3	8	1	30	171	144	27	50	
															51	
120	126	1,642	1,549	600	75	641	203	30	67	(*)	217	998	716	282	52	
															53	
															54	
10	10	308	302	77	38	146	38	3	6		17	124	119	5	55	
33	30	1,263	1,222	505	60	458	159	30	41		99	342	328	14	56	
5	7	45	42	14		23	5		2	(*)	13	47	25	22	57	
86	96	344	292	90		173	29		(*)	(*)	118	656	388	268	58	
(*)		10	10	5	(*)	1									59	
		35	35	5		10	(*)								60	
16	17	368	359	100	39	173	44	3	8	1	34	169	143	26	61	
															62	
															63	
2,785	1,702	50,012	48,327	14,487	2,708	22,062	8,585	505	1,385	(*)	9,520	20,211	12,647	7,564	64	
															65	
															66	
12	9	221	212	50	15	122	22	3	8	1	25	144	122	22	67	
2,255	1,202	39,230	37,545	12,474	1,580	17,620	5,366	505	1,385	(*)	9,123	18,124	11,108	7,016	68	
188	134	178	177	249	105	144	244	168	173	(*)	365	126	91	319	69	
															70	
															71	
	(*)														72	
	(*)														73	
3	4	114	39	41	24	30	19				5	18	84	2	74	
110	140	7,428	7,428	1,442	1,128	2,176	2,682	141			227	820	802	(*)	74	
37	35	65	65	35	47	73	141				45	46	50	(*)	75	
(*)	3	21	21	9		10	2				2	3	1	2	76	
	60	2,891	2,891	551		1,811	(*)					930	(*)	(*)	77	
12	13	33	33	45	29	24	39	102	34	(*)	25	12	12	12	78	
															79	
															80	
20	25	36	36	41	32	31	54	(*)	42		22	22	31	12	81	
8	10	30	31	50	17	20	36	102	12	(*)	29	9	8	12	82	

^aTotal capacity of all reservoirs regardless of size.
^bData are included only in totals because less than 3 enterprises reported in the 1940 Census.
^cIncludes water wheels for which no horsepower was reported.
^dIncludes 2 hydraulic rams for which no capacity was reported.

CENSUS OF IRRIGATION—WASHINGTON

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		STATE TOTAL	Adams	Asotin	Benton	Chelan	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*							
1	All farms.....1940..number.....	81,686	651	542	1,673	2,079	
2	.....1930..number.....	70,904	818	622	1,668	2,218
3	Irrigated farms.....1940..number.....	17,426	15	330	1,516	1,776	
4	.....1930..number.....	15,949	22	372	1,510	2,025
5	Increase or decrease (-), 1930-1940.....percent.....	9.3	-31.8	-11.3	0.4	-12.3	
Operated by—							
6	(a) Owners and managers.....1940..number.....	14,069	11	292	1,260	1,605	
7	.....1930..number.....	13,129	18	336	1,233	1,867
8	(b) Tenants.....1940..number.....	3,357	4	38	250	171	
9	.....1930..number.....	2,820	4	36	277	158
10	Land in all farms.....1940..acres.....	15,181,815	961,657	329,367	519,662	180,668	
11	Land in irrigated farms.....1940..acres.....	2,108,197	38,449	77,569	76,012	109,366	
12	Average per farm.....1940..acres.....	121	2,563	235	50	62	
13	(a) Operated by owners and managers.....1940..acres.....	1,762,907	36,439	74,973	62,381	98,623	
14	Average per farm.....1940..acres.....	125	3,358	257	50	61	
15	(b) Operated by tenants.....1940..acres.....	345,290	1,510	2,596	13,631	10,743	
16	Average per farm.....1940..acres.....	103	378	68	53	63	
17	Approximate land area.....1940..acres.....	42,865,280	1,212,800	401,280	1,112,320	1,875,840	
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939..acres.....	615,013	730	3,749	38,332	34,527	
19	(a) Cropland harvested.....1939..acres.....	520,424	606	3,642	32,028	34,041	
20	(b) Crop failure.....1939..acres.....	6,113	.....	.....	465	146
21	(c) Pasture.....1939..acres.....	88,476	124	107	5,839	340	
22	Area irrigated.....1929..acres.....	499,283	1,183	4,162	30,286	34,071	
23	.....1919..acres.....	529,899	943	3,474	39,272	38,894
24	Increase or decrease (-), 1929-1939.....percent.....	23.2	-38.3	-9.9	26.6	1.3	
25	Irrigable area in enterprises.....1940..acres.....	837,096	870	4,106	62,081	42,137	
26	.....1930..acres.....	915,379	1,362	5,023	54,668	40,951
27	.....1920 ² ..acres.....	836,795	1,737	4,684	72,015	65,324
28	Excess of irrigable area over the area irrigated.....1940..acres.....	222,083	140	357	23,749	7,610	
29	.....1930..acres.....	416,096	179	861	24,382	6,880
30	Area works were capable of supplying with water.....1940..acres.....	731,527	870	4,106	49,002	38,582	
31	.....1930..acres.....	631,511	1,275	5,012	43,916	36,313
32	.....1920..acres.....	637,151	1,342	4,559	48,851	50,502
33	Increase or decrease (-), 1930-1940.....percent.....	15.8	-31.8	-19.1	11.6	6.2	
34	Excess, capability of works over area irrigated.....1940..acres.....	116,514	140	357	10,670	4,055	
35	.....1930..acres.....	132,228	92	850	13,630	2,242
36	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	29.2	1.9	4.8	50.4	31.6	
37	.....1929..percent.....	26.0	1.2	9.5	35.3	34.7
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	84.1	83.9	91.3	78.2	89.5	
39	.....1929..percent.....	79.1	92.8	83.0	69.0	93.8
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940..dollars.....	56,415,196	19,920	724,459	2,777,690	4,400,110	
41	(a) Cost of irrigation works and equipment.....1940..dollars.....	55,678,678	19,920	715,899	2,727,638	4,283,922	
42	(b) Investment in water rights (reported).....1940..dollars.....	736,518	.....	8,560	50,052	116,188
43	Total investment in all enterprises.....1930..dollars.....	40,561,895	47,620	302,221	3,549,863	4,787,525	
44	.....1920..dollars.....	29,209,011	77,350	627,165	2,387,113	3,503,670
45	Increase or decrease (-), 1930-1940.....percent.....	39.1	-58.2	139.7	-21.8	-8.1	
46	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	77.12	22.90	176.44	56.69	114.05	
47	.....1930..dollars.....	64.23	37.35	60.30	80.83	131.84
48	.....1920..dollars.....	45.98	57.64	137.57	48.86	69.38
49	Average investment per acre irrigated.....1939..dollars.....	91.73	27.29	193.24	72.46	127.44	
50	Estimated final investment in existing enterprises.....1940..dollars.....	58,141,097	19,920	724,467	2,785,368	4,462,398	
51	.....1930..dollars.....	53,232,477	49,620	305,221	3,566,351	5,150,995
52	.....1920..dollars.....	37,684,591	87,750	627,165	3,040,479	4,080,090
53	Increase or decrease (-), 1930-1940.....percent.....	9.2	-59.9	137.4	-21.9	-13.4	
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	69.46	22.90	176.44	44.87	105.90	
55	.....1930..dollars.....	58.15	36.43	60.76	65.24	125.78
56	.....1920 ² ..dollars.....	45.03	50.52	130.90	42.22	62.46
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental			Primary	Supplemental
		Enterprises				Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number.....	3,746	125	9	23	132	473
58	Area irrigated in these enterprises.....1939..acres.....	602,414	22,296	710	3,719	37,978	33,881
59	Cost of maintenance and operation.....1939..dollars.....	1,673,992	11,314	1,350	45,123	154,261	246,346
60	Average cost, per acre irrigated.....1939..dollars.....	2.78	0.51	1.90	12.13	4.06	7.27
611929..dollars.....	4.14	5.55	8.81	6.16
62	Total annual charges (reported) ⁴.....1939..dollars.....	1,542,453	3,129	44,450	150,213	223,387
63	Average annual charge per acre irrigated.....1939..dollars.....	3.04	1.81	13.36	4.34	8.90
64	Area against which charges were assessed.....1939..acres.....	573,094	8,940	3,647	45,039	27,633
65	Average annual charge per acre assessed.....1939..dollars.....	2.69	0.35	12.19	3.34	8.08
66	Total charges collected ⁴.....1939..dollars.....	1,062,485	25,670	39,900	104,918	193,510
67	Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	21,764,676	856,928	1,455,044	1,073,109
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939..number.....	3,851	131	12	26	134	488
69	Area irrigated in these enterprises.....1939..acres.....	590,627	184,534	730	3,749	38,332	32,407
70	Water delivered in these enterprises.....1939..acre-feet.....	2,548,585	704,152	3,193	10,141	243,532	121,068
71	Average water delivered per acre irrigated.....1939..acre-feet.....	4.3	3.8	4.4	2.7	6.5	3.7
72	Average cost of water per acre irrigated.....1939..dollars.....	3.35	0.75	1.90	12.48	4.46	9.81
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939..number.....	210	6	5
74	Irrigable area in these enterprises.....1939..acres.....	448,702	41,712	177
75	Irrigated area in these enterprises.....1939..acres.....	300,362	21,884	163
76	Area for which drains have been installed.....1939..acres.....	178,212	4,423	28
77	Additional area needing drainage.....1939..acres.....	18,673	1,540	3

*Census of Agriculture.

¹Percent not shown when more than 1,000.²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION – WASHINGTON

1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939
 Irrigation data omitted from any of the counties listed are included under "All other counties"]

Clallam		Clark	Columbia	Cowlitz	Douglas	Ferry	Franklin	Garfield	Grant	Grays Harbor	Island		
1,226		4,528	525	1,925	1,245	553	363	335	600	1,915	1,044	1	
729		3,503	544	1,147	1,214	577	354	393	767	1,151	877	2	
108		132	92	28	479	116	193	40	161	116	8	3	
118		13	120	.....	494	66	137	30	224	4	4	4	
-8.5		915.4	-23.3	.....	-3.0	75.8	40.9	33.3	-28.1	(1)	100.0	5	
93		110	81	20	425	93	173	31	126	108	8	6	
101		.....	100	.....	463	58	109	22	202	.....	.....	7	
15		22	11	8	54	23	20	9	35	8	.....	8	
17		.....	20	.....	31	8	28	8	22	.....	.....	9	
70,844		208,036	354,754	122,474	872,490	251,437	447,004	379,693	735,134	124,209	54,969	10	
7,580		8,805	59,261	3,664	48,618	40,529	21,608	63,082	78,110	7,230	247	11	
70		67	644	132	101	349	112	1,577	485	62	31	12	
6,439		6,945	58,259	1,942	45,444	34,151	20,858	35,443	39,857	6,308	247	13	
69		63	719	97	107	367	121	1,143	317	58	31	14	
1,141		1,860	1,002	1,742	3,174	6,378	750	27,639	38,153	922	.....	15	
76		85	91	218	59	277	38	3,071	1,090	115	.....	16	
1,121,920		405,120	550,400	733,440	1,178,240	1,434,240	807,680	456,960	1,777,280	1,219,200	131,840	17	
10,910		1,168	2,565	498	9,074	1,533	3,203	659	5,680	949	35	18	
5,614		727	2,455	497	8,996	1,495	2,838	624	5,048	348	35	19	
.....		4	.....	.....	29	.....	119	.....	43	.....	.....	20	
5,296		437	110	1	49	38	246	35	589	601	.....	21	
8,960		.....	2,480	.....	9,605	1,246	2,606	775	7,597	.....	.....	22	
6,160		.....	2,168	.....	4,622	791	2,253	883	7,545	.....	.....	23	
21.8		.....	3.4	.....	-5.5	23.0	22.9	-15.0	-25.2	.....	.....	24	
21,085		1,690	3,085	1,153	11,227	2,664	5,094	808	7,456	1,329	45	25	
20,142		.....	2,861	.....	10,525	5,847	4,821	806	9,112	.....	.....	26	
12,660		.....	3,532	.....	8,756	7,421	14,268	1,698	12,806	.....	.....	27	
10,175		522	520	655	2,153	1,131	1,891	149	1,776	380	10	28	
11,182		.....	381	.....	920	4,601	2,215	31	1,515	.....	.....	29	
19,486		1,628	3,074	622	10,596	1,741	3,646	808	7,007	1,324	35	30	
17,607		.....	2,672	.....	10,061	2,018	4,471	806	8,231	.....	.....	31	
9,860		.....	3,063	.....	4,938	2,253	10,014	1,552	9,302	.....	.....	32	
10.7		.....	15.0	.....	5.3	-13.7	0.2	-18.5	-14.9	.....	.....	33	
8,575		460	509	124	1,522	208	443	149	1,327	376	.....	34	
8,647		.....	192	.....	456	772	1,865	31	634	.....	.....	35	
143.9		13.3	4.3	13.5	18.7	3.8	14.8	1.0	7.3	13.1	14.2	36	
103.1		.....	4.4	.....	28.1	9.4	6.3	3.4	4.6	.....	.....	37	
56.0		71.7	83.4	80.1	85.6	88.1	87.8	81.6	81.1	71.7	100.0	38	
50.9		.....	92.8	.....	95.5	61.7	58.3	96.2	92.3	.....	.....	39	
299,754		65,472	38,409	15,661	1,438,975	15,335	1,162,994	34,900	280,250	29,654	4,175	40	
297,639		65,245	37,399	15,649	1,374,665	14,751	1,162,694	34,840	270,055	29,573	4,025	41	
2,115		227	1,010	12	64,310	594	300	60	10,195	81	150	42	
286,126		.....	78,244	.....	685,362	45,683	528,544	22,340	694,701	.....	.....	43	
94,010		.....	61,447	.....	382,330	66,050	362,390	32,700	1,192,739	.....	.....	44	
1.2		.....	-50.9	.....	110.0	-66.4	120.0	56.2	-59.7	.....	.....	45	
15.38		40.22	12.49	25.18	135.80	8.81	318.98	43.19	40.00	22.40	119.29	46	
15.82		.....	29.28	.....	68.12	22.64	118.22	27.72	84.40	.....	.....	47	
9.53		.....	20.06	.....	77.44	29.32	36.19	21.07	128.22	.....	.....	48	
27.48		56.05	14.97	31.45	168.58	10.00	363.10	52.96	49.34	31.25	119.29	49	
299,754		68,072	38,409	18,468	1,453,875	16,385	1,164,994	37,065	281,519	33,972	5,175	50	
298,126		.....	78,544	.....	730,086	49,343	767,164	22,340	734,101	.....	.....	51	
97,010		.....	64,947	.....	402,008	66,950	637,390	36,000	1,301,729	.....	.....	52	
0.5		.....	-51.1	.....	99.1	-66.8	48.0	65.9	-61.7	.....	.....	53	
14.22		40.28	12.45	16.02	129.50	6.15	228.70	45.87	37.76	25.56	115.00	54	
14.80		.....	27.45	.....	69.37	8.44	163.28	27.72	80.56	.....	.....	55	
7.66		.....	18.39	.....	45.91	9.02	44.67	21.20	101.65	.....	.....	56	
Primary	Supplemental									Primary	Supplemental		
Enterprises										Enterprises			
12	1	102	54	25	178	85	61	30	150	116	3	57	
10,910	(3)	1,144	2,425	487	8,634	1,420	3,198	577	4,990	(3)	925	35	58
13,838	(3)	6,897	1,999	1,172	85,348	1,573	44,129	5,642	35,950	(3)	3,779	205	59
1.27	(3)	6.03	0.82	2.41	9.89	1.11	13.80	9.78	7.20	(3)	4.09	5.86	60
0.82	.....	.....	1.57	.....	15.00	1.51	11.68	9.46	16.32	.....	.....	61	
49,927	.....	.....	449	.....	37,660	.....	17,346	.....	.....	3,129	.....	62	
4.06	.....	.....	0.81	.....	8.99	.....	11.45	.....	.....	1.81	.....	63	
18,951	.....	.....	560	.....	5,333	.....	2,840	.....	.....	8,940	.....	64	
2.32	.....	.....	0.80	.....	7.06	.....	6.11	.....	.....	0.35	.....	65	
29,263	.....	.....	443	.....	29,975	.....	16,775	.....	.....	2,705	.....	66	
96,940	.....	.....	.....	.....	96,403	.....	47,455	.....	.....	17,500	.....	67	
9	1	104	53	26	189	88	62	35	151	118	3	68	
8,170	(3)	1,168	2,354	495	9,025	1,520	3,203	631	5,182	(3)	906	35	69
30,391	(3)	1,458	8,085	299	39,150	5,317	19,837	2,388	27,456	(3)	485	31	70
3.7	(3)	1.2	3.4	0.6	4.3	3.5	6.2	3.8	5.3	(3)	0.5	0.9	71
4.71	(3)	6.03	0.85	2.40	11.48	1.11	11.75	9.82	7.16	(3)	4.26	5.86	72
(3)	1	9	(3)	1	(3)	1	(3)	1	.....	.....	86	73	
(3)	.....	341	(3)	.....	(3)	.....	(3)	.....	.....	631	.....	74	
(3)	.....	232	(3)	.....	(3)	.....	(3)	.....	.....	578	.....	75	
(3)	.....	300	(3)	.....	(3)	.....	(3)	.....	.....	603	.....	76	
(2)	.....	14	.....	.....	.....	(3)	.....	.....	.....	2	.....	77	

³ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.
⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — WASHINGTON

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS,

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920

ITEM (For definitions and explanations, see text)		Jefferson	King	Kitsap	Kittitas	Klickitat		
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS^c								
1	All farms.....1940..number....	516	5,760	2,102	1,196	1,113		
2	.....1930..number....	272	4,656	1,557	888	1,074	
3	Irrigated farms.....1940..number....	17	191	34	1,074	226		
4	.....1930..number....	11	94	12	664	162	
5	Increase or decrease (-), 1930-1940.....percent....	54.5	103.2	183.3	61.7	39.5		
Operated by—								
6	(a) Owners and managers.....1940..number....	15	123	30	804	186		
7	.....1930..number....				525	126	
8	(b) Tenants.....1940..number....	2	68	4	270	46		
9	.....1930..number....				139	36	
10	Land in all farms.....1940..acres....	42,884	152,770	46,196	456,401	733,265		
11	Land in irrigated farms.....1940..acres....	1,807	4,362	998	302,191	60,153		
12	Average per farm.....1940..acres....	106	23	29	281	266		
13	(a) Operated by owners and managers.....1940..acres....	(¹)	2,700	904	258,399	54,736		
14	Average per farm.....1940..acres....	(¹)	22	30	321	294		
15	(b) Operated by tenants.....1940..acres....	(¹)	1,662	94	43,792	5,417		
16	Average per farm.....1940..acres....	(¹)	24	24	162	135		
17	Approximate land area.....1940..acres....	1,159,680	1,367,040	257,280	1,481,600	1,223,680		
IRRIGATED AND IRRIGABLE AREAS								
18	Area irrigated.....1939..acres....	103	1,641	118	108,399	13,093		
19	(a) Cropland harvested.....1939..acres....	81	1,343	77	92,969	10,167		
20	(b) Crop failure.....1939..acres....		4		1,631	252		
21	(c) Pasture.....1939..acres....	22	294	41	13,799	2,674		
22	Area irrigated.....1929..acres....				46,031	11,502		
23	.....1919..acres....				81,967	18,978	
24	Increase or decrease (-), 1929-1939.....percent....				135.5	13.8		
25	Irrigable area in enterprises.....1940..acres....	139	2,166	396	148,160	16,728		
26	.....1930..acres....				122,914	20,321	
27	.....1920 ² ..acres....				87,775	32,215	
28	Excess of irrigable area over the area irrigated.....1940..acres....	36	525	278	39,761	3,635		
29	.....1930..acres....				76,883	8,819	
30	Area works were capable of supplying with water.....1940..acres....	122	2,064	388	123,150	14,439		
31	.....1930..acres....				63,415	18,607	
32	.....1920 ² ..acres....				83,552	21,360	
33	Increase or decrease (-), 1930-1940.....percent....				94.2	-22.4		
34	Excess, capability of works over area irrigated.....1940..acres....	19	423	270	14,751	1,946		
35	.....1930..acres....				17,384	7,105	
Proportion which area irrigated is of all lands in irrigated farms.....								
37	.....1939..percent....	5.7	37.6	11.8	35.9	21.8	
38	.....1929..percent....				16.2	17.2	
Proportion which area irrigated is of area works were capable of supplying with water.....								
39	.....1939..percent....	84.4	79.5	30.4	88.0	90.7	
	.....1929..percent....				72.6	61.8	
CAPITAL INVESTED TO JANUARY 1								
40	Total investment in all enterprises.....1940..dollars....	2,883	121,525	15,162	13,196,137	263,473		
41	(a) Cost of irrigation works and equipment.....1940..dollars....	2,875	121,257	13,784	13,189,178	258,218		
42	(b) Investment in water rights (reported).....1940..dollars....	8	268	1,378	6,959	5,255		
43	Total investment in all enterprises.....1930..dollars....				7,060,394	190,912		
44	.....1920 ² ..dollars....				4,678,707	198,501	
45	Increase or decrease (-), 1930-1940.....percent....				86.9	38.0		
Average investment, based on area works were capable of supplying with water, per acre.....								
47	.....1940..dollars....	23.63	58.88	39.08	107.15	18.25	
48	.....1930..dollars....				111.34	10.26	
49	.....1920 ² ..dollars....				56.00	9.29	
49	Average investment per acre irrigated.....1939..dollars....	27.99	74.06	128.49	121.74	20.12		
50	Estimated final investment in existing enterprises.....1940..dollars....	3,233	125,950	15,218	13,320,369	281,948		
51	.....1930..dollars....				10,309,879	192,212	
52	.....1920 ² ..dollars....				5,908,707	206,851	
53	Increase or decrease (-), 1930-1940.....percent....				29.2	46.6		
Average investment, based on estimated final investment and irrigable area, per acre.....								
55	.....1940..dollars....	23.26	58.15	38.43	89.91	16.85	
56	.....1930..dollars....				83.88	9.46	
	.....1920 ² ..dollars....				67.32	6.40	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
					Primary	Supplemental	Primary	Supplemental
					Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939..number....	12	124	36	175	78	71	2
58	Area irrigated in these enterprises.....1939..acres....	94	1,606	108	102,028	8,770	12,980	(¹)
59	Cost of maintenance and operation.....1939..dollars....	113	15,787	450	142,360	856	12,799	(¹)
60	Average cost, per acre irrigated.....1939..dollars....	1.20	9.83	4.17	1.40	0.10	0.99	(¹)
611929..dollars....				2.25		0.73	
62	Total annual charges (reported) ³.....1939..dollars....	10	4,217		155,687		7,606	
63	Average annual charge per acre irrigated.....1939..dollars....	1.00	20.57		1.77		0.64	
64	Area against which charges were assessed.....1939..acres....	10	205		99,635		12,570	
65	Average annual charge per acre assessed.....1939..dollars....	1.00	20.57		1.56		0.61	
66	Total charges collected ³.....1939..dollars....		2,699		156,410		4,781	2,648
67	Indebtedness to December 31 (reported) ⁴.....1939..dollars....				11,081,889		7,000	10,550
WATER DELIVERED TO IRRIGATORS								
68	Enterprises reporting water delivered.....1939..number....		124	24	178	81	72	3
69	Area irrigated in these enterprises.....1939..acres....		1,560	111	97,308	28,547	12,559	6,880
70	Water delivered in these enterprises.....1939..acra-feet....		3,269	79	354,161	102,833	24,990	5,360
71	Average water delivered per acre irrigated.....1939..acra-feet....		2.1	0.7	3.6	3.6	2.0	0.8
72	Average cost of water per acre irrigated.....1939..dollars....		10.18	3.16	1.63	0.10	1.19	0.10
DRAINAGE OF IRRIGATED LAND								
73	Enterprises reporting land drained or needing drainage.....1939..number....	(¹) 1	15	6	4		(¹) 1	
74	Irrigable area in these enterprises.....1939..acres....	(¹)	173	65	94,981		(¹)	
75	Irrigated area in these enterprises.....1939..acres....	(¹)	120	35	56,830		(¹)	
76	Area for which drains have been installed.....1939..acres....	(¹)	65	23	1,107		(¹)	
77	Additional area needing drainage.....1939..acres....		10	12	6,072		(¹)	

^a Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION - WASHINGTON

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1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939-Continued
Irrigation data omitted from any of the counties listed are included under "All other counties"]

Lewis	Lincoln	Mason	Okanogan	Pacific	Pend Oreille	Pierce	Skagit	Snohomish	Spokane	Stevens	Thurston	
3,941	1,269	769	2,397	710	657	5,622	3,242	6,231	4,999	2,537	2,876	1
3,380	1,497	452	2,326	570	613	4,696	2,721	4,262	4,268	2,633	2,052	2
61	26	22	1,500	36	82	484	14	17	1,101	224	223	3
8	47	12	1,313	.....	38	58	8	27	696	236	141	4
662.5	-44.7	83.3	14.2	.....	115.8	734.5	75.0	-37.0	58.2	-5.1	58.2	5
58	21	20	1,325	35	69	402	12	13	952	181	203	6
.....	38	.....	1,198	.....	33	.....	.....	.....	636	191	134	7
3	5	2	174	1	13	82	2	4	149	43	20	8
.....	9	.....	115	.....	5	.....	.....	.....	60	45	7	9
274,275	1,317,436	43,995	954,264	64,509	116,146	162,747	152,758	188,304	828,880	519,215	177,885	10
4,737	39,241	2,578	334,660	3,861	17,548	15,152	1,733	1,098	34,900	55,836	13,266	11
78	1,509	117	223	107	214	31	124	65	32	249	59	12
4,520	32,020	(1)	315,969	(1)	14,206	11,644	(1)	858	27,757	43,447	12,257	13
78	1,525	(1)	238	(1)	206	29	(1)	66	29	240	60	14
217	7,221	(1)	18,691	(1)	3,342	3,508	(1)	240	7,143	12,389	1,009	15
72	1,444	(1)	107	(1)	257	43	(1)	60	48	288	50	16
1,566,080	1,482,880	618,880	3,388,800	592,000	899,840	1,075,200	1,110,400	1,344,000	1,128,320	1,613,440	460,160	17
467	1,323	107	32,809	206	1,654	4,035	158	102	16,652	5,379	3,261	18
310	1,123	60	30,371	151	1,232	2,622	105	72	15,889	4,862	2,120	19
.....	.....	.....	178	.....	5	.....	.....	.....	285	6	.....	20
157	200	47	2,260	55	417	1,413	53	30	478	511	1,141	21
.....	1,430	.....	36,248	.....	896	.....	.....	.....	18,249	3,077	3,033	22
.....	2,221	.....	35,899	.....	.....	.....	.....	.....	16,154	8,990	.....	23
.....	-7.5	.....	-9.5	.....	84.6	.....	.....	.....	-8.8	74.8	7.5	24
1,107	1,799	348	44,661	251	3,626	12,028	284	133	19,481	6,977	4,768	25
.....	1,895	.....	60,681	.....	3,334	.....	.....	.....	37,992	5,186	5,033	26
.....	3,291	.....	71,760	.....	.....	.....	.....	.....	39,458	28,605	.....	27
640	476	241	11,852	45	1,972	7,993	126	31	2,829	1,598	1,507	28
.....	465	.....	24,433	.....	2,438	.....	.....	.....	19,743	2,109	2,000	29
951	1,666	193	40,235	249	2,612	10,480	284	131	19,305	6,589	4,489	30
.....	1,695	.....	50,011	.....	2,705	.....	.....	.....	30,254	3,602	5,093	31
.....	2,838	.....	52,315	.....	.....	.....	.....	.....	20,995	18,238	.....	32
.....	-1.7	.....	-19.5	.....	-3.4	.....	.....	.....	-36.2	82.9	-10.8	33
484	343	86	7,426	43	956	6,445	126	29	2,653	1,210	1,228	34
.....	265	.....	13,763	.....	1,809	.....	.....	.....	12,005	525	2,000	35
9.9	3.4	4.2	9.8	5.3	9.4	26.6	9.1	9.3	47.7	9.6	24.6	36
.....	1.9	.....	17.6	.....	6.8	.....	.....	.....	74.0	6.1	61.0	37
49.1	79.4	55.4	81.5	82.7	63.3	38.5	55.6	77.9	86.3	81.6	72.6	38
.....	84.4	.....	72.5	.....	33.1	.....	.....	.....	60.3	85.4	60.3	39
27,139	8,573	7,910	4,372,245	13,505	67,767	207,050	7,805	10,061	2,386,456	140,920	274,057	40
26,857	8,573	7,820	4,340,317	13,505	67,005	206,440	7,780	10,021	2,374,726	139,001	273,770	41
282	.....	90	31,928	.....	762	610	25	40	11,730	1,919	287	42
.....	33,615	.....	4,165,746	.....	50,956	.....	.....	.....	1,346,735	476,384	226,250	43
.....	87,431	.....	2,874,338	.....	.....	.....	.....	.....	1,668,838	641,580	.....	44
.....	-74.5	.....	5.0	.....	33.0	.....	.....	.....	-70.4	.....	21.1	45
28.54	5.15	40.98	108.67	54.24	25.94	19.76	27.48	76.80	123.62	21.39	61.05	46
.....	19.83	.....	83.30	.....	18.84	.....	.....	.....	44.51	132.26	44.95	47
.....	30.81	.....	54.94	.....	.....	.....	.....	.....	79.49	35.18	.....	48
58.11	6.48	73.93	133.26	65.56	40.97	51.31	49.40	98.64	143.31	26.20	84.04	49
33,014	11,893	13,285	4,659,422	14,005	68,692	210,410	8,155	10,061	2,487,046	145,296	451,592	50
.....	34,115	.....	4,489,856	.....	51,381	.....	.....	.....	1,374,635	639,219	226,250	51
.....	88,431	.....	4,797,308	.....	.....	.....	.....	.....	2,699,388	1,002,330	.....	52
.....	-65.2	.....	3.8	.....	33.7	.....	.....	.....	80.9	-77.3	99.6	53
29.82	6.61	38.18	104.33	55.80	18.94	17.49	28.71	75.65	127.67	20.82	94.71	54
.....	18.00	.....	73.99	.....	15.41	.....	.....	.....	36.18	123.26	44.95	55
.....	26.87	.....	66.85	.....	.....	.....	.....	.....	68.41	35.04	.....	56
			Primary	Sup.								
			Enterprises									
36	20	16	406	7	28	46	263	9	10	80	166	37
467	1,323	107	32,132	208	203	1,286	3,988	151	102	16,348	4,829	3,257
2,075	1,370	361	141,399	929	1,856	1,188	23,607	766	660	121,230	4,915	10,236
4.44	1.04	3.37	4.40	4.47	9.14	0.92	5.92	5.07	6.47	7.42	1.02	3.14
.....	4.26	.....	8.78	.....	.....	0.81	.....	.....	.....	6.40	5.72	5.68
.....	.....	.....	124,325	.....	.....	79	7,695	.....	.....	147,323	151	11,851
.....	.....	.....	5.81	.....	.....	0.46	14.80	.....	.....	9.57	0.20	3.95
.....	.....	.....	24,709	.....	.....	790	520	.....	.....	16,830	755	5,267
.....	.....	.....	5.03	.....	.....	0.10	14.80	.....	.....	8.75	0.20	2.25
.....	.....	.....	129,788	.....	.....	.....	7,695	.....	.....	142,640	150	12,000
.....	.....	.....	821,082	.....	.....	.....	.....	.....	.....	681,066	.....	138,500
34	18	16	423	6	27	57	266	9	7	87	189	38
467	1,073	107	29,830	88	204	1,654	3,967	148	71	16,652	5,322	3,261
369	2,238	76	159,774	253	152	3,021	3,069	106	261	77,370	10,191	9,150
0.8	2.1	0.7	5.4	2.9	0.7	1.6	0.8	0.7	3.7	4.6	1.9	2.8
4.40	0.72	3.37	5.82	9.33	9.09	0.97	5.96	5.43	7.17	9.47	1.00	4.17
.....	1	2	4	.....	4	2	19	3	4	1	5	3
.....	(1)	(1)	2,496	.....	12	(1)	440	80	53	(1)	425	4,128
.....	(1)	(1)	1,694	.....	10	(1)	358	15	42	(1)	296	3,011
.....	(1)	(1)	22	.....	10	(1)	36	40	42	(1)	.....	5
.....	(1)	(1)	217	.....	.....	(1)	39	.....	9	(1)	92	201

3 Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
4 Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WASHINGTON

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

Table with columns for ITEM (For definitions and explanations, see text), Walla Walla, Whatcom, Whitman, Yakima, and All other counties. Rows include: FARMS, ACREAGE, AND TENURE OF FARM OPERATORS; IRRIGATED AND IRRIGABLE AREAS; CAPITAL INVESTED TO JANUARY 1; MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS; WATER DELIVERED TO IRRIGATORS; DRAINAGE OF IRRIGATED LAND.

* Census of Agriculture. 1 Data between census years not comparable (see headnote). 2 Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census. 3 For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. 4 Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. 5 Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — WASHINGTON

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)	STATE TOTAL	Adams	Asotin	Benton	Chelan	Clallam	Clark	Columbia
FARM VALUES, 1940°								
1 Land and buildings, all farms.....dollars..	593,366,445	20,904,693	4,679,465	7,875,658	13,745,699	5,652,448	21,455,133	13,280,553
2 Land and buildings, irrigated farms.....dollars..	121,212,949	338,220	1,552,929	5,596,883	12,774,521	1,011,875	1,205,650	966,530
Operated by—								
3 (a) Owners and managers.....dollars..	100,900,376	321,270	1,399,129	4,718,268	12,081,698	892,525	931,350	933,080
4 (b) Tenants.....dollars..	20,312,573	16,950	153,800	878,615	692,823	119,350	274,300	33,450
5 Average, land and buildings, per farm.....dollars..	6,955.87	22,548.00	4,705.85	3,691.88	7,192.86	9,369.21	9,133.71	10,505.76
6 Average, per acre in farms.....dollars..	57.50	8.80	20.02	73.63	116.81	133.49	136.93	16.31
7 Buildings, irrigated farms reporting value.....number..	17,135	14	328	1,490	1,736	107	131	90
8 Total reported.....dollars..	36,111,810	19,096	578,295	1,864,271	1,321,899	283,340	343,210	190,750
9 Average, per irrigated farm reporting.....dollars..	2,107.49	1,364.00	1,763.09	1,251.19	2,489.57	2,648.04	2,619.92	2,119.41
10 per acre on all irrigated farms.....dollars..	17.13	0.50	7.46	24.53	39.52	37.38	38.98	3.22
11 Buildings, nonirrigated farms reporting value.....number..	63,475	625	207	147	294	1,108	4,355	121
12 Total reported.....dollars..	118,408,325	2,099,602	449,410	242,237	312,589	1,617,985	7,368,578	1,267,420
13 Average, per nonirrigated farm reporting.....dollars..	1,865.43	3,359.36	2,171.06	1,647.87	1,063.23	1,459.91	1,691.98	3,010.50
14 Average, per acre on all nonirrigated farms.....dollars..	9.06	2.27	1.78	0.55	4.39	25.57	36.80	4.29
15 Implements and machinery, irrigated farms reporting value.....number..	15,795	14	221	1,419	1,642	89	113	82
16 Total reported.....dollars..	13,082,573	21,955	127,783	686,950	1,362,838	85,598	118,134	68,785
17 Average, per irrigated farm reporting.....dollars..	828.27	1,568.21	578.20	484.11	842.17	961.78	1,045.43	838.84
18 per acre, on all irrigated farms.....dollars..	6.21	0.57	1.65	9.04	12.64	11.29	13.42	1.16
19 Implements and machinery, nonirrigated farms reporting value.....number..	52,562	619	195	138	234	763	3,711	390
20 Total reported.....dollars..	43,018,574	2,531,076	360,825	403,327	94,009	354,763	1,425,352	962,636
21 Average, per acre, on all nonirrigated farms.....dollars..	3.29	2.74	1.43	0.91	1.32	5.61	7.12	3.26
ENTERPRISES AND IRRIGATION WORKS JANUARY 1								
22 Enterprises.....1940...number.....	4,125	12	26	134	509	13	104	56
23 ....."1930...number.....	2,989	20	19	191	545	8	12	67
24 ....."1920...number.....	2,692	26	21	146	379	7	.....	52
25 Average size of enterprise based on irrigable area.....1940...acres.....	203	72	158	463	83	1,622	16	55
26 ....."1930...acres.....	306	68	264	286	75	2,518	.....	43
27 ....."1920...acres.....	311	67	223	493	172	1,809	.....	68
28 Diversion dams.....1940...number.....	1,755	4	36	3	172	5	43	42
29 Main canals and laterals.....1940...length, miles.....	4,248.6	9.3	28.7	208.7	276.7	84.5	6.8	27.3
30 ....."1930...length, miles.....	3,635	18	3	209	391	99	.....	22
31 ....."1920...length, miles.....	5,615	27	16	336	424	68	.....	51
32 ....."1940...capacity, c.f.s. ⁴	15,104	12	67	727	1,269	401	61	104
33 ....."1930...capacity, c.f.s. ⁴	14,987	19	6	2,072	895	414	.....	63
34 ....."1920...capacity, c.f.s. ⁴	16,242	203	39	982	1,100	570	.....	697
35 Pipe lines ⁶.....1940...length, miles.....	2,612.7	3.6	52.5	233.7	645.9	2.7	31.8	2.6
36 Storage dams.....1940...number.....	125	.....	.....	.....	28	.....	4	.....
37 Reservoirs.....1940...number.....	114	.....	1	.....	23	.....	1	.....
38 ....."1930...number.....	78	.....	2	.....	21	.....	.....	.....
39 ....."1920...number.....	205	4	1	.....	36	.....	.....	1
40 ....."1940...capacity, acre-feet.....	1,165,527	.....	(⁶)	.....	8,127	(⁶)	.....	.....
41 ....."1930...capacity, acre-feet.....	699,807	.....	83	.....	12,783	.....	.....	.....
42 ....."1920...capacity, acre-feet.....	477,789	4	100	.....	11,481	.....	.....	1
43 Wells, flowing.....1940...number.....	50	1	.....	7	.....	.....	8	.....
44 ....."1930...number.....	42	1	.....	9	4	.....	.....	.....
45 ....."1920...number.....	60	6	.....	7	1	.....	.....	.....
46 ....."1940...yield, g.p.m.....	21,192	(⁶)	.....	2,700	.....	.....	20	.....
47 ....."1930...yield, g.p.m.....	27,290	100	.....	11,900	90	.....	.....	.....
48 ....."1920...yield, g.p.m.....	14,925	160	.....	6,200	10	.....	.....	.....
49 Wells, pumped.....1940...number.....	1,041	3	.....	80	60	.....	39	2
50 ....."1930...number.....	1,019	7	.....	143	98	.....	.....	.....
51 ....."1920...number.....	520	7	.....	101	13	.....	.....	4
52 ....."1940...yield, g.p.m.....	287,327	1,130	.....	22,540	4,422	.....	5,825	(⁶)
53 ....."1930...yield, g.p.m.....	306,800	6,240	.....	41,230	10,109	.....	.....	.....
54 ....."1920...yield, g.p.m.....	227,744	5,160	.....	38,807	1,775	.....	.....	130
55 Pumping plants.....1940...number.....	2,487	4	3	142	350	1	65	2
56 ....."1930...number.....	1,951	6	6	201	399	.....	.....	3
57 ....."1920...number.....	975	12	1	144	138	.....	.....	7
58 Prime movers.....1940...capacity, hp.....	37,131	44	440	3,383	5,363	(⁶)	308	(⁶)
59 ....."1930...capacity, hp.....	33,187	73	221	4,489	4,722	.....	.....	17
60 ....."1920...capacity, hp.....	22,929	143	5	4,555	1,415	.....	.....	23
61 Pumps.....1940...capacity, g.p.m.....	953,751	1,730	4,250	117,932	62,170	(⁶)	10,914	(⁶)
62 ....."1930...capacity, g.p.m.....	993,303	6,225	2,505	220,012	80,489	.....	.....	1,203
63 ....."1920...capacity, g.p.m.....	636,552	10,042	200	163,628	45,853	.....	.....	355
64 Pumping lift, from all sources.....1940...average, feet.....	47	50	166	35	92	(⁶)	14	(⁶)
65 ....."1930...average, feet.....	59	31	131	37	89	.....	.....	14
66 ....."1920...average, feet.....	60	28	8	37	86	.....	.....	18
67 from pumped wells.....1940...average, feet.....	43	61	.....	35	45	.....	15	(⁶)
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁷								
68 Enterprises reporting pay roll.....number.....	205	.....	2	8	37	8	.....	3
69 Irrigated area in these enterprises.....acres.....	499,904	.....	(⁶)	34,616	24,857	10,829	.....	317
70 Wages and salaries paid and payable.....dollars..	784,904	.....	(⁶)	77,349	77,655	12,667	.....	445
71 Persons employed during week ending April 29.....number.....	937	.....	(⁶)	78	111	72	.....	1

⁶Census of Agriculture. ¹Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table I. ²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³Not revised. ⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources. ⁵Includes siphons and farm pipe lines reported. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁷Pay roll and number of employees reported only by enterprises serving 5 or more farms.

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,
 [Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920]

ITEM (For definitions and explanations, see text)		Cowlitz	Douglas	Ferry	Franklin	Garfield	Grant	Grays Harbor	Island
FARM VALUES, 1940*									
1	Land and buildings, all farms.....dollars..	7,961,394	14,049,914	2,164,155	6,686,351	9,628,627	9,517,678	8,219,565	4,513,110
2	Land and buildings, irrigated farms.....dollars..	427,400	3,335,289	624,930	897,800	1,006,000	1,417,607	559,859	40,000
Operated by—									
3	(a) Owners and managers.....dollars..	279,500	3,112,064	525,000	825,200	715,200	1,116,552	522,150	40,000
4	(b) Tenants.....dollars..	147,900	223,225	99,930	72,600	280,800	301,055	37,700	.....
5	Average, land and buildings, per farm.....dollars..	15,264.29	6,963.03	5,387.33	4,651.61	25,150.00	8,805.01	4,826.29	5,000.00
6	per acre in farms.....dollars..	116.02	68.60	15.42	41.55	15.95	18.15	77.43	161.94
7	Buildings, irrigated farms reporting value.....number..	28	464	113	184	40	159	115	8
8	Total reported.....dollars..	89,100	958,121	143,750	322,995	108,150	319,964	244,100	17,650
9	Average, per irrigated farm reporting.....dollars..	3,182.14	2,064.92	1,272.12	1,752.15	2,703.75	2,012.35	2,122.61	2,206.25
10	per acre on all irrigated farms.....dollars..	24.19	19.71	3.55	14.92	1.71	4.10	33.76	71.46
11	Buildings, nonirrigated farms reporting value.....number..	1,881	712	426	153	287	4.26	1,789	1,022
12	Total reported.....dollars..	2,477,905	1,144,291	335,025	582,230	944,318	952,062	2,919,457	1,683,145
13	Average, per nonirrigated farm reporting.....dollars..	1,317.33	1,607.15	786.44	3,805.42	3,290.31	2,234.69	1,631.89	1,646.91
14	per acre on all nonirrigated farms.....dollars..	22.78	1.39	1.59	1.37	2.98	1.45	24.96	30.76
15	Implements and machinery, irrigated farms reporting value.....number..	28	393	113	177	39	145	87	4
16	Total reported.....dollars..	43,025	432,438	70,115	126,270	79,715	133,233	62,017	1,100
17	Average, per irrigated farm reporting.....dollars..	1,536.61	1,100.85	620.49	713.39	2,043.97	918.85	712.84	275.00
18	per acre, on all irrigated farms.....dollars..	11.68	8.89	1.73	5.84	1.26	1.71	8.58	4.45
19	Implements and machinery, nonirrigated farms reporting value.....number..	1,691	694	385	148	286	404	1,597	671
20	Total reported.....dollars..	671,906	1,714,621	150,972	727,443	865,821	969,296	800,304	364,541
21	Average, per acre, on all nonirrigated farms.....dollars..	6.18	2.08	0.72	1.71	2.73	1.48	6.84	6.66
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
22	Enterprises.....1940..number.....	28	191	89	62	37	155	123	3
23	.....1930..number.....	.....	206	35	60	34	175	1	1
24	.....1920..number.....	.....	86	45	48	36	172	.....	.....
25	Average size of enterprise based on irrigable area.....1940..acres.....	41	59	30	82	22	48	11	15
26	.....1930..acres.....	.....	51	167	80	24	52	.....	.....
27	.....1920 ² ..acres.....	.....	102	165	297	47	74	.....	.....
28	Diversion dams.....1940..number.....	3	9	60	.....	12	31	3	2
29	Main canals and laterals.....1940..length, miles.....	1.1	18.2	52.4	19.1	4.0	15.2	1.0	1.0
30	.....1930..length, miles.....	.....	28	11	8	.....	11	.....	.....
31	.....1920..length, miles.....	.....	26	32	10	18	45	.....	.....
32	.....1940..capacity, c.f.s. ³	19	125	101	122	42	183	89	2
33	.....1930..capacity, c.f.s. ³.....	.....	87	17	71	.....	267	.....	.....
34	.....1920..capacity, c.f.s. ³.....	.....	48	119	121	97	113	.....	.....
35	Pipe lines ⁴.....1940..length, miles.....	5.7	244.5	3.7	68.8	5.1	41.8	14.6	.....
36	Storage dams.....1940..number.....	3	6	.....	.....	.....	7	.....	1
37	Reservoirs.....1940..number.....	1	5	.....	1	.....	4	2	.....
38	.....1930..number.....	.....	4	1	1	.....	6	.....	.....
39	.....1920..number.....	.....	8	2	2	1	18	.....	.....
40	.....1940..capacity, acre-feet.....	(¹)	56	.....	(¹)	.....	41,276	(¹)	.....
41	.....1930..capacity, acre-feet.....	.....	5	1	50	.....	74	.....	.....
42	.....1920..capacity, acre-feet.....	.....	.....	151	2	.....	4,519	.....	.....
43	Wells, flowing.....1940..number.....	.....	.....	.....	.....	.....	1	.....	.....
44	.....1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....
45	.....1920..number.....	.....	2	1	.....	.....	.....	.....	.....
46	.....1940..yield, g.p.m.....	.....	.....	.....	.....	.....	(¹)	.....	.....
47	.....1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
48	.....1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
49	Wells, pumped.....1940..number.....	8	96	1,000	.....	39	122	9	1
50	.....1930..number.....	.....	112	.....	.....	1	136	.....	.....
51	.....1920..number.....	.....	22	3	.....	1	132	.....	.....
52	.....1940..yield, g.p.m.....	480	21,644	.....	11,235	.....	46,379	435	(¹)
53	.....1930..yield, g.p.m.....	.....	43,221	.....	8,875	60	45,251	.....	.....
54	.....1920..yield, g.p.m.....	.....	6,865	1,000	13,080	250	39,779	.....	.....
55	Pumping plants.....1940..number.....	28	195	1	84	12	164	106	1
56	.....1930..number.....	.....	204	.....	65	16	170	.....	.....
57	.....1920..number.....	.....	55	3	50	7	164	.....	.....
58	Prime movers.....1940..capacity, hp.....	326	2,515	(¹)	1,361	165	1,706	302	(¹)
59	.....1930..capacity, hp.....	.....	2,932	.....	1,200	284	2,650	.....	.....
60	.....1920..capacity, hp.....	.....	1,452	9	1,100	242	3,084	.....	.....
61	Pumps.....1940..capacity, g.p.m.....	6,801	44,024	(¹)	48,476	7,865	71,419	7,659	(¹)
62	.....1930..capacity, g.p.m.....	.....	69,258	.....	97,265	5,594	81,925	.....	.....
63	.....1920..capacity, g.p.m.....	.....	38,760	153	36,478	7,750	76,924	.....	.....
64	Pumping lift, from all sources.....1940..average, feet.....	12	77	(¹)	35	47	57	9	(¹)
65	.....1930..average, feet.....	.....	72	.....	34	48	74	.....	.....
66	.....1920..average, feet.....	.....	95	12	48	76	79	.....	.....
67	from pumped wells.....1940..average, feet.....	25	67	.....	33	.....	63	23	(¹)
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁵									
68	Enterprises reporting pay roll.....number.....	.....	6	.....	1	.....	1	.....	.....
69	Irrigated area in these enterprises.....acres.....	.....	4,116	.....	(¹)	.....	(¹)	.....	.....
70	Wages and salaries paid and payable.....dollars..	.....	13,053	.....	(¹)	.....	(¹)	.....	.....
71	Persons employed during week ending April 29.....number..	.....	18	.....	(¹)	.....	.....	.....	.....

* Census of Agriculture.
¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

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1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939-Continued
 Irrigation data omitted from any of the counties listed are included under "All other counties"

Jefferson	King	Kitsap	Kittitas	Klickitat	Lewis	Lincoln	Mason	Okanogan	Pacific	Pend Oreille	Pierce	Skagit	Snohomish	
2,423,945	30,654,050	7,698,910	11,466,858	8,805,923	17,239,694	33,897,094	2,880,845	12,370,077	3,139,904	2,226,878	25,981,561	20,160,915	28,520,393	1
101,250	1,583,002	207,800	10,663,324	1,474,153	511,400	375,220	164,135	8,356,567	307,575	418,450	4,290,653	397,900	247,400	2
(1)	1,066,802	193,300	8,222,354	1,215,253	498,200	320,620	(1)	7,718,293	(1)	349,450	3,465,153	(1)	175,400	3
(1)	516,200	14,500	2,440,870	258,900	13,200	54,600	(1)	638,274	(1)	69,000	825,500	(1)	72,000	4
5,955.88	8,287.97	6,111.76	9,828.61	6,522.80	8,383.61	14,431.54	7,460.68	5,571.04	8,543.75	5,103.05	8,864.99	28,421.43	14,552.94	5
56.03	362.91	208.22	35.29	24.51	107.96	9.56	63.67	24.97	79.66	23.85	283.17	229.60	225.32	6
16	165	34	1,057	224	61	26	22	1,465	32	81	478	14	17	7
34,700	497,122	102,900	2,809,401	387,396	190,275	73,700	58,565	2,385,605	86,450	131,850	1,623,716	103,501	72,700	8
2,166.75	2,687.15	3,026.47	2,752.51	1,729.40	3,119.26	2,834.62	2,662.95	1,628.40	2,701.56	1,627.78	3,336.90	7,332.83	4,276.47	9
19.20	113.97	103.11	9.63	6.44	40.17	1.88	22.72	7.13	22.39	7.51	107.16	59.72	66.21	10
499	5,522	2,058	116	866	3,847	1,211	741	867	666	566	5,097	3,191	6,192	11
825,275	11,598,886	3,728,300	197,310	1,533,811	5,885,890	3,703,644	1,071,875	823,763	1,079,420	532,044	9,545,599	6,501,316	11,094,228	12
1,653.86	2,100.49	1,811.61	1,672.12	1,771.14	1,529.99	3,058.34	1,446.52	950.13	1,620.79	940.01	1,872.79	2,037.39	1,781.70	13
20.09	78.16	82.49	1.20	2.28	21.84	2.90	25.88	1.33	17.80	5.40	64.67	43.05	59.26	14
17	168	29	1,010	215	56	25	21	1,344	30	76	413	14	16	15
10,304	170,519	18,137	1,437,468	157,998	65,411	39,108	15,832	988,821	34,148	54,026	327,582	26,324	27,800	16
606.12	1,014.99	625.41	1,423.24	734.87	1,168.05	1,564.32	753.90	735.73	1,138.27	710.87	793.18	1,880.29	1,737.50	17
5.70	39.09	18.17	4.76	2.63	13.81	1.00	6.14	2.95	8.84	3.08	21.62	15.19	25.32	18
436	3,997	1,458	111	815	3,185	1,188	663	771	535	470	3,699	2,344	5,032	19
201,320	1,881,165	440,706	80,014	845,130	1,355,079	3,864,360	250,191	538,927	253,807	161,742	1,292,108	1,424,437	1,957,732	20
4.90	12.68	9.75	0.49	1.26	5.03	3.02	6.04	0.87	4.18	1.64	8.75	9.43	10.46	21
14	128	40	267	61	36	20	16	438	29	57	287	10	10	22
7	32	6	72	72	3	19	2	498	.....	20	15	1	9	23
.....	.....	.....	223	93	.....	54	.....	383	.....	.....	.....	.....	.....	24
10	17	10	555	207	31	90	22	102	9	64	42	28	13	25
.....	.....	.....	1,707	282	.....	100	.....	122	.....	167	.....	.....	.....	26
.....	.....	.....	394	347	.....	61	.....	187	.....	.....	.....	.....	.....	27
15	10	4	387	81	1	22	10	171	.....	45	10	1	2	28
3.0	8.5	.....	570.8	80.6	0.2	18.1	3.2	515.6	.....	39.0	1.9	.....	.....	29
.....	.....	.....	334	62	.....	7	.....	409	.....	15	.....	.....	.....	30
.....	.....	.....	430	192	.....	31	.....	507	.....	.....	.....	.....	.....	31
19	130	27	2,542	424	26	25	16	1,422	7	80	170	4	6	32
.....	.....	.....	2,237	214	12	12	.....	1,690	.....	81	.....	.....	.....	33
.....	.....	.....	1,788	842	63	.....	.....	1,851	.....	.....	.....	.....	.....	34
1.3	49.9	12.7	41.6	19.8	7.5	1.7	2.8	227.5	4.0	9.7	190.9	2.4	3.2	35
.....	1	3	4	5	2	2	1	21	.....	11	8	1	.....	36
.....	2	4	4	3	.....	.....	1	17	.....	11	8	3	.....	37
.....	.....	.....	3	4	.....	.....	.....	20	.....	1	.....	.....	.....	38
.....	(1)	.....	7	18	.....	1	.....	49	.....	.....	.....	.....	.....	39
.....	.....	4	827,720	31	.....	(1)	.....	49,639	.....	20	233	9	.....	40
.....	.....	.....	386,100	66	.....	.....	.....	52,459	.....	3,060	.....	.....	.....	41
.....	.....	.....	384,810	415	.....	.....	.....	30,789	.....	.....	.....	.....	.....	42
.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	44
.....	(1)	.....	.....	.....	.....	.....	.....	1	.....	.....	(1)	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	50	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	31	12	5	5	14	3	.....	115	18	.....	113	12	2	49
.....	.....	.....	.....	7	.....	8	.....	204	.....	.....	.....	.....	.....	50
.....	.....	.....	1	2	.....	9	.....	52	.....	.....	.....	.....	.....	51
.....	3,344	377	2,450	1,010	453	1,300	.....	16,810	5,749	.....	5,554	990	(1)	52
.....	.....	.....	1,049	.....	.....	2,500	.....	29,420	.....	.....	.....	.....	.....	53
.....	.....	.....	200	24	.....	3,785	.....	13,613	.....	.....	.....	.....	.....	54
.....	113	25	13	25	36	5	2	298	23	3	196	10	6	55
.....	.....	.....	2	21	.....	11	.....	369	.....	.....	.....	.....	.....	56
.....	.....	.....	9	12	.....	20	(1)	131	.....	.....	.....	.....	.....	57
.....	516	42	1,232	396	255	16	(1)	3,852	269	65	875	72	22	58
.....	.....	.....	137	212	.....	185	.....	5,035	.....	.....	.....	.....	.....	59
.....	.....	.....	193	104	.....	361	.....	1,885	.....	.....	.....	.....	.....	60
.....	21,171	1,227	29,017	13,693	4,280	1,583	(1)	75,392	6,924	1,800	21,994	1,927	1,193	61
.....	.....	.....	2,700	6,615	.....	5,170	.....	123,611	.....	.....	.....	.....	.....	62
.....	.....	.....	12,575	6,100	.....	11,805	(1)	54,461	.....	.....	.....	.....	.....	63
.....	30	28	83	36	13	39	(1)	50	12	32	33	32	51	64
.....	.....	.....	135	41	.....	52	.....	50	.....	.....	.....	.....	.....	65
.....	.....	.....	24	46	.....	63	.....	43	.....	.....	.....	.....	.....	66
.....	30	24	34	24	24	49	.....	44	12	.....	37	42	(1)	67
.....	.....	.....	9	10	.....	.....	.....	25	.....	1	.....	.....	.....	68
.....	.....	.....	86,483	10,608	.....	.....	.....	20,566	.....	(1)	.....	.....	.....	69
.....	.....	.....	86,437	3,694	.....	.....	.....	51,492	.....	(1)	.....	.....	.....	70
.....	.....	.....	80	12	.....	.....	.....	123	.....	.....	.....	.....	.....	71

³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁴Includes siphons and farm pipe lines reported.
⁵Pay roll and number of employees reported only by enterprises serving 5 or more farms.

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

[Counties for which 1920 data are not shown may have had irrigation in that year; 1930 and 1920 irrigation data omitted from any of the counties listed are included under "All other counties"]

ITEM (For definitions and explanations, see text)		Spokane	Stevens	Thurston	Walla Walla	Whitman	Whitman	Yakima	All other counties ¹
FARM VALUES, 1940*									
1	Land and buildings, all farms.....dollars..	36,372,082	11,499,619	11,415,527	30,104,903	23,351,635	67,978,332	47,514,884	7,327,993
2	Land and buildings, irrigated farms.....dollars..	5,086,680	1,606,700	944,437	6,023,655	412,353	1,156,260	45,031,451	97,100
	Operated by—								
3	(a) Owners and managers.....dollars..	4,485,934	1,211,300	883,237	4,801,350	345,853	1,120,360	35,408,271	(²)
4	(b) Tenants.....dollars..	600,746	385,400	61,200	1,222,305	66,500	35,900	9,622,180	(²)
5	Average, land and buildings, per farm.....dollars..	4,620.05	7,172.77	4,235.14	9,140.60	11,454.25	25,136.09	7,227.00	8,091.67
6	per acre in farms.....dollars..	145.75	28.78	71.19	72.59	142.68	15.98	108.70	68.53
7	Buildings, irrigated farms reporting value.....number..	1,090	224	216	644	35	46	6,149	12
8	Total reported.....dollars..	2,757,121	430,850	401,150	1,460,155	128,841	151,260	12,288,651	31,800
9	Average, per irrigated farm reporting.....dollars..	2,529.47	1,923.44	1,867.18	2,267.32	3,661.17	3,268.26	1,998.48	2,650.00
10	per acre on all irrigated farms.....dollars..	79.00	7.72	30.24	17.59	44.64	2.09	29.66	22.44
11	Buildings, nonirrigated farms reporting value.....number..	3,851	2,286	2,640	745	4,626	2,422	360	1,251
12	Total reported.....dollars..	7,151,686	2,937,190	4,031,544	2,235,161	8,856,404	7,582,116	521,001	2,576,019
13	Average, per nonirrigated farm reporting.....dollars..	1,857.10	1,284.86	1,527.10	3,000.22	1,914.48	3,130.52	1,447.22	2,059.17
14	per acre on all nonirrigated farms.....dollars..	9.01	6.34	24.48	3.47	45.68	5.93	1.01	20.28
15	Implements and machinery, irrigated farms reporting value.....number..	842	217	188	626	36	44	5,830	12
16	Total reported.....dollars..	409,273	162,156	97,546	572,656	67,629	87,595	4,865,204	7,080
17	Average, per irrigated farm reporting.....dollars..	486.07	747.26	518.86	914.79	1,878.58	1,990.80	834.51	590.00
18	per acre, on all irrigated farms.....dollars..	11.73	2.90	7.35	6.90	23.43	1.21	11.74	5.00
19	Implements and machinery, nonirrigated farms reporting value.....number..	3,385	2,126	2,310	709	3,778	2,273	297	1,074
20	Total reported.....dollars..	3,031,225	965,903	818,494	2,095,320	1,739,373	6,630,878	224,684	569,087
21	Average, per acre, on all nonirrigated farms.....dollars..	3.82	2.08	4.97	3.25	8.97	5.18	0.43	4.48
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
22	Enterprises.....1940.....number.....	90	192	38	285	35	45	465	.....
23	.....1930.....number.....	99	112	4	341	13	43	221	26
24	.....1920.....number.....	107	199	.....	280	.....	29	252	54
25	Average size of enterprise based on irrigable area.....1940.....acres.....	216	36	125	87	33	42	820	.....
26	.....1930.....acres.....	394	46	1,258	66	.....	54	2,152	.....
27	.....1920.....acres.....	369	144	.....	162	.....	143	1,227	185
28	Diversions dams.....1940.....number.....	22	125	7	161	4	24	228	.....
29	Main canals and laterals.....1940.....length, miles.....	110.1	78.9	50.7	144.7	.....	15.1	1,854.2	.....
30	.....1930.....length, miles.....	25	59	51	135	.....	15	1,772	11
31	.....1920.....length, miles.....	230	269	.....	1,148	.....	31	1,580	50
32	.....1940.....capacity, c. f. s. ⁴	91	247	127	533	15	57	5,802	.....
33	.....1930.....capacity, c. f. s. ⁴	289	78	100	391	.....	15	5,946	23
34	.....1920.....capacity, c. f. s. ⁴	782	477	.....	959	.....	48	5,152	191
35	Pipe lines ⁵.....1940.....length, miles.....	164.6	7.7	12.9	46.3	4.9	22.9	421.4	.....
36	Storage dams.....1940.....number.....	5	3	.....	.....	.....	4	5	.....
37	Reservoirs.....1940.....number.....	12	2	1	.....	.....	3	5	.....
38	.....1930.....number.....	3	1	1	.....	.....	.....	5	3
39	.....1920.....number.....	32	7	.....	5	.....	.....	3	10
40	.....1940.....capacity, acre-feet.....	70	(²)	(²)	.....	.....	2	238,150	.....
41	.....1930.....capacity, acre-feet.....	1,607	90	35	.....	.....	.....	243,387	5
42	.....1920.....capacity, acre-feet.....	5,663	800	.....	.....	.....	.....	39,000	54
43	Wells, flowing.....1940.....number.....	.....	1	.....	13	1	7	4	.....
44	.....1930.....number.....	.....	.....	.....	17	.....	6	4	.....
45	.....1920.....number.....	.....	.....	.....	33	.....	5	3	1
46	.....1940.....yield, g. p. m.....	.....	(²)	.....	7,495	(²)	7,025	601	.....
47	.....1930.....yield, g. p. m.....	.....	.....	.....	10,600	.....	1,200	3,350	.....
48	.....1920.....yield, g. p. m.....	.....	.....	.....	6,080	.....	1,000	285	.....
49	Wells, pumped.....1940.....number.....	48	3	8	86	22	3	82	.....
50	.....1930.....number.....	80	5	3	114	.....	3	48	22
51	.....1920.....number.....	49	2	.....	45	.....	.....	43	3
52	.....1940.....yield, g. p. m.....	79,463	65	383	19,901	6,089	530	28,189	.....
53	.....1930.....yield, g. p. m.....	74,059	1,500	313	19,628	.....	540	19,203	3,602
54	.....1920.....yield, g. p. m.....	58,646	45	.....	36,240	.....	.....	8,225	120
55	Pumping plants.....1940.....number.....	83	11	22	126	30	35	267	.....
56	.....1930.....number.....	93	7	3	166	.....	32	117	60
57	.....1920.....number.....	75	9	.....	65	.....	11	51	11
58	Prime movers.....1940.....capacity, hp.....	3,790	26	287	707	217	504	8,018	.....
59	.....1930.....capacity, hp.....	3,732	42	18	955	.....	479	5,460	344
60	.....1920.....capacity, hp.....	3,316	41	.....	2,775	.....	340	1,735	151
61	Pumps.....1940.....capacity, g. p. m.....	78,402	2,200	3,450	35,697	9,520	13,885	245,156	.....
62	.....1930.....capacity, g. p. m.....	69,934	2,105	313	31,169	.....	15,841	150,511	20,858
63	.....1920.....capacity, g. p. m.....	79,688	9,156	.....	25,885	.....	8,434	47,002	1,303
64	Pumping lift, from all sources.....1940.....average, feet.....	54	15	39	20	25	47	46	.....
65	.....1930.....average, feet.....	76	38	80	24	.....	47	39	33
66	.....1920.....average, feet.....	83	48	.....	24	.....	56	38	.....
67	from pumped wells.....1940.....average, feet.....	71	28	48	22	22	32	55	.....
PAY ROLL AND NUMBER OF EMPLOYEES 1939 ⁶									
68	Enterprises reporting pay roll.....number.....	15	1	1	24	.....	.....	53	.....
69	Irrigated area in these enterprises.....acres.....	15,402	(²)	(²)	12,774	.....	.....	270,569	.....
70	Wages and salaries paid and payable.....dollars..	40,753	(²)	(²)	12,203	.....	.....	372,913	.....
71	Persons employed during week ending April 29.....number..	64	.....	(²)	39	.....	.....	302	.....

² Census of Agriculture.
¹ Data between census years not comparable (see headnote).
² Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
³ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁴ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁵ Includes siphons and farm pipe lines reported.
⁶ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - WYOMING

STATE TABLE 1.-IRRIGATION SUMMARY FOR THE STATE: 1890 TO 1940

Table with columns: ITEM (For definitions and explanations, see text), CENSUS OF - (1940, 1935, 1930, 1920, 1910, 1900, 1890). Rows include: Approximate land area of State, CENSUS OF AGRICULTURE (All farms, Farms irrigated, Land in farms, Area irrigated, Value of irrigated farms), and CENSUS OF IRRIGATION (Irrigation enterprises, Investment in irrigation enterprises, Estimated completed cost of existing enterprises).

1 Relates to farms reporting irrigated cropland harvested and/or irrigated pasture, 1940 Census; farms reporting irrigated cropland harvested, 1935 Census; farms reporting irrigated crops, 1930, 1920, and 1910 Censuses; and farms reporting irrigated land, 1900 and 1890 Censuses. 2 Increase or decrease represented by 1940 figures are with reference to 1930 figures, not 1935. 3 Not available. 4 Irrigated land from which crops were harvested plus 264,374 acres of irrigated land used only for pasture. 5 Irrigated land from which crops were harvested. 6 Acreage of irrigated crops including some duplication where 2 or more crops were harvested from same land. 7 Data were secured for crops irrigated but the returns were considered relatively incomplete. 8 Total is for irrigated farms reporting this item. Averages are based on all irrigated farms. 9 For 1920 and 1910 relates to total area in enterprises. Irrigable areas for those years were not reported. 10 The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from those shown for earlier years.

STATE TABLE 2.-CENSUS OF AGRICULTURE--NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

Table with columns: ITEM (For definitions and explanations, see text), Farms, Land in farms, CROPLAND HARVESTED 1939 (Total, Irrigated), VALUE OF FARMS (land and buildings) (Total, Average per acre), VALUE OF BUILDINGS (Total, Average per acre), and VALUE OF IMPLEMENTS AND MACHINERY (Total, Average per acre). Rows include: All farms, Irrigated farms, Wholly irrigated farms, Partly irrigated farms, Nonirrigated farms.

1 Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed. 2 Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION — WYOMING

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, 1940; IRRIGATED AREA, 1939, 1929, AND 1919; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940			IRRIGATED AREA				DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enter- prises	Irrigable area	Area works were capable of supplying with water	1939	1929	1919	Increase or decrease (-) 1929-39	Irrigated area reporting—			Quantity delivered per acre ¹	Cost ¹	
								Quantity	Cost	Quantity and cost		Per acre	Per acre- foot
	Number	Acres	Acres	Acres	Acres	Acres	Percent	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	3,385	2,277,046	1,913,527	1,486,498	1,236,155	1,207,982	20.3	1,360,506	1,418,031	1,298,355	2.1	0.69	0.32
Primary sources:													
Streams, gravity.....	2,887	2,167,185	1,842,092	1,430,647	1,173,763	1,155,596	21.9	1,306,099	1,365,992	1,247,682	2.1	0.63	0.30
Streams, pumped.....	99	12,032	10,938	7,860	9,489	1,525	-17.2	7,834	7,704	7,678	1.7	1.80	1.06
Streams, gravity and pumped.....	12	13,288	12,892	11,908				11,908	10,194	10,194	0.9	0.14	0.16
Wells, pumped.....	64	2,423	2,775	3,008	180	147	(²)	3,008	2,751	2,751	1.9	4.61	2.43
Wells, flowing.....	20	890	791	459	140	19	227.9	436	261	241	1.2	2.09	1.73
Wells, pumped and flowing.....	1	(³)	(³)										
Lakes, gravity.....	5												
Lakes, pumped.....	2	1,049	629	591	3,656	355	-83.9	571	586	566	1.1	1.25	1.10
Springs.....	116	8,721	8,410	7,011	6,289	5,985	11.5	6,588	6,278	5,874	2.8	0.60	0.22
Springs and streams.....	43	23,250	22,988	16,504				16,468	16,291	16,285	1.3	1.31	0.97
Stored storm water.....	32	3,123	2,591	947	974	10,852	-2.8	906	563	548	1.4	1.45	1.05
City water.....	2												
Sewage.....	1	152	152	152	65		133.8	152	150	150	0.4	0.23	0.52
Streams, gravity; wells, pumped...	6				137	400	(³)	1,775	2,650	1,775	0.8	1.19	1.48
Streams, gravity; wells, flowing...	2	2,701	2,681	2,650									
Streams, pumped; wells, pumped...													
Waste water, seepage or drainage...	3	180	180	100				160	100	100	3.5	0.55	0.16
Other mixed.....	24	40,245	5,408	4,601	38,497	33,043	-88.0	4,601	4,511	4,511	1.0	0.92	0.88
Other and not reported.....					2,959	60							
Supplemental sources:⁴													
Streams, gravity and/or storage...	61	162,436	160,116	90,656				64,821	88,489	64,302	0.8	0.28	0.35
Streams, pumped.....	4												
Wells, pumped.....	1	2,974	2,974	2,925				2,925	2,925	2,925	1.6	4.89	3.08
Wells, flowing.....													

¹Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ²Data for 1 enterprise with "Wells, pumped and flowing" source of supply are included with enterprises reporting "Wells, pumped" source of supply in the 1940 Census. ³Percent not shown when more than 1,000. ⁴Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

STATE TABLE 4.—INVESTMENT, 1940 AND 1930; AND COST OF MAINTENANCE AND OPERATION, 1939, 1929, AND 1919; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	INVESTMENT							COST OF MAINTENANCE AND OPERATION ¹						
	1940			1930			Average per acre increase or decrease (-) 1930-40	1939		1929		Average per acre increase or decrease (-) 1930-40	1919	
	Amount	Pro- por- tion of total	Aver- age per acre ²	Amount	Pro- por- tion of total	Aver- age per acre ²		Irrigated area reporting	Aver- age per acre	Irrigated area reporting	Aver- age per acre		Irrigated area reporting	Aver- age per acre
	Dollars	Percent	Dollars	Dollars	Percent	Dollars	Dollars	Acres	Dollars	Acres	Dollars	Dollars	Acres	Dollars
Total.....	41,522,801	100.0	21.70	35,153,187	100.0	21.24	0.46	1,421,852	0.59	1,131,867	0.84	-0.25	869,581	1.04
Primary sources:														
Streams, gravity.....	37,446,314	90.1	20.33	32,977,096	93.8	21.08	-0.75	1,369,813	0.55	1,075,560	0.79	-0.24	826,086	1.03
Streams, pumped.....	222,773	0.5	20.37	289,444	0.8	19.06	1.31	7,704	1.82	8,033	1.58	0.24	985	9.91
Streams, gravity and pumped.....	150,200	0.4	11.65					10,194	0.14					
Wells, pumped.....	³ 92,075	³ 0.2	³ 24.39	8,250 (⁴)		28.95	-4.58	2,751	4.66	176	34.76	-30.10	122	7.79
Wells, flowing.....	22,613	0.1	28.59	1,000 (⁴)		6.25	22.34	261	2.03	90	1.67	0.36	12	9.58
Wells, pumped and flowing.....	(³)	(³)												
Lakes, gravity.....				143,000	0.4	16.26	87.63	586	1.26	3,655	12.97	-11.70	60	0.83
Lakes, pumped.....	65,377	0.2	103.94	1,560 (⁴)		23.64				6	4.17			
Springs.....	82,595	0.2	9.82	51,670	0.1	6.92	2.90	6,278	0.56	4,883	0.71	-0.13	2,983	0.60
Springs and streams.....	983,808	2.4	42.80					16,291	0.37					
Stored storm water.....	66,808	0.2	25.78	49,348	0.1	26.35	-2.57	563	1.42	692	2.54	-1.12	10,055	0.73
City water.....				2,100	(⁴)	30.00	-20.36	150	0.23					
Sewage.....	1,465	(⁴)	9.64											
Streams, gravity; wells, pumped...				1,600	(⁴)	11.43	27.29	2,650	1.05	137	0.52	0.53	125	1.20
Streams, gravity; wells, flowing...	103,436	0.2	38.58	150	(⁴)	10.00								
Streams, pumped; wells, pumped...														
Waste water, seepage or drainage...	5,100	(⁴)	28.33					100	0.55					
Other mixed.....	713,239	1.7	131.89	1,594,994	4.5	29.36	102.51	4,511	0.97	35,781	0.86	0.11	29,153	1.25
Other and not reported.....				44,985	0.1	13.52				2,854	1.14			
Supplemental sources:⁵														
Streams, gravity and/or storage...	1,505,189	3.6	9.40					90,089	0.20					
Streams, pumped.....														
Wells, pumped.....	61,809	0.1	20.78					2,925	4.73					
Wells, flowing.....														

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Data for 1 enterprise with "Wells, pumped and flowing" source of supply are included with enterprises reporting "Wells, pumped" source of supply in the 1940 Census. ⁴Less than one-tenth of 1 percent. ⁵Areas shown under "Supplemental sources" are parts of areas shown under "Primary sources" and therefore are not again added into the totals (see text).

CENSUS OF IRRIGATION - WYOMING

STATE TABLE 5.—AREAS, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises	ITEM AND TYPE OF ENTERPRISE (For definitions and explanations, see text)	CENSUS OF—				Increase or decrease (-) 1930-40 primary enterprises
	1940		1930				1940		1930		
	Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises			Primary enterprises	Supplemental enterprises ¹	Primary enterprises	Primary enterprises	
AREA IRRIGATED						AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER—Continued					
Total.....	Acres 1,486,498	Acres 93,581	Acres 1,236,155	Acres 1,207,982	Percent 20.3		Acres	Acres	Acres	Acres	Percent
Individual and partnership....	816,337	11,376	665,844	724,620	22.6	Commercial.....	56,653	94,760	121,310	-40.2	
Cooperative, incorporated....	320,855	31,867	303,086	286,702	2 31.0	Bureau of Reclamation ³	170,643	16,321	144,548	18.1	
Cooperative, unincorporated....	² 76,119	10,633				Office of Indian Affairs ³	52,941	57,668	45,000	-8.2	
Irrigation district.....	96,681	24,307	86,174	22,935	12.2	State.....	(²)		2,120		
Commercial.....	10,931		51,460	57,800	-78.8	City and/or sewage.....			2,020		
Bureau of Reclamation ³	138,653	15,398	85,886	53,555	61.4	Other.....	9,807		48,200	-79.7	
Office of Indian Affairs ³	23,681		21,636	22,000	9.5	IRRIGABLE AREA ⁴					
State.....	(²)			2,120		Total.....	2,277,046	165,410	1,958,147	2,564,668	16.3
City and/or sewage.....				2,020		Individual and partnership....	1,056,540	15,562	898,108	1,339,116	17.6
Other.....	3,241		22,069	36,230	-85.3	Cooperative, incorporated....	579,841	32,312	434,902	532,206	² 55.2
AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER						Cooperative, unincorporated....	² 95,304	15,274			
Total.....	1,913,527	163,090	1,655,008	1,831,039	15.6	Irrigation district.....	147,790	85,941	134,408	56,617	10.0
Individual and partnership....	995,736	15,492	799,345	1,008,379	24.6	Commercial.....	91,898		109,780	145,478	-16.3
Cooperative, incorporated....	425,066	32,312	395,079	432,956	² 29.0	Bureau of Reclamation ³	228,918	16,321	236,869	299,789	-3.4
Cooperative, unincorporated....	² 84,705	13,274				Office of Indian Affairs ³	64,508		78,900	87,940	-18.2
Irrigation district.....	117,976	85,691	115,408	54,017	2.2	State.....	(²)		2,155		
						City and/or sewage.....			2,777		
						Other.....	12,247		65,200	98,190	-81.2

¹ Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text). ² Data for 1 "State" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ³ U. S. Dept. of the Interior. ⁴ For 1920 relates to total area. Irrigable area for that year was not reported. ⁵ For explanation of areas, see text, p. 634.

STATE TABLE 6.—ENTERPRISES, AREAS, AVERAGE COSTS, 1940; AND AREA IRRIGATED, 1939; BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST				AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Primary enterprises		Supplemental enterprises		Farms served	Total area	Cropland		Irrigated pasture
					Works and equipment per acre ²	Maintenance and operation per acre ³	Works and equipment per acre ²	Maintenance and operation per acre ³			From which crops were harvested	On which crops failed	
Total.....	Number 3,385	Number 316	Acres 2,277,046	Acres 1,913,527	Dollars 20.64	Dollars 0.57	Dollars 9.56	Dollars 0.34	Number 11,527	Acres 1,486,498	Acres 1,193,997	Acres 16,550	Acres 275,951
Individual and partnership....	3,142	99	1,056,540	995,736	7.55	0.41	2.85	0.21	4,088	816,337	622,747	9,214	184,376
Cooperative, incorporated....	107	103	579,941	425,066	16.26	0.51	5.44	0.11	2,822	320,855	278,094	4,303	38,468
Cooperative, unincorporated....	86	71	⁴ 95,304	⁴ 84,705	⁴ 6.01	⁴ 0.27	1.09	0.10	⁴ 622	⁴ 76,119	⁴ 65,016	961	10,140
Irrigation district.....	23	23	147,790	117,976	34.66	0.82	13.41	0.59	1,150	96,681	91,181	1,500	4,000
Commercial.....	8	7	91,898	56,653	52.15	0.66			29	10,931	6,241	190	4,500
U. S. Bureau of Reclamation.....	10	10	228,918	170,643	89.26	1.23	10.81	0.70	2,194	138,653	113,127	387	25,169
U. S. Office of Indian Affairs....	5	2	64,508	52,941	42.65	2.45			601	23,681	15,687		7,994
State.....	1		(⁴)	(⁴)	(⁴)	(⁴)			(⁴)	(⁴)	(⁴)		
City and/or sewage.....													
Other.....	6	1	12,247	9,807	3.21	0.37			11	3,241	1,912	25	1,304

¹ Reported by enterprises in the Census of Irrigation, not by the Census of Agriculture. ² Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³ Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴ Data for 1 "State" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁵ Data for less than 3 enterprises shown with permission of the enterprises involved. ⁶ For explanation of areas and investment, see text, p. 634.

STATE TABLE 7.—INVESTMENT IN IRRIGATION ENTERPRISES, BY TYPE OF ENTERPRISE: 1940, 1930, AND 1920

TYPE OF ENTERPRISE (For definitions and explanations, see text)	TOTAL INVESTMENT, TO JANUARY 1							Increase or decrease (-) 1930-40	AVERAGE INVESTMENT PER ACRE WORKS WERE CAPABLE OF SUPPLYING WATER		Capital expenditures during 1939 ¹	Estimated investment required to complete works
	1940				1930	1920	Primary enterprises		Supplemental enterprises			
	Total	Primary enterprises	Supplemental enterprises	Total cost of works and equipment								
Total.....	Dollars 41,522,801	Dollars 39,955,803	Dollars 1,568,998	Dollars 41,057,813	Dollars 464,988	Dollars 35,153,187	Dollars 34,326,328	Percent 18.1	Dollars 20.88	Dollars 9.61	Dollars 814,990	Dollars 7,016,862
Individual and partnership....	7,819,522	7,773,873	45,649	7,557,526	261,996	5,410,053	8,738,886	44.5	7.81	2.95	1,803	181,727
Cooperative, incorporated....	7,239,250	7,061,745	177,505	7,086,708	152,542	4,786,271	6,701,990	² 62.4	16.61	5.49	58,503	889,375
Cooperative, unincorporated....	² 531,906	² 516,621	15,185	² 523,952	7,854	2,615,006	1,441,312		² 6.10	1.14	6,045	5,650
Irrigation district.....	5,249,158	4,096,984	1,152,174	5,237,808	11,350	2,299,870	780,562		34.73	13.45	446,747	906,500
Commercial.....	2,980,102	2,980,102		2,954,643	25,459	17,589,985	12,863,870	-12.4	52.60		40	185,000
U. S. Bureau of Reclamation.....	15,411,385	15,234,910	176,465	15,407,687	3,726	1,469,842	1,339,887	53.6	89.28	10.81	281,452	3,345,810
U. S. Office of Indian Affairs....	2,258,000	2,258,000		2,258,000			15,050		42.65		20,000	1,496,800
State.....	(²)	(²)		(²)			9,980		(²)			
City and/or sewage.....												
Other.....	33,568	33,568		31,509	2,059	982,360	2,434,791	-96.6	3.42		400	6,000

¹ Only for enterprises serving 5 or more farms. ² Data for 1 "State" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ³ For explanation of investment, see text, p. 634.

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STATE TABLE 8.—INDEBTEDNESS, ARREARAGE, AND CHARGES, BY TYPE OF ENTERPRISE,¹ CENSUS OF 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	INDEBTEDNESS OF ENTERPRISES REPORTING						ARREARAGES OF ENTERPRISES REPORTING ²				CHARGES OF ENTERPRISES REPORTING		
	Enter- prises 1940	Area		Total indebt- ness 1940	Average per acre assessed 1939 ³	Average per acre works were capable of supplying with water ⁴	Enter- prises 1940	Total arrearages		Average per acre assessed 1939 ⁵	Area assessed 1939	Charges made 1939	Charges collected 1939
		Irri- gable 1940	Works were capable of supplying with water 1940					Dec. 31 1939	Dec. 31 1939				
Total.....	Number 40	Acres 697,738	Acres 584,130	Dollars 16,699,485	Dollars 41.01	Dollars 31.64	Number 8	Dollars 87,800	Dollars 69,898	Dollars 1.93	Acres 935,232	Dollars 662,711	Dollars 472,160
Partnership.....													
Cooperative, incorporated.....	13	165,689	136,589	502,220	5.74	3.68	2	(⁶)	(⁶)	(⁶)	84,965	23,344	9,814
Cooperative, unincorporated.....	1	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)					408,065	204,301	196,099
Irrigation district.....	17	194,633	179,967	1,418,894	5.26	5.19	5	18,421	4,094	0.46	79,865	18,715	12,950
Commercial.....	7	50,000	40,000	97,560	10.50	2.44	1	58,579	50,632	6.31	135,852	158,634	112,517
Bureau of Reclamation ³	6	228,918	170,643	1,138,281	91.75	76.99					19,450	9,769	6,908
Office of Indian Affairs ⁴	2	64,508	52,941	1,542,220	32.37	29.13					158,598	188,080	110,878
State.....											47,640	59,550	22,674
City and/or sewage.....											(⁶)	(⁶)	(⁶)
Other.....											(⁶)	(⁶)	(⁶)

¹Only for enterprises serving 5 or more farms. Enterprises and areas shown are totals for primary and supplemental enterprises reporting. ²In payment of principal, interest, and/or other funded obligations. ³Based on primary enterprises only; State average for supplemental enterprises is \$3.47. ⁴Based on primary enterprises only; State average for supplemental enterprises is \$0.85. ⁵Based on primary enterprises only; State average for supplemental enterprises is \$0.46. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁷Data for less than 3 enterprises shown with permission of the enterprises involved. ⁸U. S. Dept. of the Interior. ⁹Represents indebtedness and arrearages of irrigation districts to the U. S. Government. ¹⁰Represents construction costs of irrigation works less cancellations and repayments. ¹¹For explanation of areas and investment, see text, p. 634.

STATE TABLE 9.—COST OF MAINTENANCE AND OPERATION, AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939;
BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	COST OF MAINTENANCE AND OPERATION						PAY ROLL AND EMPLOYEES, 1939 ¹			
	Primary enterprises		Supplemental enterprises		Average cost per irrigated acre		Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29	
	Irrigated area reporting 1939	Reported cost 1939	Irrigated area reporting 1939	Reported cost 1939	Primary enterprises 1939	Supplemental enterprises 1939				
Total.....	Acres 1,421,852	Dollars 807,345	Acres 93,014	Dollars 31,923	Dollars 0.57	Dollars 0.34	Number 175	Dollars 392,047	Number 578	
Individual and partnership.....										
Cooperative, incorporated.....		755,309	308,765	10,809	2,223	0.41	0.21	19	5,783	28
Cooperative, unincorporated.....		319,855	163,222	31,867	3,613	0.51	0.11	86	79,818	197
Irrigation district.....		273,551	19,732	10,633	1,047	0.27	0.10	39	11,346	46
Commercial.....		96,681	79,192	24,307	14,261	0.82	0.59	19	48,736	58
U. S. Bureau of Reclamation ²		10,931	7,240			0.66		3	3,121	3
U. S. Office of Indian Affairs ³		138,653	170,019	15,398	10,779	1.23	0.70	6	195,705	192
State.....		23,681	58,000			2.45		4	47,538	54
City and/or sewage.....		(⁴)	(⁴)			(⁴)				
Other.....		3,191	1,175			0.37		1	(⁴)	(⁴)

¹Only for enterprises serving 5 or more farms. ²Data for 1 "State" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ³Data for 1 "Other" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁴Data for less than 3 enterprises shown with permission of the enterprises involved. ⁵For explanation of areas and investment, see text, p. 634.

STATE TABLE 10.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver- sion	Stor- age	Capac- ity at main head- ing	Length ¹		Num- ber	Capacity	Length	Num- ber	Yield	Num- ber	Yield	Prime movers		Pumps	
				Earth	Lined ²								Number	Rated capac- ity	Number	Rated capac- ity
Total.....	Number 4,205	Number 319	Sec.-ft. 46,366	Miles 11,715	Miles 47.1	334	Ac.-ft. 3,379,957	Miles 70.3	36	G.p.m. 3,830	94	G.p.m. 60,522	224	H.p. 4,152	230	G.p.m. 209,599
Individual and partnership.....	3,974	254	21,712	7,882	28.6	273	179,566	30.2	35	3,636	93	59,172	217	3,633	223	188,368
Cooperative, incorporated.....	100	30	8,794	1,400	2.6	31	295,850	7.6	1	194	1	1,350	1	15	1	1,350
Cooperative, unincorporated.....	80	5	2,216	429	1.1	4	5,667	3.0					3	11	2	1,050
Irrigation district.....	15	11	3,359	421	1.3	9	161,024	3.1					2	440	2	15,708
Commercial.....	5	6	2,369	153	0.1	6	79,266	0.3					1	45	1	3,000
Bureau of Reclamation ³	5	11	7,440	1,007	12.9	9	2,643,584	18.3								
Office of Indian Affairs ⁴	15	2	250	410	0.5	2	15,000	4.3					(⁵)	(⁵)	(⁵)	(⁵)
State.....			(⁵)					(⁵)					(⁵)	(⁵)	(⁵)	(⁵)
City and/or sewage.....																
Other.....	11		236	13				0.5					1	8	1	83

¹Includes main and lateral canals but not farm ditches. ²Includes flumes. ³Data for 1 "State" enterprise are included with "Cooperative, unincorporated" enterprises in the 1940 Census. ⁴U. S. Dept. of the Interior. ⁵For explanation of areas and investment, see text, p. 634.

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STATE TABLE 11.—DAMS, BY MATERIAL: 1940 AND 1930

MATERIAL	1940		1930		MATERIAL	1940		1930	
	Diversion	Storage	Diversion	Storage		Diversion	Storage	Diversion	Storage
Total.....	Number 4,205	Number 319	Number 2,406	Number 212	Earth and rock.....	Number 2,673	Number 277	Number	Number 137
Concrete or masonry.....	257	12	213	22	Other and mixed.....	1,698	21	1,824	45
Timber.....	528	3	317	.....	Not reported.....	49	6	52	8

¹ Principally temporary dams, replaced annually.

STATE TABLE 12.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940; AND TOTAL NUMBER AND CAPACITY, 1930

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps	MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
Total, 1940.....	230	100.0	209,559	100.0	30	Total, 1940.....	224	100.0	4,152	100.0
Electric motor.....	34	14.8	26,693	12.7	27	Centrifugal pump.....	142	63.4	2,812	67.8
Centrifugal.....	24	10.4	23,953	11.4	22	Electric.....	23	10.3	267	6.4
Turbine.....	3	1.3	2,580	1.2	63	Internal-combustion.....	111	49.5	2,442	58.9
Plunger.....	5	2.2	110	0.1	23	Other.....	8	3.6	103	2.5
Other.....	2	0.9	50	(¹)	40	Turbine pump.....	40	17.8	1,038	25.0
Internal-combustion engine.....	166	72.2	158,280	75.6	27	Electric.....	5	2.2	98	2.4
Centrifugal.....	118	51.3	126,268	60.3	17	Internal-combustion.....	35	15.6	940	22.6
Turbine.....	35	15.2	29,893	14.3	62	Other.....	.....	.....	.....	.....
Plunger.....	11	4.8	479	0.2	36	Plunger pump.....	23	10.3	72	1.7
Other.....	2	0.9	1,640	0.8	14	Electric.....	4	1.8	6	0.1
Other kinds of motive power.....	19	8.2	10,576	5.0	59	Internal-combustion.....	10	4.5	53	1.3
Centrifugal.....	7	3.0	10,375	5.0	19	Other.....	9	4.0	13	0.3
Turbine.....	.....	.....	.....	.....	.....	Other and mixed types of pumps.....	19	8.5	230	5.5
Plunger.....	9	3.9	103	(¹)	81	Electric.....	5	2.2	30	0.7
Other.....	3	1.3	98	(¹)	74	Internal-combustion.....	4	1.8	112	2.7
Mixed kinds of motive power.....	11	4.8	14,010	6.7	26	Other.....	10	4.5	88	2.1
Centrifugal.....	4	1.7	4,960	2.4	17	Total, 1930.....	² 61	.....	912	.....
Turbine.....	6	2.7	8,600	4.1	40	Increase or decrease (-) 1930-1940.....	163	.....	3,240	.....
Plunger.....	.....	.....	.....	.....	.....
Other.....	1	0.4	450	0.2	10					
Total, 1930.....	65	.....	86,905	.....	21					
Increase or decrease (-) 1930-1940..	165	.....	122,654	.....	9					

¹ Less than one-tenth of 1 percent.

² Number of pumping plants.

STATE TABLE 13.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH: 1940 AND 1930

MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940	MATERIAL AND SIZE (DIAMETER)	LENGTH		Increase or decrease (-) 1930-1940
	1940 ¹	1930 ²			1940 ¹	1930 ²	
Total.....	Miles 70.3	Miles 14.1	Percent 398.6	Wood-stave:	Miles	Miles	Percent
Concrete:				1 to 12 inches.....	9.5	.....	.....
1 to 12 inches.....	1.7	0.1	(³)	13 to 24 inches.....	0.6	0.8	337.5
13 to 24 inches.....	1.2	2.7	348.1	Over 24 inches.....	2.9		
Over 24 inches.....	10.9						
Metal:				1 to 12 inches.....	2.6	2.5	16.0
1 to 12 inches.....	26.2	6.3	315.9	13 to 24 inches.....	2.3		
13 to 24 inches.....	5.1	1.7	594.1	Over 24 inches.....	0.6		
Over 24 inches.....	6.7						

¹ Includes siphons and farm pipe lines reported.

² Pipe sizes were separated at 30 inches in diameter (instead of 24 inches) in the 1930 Census.

³ Percent not shown when more than 1,000.

BUREAU OF RECLAMATION AREAS AND INVESTMENT

The areas credited to the United States Bureau of Reclamation in State tables 5, 6, 8, and 9 include 138,653 acres irrigated in 1939 which were within the Goshen Irrigation District, North Platte Project; the Shoshone and Deaver Districts and the Willwood Division, Shoshone Project; and the Midvale District, Riverton Project. These districts are indicated as separate enterprises under the Bureau of Reclamation, and their areas are not duplicated under any other classification. Areas totaling 15,398 acres irrigated, received a supplemental supply from the Riverton Project which is under construction, and the Goshen District of the North Platte Project in Wyoming. These areas are reported as also receiving a primary water supply from other enterprises.

The investment attributed to the Bureau of Reclamation in State tables 7 and 17 relates to these areas and reflects construction costs incurred by the United States

for irrigation and power facilities which were charged to Wyoming lands at the time of the irrigation census of 1940. It also includes an investment of about \$30,000 by water users in one project. Costs of drainage works and certain facilities repayable by net power revenues and of storage dams charged to Nebraska or Idaho lands are not included in the Bureau of Reclamation investment in Wyoming. Also, not included are certain power costs in Wyoming not repayable by water users under contracts in effect at the time of the irrigation census. Data relating to the Heart Mountain Division of the Shoshone Project, under construction in 1940; the Kendrick Project on the North Platte River, where power facilities only were in operation when the census was taken; and the Eden Project being constructed on Little and Big Sandy Creeks under the Water Conservation and Utilization Program; are not included in the 1940 Census of Irrigation.

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STATE TABLE 14.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE: 1940, 1930, AND 1920

ITEM	1940	1930	1920	ITEM	1940	1930	1920
Enterprises reporting land drained or needing drainage.....number..	145	88	144	Ratio of area drained to area irrigated in—			
Area irrigable in these enterprises.....acres...	843,642	592,041	¹ 513,347	(a) Enterprises reporting lands drained and/or needing drainage....percent..	38.4	³ 24.9	¹ 13.3
Area irrigated in these enterprises.....acres...	456,760	(2)	(2)	(b) All irrigation enterprises.....percent..	11.8	11.9	5.6
Area for which drains have been installed...acres...	175,394	147,346	68,086	Ratio of area drained plus area needing drainage to—			
Additional area needing drainage.....acres...	44,997	34,077	75,183	(a) Irrigable area reporting.....percent..	26.1	30.6	¹ 27.9
				(b) Irrigated area reporting.....percent..	48.3	(2)	(2)

¹For 1920 relates to total area in enterprises. Irrigable area was not reported and irrigated area in enterprises reporting drainage was not reported separately for the 1920 Census.
²Not available.
³Based on irrigable area for 1930, area irrigated in enterprises reporting land drained or needing drainage not available.

STATE TABLE 15.—WATER USED, BY SOURCE OF SUPPLY: 1939, 1929, AND 1919

ITEM (For definitions and explanations, see text)	TOTAL			MEASURED ¹			NOT MEASURED		
	1939	1929 ¹	1919 ¹	1939	1929	1919	1939	1929 ¹	1919 ¹
PRIMARY ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	3,052,654	1,292,891	1,310,560	1,929,017	513,763	491,047	1,123,637	779,128	819,513
Area irrigated by these enterprises.....acres.....	690,158	403,534	545,265	359,039	183,323	230,729	331,119	220,211	314,536
Average water per acre irrigated.....acre-feet..	4.4	3.2	2.4	5.4	2.8	2.1	3.4	3.5	2.6
Total water delivered to irrigators.....acre-feet..	2,825,665	395,362	393,985	935,998	228,552	274,200	1,889,667	166,810	119,785
Area irrigated by these enterprises.....acres.....	1,356,583	160,266	186,328	259,313	111,685	128,021	1,097,270	48,581	58,307
Average water per acre irrigated.....acre-feet..	2.1	2.5	2.1	3.6	2.0	2.1	1.7	3.4	2.1
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	7,427	.....	.....	.....	.....	.....	7,427	.....	.....
Area irrigated by these enterprises.....acres.....	3,923	.....	.....	.....	.....	.....	3,923	.....	.....
Average water per acre irrigated.....acre-feet..	1.9	.....	.....	.....	.....	.....	1.9	.....	.....
SUPPLEMENTAL ENTERPRISES									
From surface sources reported:									
Total water entering canals.....acre-feet..	73,785	.....	.....	55,888	.....	.....	17,897	.....	.....
Area irrigated by these enterprises.....acres.....	68,107	.....	.....	50,056	.....	.....	18,051	.....	.....
Average water per acre irrigated.....acre-feet..	1.1	.....	.....	1.1	.....	.....	1.0	.....	.....
Total water delivered to irrigators.....acre-feet..	56,496	.....	.....	22,838	.....	.....	33,658	.....	.....
Area irrigated by these enterprises.....acres.....	67,602	.....	.....	24,077	.....	.....	43,525	.....	.....
Average water per acre irrigated.....acre-feet..	0.8	.....	.....	0.9	.....	.....	0.8	.....	.....
From underground sources reported:									
Total water delivered to irrigators.....acre-feet..	25	.....	.....	.....	.....	.....	25	.....	.....
Area irrigated by these enterprises.....acres.....	144	.....	.....	.....	.....	.....	144	.....	.....
Average water per acre irrigated.....acre-feet..	0.2	.....	.....	.....	.....	.....	0.2	.....	.....

¹Data only for enterprises serving 5 or more farms. Water and area for surface and underground sources and water and area for primary and supplemental enterprises were not segregated for 1929 and 1919.

STATE TABLE 16.—AREA IRRIGATED, BY TYPE OF RIGHTS UNDER WHICH WATER WAS DELIVERED: 1939, 1929, AND 1919

TYPE OF WATER RIGHTS (For definitions and explanations, see text)	1939			1929		1919	
	Area irrigated			Area irrigated	Proportion of total	Area irrigated	Proportion of total
	Primary enterprises	Proportion of total	Supplemental enterprises ¹				
	Acres	Percent	Acres	Acres	Percent	Acres	Percent
Total.....	1,486,498	100.0	93,581	1,236,155	100.0	1,207,982	100.0
Appropriation ²	1,436,392	96.7	91,991	978,069	79.2	1,009,518	83.6
Underground.....	3,679	0.2	144	320	(3)	276	(3)
Appropriation and underground.....	220	(3)	.....	.....	.....	.....	.....
Adjudicated by court.....	36,107	2.4	1,367	217,905	17.6	162,186	13.4
Other mixed and not reported.....	10,100	0.7	79	39,861	3.2	36,002	3.0

¹Irrigated areas shown under "Supplemental enterprises" are parts of irrigated areas in "Primary enterprises" (see text).
²"Appropriation" includes water rights published in the 1930 and 1920 Census Reports as "Appropriation and use," "Notice filed and posted," "Permit from State," and "Certificate or license from State."
³Less than one-tenth of 1 percent.

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STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number...	3,319	73	2,560	404	232	32	18
2	Irrigated farms, 1939.....number...	11,527		2,560	993	2,149	1,416	4,409
3	Area irrigated, 1939.....acres....	1,486,498		558,025	189,901	286,097	128,148	324,327
4	(a) From which crops were harvested.....acres....	1,193,997		414,158	152,631	234,797	111,984	280,427
5	(b) On which crops failed.....acres....	16,550		6,932	1,890	4,366	2,505	857
6	(c) Irrigated pasture.....acres....	275,951		136,935	35,280	46,934	13,659	43,043
CAPITAL INVESTMENT, 1940								
7	Total capital investment in all enterprises.....dollars..	39,955,803	2,150,445	6,122,640	1,699,024	4,793,478	3,771,692	21,418,324
8	(a) Cost of irrigation works and equipment.....dollars..	39,495,204	2,123,708	5,923,703	1,648,673	4,631,098	3,761,328	21,409,694
9	(b) Investment in water rights.....dollars..	457,599	26,737	198,937	50,351	162,380	10,564	8,630
10	Area works were capable of supplying with water.....acres....	1,913,527	49,426	681,595	228,793	329,465	214,921	409,327
11	Average investment per acre irrigated.....dollars..	26.88		10.97	8.95	16.75	29.43	66.04
12	Average investment per acre which the works could supply with water.....dollars..	20.88	43.51	8.98	7.43	14.55	17.55	52.33
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
13	Enterprises reporting maintenance and operation.....number...	2,961	37	2,276	379	219	32	18
14	(a) Area irrigated in these enterprises.....acres....	1,421,852		514,733	181,288	273,356	128,148	324,327
15	(b) Cost of maintenance and operation.....dollars..	807,945	5,587	229,963	57,400	89,931	71,439	353,025
16	(c) Average cost per irrigated acre reporting.....dollars..	0.57		0.45	0.32	0.33	0.56	1.09
17	Total annual charges ².....dollars..	631,943	5,574	237	429	112,296	92,649	420,158
18	Average charge per irrigated acre reporting.....dollars..	0.87		0.11	0.28	0.41	0.72	1.30
19	Area against which charges were assessed.....acres....	852,728	9,290	2,160	2,195	312,192	157,948	368,943
20	Average annual charge per acre assessed.....dollars..	0.74	0.60	0.11	0.20	0.36	0.59	1.14
21	Total charges collected ².....dollars..	447,354	1,697	1,200	241	74,633	91,469	278,114
INDEBTEDNESS AND ARREARAGE, 1939								
22	Enterprises reporting indebtedness ³.....number...	35	4 ¹			9	10	15
23	(a) Area irrigated in these enterprises.....acres....	321,962				18,474	51,683	251,805
24	(b) Indebtedness.....dollars..	15,770,071	97,560			217,482	489,796	14,965,233
25	(c) Average indebtedness per acre irrigated.....dollars..	48.98				11.77	9.48	59.43
26	(d) Cost of irrigation works and equipment.....dollars..	24,308,358	1,800,000			449,674	1,738,500	20,320,184
27	(e) Investment in water rights.....dollars..	11,648				1,848	1,170	8,630
28	(f) Total investment.....dollars..	24,320,006	1,800,000			451,522	1,739,670	20,328,814
29	(g) Maintenance and operation.....dollars..	365,666	2,056			9,677	33,550	320,403
30	(h) Total annual charges ².....dollars..	455,508	5,574			24,312	48,485	377,137
31	(i) Total charges collected ².....dollars..	287,475	1,697			13,465	38,636	233,677
32	(j) Area against which annual charges were assessed.....acres....	384,576	9,290			19,104	65,089	291,093
33	(k) Average indebtedness per acre assessed.....dollars..	41.01	10.50			11.38	7.53	51.41
34	(l) Average charges per acre assessed.....dollars..	1.18	0.60			1.27	0.74	1.30
35	(m) Average charges per acre irrigated.....dollars..	1.41				1.32	0.94	1.50
36	Enterprises reporting arrearage ³.....number...	6	4 ¹			1	3	1
37	(a) Area assessed in these enterprises.....acres....	41,492	9,290			(⁵)	16,963	(⁶)
38	(b) Total arrearage.....dollars..	79,900	58,579			(⁵)	13,721	(⁶)
39	(c) Average arrearage per acre assessed.....dollars..	1.93	6.31			(⁵)	0.81	(⁶)
40	(d) Indebtedness.....dollars..	208,831	97,560			(⁵)	69,300	(⁶)
TYPE, 1940								
41	Individual and partnership.....number...	3,096	64	2,540	396	94	2	
42	Cooperative (incorporated and unincorporated).....number...	180	4	12	8	126	26	4
43	Irrigation district.....number...	18	1			6	4	7
44	Commercial.....number...	8	2	2		4		
45	U. S. Bureau of Reclamation.....number...	8	2					5
46	U. S. Office of Indian Affairs.....number...	2						2
47	All other.....number...	7	6			1		
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
48	Enterprises reporting pay roll.....number...	163	4 ¹		2	110	32	18
49	Wages and salaries paid and payable for 1939.....dollars..	386,458	1,010		43,660		39,398	302,390
50	Persons employed during week ending April 29, 1939.....number...	567	2		156		104	305
SOURCE OF WATER SUPPLY, 1939								
51	Streams, gravity.....number...	2,887	51	2,170	391	226	32	17
52	Streams, pumped.....number...	99	7	90	1			
53	Wells, pumped.....number...	64	2	61	1			
54	Wells, pumped and flowing; or wells flowing.....number...	21	2	18		1		
55	Lakes, gravity or pumped.....number...	7		7				
56	Streams and springs; or springs.....number...	159	4	147	6	1		1
57	Mixed, streams and wells.....number...	20		15	3	2		
58	Other mixed or stored storm water.....number...	62	7	52	2	1		

	SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)	TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
1	Enterprises, 1940.....number...	66	5	33	11	9	7	4 ¹
2	Irrigated farms, 1939.....number...	683		33	27	118	295	210
3	Area irrigated, 1939.....acres....	93,581		4,270	5,806	41,618	26,489	15,398
CAPITAL INVESTMENT, 1940								
4	Total capital investment in all enterprises.....dollars..	1,566,998	1,002,143	27,536	14,640	135,650	210,554	176,475
5	(a) Cost of irrigation works and equipment.....dollars..	1,559,609	1,000,620	26,365	14,145	133,000	209,004	176,475
6	(b) Investment in water rights.....dollars..	7,389	1,523	1,171	495	2,650	1,550	
7	Area works were capable of supplying with water.....acres....	163,090	62,671	7,339	6,518	42,704	27,537	16,321
8	Average investment per acre irrigated.....dollars..	16.74		6.45	2.52	3.26	7.95	11.46
9	Average investment per acre which the works could supply with water.....dollars..	9.61	15.99	3.75	2.25	3.18	7.65	10.81
MAINTENANCE AND OPERATION, AND CHARGES, 1939								
10	Enterprises reporting maintenance and operation.....number...	59	3	28	11	9	7	4 ¹
11	(a) Area irrigated in these enterprises.....acres....	93,014		3,703	5,806	41,618	26,489	15,398
12	(b) Cost of maintenance and operation.....dollars..	31,923	8	1,672	796	2,184	16,535	10,778
13	(c) Average cost per irrigated acre reporting.....dollars..	0.34		0.45	0.13	0.05	0.62	0.70
14	Total annual charges ².....dollars..	31,368				3,687	16,902	10,779
15	Average charge per irrigated acre reporting.....dollars..	0.38				0.09	0.68	0.70
16	Area against which charges were assessed.....acres....	82,504				42,169	24,937	15,398
17	Average annual charge per acre assessed.....dollars..	0.38				0.09	0.68	0.70
18	Total charges collected ².....dollars..	24,806	10,800			5,194	8,812	

¹ Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

² Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

CENSUS OF IRRIGATION – WYOMING

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT					
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	\$1,500,000 to \$9,999,999	
73	1,390	953	758	125	20	2,790	356	136	31	6	1
.....	1,544	1,289	2,427	1,948	4,319	4,057	1,331	1,288	2,481	2,390	2
.....	59,284	164,369	512,307	390,996	359,562	561,564	270,021	253,506	254,619	146,788	3
.....	49,983	132,565	406,649	290,617	314,173	434,780	208,463	204,725	229,968	116,041	4
.....	1,422	3,311	5,375	4,180	7,676	2,262	2,862	4,065	1,590	357	5
.....	7,849	28,493	100,283	96,199	43,127	119,108	58,696	44,716	23,041	30,390	6
2,150,445	1,227,515	2,687,024	4,600,765	6,668,503	22,621,551	2,902,089	2,698,866	4,249,792	12,317,849	17,787,207	7
2,123,708	1,175,064	2,618,159	4,470,604	6,622,623	22,487,846	2,752,746	2,631,336	4,178,564	12,151,486	17,784,072	8
26,737	52,451	68,865	130,161	45,680	133,705	149,343	67,530	71,228	166,363	3,135	9
49,426	90,628	210,298	607,601	506,310	446,264	672,785	325,035	299,294	378,578	238,035	10
.....	20.71	16.35	8.98	17.06	62.91	5.17	10.00	16.76	48.38	121.18	11
43.51	13.11	12.78	7.57	13.17	50.69	4.31	8.30	14.20	32.55	74.73	12
37	1,196	875	712	121	20	2,458	337	130	30	6	13
.....	52,228	152,347	478,519	379,196	359,562	523,422	253,685	243,138	254,619	146,788	14
5,587	60,252	99,213	147,880	139,578	354,835	198,402	106,520	95,800	203,444	203,179	15
.....	1.15	0.65	0.31	0.37	0.99	0.38	0.42	0.39	0.80	1.38	16
5,574	312	2,313	47,954	159,813	415,377	24,580	37,746	92,564	261,079	215,374	17
.....	1.13	0.66	0.33	0.70	1.18	0.30	0.38	0.58	1.08	1.47	18
9,290	276	5,463	168,314	275,466	393,919	87,127	113,704	195,488	277,902	178,507	19
0.60	1.17	0.44	0.28	0.58	1.05	0.28	0.33	0.47	0.94	1.21	20
1,697	187	995	50,234	114,839	279,402	15,743	24,684	81,240	195,930	129,757	21
4 ¹	1	3	16	14	2	11	16	6	22
.....	.....	2,619	70,429	248,914	.....	.....	38,079	137,095	146,788	23
97,560	.....	161,263	513,693	14,997,555	.....	.....	124,122	2,187,830	13,458,119	24
.....	.....	61.57	7.29	60.25	.....	.....	3.26	15.96	91.68	25
1,800,000	.....	220,844	1,891,188	20,396,326	.....	.....	387,330	6,136,956	17,784,072	26
.....	.....	348	2,670	8,630	.....	.....	2,200	6,313	3,135	27
1,800,000	.....	221,192	1,893,858	20,404,956	.....	.....	389,530	6,143,269	17,787,207	28
2,056	.....	2,810	49,800	311,000	.....	.....	17,449	145,038	203,179	29
5,574	.....	2,848	89,087	357,999	.....	.....	31,750	208,384	215,374	30
1,697	.....	6,594	54,262	224,922	.....	.....	26,910	130,808	129,757	31
9,290	.....	3,249	86,217	285,820	.....	.....	40,294	165,775	178,507	32
10.50	.....	49.63	5.96	52.47	.....	.....	3.08	13.20	75.39	33
0.60	.....	0.88	1.03	1.25	.....	.....	0.79	1.26	1.21	34
.....	.....	1.09	1.26	1.44	.....	.....	0.83	1.52	1.47	35
4 ¹	.....	1	.....	3	1	.....	.....	3	2	4 ¹
9,290	.....	(6)	.....	16,963	(6)	.....	.....	8,163	(6)	9,290
58,579	.....	(6)	.....	13,721	(6)	.....	.....	10,921	(6)	58,579
6.31	.....	(6)	.....	0.81	(6)	.....	.....	1.34	(6)	6.31
97,560	.....	(6)	.....	69,300	(6)	.....	.....	65,766	(6)	97,560
64	1,380	936	653	62	1	2,719	295	79	3	.....
4	5	15	101	48	7	63	57	48	12	.....
1	.....	.....	1	10	6	2	1	4	11	.....
2	.....	2	1	3	.....	2	2	3	2	.....
2	.....	1	.....	.....	5	2	.....	.....	2	.....
.....	.....	.....	1	1	.....	1	.....	.....	1	.....
.....	5	.....	1	.....	.....	4	1	2	.....	.....
4 ¹	2	7	76	58	19	36	43	51	27	6	
1,010	661	18,384	69,537	296,866	5,286	12,519	34,572	106,335	227,746	48	
2	21	111	128	305	43	82	82	133	227	50	
51	1,076	876	745	121	18	2,403	325	124	29	6	
7	75	14	2	1	.....	91	4	4	.....	.....
2	50	11	1	.....	.....	61	3	.....	.....	.....
2	18	1	.....	.....	.....	20	1	.....	.....	.....
.....	5	.....	.....	.....	6	.....	.....	1	.....	.....
4	116	31	5	2	1	147	10	1	1	.....
.....	8	7	4	.....	1	14	2	4	.....	.....
7	42	11	1	.....	1	48	11	2	1	.....
5	28	9	10	11	3	50	6	8	2	4 ²	
.....	1,239	1,474	9,517	43,333	38,018	15,155	21,844	40,617	15,398	10	
.....	.....	12	69	314	255	102	131	8	240	2
.....	
1,002,143	16,027	7,339	66,635	205,579	269,275	41,369	41,550	306,104	1,177,975	4	
1,000,620	15,265	6,895	65,850	203,504	267,475	39,130	41,000	303,004	1,176,475	5	
1,533	762	444	785	2,075	1,800	2,239	550	3,100	1,500	6	
62,671	2,186	3,933	10,549	44,801	38,941	22,899	22,869	40,665	76,657	7	
.....	12.94	4.98	7.00	4.74	7.08	2.63	1.90	7.54	76.50	8	
15.99	7.30	1.87	6.32	4.59	6.91	1.81	1.82	7.53	15.37	9	
3	25	7	10	11	3	43	6	8	4 ²	10	
.....	1,102	1,044	9,517	43,333	38,018	15,155	21,844	40,617	15,398	11	
8	859	228	2,432	16,748	11,637	2,649	1,884	16,610	10,780	12	
.....	0.79	0.22	0.26	0.39	0.31	0.17	0.09	0.41	0.70	13	
.....	.....	.....	1,533	17,987	11,848	1,337	1,350	17,903	10,778	14
.....	.....	.....	0.36	0.45	0.31	0.12	0.08	0.46	0.70	15
.....	.....	.....	4,385	40,101	38,018	11,264	16,777	39,065	15,398	16
.....	.....	.....	0.35	0.45	0.31	0.12	0.08	0.46	0.70	17
10,800	.....	1,998	8,500	758	2,750	1,000	1,568	11,418	10,800	18

³ Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
⁴ Data for less than 3 enterprises shown with permission of the enterprises involved.
⁵ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - WYOMING

STATE TABLE 17.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND OPERATION, AND SOURCE OF WATER SUPPLY, BY SPECIFIED GROUPS OF IRRIGATED FARMS,

SUPPLEMENTAL ENTERPRISES (For definitions and explanations, see text)		TOTAL	IRRIGATED FARMS					
			No farms ¹	1 farm	2 to 4 farms	5 to 24 farms	25 to 99 farms	100 to 999 farms
INDEBTEDNESS AND ARREARAGE, 1939								
19	Enterprises reporting indebtedness ².....number.....	5	³ 1			³ 2	³ 2	
20	(a) Area irrigated in these enterprises.....acres.....	24,307				15,628	8,679	
21	(b) Indebtedness.....dollars.....	929,414	845,000			46,500	37,914	
22	(c) Average indebtedness per acre irrigated.....dollars.....	38.24				2.98	4.37	
23	(d) Cost of irrigation works and equipment.....dollars.....	1,148,724	1,000,000			84,000	64,724	
24	(e) Investment in water rights.....dollars.....	3,450	1,500			1,550	400	
25	(f) Total investment.....dollars.....	1,152,174	1,001,500			85,550	65,124	
26	(g) Maintenance and operation.....dollars.....	14,261	2			359	13,900	
27	(h) Total annual charges ⁴.....dollars.....	16,004				1,442	14,562	
28	(i) Total charges collected ⁵.....dollars.....	19,226	10,800			3,386	5,040	
29	(j) Area against which annual charges were assessed.....acres.....	24,355				15,628	8,727	
30	(k) Average indebtedness per acre assessed.....dollars.....	3.47				2.98	4.34	
31	(l) Average charges per acre assessed.....dollars.....	0.66				0.09	1.57	
32	(m) Average charges per acre irrigated.....dollars.....	0.66				0.09	1.68	
33	Enterprises reporting arrearage ².....number.....	2	³ 1			³ 1		
34	(a) Area assessed in these enterprises.....acres.....	1,508				1,508		
35	(b) Total arrearage.....dollars.....	7,900	7,200			700		
36	(c) Average arrearage per acre assessed.....dollars.....	0.46				0.46		
37	(d) Indebtedness.....dollars.....	852,500	845,000			7,500		
TYPE, 1940								
38	Individual and partnership.....number.....	46	2	33	10	1		
39	Cooperative (incorporated and unincorporated).....number.....	13	1		1	6	5	
40	Irrigation district.....number.....	5	1			2	2	
41	U. S. Bureau of Reclamation.....number.....	2	1					1
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939								
42	Enterprises reporting pay roll.....number.....	12	³ 1			5	6	
43	Wages and salaries paid and payable for 1939.....dollars.....	5,589	1,500			1,250	2,839	
44	Persons employed during week ending April 29, 1939.....number.....	11	6			3	2	
SOURCE OF SUPPLEMENTAL WATER SUPPLY, 1939								
45	Streams, pumped.....number.....	4		2	1		1	
46	Wells, pumped or flowing.....number.....	1		1				
47	Streams, gravity or storage.....number.....	61	5	30	10	9	6	1

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.
²Indebtedness and arrearage were reported only by enterprises serving 5 or more farms.
³Data for less than 3 enterprises shown with permission of the enterprises involved.

STATE TABLE 18.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND WEATHER STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938--SEPTEMBER 1939										TEMPERATURES 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
Big Horn River														
Lander.....	Fremont.....	5,370	11.04	-1.59	3.47	+0.83	1.98	-0.40	4.40	-1.07	1.19	-0.95	45.6	+3.1
Thermopolis.....	Hot Springs.....	4,350	9.17	-4.28	2.16	-0.04	1.69	-0.13	3.93	-2.32	1.39	-1.79	47.4	+2.5
Cody.....	Park.....	4,984	10.16	+0.81	1.83	+0.33	0.96	-0.06	5.32	+1.17	2.05	-0.63	47.8	+3.5
Lovell.....	Big Horn.....	3,825	8.08	+1.48	1.02	-0.03	0.93	-0.01	4.54	+1.74	1.59	-0.22	46.7	+3.1
Average ²			9.61	-0.90	2.12	+0.27	1.39	-0.15	4.55	-0.12	1.58	-0.20	46.9	+3.0
Tongue and Powder Rivers														
Sheridan.....	Sheridan.....	3,773	18.18	+3.12	2.49	+0.15	2.23	-0.48	8.06	+1.45	5.40	+2.00	46.4	+3.0
Nine Mile Creek.....	Johnson.....	5,000	10.33	-1.80	1.68	+0.23	1.42	+0.34	5.92	-0.81	1.31	-1.56	45.3	(²)
Salt Creek (near).....	Natrona.....	4,842	(²)	(²)	2.27	+0.09	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Average ²			14.26	+0.66	2.15	+0.16	1.82	-0.07	6.99	+0.32	3.36	+0.22	45.8	+3.0
Cheyenne River														
Clarkelen (near).....	Campbell.....	5,010	11.59	-2.25	1.51	-0.45	1.64	-0.22	6.10	-0.23	2.34	-1.35	44.4	(²)
Colony.....	Crook.....	3,500	11.47	-5.46	1.32	-0.62	1.68	-0.37	4.63	-2.01	3.64	-2.26	48.1	+3.0
Spencer (near).....	Niobrara.....	3,800	9.24	-3.37	0.46	-0.95	0.99	-0.47	3.33	-2.94	4.46	+0.93	(²)	(²)
Average ²			10.77	-3.69	1.10	-0.74	1.44	-0.35	4.69	-1.73	3.55	-0.87	46.2	+3.0
North and South Platte Rivers														
Saratoga.....	Carbon.....	6,700	6.47	-3.89	1.52	-0.60	0.71	-1.39	1.92	-1.26	2.32	-0.58	42.3	+1.1
Laramie.....	Albany.....	7,188	9.00	-2.06	2.09	+0.29	1.65	+0.09	2.67	-0.88	2.39	-1.56	43.9	+3.0
Cheyenne.....	Laramie.....	6,139	11.28	-3.71	2.14	+0.11	3.19	+1.11	4.33	-1.70	1.62	-3.23	46.7	+2.1
Casper (near).....	Natrona.....	5,124	8.30	-6.88	1.47	-1.68	0.96	-1.79	4.09	-1.89	1.78	-1.52	47.3	+0.1
Fort Laramie (near).....	Goshen.....	4,715	7.22	-6.89	1.03	-0.76	1.13	-0.52	2.35	-4.03	2.71	-1.58	48.9	+1.9
Average ²			8.45	-4.67	1.65	-0.53	1.50	-0.50	3.11	-1.95	2.16	-1.69	45.8	+1.6
Green River														
Kendall.....	Sublette.....	7,600	17.40	+0.53	6.99	+3.17	2.85	-1.89	4.33	-0.28	3.23	-0.47	34.8	+1.6
Green River.....	Sweetwater.....	6,083	6.59	-0.62	2.75	+1.15	0.93	-0.49	1.78	-0.63	1.13	-0.65	45.4	+2.4
Average ²			12.00	-0.04	4.87	+2.16	1.89	-1.19	3.06	-0.46	2.18	-0.56	40.1	+2.1
Bear River														
Evanston.....	Uinta.....	6,860	7.53	-6.43	2.52	-0.63	1.30	-2.57	1.87	-1.92	1.94	-1.31	40.1	+0.5
Border.....	Lincoln.....	6,085	12.28	-0.30	4.75	+2.04	2.43	-1.28	3.54	+0.11	1.56	-1.17	39.7	+1.8
Average ²			9.90	-3.36	3.64	+0.70	1.86	-1.92	2.70	-0.90	1.70	-1.24	39.9	+1.2
Snake River														
Afton (near).....	Lincoln.....	6,225	15.00	-3.09	3.59	-1.23	3.75	-0.47	4.83	-0.35	2.83	-1.04	(²)	(²)
Moran.....	Teton.....	6,770	21.38	-0.09	6.35	+1.32	7.06	-0.16	5.54	+0.39	2.43	-1.64	34.7	+0.6
Jackson.....	Teton.....	6,244	14.63	-2.99	4.49	+0.39	3.20	-1.57	4.81	+0.53	2.13	-2.34	38.9	+1.5
Average ²			17.00	-2.06	4.81	+0.16	4.67	-0.73	5.06	+0.19	2.46	-1.67	36.8	+1.0

¹Departure from normal.

²Data not available.

³Average for drainage basin group.

CENSUS OF IRRIGATION - WYOMING

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CHARGES, INDEBTEDNESS AND ARREARAGE, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940-Continued

ACRES IRRIGATED						COST OF IRRIGATION WORKS AND EQUIPMENT				
No acres ¹	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	7,500 to 74,999 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999	\$100,000 to \$1,499,999	
³ 1			³ 1	³ 2	³ 1		³ 1	3	³ 1	19
845,000			1,508	8,679	14,120		6,000	18,307	84,214	20
			7,500	37,914	39,000		200	84,214	845,000	21
			4.97	4.37	2.76		0.03	4.60	1,000,000	22
1,000,000			18,000	64,724	66,000		5,000	143,724	1,000,000	23
1,500			50	400	1,500		1,950	1,500	1,500	24
1,001,500			18,050	65,124	67,500		5,000	145,674	1,001,500	25
2			50	13,800	309		400	13,859	2	26
			1,131	14,562	311		600	15,404	27	27
10,800			636	5,040	2,750		600	7,828	10,800	28
			1,508	8,727	14,120		6,000	18,355	29	29
			4.97	4.34	2.76		0.03	4.59	30	30
			0.75	1.67	0.02		0.10	0.84	31	31
			0.75	1.68	0.02		0.10	0.84	32	32
³ 1			³ 1					³ 1	³ 1	33
			1,508					1,508	34	34
7,200			700					700	7,200	35
			0.46					0.46	36	36
845,000			7,500					7,500	845,000	37
2	28	9	6	1		44	2			38
1			3	8	1	5	3	5		39
1			1	2	1	1	1	3	1	40
1					1	1			1	41
³ 1			1	8	2	3	1	7	³ 1	42
1,500			(b)	2,906	(b)	518	(b)	3,346	1,500	43
6				3	(b)	1		4	6	44
	3			1		3		1		45
		1				1				46
5	25	8	10	10	3	46	6	7	2	47

⁴Annual charges, reported only by enterprises serving 5 or more farms, may include for these enterprises costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁵Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

Precipitation in Wyoming during both the calendar year 1939 and the water year (October 1938 through September 1939), as reported by the United States Weather Bureau, was substantially below normal; for the calendar year precipitation averaged approximately 73 percent of normal. In October and December 1938, and February and June 1939, precipitation was slightly above normal, but in all other months of both calendar and water years the precipitation was deficient.

For the water year, the run-off from principal watersheds, as measured by the United States Geological Survey at representative stations, averaged slightly more than half of normal (53 percent). At the close of 1938 a good supply of water was in most irrigation reservoirs, but because of high temperatures and low humidity in the spring months of 1939, snow in many of the higher mountains

of the southern part of the State melted rapidly and the moisture evaporated instead of finding its way into the streams. As a result, the volume of run-off was low and it was only on account of the large storage carry-over that there was sufficient water for irrigation in several important valleys.

Temperatures in Wyoming during both the calendar year 1939 and the water year (October 1938 through September 1939) were somewhat warmer than normal, only November 1938 and February, June, and August, 1939 showing mean temperatures below normal.

In comparison, the precipitation for the calendar year 1929, when the last previous irrigation census was taken, was almost the normal, the departure for the State being -0.01 inch, while the temperature was colder than usual in most sections.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE I.- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	MISSOURI RIVER				
		Total ¹	Yellowstone River		Clarks Fork (12)	
			Total			
IRRIGATED FARMS AND AREAS						
1 Irrigated farms.....1939..number.....	11,527	9,203	6,176		93	
2 Area irrigated.....1939..acres.....	1,486,498	1,066,757	526,919		11,217	
3 (a) Cropland harvested.....1939..acres.....	1,193,997	879,011	444,532		8,796	
4 (b) Crop failure.....1939..acres.....	16,550	13,622	5,131		23	
5 (c) Pasture.....1939..acres.....	275,951	174,124	77,256		2,398	
6 Area irrigated.....1929..acres.....	1,236,155	900,523	426,595		6,558	
7 .....1919..acres.....	1,207,982	869,945	448,671		8,897	
8 Increase or decrease (-), 1929-1939.....percent.....	20.3	18.5	23.5		68.5	
9 Irrigable area in enterprises.....1940..acres.....	2,277,046	1,655,772	799,851		15,723	
10 .....1930..acres.....	1,958,147	1,449,857	750,147		11,035	
11 .....1920 ² ..acres.....	2,564,668	1,895,348	968,059		15,640	
12 Excess of irrigable area over the area irrigated..1940..acres.....	790,548	589,015	272,932		4,506	
13 .....1930..acres.....	721,992	549,334	323,552		4,377	
14 .....1920 ² ..acres.....	1,356,686	1,025,503	519,382		6,743	
15 Area works were capable of supplying with water..1940..acres.....	1,913,527	1,410,582	688,164		14,688	
16 .....1930..acres.....	1,655,008	1,217,344	596,983		11,035	
17 .....1920..acres.....	1,831,039	1,308,438	653,949		14,121	
18 Increase or decrease (-), 1930-1940.....percent.....	15.6	15.9	15.3		33.1	
19 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	427,029	343,825	161,265		3,471	
20 .....1930..acres.....	418,853	316,821	170,388		4,377	
21 .....1920..acres.....	623,057	438,593	205,278		5,224	
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	77.7	75.6	76.6		76.4	
23 .....1929..percent.....	74.7	74.0	71.5		60.3	
24 .....1919..percent.....	66.0	66.5	68.6		63.0	
CAPITAL INVESTED TO JANUARY 1						
25 Total investment in irrigation enterprises.....1940..dollars....	41,522,801	37,358,108	21,687,868		309,513	
26 (a) Cost of irrigation works and equipment.....1940..dollars....	41,057,813	37,001,274	21,583,244		306,707	
27 (b) Investment in water rights (reported).....1940..dollars....	464,988	356,834	104,624		2,806	
28 Total investment in irrigation enterprises.....1930..dollars....	35,153,187	31,313,543	19,001,400		71,975	
29 .....1920..dollars....	34,326,328	29,818,236	16,419,213		117,292	
30 Increase or decrease (-), 1930-1940.....percent.....	18.1	19.3	14.1		330.0	
31 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	21.70	26.48	31.51		21.07	
32 .....1930..dollars....	21.24	25.72	31.83		6.52	
33 .....1920..dollars....	18.75	22.79	28.11		8.31	
34 Average investment per acre irrigated.....1939..dollars....	27.93	35.02	41.16		27.59	
35 Estimated final investment in existing enterprises..1940..dollars....	48,539,663	43,860,036	27,091,578		311,823	
36 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	21.32	26.49	33.87		19.83	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS						
	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
	Enterprises		Enterprises		Enterprises	
37 Enterprises reporting maintenance and operation...1939..number.....	2,967	59	2,005	36	1,027	27
38 Area irrigated in these enterprises.....1939..acres.....	1,421,852	93,014	1,017,404	62,736	517,769	40,214
39 Cost of maintenance and operation.....1939..dollars....	807,345	31,923	693,484	30,168	438,899	18,214
40 Average cost, per acre irrigated.....1939..dollars....	0.57	0.34	0.68	0.48	0.85	0.45
41 Total annual charges (reported) ⁷.....1939..dollars....	631,343	31,368	578,489	30,600	417,841	19,419
42 Average annual charge per acre irrigated.....1939..dollars....	0.87	0.38	0.96	0.55	1.09	0.52
43 Area against which charges were assessed.....1939..acres.....	852,728	82,504	689,406	55,908	444,531	37,633
44 Average annual charge per acre assessed.....1939..dollars....	0.74	0.38	0.84	0.55	0.94	0.52
45 Total charges collected ⁷.....1939..dollars....	447,354	24,806	394,095	22,056	246,926	21,654
46 Indebtedness to December 31 (reported) ⁸.....1939..dollars....	15,770,071	929,414	15,273,594	890,414	10,794,703	890,414
WATER DELIVERED TO IRRIGATORS, 1939						
47 Enterprises reporting water delivered.....1939..number.....	2,999	55	1,988	34	1,044	26
48 Area irrigated by these enterprises.....1939..acres.....	1,360,506	67,746	969,928	57,475	487,348	38,653
49 Water delivered.....1939..acre-feet..	2,833,092	56,521	1,887,138	44,218	1,167,974	34,613
50 Average water delivered per acre irrigated.....1939..acre-feet..	2.1	0.8	1.9	0.8	2.4	0.9
51 Average cost of water per acre irrigated.....1939..dollars....	0.66	0.48	0.79	0.55	0.99	0.52
52 Average cost of water per acre-foot delivered..1939..dollars....	0.31	0.58	0.41	0.72	0.41	0.58
DRAINAGE OF IRRIGATED LAND						
53 Enterprises reporting land drained or needing drainage.....1939..number.....	145		128		76	
54 Irrigable area in these enterprises.....1939..acres.....	843,642		730,604		452,645	
55 Irrigated area in these enterprises.....1939..acres.....	456,760		419,691		286,876	
56 Area for which drains have been installed.....1939..acres.....	176,394		176,368		138,138	
57 Additional area needing drainage.....1939..acres.....	44,997		37,270		27,203	

¹Data for 1 enterprise in Niobrara River Drainage Basin (33) (number refers to separate map) are included with Missouri River Total.
²Data for 2 enterprises in Little Horn River Drainage Basin (9) (number refers to separate map) are included with Big Horn River "Direct" Drainage Basin (10).
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁴Less than one-tenth of 1 percent.

CENSUS OF IRRIGATION — WYOMING

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

MISSOURI RIVER—Continued														
Yellowstone River—Continued														
Big Horn River														
Total	Direct ²	Popo Agie River	Wind River	Owl Creek	Cottonwood Creek	Gooseberry Creek	Nowood Creek	Greybull River						
	(10)	(31)	(25)	(44)	(18)	(17)	(19)	(15)						
5,017	645	886	944	129	29	23	173	360		1				
388,964	61,706	48,448	73,157	11,900	2,860	2,779	15,442	48,526		2				
326,996	54,709	36,469	62,781	10,623	2,675	2,549	13,904	37,713		3				
3,716	320	200	440	452	171	190	52	1,779		4				
58,255	6,677	11,749	9,936	825	14	40	1,486	9,034		5				
318,607	47,016	21,131	51,789	16,148	.....	.....	15,254	52,138		6		
307,846	44,207	22,073	43,620	11,610	.....	.....	18,416	49,231		7		
22.1	31.2	129.3	41.3	-26.3	.....	.....	1.2	-6.9		8		
618,163	73,313	88,894	161,230	19,473	4,794	4,823	20,701	70,784		9				
623,351	58,998	31,343	224,983	20,051	.....	.....	21,478	70,308		10		
750,261	81,648	34,723	228,338	14,546	.....	.....	26,193	93,543		11		
229,199	11,607	40,436	88,073	7,573	1,834	2,044	5,259	22,258		12				
304,744	11,982	10,212	173,194	3,903	.....	.....	6,224	18,170		13		
442,415	37,441	12,650	184,718	2,936	.....	.....	7,777	44,312		14		
512,460	69,123	77,943	97,588	19,274	4,675	4,823	18,590	65,313		15				
475,301	55,023	26,189	116,788	18,924	.....	.....	19,778	65,331		16		
468,198	61,285	34,375	77,122	12,951	.....	.....	22,080	79,134		17		
7.8	25.6	197.6	-16.4	1.8	.....	.....	-6.0	(*)		18		
123,496	7,417	29,495	24,431	7,374	1,815	2,044	3,148	16,787		19				
156,694	8,007	5,058	64,999	2,776	.....	.....	4,524	13,133		20		
160,352	17,078	12,302	33,502	1,341	.....	.....	3,664	29,903		21		
75.9	89.3	62.2	75.0	61.7	61.2	57.6	83.1	74.3		22				
67.0	85.4	80.7	44.3	85.3	.....	.....	77.1	79.8		23		
65.8	72.1	64.2	56.6	89.6	.....	.....	83.4	62.2		24		
19,338,912	1,506,357	2,220,420	6,538,301	210,292	91,036	46,561	288,485	1,590,651		25				
19,268,120	1,501,670	2,210,948	6,526,528	207,299	88,290	45,100	261,246	1,569,743		26				
70,792	4,687	9,472	11,773	2,993	2,746	1,461	7,239	20,908		27				
17,389,658	695,847	235,393	5,949,958	110,235	.....	.....	162,731	413,845		28		
14,330,800	1,330,576	349,546	2,101,819	52,915	.....	.....	161,588	503,184		29		
11.2	116.5	843.5	9.9	90.8	.....	.....	65.0	284.4		30		
37.74	21.79	28.49	67.00	10.91	19.47	9.65	14.44	24.35		31				
36.59	12.65	8.99	50.95	5.83	.....	.....	8.23	6.33		32		
30.61	21.71	10.17	27.25	4.09	.....	.....	7.32	6.36		33		
49.72	24.41	45.83	89.37	17.67	31.83	16.75	17.39	32.78		34				
24,731,647	1,552,882	3,443,633	10,160,273	210,292	92,536	46,561	271,010	1,595,901		35				
40.01	21.18	38.74	63.02	10.80	19.30	9.65	13.09	22.55		36				
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.					
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises						
625	12	96	103	5	95	50	51	22	51	14	96	46	2	37
394,576	10,590	61,666	46,891	6,131	72,719	11,699	2,679	2,860	1,508	2,719	15,442	46,616	(*)	38
380,257	14,368	75,576	58,478	515	87,835	3,813	13,500	2,088	50	1,470	18,918	11,252	(*)	39
0.99	1.36	1.23	1.25	0.08	1.21	0.33	5.04	0.73	0.03	0.54	1.23	0.24	(*)	40
385,615	15,693	82,486	55,076	600	78,939	1,527	13,962	500	1,131	2,837	10,067	41
1.26	1.54	1.54	1.43	0.10	1.33	0.28	5.21	0.67	0.75	0.64	0.32	42
361,730	10,235	55,093	57,986	6,000	68,254	8,044	2,727	750	1,508	5,082	41,000	43
1.07	1.53	1.50	0.95	0.10	1.16	0.19	5.12	0.67	0.75	0.56	0.25	44
219,835	16,476	72,978	22,640	600	65,231	4,440	636	487	11,744	10,800	45
10,784,003	890,414	226,441	1,222,672	200	5,944,365	37,714	7,500	845,000	46
616	11	88	110	5	93	52	51	18	51	14	94	46	1	47
361,281	10,590	47,269	42,884	6,131	70,740	11,900	2,679	2,779	1,508	2,719	15,379	46,268	(*)	48
971,628	6,860	111,131	120,121	1,718	172,282	13,105	4,500	5,112	300	3,739	53,443	87,670	(*)	49
2.7	0.7	2.4	2.8	0.3	2.4	1.1	1.7	1.8	0.2	1.4	3.5	1.9	(*)	50
1.17	1.53	1.61	1.37	0.12	1.20	0.31	5.21	0.69	0.75	0.54	1.10	0.34	(*)	51
0.43	2.35	0.68	0.49	0.42	0.49	0.28	3.10	0.38	3.77	0.39	0.32	0.18	(*)	52
58	6	14	7	3	1	7	7	53
427,243	56,095	61,950	138,436	4,124	(*)	2,509	32,518	54
250,206	48,027	28,345	57,440	846	(*)	2,259	22,486	55
137,536	27,706	2,563	21,572	90	(*)	14,380	56
26,589	3,140	4,156	2,312	101	(*)	187	2,144	57

¹Data for less than 3 enterprises shown with permission of the enterprise involved.
²Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
³Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁴Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued						
	Yellowstone River—Continued						
	Big Horn River—Continued			Tongue River			
	Shell Creek (74)	Shoshone River (11)	Total	Shell Creek (74)	Shoshone River (11)	Total	
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	124	1,704	711			
2	Area irrigated.....1939..acres.....	11,361	112,785	72,222			
3	(a) Cropland harvested.....1939..acres.....	10,447	95,123	64,219			
4	(b) Crop failure.....1939..acres.....	42	40	56			
5	(c) Pasture.....1939..acres.....	872	17,622	7,947			
6	Area irrigated.....1929..acres.....	7,110	95,636	52,195			
7	1919..acres.....	11,955	95,091	49,025			
8	Increase or decrease (-), 1929-1939.....percent.....	59.8	17.9	38.4			
9	Irrigable area in enterprises.....1940..acres.....	13,705	160,456	86,023			
10	1930..acres.....	13,894	163,768	87,917			
11	1920 ² ..acres.....	24,005	217,988	99,167			
12	Excess of irrigable area over the area irrigated..1940..acres.....	2,344	47,671	13,801			
13	1930..acres.....	6,784	68,132	5,722			
14	1920 ² ..acres.....	12,050	122,907	26,142			
15	Area works were capable of supplying with water...1940..acres.....	13,705	141,426	85,687			
16	1930..acres.....	13,795	142,902	85,453			
17	1920..acres.....	22,406	134,431	59,290			
18	Increase or decrease (-), 1930-1940.....percent.....	-0.7	-1.0	54.5			
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	2,344	28,641	13,465			
20	1930..acres.....	6,685	47,266	3,258			
21	1920..acres.....	10,451	39,340	16,265			
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	82.9	79.7	84.3			
23	1929..percent.....	51.5	66.9	94.1			
24	1919..percent.....	53.4	70.7	72.6			
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	133,380	6,739,429	1,103,939			
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	130,875	6,726,421	1,086,439			
27	(b) Investment in water rights (reported).....1940..dollars.....	2,505	7,008	17,500			
28	Total investment in irrigation enterprises.....1930..dollars.....	386,300	9,285,642	723,271			
29	1920..dollars.....	380,420	8,702,480	811,125			
30	Increase or decrease (-), 1930-1940.....percent.....	-65.5	-27.5	52.6			
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	9.73	47.61	12.88			
32	1930..dollars.....	28.00	64.98	13.04			
33	1920..dollars.....	16.98	64.74	13.68			
34	Average investment per acre irrigated.....1939..dollars.....	11.74	59.70	15.29			
35	Estimated final investment in existing enterprises..1940..dollars.....	133,380	7,225,179	1,108,904			
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	9.73	45.03	12.89			
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Supplemental	Primary	Supplemental	Primary	Supplemental
		Enterprises		Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation...1939..number.....	37	1	66	2	175	8
38	Area irrigated in these enterprises.....1939..acres.....	11,263	(³)	112,701	(³)	70,002	14,562
39	Cost of maintenance and operation.....1939..dollars.....	6,448	(³)	114,379	(³)	28,016	2,017
40	Average cost, per acre irrigated.....1939..dollars.....	0.57	(³)	1.01	(³)	0.40	0.14
41	Total annual charges (reported) ⁴ 5.....1939..dollars.....	4,760	149,423	19,210	1,870
42	Average annual charge per acre irrigated.....1939..dollars.....	0.66	1.40	0.37	0.14
43	Area against which charges were assessed.....1939..acres.....	7,208	118,313	64,917	12,898
44	Average annual charge per acre assessed.....1939..dollars.....	0.66	1.26	0.35	0.14
45	Total charges collected ⁶.....1939..dollars.....	3,160	43,595	18,102	3,168
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	2,500	3,388,025	700
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	37	1	64	2	189	7
48	Area irrigated by these enterprises.....1939..acres.....	10,031	(³)	111,312	(³)	63,722	12,962
49	Water delivered.....1939..acre-feet.....	37,519	(³)	367,496	(³)	94,910	15,796
50	Average water delivered per acre irrigated.....1939..acre-feet.....	3.7	(³)	3.3	(³)	1.5	1.2
51	Average cost of water per acre irrigated.....1939..dollars.....	0.69	(³)	1.39	(³)	0.42	0.15
52	Average cost of water per acre-foot delivered..1939..dollars.....	0.18	(³)	0.42	(³)	0.28	0.12
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	13	9
54	Irrigable area in these enterprises.....1939..acres.....	130,661	10,122
55	Irrigated area in these enterprises.....1939..acres.....	89,953	9,824
56	Area for which drains have been installed.....1939..acres.....	71,235	442
57	Additional area needing drainage.....1939..acres.....	14,403	162

¹ Percent not shown when more than 1,000.
² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - WYOMING

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSOURI RIVER—Continued										
Yellowstone River—Continued										
Tongue River—Continued			Powder River							
Direct (6)	Goose Creek (6)	Total	Direct (5)	South Fork (24)	Middle Fork (22)	Crazy Woman Creek (20)	Clear Creek (7)	Little Powder River (4)		
322	389	355	49	9	47	46	200	4	1	
34,767	37,455	54,516	5,085	1,490	8,616	7,796	31,236	293	2	
30,483	33,736	44,524	5,039	1,211	7,674	6,156	24,143	293	3	
56	.....	1,336	25	271	153	554	333	.....	4
4,228	3,719	8,656	21	.....	789	1,086	6,760	.....	5
8,914	35,455	49,135	4,703	.....	450	2,600	35,295	.....	6
9,805	27,627	88,903	2,465	.....	3,341	21,965	50,648	.....	7
290.0	5.6	11.0	8.1	.....	(1)	199.8	-11.5	.....	8
47,755	38,268	79,942	5,570	3,259	12,043	11,944	46,621	505	9	
10,534	38,489	57,844	4,703	.....	450	4,188	38,338	.....	10
11,679	43,817	132,985	4,975	.....	4,271	29,684	71,560	.....	11
12,968	813	25,426	485	1,769	3,427	4,148	15,385	212	12	
1,620	3,044	8,709	.....	.....	.....	1,588	3,043	.....	13
1,874	16,190	44,082	2,510	.....	930	7,719	20,912	.....	14
47,470	38,217	75,349	5,530	3,209	11,953	9,342	44,825	490	15	
10,534	36,884	55,194	4,703	.....	450	4,146	35,960	.....	16
10,771	37,749	112,340	4,962	.....	3,385	24,151	67,735	.....	17
350.6	3.6	36.5	17.6	.....	(1)	125.3	24.7	.....	18
12,703	762	20,833	445	1,719	3,337	1,546	13,589	197	19	
1,620	1,429	6,059	.....	.....	.....	1,546	665	.....	20
966	10,122	23,437	2,497	.....	44	2,186	13,087	.....	21
73.2	98.0	72.4	92.0	46.4	72.1	83.5	69.7	59.6	22	
84.6	96.1	89.0	100.0	.....	100.0	62.7	98.2	.....	23
91.0	73.2	79.1	49.7	.....	98.7	90.9	79.5	.....	24
452,399	651,600	935,504	61,114	13,890	87,285	132,930	634,260	6,025	25	
440,143	646,296	921,978	60,143	13,800	85,340	130,475	626,305	5,915	26	
12,196	5,304	13,526	971	90	1,945	2,455	7,955	110	27	
85,814	564,639	816,498	180,000	.....	15,300	23,850	551,488	.....	28
125,555	563,518	1,159,996	152,100	.....	78,500	127,791	553,465	.....	29
527.1	11.5	14.6	-61.8	.....	470.5	457.4	15.0	.....	30
9.53	17.05	12.42	11.05	4.33	7.30	14.23	14.15	12.30	31	
8.15	15.85	14.79	34.02	.....	34.00	5.75	15.34	.....	32
11.66	14.93	10.33	30.65	.....	23.19	5.29	8.68	.....	33
13.01	17.40	17.16	12.02	9.32	10.13	17.05	20.31	20.56	34	
457,289	651,615	939,204	62,264	14,090	87,585	133,980	635,260	6,025	35	
9.68	17.03	11.75	12.22	4.32	6.79	11.22	13.63	11.93	36	
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
114	1	61	7	165	7	11	.....	6	31
33,260	(3)	36,742	10,562	52,123	15,122	4,966	.....	1,329	8,616
9,670	(3)	18,346	1,583	23,545	1,829	4,682	.....	715	5,885
0.29	(8)	0.50	0.15	0.45	0.12	0.93	.....	0.54	0.68
3,352	600	15,858	1,270	9,916	1,856	4,283	.....	951	300
0.19	0.15	0.47	0.14	0.47	0.13	0.90	.....	1.05	0.24
20,951	4,009	39,966	8,898	22,599	14,500	4,759	.....	906	1,250
0.16	0.15	0.47	0.14	0.44	0.13	0.90	.....	1.05	0.24
3,547	838	14,555	2,230	6,548	2,010	4,283	.....	951	300
400	.....	300	.....	.....	.....	.....	.....	.....	.....
128	1	61	6	185	8	17	.....	7	31
31,892	(3)	31,830	8,962	54,477	15,161	5,085	(3)	1,451	8,616	
49,350	(3)	45,560	2,314	75,943	11,957	10,026	(3)	1,533	7,796	
1.5	(8)	1.4	0.3	1.4	0.8	2.0	(3)	1.1	1.3	
0.30	(3)	0.53	0.15	0.46	0.13	0.93	.....	0.53	0.68
0.19	(3)	0.37	0.57	0.33	0.17	0.47	.....	0.51	0.54
3	.....	6	.....	7	.....	.....	.....	.....	.....
3,550	.....	6,572	.....	13,109	.....	.....	.....	(3)	1
3,279	.....	6,545	.....	5,645	.....	.....	.....	(3)	(3)
45	.....	397	.....	80	.....	.....	.....	.....	.....
62	.....	100	.....	398	.....	.....	.....	(3)	(3)

⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁸ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE I-- AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSOURI RIVER--Continued						
		Little Missouri River (3)	Total	Cheyenne River				
				Total	Direct (2)	Redwater Creek (1)	South Fork (21)	
								Belle Fourche River
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....1939..number.....	2	63	30	17	13	33	
2	Area irrigated.....1939..acres.....	(2)	4,722	898	371	527	3,824	
3	(a) Cropland harvested.....1939..acres.....	(2)	3,922	765	261	604	3,157	
4	(b) Crop failure.....1939..acres.....		212	15	8	7	197	
5	(c) Pasture.....1939..acres.....	(2)	588	118	102	16	470	
6	Area irrigated.....1929..acres.....		3,503	457	457		3,046	
7	.....1919..acres.....	60	7,872	1,966	1,966		5,906
8	Increase or decrease (-), 1929-1939.....percent.....		34.8	96.5	-18.8		25.5	
9	Irrigable area in enterprises.....1940..acres.....	(2)	10,974	2,804	2,058	746	8,170	
10	.....1930..acres.....		7,678	657	657		7,021
11	.....1920 ³ ..acres.....	60	16,818	5,054	5,054		11,764
12	Excess of irrigable area over the area irrigated.....1940..acres.....	(2)	6,252	1,906	1,687	219	4,346	
13	.....1930..acres.....		4,175	200	200		3,975
14	.....1920 ³ ..acres.....		8,946	3,088	3,088		5,858
15	Area works were capable of supplying with water.....1940..acres.....	(2)	9,392	2,072	1,488	584	7,320	
16	.....1930..acres.....		4,475	632	632		3,843
17	.....1920..acres.....	60	11,531	3,621	3,621		7,910
18	Increase or decrease (-), 1930-1940.....percent.....		109.9	227.8	135.4		90.5	
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	(2)	4,670	1,174	1,117	57	3,496	
20	.....1930..acres.....		972	175	175		797
21	.....1920..acres.....		3,659	1,655	1,655		2,004
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	(2)	50.3	43.3	24.9	90.2	52.2	
23	.....1929..percent.....		76.3	72.3	72.3		79.3
24	.....1919..percent.....	100.0	68.3	54.3	54.3		74.7
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars.....		6,673	97,523	38,186	28,393	9,793	59,337
26	(a) Cost of irrigation works and equipment.....1940..dollars.....		6,558	94,431	37,249	27,676	9,573	57,182
27	(b) Investment in water rights (reported).....1940..dollars.....		115	3,092	937	717	220	2,155
28	Total investment in irrigation enterprises.....1930..dollars.....			36,965	3,100	3,100		33,865
291920..dollars.....		726	242,886	76,066	76,066		166,820
30	Increase or decrease (-), 1930-1940.....percent.....			163.8	(4)	815.9		75.2
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....		15.70	10.38	18.43	19.08	16.77	8.11
321930..dollars.....			8.26	4.91	4.91		8.81
331920..dollars.....		12.10	21.06	21.01	21.01		21.09
34	Average investment per acre irrigated.....1939..dollars.....		25.18	20.65	42.52	76.53	18.58	15.52
35	Estimated final investment in existing enterprises.....1940..dollars.....		11,673	107,963	45,511	35,168	10,343	62,452
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....		16.21	9.84	16.23	17.09	13.86	7.64
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
37	Enterprises reporting maintenance and operation.....1939..number.....	4	51	28	19	9	23	
38	Area irrigated in these enterprises.....1939..acres.....	250	3,810	846	319	527	2,964	
39	Cost of maintenance and operation.....1939..dollars.....	103	2,731	920	613	307	1,811	
40	Average cost, per acre irrigated.....1939..dollars.....	0.41	0.72	1.09	1.92	0.58	0.61	
41	Total annual charges (reported) ^{5 6}.....1939..dollars.....		76	76		76		
42	Average annual charge per acre irrigated.....1939..dollars.....		0.48	0.48		0.48		
43	Area against which charges were assessed.....1939..acres.....		160	160		160		
44	Average annual charge per acre assessed.....1939..dollars.....		0.48	0.48		0.48		
45	Total charges collected ⁶.....1939..dollars.....							
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....							
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	2	56	26	17	9	30	
48	Area irrigated by these enterprises.....1939..acres.....	(2)	4,657	898	371	527	3,759	
49	Water delivered.....1939..acre-feet.....	(2)	4,539	887	303	584	3,652	
50	Average water delivered per acre irrigated.....1939..acre-feet.....	(2)	1.0	1.0	0.8	1.1	1.0	
51	Average cost of water per acre irrigated.....1939..dollars.....	(2)	0.69	0.96	1.60	0.58	0.61	
52	Average cost of water per acre-foot delivered.....1939..dollars.....	(2)	0.71	0.98	1.95	0.53	0.63	
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....							
54	Irrigable area in these enterprises.....1939..acres.....							
55	Irrigated area in these enterprises.....1939..acres.....							
56	Area for which drains have been installed.....1939..acres.....							
57	Additional area needing drainage.....1939..acres.....							

¹Data for 2 enterprises in Great Divide Drainage Basin (50) (number refers to separate map) are included with North Platte River "Direct" Drainage Basin (32).
²Data are included only in totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — WYOMING

IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSOURI RIVER—Continued														
North Platte River														
Total	Direct ¹	Beaver Creek	Encampment Creek	Spring Creek	Pass Creek	Medicine Bow River								
						Total	Direct							
	(32)	(62)	(61)	(60)	(56)		(51)							
2,869	1,350	24	78	26	24	115	47							1
519,685	169,515	6,498	17,925	13,688	13,425	75,003	27,453							2
416,215	139,198	4,676	11,079	7,085	9,953	60,128	21,956							3
7,710	2,784	8	40	40	.....	600	.....							4
95,760	27,533	1,814	6,806	6,563	3,472	14,275	5,497							5
452,762	81,313	3,132	6,906	10,825	14,681	37,279	36,879							6
402,993	56,794	2,621	7,053	13,123	8,557	55,157	54,500							7
14.8	108.5	107.5	159.6	26.4	-8.6	101.2	-25.6							8
824,698	213,477	7,761	19,052	15,489	14,506	149,747	26,043							9
671,716	104,952	4,176	11,582	13,197	18,243	44,816	44,416							10
888,419	120,195	3,666	10,173	18,702	12,500	140,711	139,599							11
305,013	43,962	1,263	1,127	1,801	1,081	74,744	590							12
218,964	23,639	1,044	4,676	2,372	3,562	7,537	7,537							13
485,426	63,401	1,045	3,120	5,579	3,943	85,554	85,099							14
- 693,455	195,093	7,479	19,052	15,003	14,291	81,146	27,981							15
596,125	100,287	4,176	11,522	13,197	17,860	42,671	42,271							16
628,233	76,966	3,186	7,293	18,177	11,373	67,780	67,103							17
16.3	94.5	79.1	65.4	13.7	-20.0	90.2	-33.8							18
173,770	25,578	981	1,127	1,315	866	6,143	528							19
143,373	18,974	1,044	4,616	2,372	3,179	5,392	5,392							20
225,240	20,172	565	240	5,054	2,816	12,623	12,603							21
74.9	86.9	86.9	94.1	91.2	93.9	92.4	98.1							22
75.9	81.1	75.0	59.9	82.0	82.2	87.4	87.2							23
64.1	73.8	82.3	96.7	72.2	75.2	81.4	81.2							24
15,217,505	6,218,592	74,625	240,270	107,690	53,497	1,482,988	181,484							25
14,983,866	6,183,781	71,650	234,190	105,000	51,275	1,347,399	176,769							26
233,639	34,811	2,975	6,080	2,690	2,222	135,589	4,715							27
12,007,608	5,241,418	11,427	75,926	62,731	47,555	440,825	434,825							28
12,931,901	5,920,923	37,497	72,692	184,290	50,051	354,434	346,664							29
26.7	18.6	553.1	216.5	71.7	12.5	236.4	-58.3							30
21.94	31.88	9.98	12.61	7.18	3.74	18.28	6.49							31
20.14	52.26	2.74	6.59	4.75	2.66	10.33	10.29							32
20.58	76.93	11.77	9.97	10.14	4.40	5.23	5.17							33
29.28	36.68	11.48	13.40	7.87	3.98	19.77	6.61							34
16,293,033	6,291,240	78,125	247,270	107,690	53,847	1,683,863	181,609							35
19.76	29.47	10.07	12.98	6.95	3.71	11.24	6.48							36
Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	Primary	Sup.	
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		Enterprises		
865	9	273	3	23	1	42	1	17	20	82	1	35	1	37
466,012	22,522	154,373	17,519	6,473	(²)	17,431	(²)	11,440	12,825	74,234	(²)	26,859	(²)	38
237,307	11,954	106,343	10,978	2,515	(²)	2,792	(²)	1,730	2,671	16,312	(²)	3,866	(²)	39
0.49	0.53	0.69	0.63	0.39	(²)	0.16	(²)	0.15	0.21	0.22	(²)	0.14	(²)	40
159,813	11,181	77,484	10,829	.....	352	505	.....	.....	.....	8,459	.....	375	.....	41
0.75	0.62	0.89	0.63	.....	0.36	0.10	.....	.....	.....	0.30	.....	0.05	.....	42
243,365	18,275	91,962	17,175	.....	1,100	5,194	.....	.....	.....	28,462	.....	7,024	.....	43
0.66	0.61	0.84	0.63	.....	0.32	0.10	.....	.....	.....	0.30	.....	0.05	.....	44
147,169	402	84,133	50	.....	352	203	.....	.....	.....	5,241	.....	376	.....	45
4,486,891	.....	4,276,524	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
804	8	260	3	24	1	44	1	19	17	57	1	18	1	47
462,607	18,822	154,133	17,519	6,498	(²)	15,482	(²)	13,688	11,174	49,060	(²)	14,847	(²)	48
697,789	9,605	291,357	9,044	11,081	(²)	24,778	(²)	18,995	21,077	56,824	(²)	19,660	(²)	49
1.5	0.5	1.9	0.5	1.7	(²)	1.6	(²)	1.4	1.9	1.2	(²)	1.3	(²)	50
0.55	0.62	0.76	0.63	0.39	(²)	0.18	(²)	0.15	0.23	0.32	(²)	0.15	(²)	51
0.37	1.21	0.40	1.21	0.23	(²)	0.11	(²)	0.11	0.12	0.28	(²)	0.11	(²)	52
48	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
277,015	.....	78,238	.....	.....	.....	(²)	.....	(²)	.....	(²)	.....	.....	.....	54
152,351	.....	61,659	.....	.....	.....	(²)	.....	(²)	.....	(²)	.....	.....	.....	55
37,050	.....	16,809	.....	.....	.....	(²)	.....	(²)	.....	(²)	.....	.....	.....	56
10,012	.....	2,730	.....	.....	.....	(²)	.....	(²)	.....	(²)	.....	.....	.....	57

⁴ Percent not shown when more than 1,000.

⁵ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.

⁶ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSOURI RIVER—Continued					
		North Platte River—Continued					
		Medicine Bow River—Continued					
		Rock Creek (71)	Total	Direct (73)	Sheep Creek (72)	Muddy Creek (68)	Sweetwater River (38)
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	40	28	8	14	6	44
2	Area irrigated.....1939..acres.....	40,090	7,460	1,805	2,625	3,030	15,796
3	(a) Cropland harvested.....1939..acres.....	31,782	6,390	1,555	2,505	2,830	7,936
4	(b) Crop failure.....1939..acres.....	600	.....	.....	.....	.....	181
5	(c) Pasture.....1939..acres.....	7,708	1,070	250	120	700	7,679
6	Area irrigated.....1929..acres.....	400	.....	.....	.....	400	6,506
7	.....1919..acres.....	657	.....	.....	.....	657	5,448
8	Increase or decrease (-), 1929-1939.....percent.....	(¹)	.....	.....	.....	657.5	142.8
9	Irrigable area in enterprises.....1940..acres.....	113,174	8,530	2,720	2,780	3,030	18,002
10	.....1930..acres.....	400	.....	.....	.....	400	8,697
11	.....1920 ² ..acres.....	1,112	.....	.....	.....	1,112	14,166
12	Excess of irrigable area over the area irrigated..1940..acres.....	73,064	1,070	915	155	.....	2,206
13	.....1930..acres.....	.....	.....	.....	.....	.....	2,191
14	.....1920 ² ..acres.....	455	.....	.....	.....	455	8,718
15	Area works were capable of supplying with water...1940..acres.....	45,320	7,845	2,090	2,725	3,030	17,741
16	.....1930..acres.....	400	.....	.....	.....	400	8,519
17	.....1920..acres.....	677	.....	.....	.....	677	10,593
18	Increase or decrease (-), 1930-1940.....percent.....	(¹)	.....	.....	.....	657.5	108.3
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	5,230	385	285	100	.....	1,945
20	.....1930..acres.....	.....	.....	.....	.....	.....	2,013
21	.....1920..acres.....	20	.....	.....	.....	20	5,145
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	88.5	95.1	86.4	96.3	100.0	89.0
23	.....1929..percent.....	.....	100.0	.....	.....	100.0	76.4
24	.....1919..percent.....	.....	97.0	.....	.....	97.0	51.4
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars....	1,254,703	46,801	14,835	14,961	16,985	167,112
26	(a) Cost of irrigation works and equipment.....1940..dollars....	1,126,000	44,630	14,450	14,550	15,630	155,775
27	(b) Investment in water rights (reported).....1940..dollars....	128,703	2,171	385	431	1,355	11,337
28	Total investment in irrigation enterprises.....1930..dollars....	6,000	.....	.....	.....	6,000	78,200
29	.....1920..dollars....	7,770	.....	.....	.....	7,770	87,322
30	Increase or decrease (-), 1930-1940.....percent.....	680.0	.....	.....	.....	183.1	113.7
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	27.69	5.97	7.10	5.50	5.61	9.42
32	.....1930..dollars....	.....	15.00	.....	.....	15.00	9.18
33	.....1920..dollars....	.....	11.48	.....	.....	11.48	8.24
34	Average investment per acre irrigated.....1939..dollars....	31.30	6.27	8.22	5.71	5.61	10.58
35	Estimated final investment in existing enterprises..1940..dollars....	1,454,703	47,551	15,035	15,531	16,985	174,212
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	12.85	5.57	5.53	5.59	5.61	9.68
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
37	Enterprises reporting maintenance and operation...1939..number.....	20	27	8	14	5	30
38	Area irrigated in these enterprises.....1939..acres.....	39,825	7,450	1,805	2,625	3,020	9,700
39	Cost of maintenance and operation.....1939..dollars....	9,430	3,016	1,100	1,595	321	3,726
40	Average cost, per acre irrigated.....1939..dollars....	0.24	0.40	0.61	0.61	0.11	0.38
41	Total annual charges (reported) ^{4 5}.....1939..dollars....	8,084	.....	.....	.....	.....	.....
42	Average annual charge per acre irrigated.....1939..dollars....	0.38	.....	.....	.....	.....	.....
43	Area against which charges were assessed.....1939..acres.....	21,458	.....	.....	.....	.....	.....
44	Average annual charge per acre assessed.....1939..dollars....	0.38	.....	.....	.....	.....	.....
45	Total charges collected ⁴.....1939..dollars....	4,865	.....	.....	.....	.....	.....
46	Indebtedness to December 31 (reported) ⁵.....1939..dollars....	.....	.....	.....	.....	.....	.....
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	11	28	8	14	6	42
48	Area irrigated by these enterprises.....1939..acres.....	26,753	7,460	1,805	2,625	3,030	15,265
49	Water delivered.....1939..acre-feet.....	28,499	8,665	1,434	985	6,246	23,478
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.1	1.2	0.8	0.4	2.1	1.5
51	Average cost of water per acre irrigated.....1939..dollars....	0.39	0.40	0.61	0.61	0.11	0.35
52	Average cost of water per acre-foot delivered..1939..dollars....	0.37	0.35	0.77	1.62	0.05	0.23
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	1	.....	.....	.....	.....	.....
54	Irrigable area in these enterprises.....1939..acres.....	(³)	.....	.....	.....	.....	.....
55	Irrigated area in these enterprises.....1939..acres.....	(³)	.....	.....	.....	.....	.....
56	Area for which drains have been installed.....1939..acres.....	(³)	.....	.....	.....	.....	.....
57	Additional area needing drainage.....1939..acres.....	.....	.....	.....	.....	.....	.....

¹Percent not shown when more than 1,000.
²For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
³Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION -- WYOMING

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

MISSOURI RIVER—Continued												
North Platte River—Continued												
Box Elder Creek (37)	La Prele Creek (36)	La Bonte Creek (35)	Laramie River						Rawhide Creek (34)	Horse Creek (53)		
			Total	Direct	Little Laramie River (63)	Sybilie Creek (55)	North Laramie River (52)	Chugwater Creek (54)				
23	122	35	838	599	108	28	55	48	3	187	1	
2,519	10,678	6,631	164,276	91,395	51,465	4,238	6,647	10,531	340	23,391	2	
2,444	9,967	6,370	135,033	80,926	33,686	4,232	5,848	10,341	340	22,006	3	
30	280	68	2,674	1,962	20	6	536	150	.....	1,005	4
45	431	193	26,569	17,759	8,507	.....	263	40	.....	1,360	5
3,742	16,549	4,383	179,019	98,510	43,942	5,237	5,979	6,139	225	29,594	6	
4,648	9,103	4,376	149,999	72,400	30,860	6,183	6,856	5,914	2,045	28,369	7	
-32.7	-35.5	51.3	-8.2	-7.2	17.1	-19.1	11.2	71.5	51.1	-21.0	8	
3,390	16,599	7,854	325,997	227,254	61,448	5,271	10,704	21,320	340	32,484	9	
8,486	17,462	4,876	315,207	215,907	51,177	5,934	11,474	7,648	225	34,688	10	
7,916	21,697	6,525	366,928	171,554	42,852	9,519	20,144	9,853	3,651	71,188	11	
871	5,921	1,223	161,721	135,859	9,983	1,033	4,057	10,789	.....	9,093	12
4,744	913	493	136,188	117,397	7,235	697	5,485	1,509	.....	5,091	13
3,268	12,594	2,149	216,929	99,154	11,992	3,336	13,286	3,939	1,606	42,819	14	
3,252	16,432	7,369	284,045	189,540	60,506	5,271	7,806	20,920	340	32,212	15	
8,486	16,908	4,826	257,351	168,297	50,972	5,387	6,360	7,108	225	30,920	16	
7,696	16,690	5,756	291,993	122,956	33,144	8,044	11,749	9,258	2,481	39,702	17	
-61.7	-2.8	52.7	10.4	12.6	18.7	-2.2	22.7	194.3	51.1	4.2	18	
733	5,754	738	119,769	98,145	9,043	1,033	1,159	10,389	.....	8,821	19
4,744	359	443	78,332	69,787	7,030	150	381	969	.....	1,326	20
3,048	6,587	1,380	141,994	50,556	2,284	1,861	4,891	3,344	436	11,333	21	
77.5	65.0	90.0	57.8	48.2	85.1	80.4	85.2	50.3	100.0	72.6	22	
44.1	97.9	90.8	69.6	58.5	86.2	97.2	94.0	86.4	100.0	95.7	23	
60.4	58.0	76.0	51.4	58.9	93.1	76.9	58.4	63.9	82.4	71.5	24	
22,983	1,091,526	145,549	4,490,920	3,121,930	263,087	48,567	795,429	261,907	2,660	1,119,093	25	
22,028	1,086,550	140,300	4,467,208	3,116,020	252,925	46,420	793,369	258,474	2,460	1,116,250	26	
955	4,976	5,249	23,712	5,910	2,147	2,060	3,433	200	.....	2,843	27
176,245	331,825	28,655	4,198,500	3,365,261	273,861	24,935	276,120	118,648	3,200	627,600	28	
104,676	327,411	71,826	4,334,896	923,041	48,753	65,041	396,708	83,155	27,330	536,475	29	
-87.0	228.9	407.9	7.0	-7.8	-3.9	94.8	188.1	120.7	-16.9	78.3	30	
7.07	66.43	19.75	15.81	16.47	4.35	9.21	101.90	12.52	7.82	34.74	31	
20.77	19.63	5.94	16.31	20.11	5.37	4.63	43.42	16.69	14.22	20.30	32	
13.60	20.87	12.48	14.85	7.51	1.47	8.09	33.77	8.98	11.02	13.51	33	
9.12	102.22	21.95	27.34	34.16	5.11	11.46	119.67	24.87	7.82	47.84	34	
23,663	1,091,526	145,849	5,272,645	3,872,505	263,087	51,567	797,079	286,407	2,660	1,120,443	35	
6.98	65.76	18.57	16.17	17.04	4.28	9.78	74.47	13.53	7.82	34.49	36	
24	23	34	252	90	72	24	47	19	3	42	37	
2,489	9,784	6,431	158,441	89,987	47,404	3,948	6,571	10,531	340	22,051	38	
1,757	12,965	8,065	67,392	50,024	8,512	1,642	3,012	4,202	285	10,754	39	
0.71	1.33	1.25	0.43	0.56	0.18	0.42	0.46	0.40	0.84	0.49	40	
.....	10,020	.....	45,333	43,655	822	.....	.....	856	.....	18,012	41
.....	1.39	.....	0.59	0.64	0.13	.....	.....	0.41	.....	1.81	42
.....	12,000	.....	92,812	84,432	6,280	.....	.....	2,100	.....	12,915	43
.....	0.84	.....	0.49	0.52	0.13	.....	.....	0.41	.....	1.39	44
.....	10,020	.....	40,057	38,435	822	.....	.....	800	.....	7,515	45
.....	.....	.....	99,490	99,490	.....	.....	.....	.....	.....	112,877	46
17	22	8	255	97	75	23	46	14	1	38	47	
1,792	10,105	1,953	162,996	91,351	51,315	4,122	6,335	9,873	.....	20,361	48
2,125	20,651	1,920	198,985	115,889	57,609	2,958	7,082	15,447	.....	26,482	49
1.2	2.0	1.0	1.2	1.3	1.1	0.7	1.1	1.6	.....	1.3	50
0.65	1.28	0.86	0.42	0.65	0.19	0.36	0.32	0.42	.....	1.20	51
0.54	0.63	0.87	0.34	0.43	0.17	0.50	0.28	0.27	.....	0.92	52
.....	(3)	1	29	6	23	.....	.....	.....	.....	(3)	53
.....	(3)	.....	170,077	153,959	16,118	.....	.....	.....	.....	(3)	54
.....	(3)	.....	71,347	56,225	15,122	.....	.....	.....	.....	(3)	55
.....	(3)	.....	18,341	2,455	15,886	.....	.....	.....	.....	(3)	56
.....	.....	.....	7,242	7,240	2	.....	.....	.....	.....	(3)	57

⁴Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
⁵Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued				COLORADO RIVER			
	South Platte River				Green River			
	Total	Cache la Poudre River (70)	Crow Creek (66)	Lodgepole Creek (65)	Total	Direct (40)		
IRRIGATED FARMS AND AREAS								
1	Irrigated farms.....1939..number.....	92	31	22	39	1,110	118	
2	Area irrigated.....1939..acres.....	15,066	3,597	5,575	5,894	273,971	45,000	
3	(a) Cropland harvested.....1939..acres.....	14,092	3,427	4,835	5,830	193,470	32,655	
4	(b) Crop failure.....1939..acres.....	569	.....	505	64	2,687	127
5	(c) Pasture.....1939..acres.....	405	170	235	.....	77,814	12,218
6	Area irrigated.....1929..acres.....	17,340	10,794	4,951	1,595	228,699	25,791	
7	.....1919..acres.....	9,804	5,449	2,580	1,775	211,507	20,285
8	Increase or decrease (-), 1929-1939.....percent.....	-13.1	-66.7	12.6	269.5	19.8	74.5	
9	Irrigable area in enterprises.....1940..acres.....	19,349	3,607	5,834	9,908	448,422	81,253	
10	.....1930..acres.....	19,748	10,991	6,717	2,040	360,974	38,880
11	.....1920 ³ ..acres.....	21,553	5,779	5,590	10,184	473,116	32,492
12	Excess of irrigable area over the area irrigated.....1940..acres.....	4,283	10	259	4,014	174,451	36,253	
13	.....1930..acres.....	2,408	197	1,766	445	132,275	13,089
14	.....1920 ³ ..acres.....	11,749	330	3,010	8,409	261,609	12,207
15	Area works were capable of supplying with water.....1940..acres.....	18,946	3,607	5,794	9,545	337,027	56,401	
16	.....1930..acres.....	19,393	10,991	6,677	1,725	304,057	28,985
17	.....1920..acres.....	14,220	5,659	4,867	3,694	353,731	28,034
18	Increase or decrease (-), 1930-1940.....percent.....	-2.3	-67.2	-13.2	453.3	10.8	94.6	
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	3,980	10	219	3,651	63,056	11,401	
20	.....1930..acres.....	2,053	197	1,726	130	75,358	3,194
21	.....1920..acres.....	4,416	210	2,287	1,919	142,294	7,749
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	79.5	99.5	96.2	61.7	81.3	79.8	
23	.....1929..percent.....	89.4	98.2	74.2	92.5	75.2	89.0
24	.....1919..percent.....	68.9	96.3	53.0	48.1	59.8	72.4
CAPITAL INVESTED TO JANUARY 1								
25	Total investment in irrigation enterprises.....1940..dollars.....	345,839	93,863	153,861	98,115	3,205,108	555,890	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	330,675	92,746	140,514	97,415	3,120,886	518,910	
27	(b) Investment in water rights (reported).....1940..dollars.....	15,164	1,117	13,347	700	84,222	36,980	
28	Total investment in irrigation enterprises.....1930..dollars.....	264,466	112,845	136,346	15,275	2,121,930	190,463	
29	.....1920..dollars.....	212,945	74,999	48,919	89,037	3,064,797	170,841
30	Increase or decrease (-), 1930-1940.....percent.....	30.8	-16.8	12.8	542.3	51.0	191.9	
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	18.25	26.02	26.56	10.28	9.51	9.86	
32	.....1930..dollars.....	13.64	10.27	20.42	8.86	6.98	6.57
33	.....1920..dollars.....	14.98	13.25	10.05	24.10	8.66	6.09
34	Average investment per acre irrigated.....1939..dollars.....	22.95	26.09	25.60	16.65	11.70	12.35	
35	Estimated final investment in existing enterprises.....1940..dollars.....	353,089	93,863	155,061	104,165	3,707,046	593,540	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	18.25	26.02	26.58	10.51	8.27	7.30	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
37	Enterprises reporting maintenance and operation.....1939..number.....	57	14	7	36	620	15	96
38	Area irrigated in these enterprises.....1939..acres.....	9,463	2,962	790	5,711	265,513	22,161	40,376
39	Cost of maintenance and operation.....1939..dollars.....	14,494	1,264	537	12,693	89,242	1,259	14,096
40	Average cost, per acre irrigated.....1939..dollars.....	1.53	0.43	0.68	2.22	0.34	0.06	0.35
41	Total annual charges (reported) ^{5 6}.....1939..dollars.....	759	759	24,049	411	1,545
42	Average annual charge per acre irrigated.....1939..dollars.....	0.56	0.56	0.42	0.02	0.48
43	Area against which charges were assessed.....1939..acres.....	1,350	1,350	90,270	19,120	5,100
44	Average annual charge per acre assessed.....1939..dollars.....	0.56	0.56	0.27	0.02	0.30
45	Total charges collected ⁶.....1939..dollars.....	40,476	2,750
46	Indebtedness to December 31 (reported) ⁶.....1939..dollars.....	414,915	39,000
WATER DELIVERED TO IRRIGATORS, 1939								
47	Enterprises reporting water delivered.....1939..number.....	81	22	21	38	628	13	100
48	Area irrigated by these enterprises.....1939..acres.....	14,949	3,580	5,475	5,894	257,989	2,104	43,630
49	Water delivered.....1939..acre-feet.....	16,591	2,083	5,084	9,424	611,792	4,703	115,026
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.1	0.6	0.9	1.6	2.4	2.2	2.6
51	Average cost of water per acre irrigated.....1939..dollars.....	1.53	0.43	0.68	2.22	0.34	0.15	0.35
52	Average cost of water per acre-foot delivered.....1939..dollars.....	1.38	0.73	0.73	1.39	0.14	0.07	0.13
DRAINAGE OF IRRIGATED LAND								
53	Enterprises reporting land drained or needing drainage.....1939..number.....	3	2	1	12
54	Irrigable area in these enterprises.....1939..acres.....	764	(*)	(*)	97,846
55	Irrigated area in these enterprises.....1939..acres.....	564	(*)	(*)	21,938
56	Area for which drains have been installed.....1939..acres.....	26
57	Additional area needing drainage.....1939..acres.....	55	(*)	(*)	2,450

¹Data for 1 enterprise in Cottonwood Creek Drainage Basin (57) (number refers to separate map) are included with Blacks Fork "Direct" Drainage Basin (48).
²Percent not shown when more than 1,000.
³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — WYOMING

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLORADO RIVER—Continued														
Green River—Continued														
Horse Creek	Cottonwood Creek	New Fork	South Piney Creek	La Barge Creek	Fontenelle Creek	Sandy Creek	Bitter Creek	Blacks Fork						
								Total	Direct ¹					
(29)	(75)	(30)	(41)	(42)	(43)	(39)	(49)		(48)					
14	27	155	35	20	17	85	24	408	336	1				
13,515	25,345	46,724	26,881	6,773	4,824	12,737	1,350	59,038	43,790	2				
8,857	16,916	34,041	18,519	5,843	4,060	9,274	1,142	38,723	27,551	3				
.....	.....	.....	60	.....	.....	.....	14	1,977	1,477	4
4,658	8,429	12,683	8,202	930	764	3,463	194	18,338	14,762	5				
5,982	9,189	48,003	1,472	4,083	1,607	.....	878	61,397	.....	6		
15,520	17,437	27,743	11,928	5,459	4,428	.....	2,395	65,980	.....	7		
125.9	175.8	-2.7	(²)	65.9	200.2	.....	53.8	-3.8	.....	8		
15,528	26,807	71,121	29,848	6,798	5,167	49,023	1,625	118,567	99,219	9				
8,955	12,667	77,099	2,970	4,898	1,680	.....	1,356	87,650	.....	10		
21,870	32,317	53,918	30,924	11,700	5,858	.....	12,495	175,970	.....	11		
2,013	1,462	24,397	2,967	25	343	36,286	275	59,529	55,429	12				
2,873	3,478	29,096	1,498	815	73	.....	478	26,253	.....	13		
6,150	14,880	26,175	18,986	6,241	1,490	.....	10,100	109,990	.....	14		
15,528	26,807	61,766	29,848	5,798	4,967	21,474	1,617	74,007	55,157	15				
6,935	10,594	63,967	1,800	4,898	1,680	.....	1,026	76,875	.....	16		
19,453	29,283	43,614	26,397	7,725	5,033	.....	11,447	104,305	.....	17		
123.9	153.0	-3.4	(²)	38.8	195.7	.....	57.6	-3.7	.....	18		
2,013	1,462	15,042	2,967	25	143	8,737	267	14,969	11,367	19				
953	1,405	15,964	328	815	73	.....	148	15,478	.....	20		
3,933	11,846	15,871	14,469	2,266	605	.....	9,052	38,325	.....	21		
87.0	94.5	75.6	90.1	99.6	97.1	59.3	83.5	79.8	79.4	22				
86.3	86.7	75.0	81.8	83.4	95.7	.....	85.6	79.9	.....	23		
79.8	59.5	63.6	45.2	70.7	88.0	.....	20.9	63.3	.....	24		
29,355	232,850	530,590	165,445	36,650	33,390	933,490	59,304	345,317	220,731	25				
27,600	227,550	515,050	162,395	35,900	32,400	931,925	58,650	334,204	213,209	26				
1,755	5,300	15,540	3,050	750	990	1,565	654	11,113	7,522	27				
19,823	29,641	533,415	7,830	28,900	12,600	.....	6,445	208,495	.....	28		
51,163	456,827	293,043	85,728	39,150	33,000	.....	93,158	566,776	.....	29		
48.1	685.6	-0.5	(²)	26.8	165.0	.....	620.2	65.6	.....	30		
1.89	8.69	8.59	5.54	5.39	6.72	43.47	36.68	4.67	4.00	31				
2.86	5.90	3.34	4.35	5.90	7.50	.....	6.25	2.71	.....	32		
2.63	15.60	6.72	3.25	5.07	6.56	.....	8.14	5.43	.....	33		
2.17	9.19	11.36	6.15	5.41	6.92	73.29	43.93	5.85	.....	34			
29,355	232,850	544,860	165,445	36,650	33,390	1,158,990	59,404	555,867	428,121	35				
1.89	8.69	7.66	5.54	5.39	6.46	23.64	36.56	4.69	4.31	36				
	Primary	Sup.						Primary	Sup.					
	Enterprises		Enterprises					Enterprises						
11	21	(⁴)	128	6	28	14	19	16	24	163	7	112	7	37
13,515	25,345	(⁴)	45,522	19,903	26,881	6,773	4,754	12,737	1,350	56,965	729	41,847	729	38
2,950	10,750	(⁴)	11,129	549	6,133	3,650	3,355	12,637	2,336	11,877	105	6,727	105	39
0.22	0.42	(⁴)	0.24	0.03	0.23	0.54	0.71	0.99	1.73	0.21	0.14	0.16	0.14	40
.....	2,811	411	300	7,226	6,744	6,144	41
.....	0.32	0.02	0.16	0.79	0.26	0.26	42
.....	13,106	19,120	1,902	13,098	43,876	41,476	43
.....	0.21	0.02	0.16	0.55	0.15	0.15	44
.....	2,575	2,750	7,201	3,628	3,628	45
.....	17,296	33,000	377,370	46
11	20	132	5	28	13	19	16	24	166	7	119	7	47
13,515	24,480	44,781	1,033	26,881	4,871	4,754	12,737	1,350	51,959	909	37,674	909	48
40,762	36,063	159,769	2,447	60,294	6,965	7,494	23,711	3,168	103,799	2,110	76,342	2,110	49
3.0	1.5	3.6	2.4	2.2	1.4	1.6	1.9	2.3	2.0	2.3	2.0	2.3	50
0.22	0.44	0.26	0.16	0.23	0.69	0.71	1.73	1.73	0.26	0.14	0.23	0.14	51
0.07	0.30	0.07	0.08	0.10	0.48	0.45	0.36	0.74	0.13	0.06	0.11	0.06	52
.....	8	1	3	3	53
.....	7,976	(⁴)	47,000	47,000	54
.....	5,299	(⁴)	7,500	7,500	55
.....	26	56
.....	525	(⁴)	425	425	57

¹Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, 1929, 1919; CAPITAL INVESTED AND OPERATION, CHARGES, INDEBTEDNESS, WATER DELIVERED TO

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued					GREAT SALT LAKE	
	Green River—Continued						
	Blacks Fork—Continued		Henrys Fork		Little Snake River (Yampa)	Bear River	
	Muddy Creek (47)	Hams Fork (45)	Henrys Fork (58)		(59)	(46)	
IRRIGATED FARMS AND AREAS							
1	Irrigated farms.....1939..number.....	23	49	98	109	256	
2	Area irrigated.....1939..acres.....	5,002	10,246	16,890	14,894	62,803	
3	(a) Cropland harvested.....1939..acres.....	3,112	8,060	10,016	13,324	49,054	
4	(b) Crop failure.....1939..acres.....	500	.....	429	80	91	
5	(c) Pasture.....1939..acres.....	1,390	2,186	6,445	1,480	13,658	
6	Area irrigated.....1929..acres.....	.....	.....	15,884	11,719	47,379	
7	.....1919..acres.....	.....	.....	8,298	13,463	63,665	
8	Increase or decrease (-), 1929-1939.....percent.....	.....	.....	6.3	27.1	32.6	
9	Irrigable area in enterprises.....1940..acres.....	7,242	12,106	24,932	17,753	68,690	
10	.....1930..acres.....	.....	.....	26,598	12,049	59,351	
11	.....1920 ⁴ ..acres.....	.....	.....	25,940	18,038	91,842	
12	Excess of irrigable area over the area irrigated.....1940..acres.....	2,240	1,860	8,042	2,859	5,887	
13	.....1930..acres.....	.....	.....	10,714	330	11,972	
14	.....1920 ⁴ ..acres.....	.....	.....	17,642	4,575	28,177	
15	Area works were capable of supplying with water.....1940..acres.....	6,933	11,917	21,410	16,404	67,026	
16	.....1930..acres.....	.....	.....	18,677	12,049	56,221	
17	.....1920..acres.....	.....	.....	23,694	16,358	82,470	
18	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	14.6	36.1	19.2	
19	Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	1,931	1,671	4,520	1,510	4,223	
20	.....1930..acres.....	.....	.....	2,793	330	8,842	
21	.....1920..acres.....	.....	.....	15,396	2,895	18,805	
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	72.1	86.0	78.9	90.8	93.7	
23	.....1929..percent.....	.....	.....	85.0	97.3	84.3	
24	.....1919..percent.....	.....	.....	35.0	82.3	77.2	
CAPITAL INVESTED TO JANUARY 1							
25	Total investment in irrigation enterprises.....1940..dollars.....	74,857	49,729	165,857	116,970	538,271	
26	(a) Cost of irrigation works and equipment.....1940..dollars.....	73,810	47,185	162,732	113,570	530,695	
27	(b) Investment in water rights (reported).....1940..dollars.....	1,047	2,544	3,125	3,400	7,576	
28	Total investment in irrigation enterprises.....1930..dollars.....	.....	.....	111,750	110,950	201,574	
29	.....1920..dollars.....	.....	.....	77,320	274,302	679,405	
30	Increase or decrease (-), 1930-1940.....percent.....	.....	.....	48.4	5.4	167.0	
31	Average investment based on area works were capable of supplying with water, per acre.....1940..dollars.....	10.80	4.17	7.75	7.13	8.03	
32	.....1930..dollars.....	.....	.....	5.98	9.21	3.59	
33	.....1920..dollars.....	.....	.....	3.26	16.77	8.24	
34	Average investment per acre irrigated.....1939..dollars.....	14.97	4.85	9.82	7.85	8.57	
35	Estimated final investment in existing enterprises.....1940..dollars.....	74,857	52,909	175,255	121,420	540,371	
36	Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars.....	10.34	4.37	7.03	6.84	7.87	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
				Primary	Supplemental	Primary	Supplemental
				Enterprises		Enterprises	
37	Enterprises reporting maintenance and operation.....1939..number.....	9	42	55	1	45	93
38	Area irrigated in these enterprises.....1939..acres.....	4,872	10,246	16,490	(6)	14,805	60,761
39	Cost of maintenance and operation.....1939..dollars.....	1,151	3,999	4,223	(6)	6,106	11,422
40	Average cost, per acre irrigated.....1939..dollars.....	0.24	0.39	0.26	(6)	0.41	0.19
41	Total annual charges (reported) ⁶ 7.....1939..dollars.....	600	.....	1,900	.....	3,523	16,243
42	Average annual charge per acre irrigated.....1939..dollars.....	0.33	.....	0.61	.....	0.61	0.67
43	Area against which charges were assessed.....1939..acres.....	2,400	.....	6,796	.....	6,382	24,065
44	Average annual charge per acre assessed.....1939..dollars.....	0.25	.....	0.28	.....	0.55	0.67
45	Total charges collected ⁸.....1939..dollars.....	.....	.....	23,537	.....	3,535	3,942
46	Indebtedness to December 31 (reported) ⁹.....1939..dollars.....	.....	.....	20,000	.....	249	42,000
WATER DELIVERED TO IRRIGATORS, 1939							
47	Enterprises reporting water delivered.....1939..number.....	10	37	54	1	45	98
48	Area irrigated by these enterprises.....1939..acres.....	4,893	9,392	15,290	(6)	13,741	62,377
49	Water delivered.....1939..acre-feet.....	7,385	20,072	30,389	(6)	24,352	117,206
50	Average water delivered per acre irrigated.....1939..acre-feet.....	1.5	2.1	2.0	(6)	1.8	1.9
51	Average cost of water per acre irrigated.....1939..dollars.....	0.24	0.38	0.19	(6)	0.55	0.37
52	Average cost of water per acre-foot delivered.....1939..dollars.....	0.16	0.18	0.10	(6)	0.31	0.19
DRAINAGE OF IRRIGATED LAND							
53	Enterprises reporting land drained or needing drainage.....1939..number.....	.....	.....	.....	.....	.....	4
54	Irrigable area in these enterprises.....1939..acres.....	.....	.....	.....	.....	.....	14,762
55	Irrigated area in these enterprises.....1939..acres.....	.....	.....	.....	.....	.....	14,558
56	Area for which drains have been installed.....1939..acres.....	.....	.....	.....	.....	.....	.....
57	Additional area needing drainage.....1939..acres.....	.....	.....	.....	.....	.....	5,252

¹Data for 1930 and 1920 not available because tributaries of South Fork of the Snake River were not identified.

²Data for 2 enterprises in Henrys Fork "Direct" Drainage Basin (59) (number refers to separate map) are included with Teton River Drainage Basin (13).

³Percent not shown when more than 1,000.

⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

CENSUS OF IRRIGATION — WYOMING

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IRRIGABLE AREA, 1940, 1930, 1920; AND IRRIGATED FARMS, MAINTENANCE
IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

COLUMBIA RIVER											
Snake River											
Total	South Fork					Henry's Fork					
	Total ¹	Direct (14)	Gros Ventre River (26)	Grays River (28)	Salt River. (27)	Teton River ² (13)					
958	821	186	48	5	682	37	1				
82,967	79,500	22,978	8,223	251	48,048	3,467	2				
72,462	69,162	19,809	8,065	133	41,155	3,300	3				
150	145	28	.....	.....	117	5	4		
10,955	10,193	3,141	158	118	6,776	162	5				
59,554	1,250	6,158	.....	.....	36,863	.....	6	
62,965	.....	912	12,961	.....	34,338	.....	7	
39.3	.....	(³)	33.5	.....	30.3	.....	8	
104,162	100,016	32,887	10,917	293	55,919	4,146	9				
87,965	.....	2,438	9,549	.....	49,016	.....	10	
104,362	.....	2,202	19,023	.....	57,288	.....	11	
21,185	20,516	9,909	2,694	42	7,871	679	12				
28,411	.....	1,188	3,391	.....	12,153	.....	13	
41,397	.....	1,290	6,062	.....	22,950	.....	14	
98,892	94,820	30,404	9,782	263	54,471	3,972	15				
77,286	.....	1,877	6,725	.....	46,233	.....	16	
86,400	.....	1,879	14,490	.....	46,294	.....	17	
27.8	.....	(³)	45.5	.....	17.8	.....	18	
15,925	15,420	7,426	1,559	12	6,423	505	19				
17,832	.....	627	567	.....	9,370	.....	20	
23,435	.....	967	1,529	.....	11,896	.....	21	
89.9	83.8	75.6	84.1	95.4	88.2	87.3	22				
77.0	.....	66.6	91.6	.....	79.7	.....	23	
72.9	.....	48.5	89.4	.....	74.3	.....	24	
421,314	410,880	82,372	45,420	1,170	281,918	10,434	25				
404,958	395,423	77,280	43,930	1,025	273,188	9,535	26				
16,356	15,457	5,092	1,490	145	8,730	899	27				
1,516,140	.....	1,273,820	21,275	.....	111,368	.....	28	
763,890	.....	500,202	49,971	.....	149,207	.....	29	
-72.2	.....	-93.5	113.5	.....	153.1	.....	30	
4.26	4.33	2.71	4.64	4.45	5.18	2.63	31				
19.59	.....	678.12	3.16	.....	2.41	.....	32	
8.84	.....	266.21	3.45	.....	3.23	.....	33	
5.08	5.17	3.58	5.52	4.66	5.87	3.01	34				
432,210	421,676	87,728	46,755	2,170	285,023	10,534	35				
4.15	4.22	2.67	4.28	7.41	5.10	2.54	36				
Primary	Supplemental	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental	Primary	Supplemental		
Enterprises		Enterprises		Enterprises		Enterprises		Enterprises			
249	7	236	5	104	17	5	110	4	13	37	
78,174	7,707	74,822	7,633	20,580	8,051	(⁵) 1	251	45,940	4,267	3,352	(⁵) 2
13,197	396	12,813	385	4,999	1,410	(⁵)	95	6,309	60	384	(⁵)
0.17	0.05	0.17	0.05	0.24	0.18	(⁵)	0.38	0.14	0.01	0.11	(⁵)
12,562	357	12,183	357	250	550	337	11,383	20	379
0.27	0.05	0.28	0.05	0.14	0.13	0.10	0.31	(⁵)	0.13
46,987	7,476	46,000	7,476	2,017	4,252	3,366	39,731	4,110	2,987
0.26	0.05	0.26	0.05	0.12	0.13	0.10	0.29	(⁵)	0.13
8,841	8,745	8,745	96
39,562	39,562	39,562
285	7	271	5	123	21	5	122	4	14	2	
70,214	7,757	66,747	7,633	19,947	8,223	(⁵) 1	251	38,326	4,267	3,467	(⁵)
216,956	7,200	208,737	6,850	74,710	29,050	(⁵)	628	105,349	850	7,219	(⁵)
3.1	0.9	3.1	0.9	3.7	3.5	(⁵)	2.5	2.7	0.2	2.1	(⁵)
0.23	0.05	0.24	0.05	0.26	0.18	(⁵)	0.38	0.24	0.01	0.12	(⁵)
0.07	0.06	0.08	0.06	0.07	0.05	(⁵)	0.15	0.09	0.07	0.08	(⁵)
(⁵) 1	(⁵) 1	(⁵) 1
(⁵)	(⁵)	(⁵)
(⁵)	(⁵)	(⁵)
(⁵)	(⁵)	(⁵)

¹Data are included only in totals because less than 3 enterprises reported in the 1940 Census.
²Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons.
³Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 41 to 46, inclusive, relate to those enterprises only.
⁴Less than 1 cent.

CENSUS OF IRRIGATION — WYOMING

DRAINAGE BASIN TABLE II.— ENTERPRISES AND IRRIGATION

ITEM <small>(For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)</small>	STATE TOTAL	MISSOURI RIVER							
		Total ¹	Yellowstone River						
			Total	Clarks Fork (12)	Big Horn River				
					Total	Direct ² (10)	Popo Agie River (31)	Wind River (25)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	3,391	2,308	1,168	64	685	97	127	109
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	564	611	589	230	748	713	614	895
3	Diversion dams.....1940..total number.....	4,205	2,955	960	104	458	70	51	56
4	.....1930..total number.....	2,406	1,452	402	2	290	13	16	50
5	.....1920..total number.....	2,066	1,546	565	.....	266	12	37	7
6	(a) Concrete and masonry.....1940..number.....	257	215	83	.....	49	6	23	10
7	(b) Timber.....1940..number.....	528	329	91	36	31	6	2	13
8	(c) Earth and rock.....1940..number.....	2,673	1,916	540	20	224	28	22	17
9	(d) Other, mixed, and not reported.....1940..number.....	747	505	246	48	154	30	4	16
10	Main canals and laterals.....1940..total length, miles.....	11,762.1	6,799.3	4,219.4	77.3	2,987.1	307.5	689.1	420.8
11	.....1930..total length, miles.....	10,775	7,563	4,020	48	3,166	149	244	949
12	.....1920..total length, miles.....	12,051	8,603	4,150	18	2,725	233	304	246
13	(a) Earth.....1940..length, miles.....	11,715	8,748	4,193	77	2,966	305	689	416
14	(b) Lined.....1940..length, miles.....	47.1	45.3	26.4	0.3	21.1	2.5	1.1	4.8
15	.....1940..capacity, c.f.s. ⁴	46,366	32,972	16,472	347	11,907	1,432	893	3,179
16	.....1930..capacity, c.f.s. ⁴	35,811	25,549	13,603	415	11,084	623	721	4,070
17	.....1920..capacity, c.f.s. ⁴	39,009	27,977	12,459	38	8,202	758	605	1,005
18	Pipe lines ⁵.....1940..total length, miles.....	70.3	67.6	50.2	0.5	42.1	10.2	5.5	2.0
19	.....1930..total length, miles.....	14.1	11.7	2.5	0.3	.....	.....	0.8	0.4
20	.....1920..total length, miles.....	17.9	13.7	10.4	.....	9.9	4.9	2.0	.....
21	(a) Concrete.....1940..length, miles.....	13.8	13.6	9.1	0.3	8.6	.....	.....	0.7
22	(b) Metal.....1940..length, miles.....	38.0	36.1	27.9	0.2	20.5	8.5	4.5	1.3
23	(c) Wood-stave.....1940..length, miles.....	13.0	12.5	10.3	.....	10.2	1.5	0.8	.....
24	(d) Other.....1940..length, miles.....	5.5	5.4	2.9	.....	2.8	0.2	0.2	.....
25	Storage dams.....1940..total number.....	319	253	103	2	42	12	8	7
26	.....1930..total number.....	212	186	46	.....	29	2	.....	5
27	.....1920..total number.....	301	252	79	.....	30	1	.....	1
28	(a) Concrete and masonry.....1940..number.....	12	11	3	.....	1	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	277	224	98	2	40	12	2	7
30	(c) Other, mixed, and not reported.....1940..number.....	30	18	2	.....	1	.....	1	.....
31	Reservoirs.....1940..total number.....	334	275	107	2	51	21	3	6
32	(a) 1-99 acre-feet capacity.....1940..number.....	179	152	55	1	22	15	.....	.....
33	(b) 100-999 acre-feet capacity.....1940..number.....	81	66	22	.....	13	6	.....	2
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	74	57	30	1	16	.....	3	4
35	.....1940..total capacity, ac.-ft. ⁶	3,379,957	2,370,251	809,238	(?)	731,701	1,730	7,086	198,750
36	.....1930..total number.....	214	182	61	.....	40	4	.....	5
37	.....1930..total capacity, ac.-ft.....	3,051,745	2,145,073	558,543	.....	502,075	246	.....	38,435
38	Wells, flowing.....1940..number.....	36	32	19	.....	14	10	1	.....
39	.....1930..number.....	6	5	4	.....	4	2	.....	.....
40	.....1920..number.....	7	5	3	.....	1	.....	.....	.....
41	.....1940..yield, g.p.m.....	3,830	3,769	2,464	.....	2,286	1,096	(?)	.....
42	.....1930..yield, g.p.m.....	2,205	2,085	1,965	.....	1,965	950	.....	.....
43	.....1920..yield, g.p.m.....	46	46	6	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	94	89	21	.....	8	6	.....	.....
45	.....1930..number.....	11	8	.....	.....	.....	.....	.....	.....
46	.....1920..number.....	16	16	4	.....	1	1	.....	.....
47	.....1940..yield, g.p.m.....	60,522	60,440	4,075	.....	2,565	1,565	.....	.....
48	.....1930..yield, g.p.m.....	8,280	7,870	.....	.....	.....	.....	.....	.....
49	.....1920..yield, g.p.m.....	8,020	8,020	955	.....	950	950	.....	.....
50	Pumping plants.....1940..total number.....	224	210	78	.....	38	18	.....	.....
51	.....1930..total number.....	61	52	9	.....	5	5	.....	.....
52	Prime movers.....1940..capacity, hp.....	4,057	4,057	1,427	.....	902	216	.....	.....
53	.....1930..capacity, hp.....	912	878	148	.....	93	93	.....	.....
54	.....1920..capacity, hp.....	1,304	1,260	792	.....	368	319	3	.....
55	(a) Electric.....1940..number.....	37	36	20	.....	14	11	.....	.....
56	.....1940..capacity, hp.....	401	396	158	.....	131	105	.....	.....
57	(b) Internal-combustion.....1940..number.....	160	151	51	.....	23	7	.....	.....
58	.....1940..capacity, hp.....	3,547	3,478	1,258	.....	769	111	.....	.....
59	(c) Other.....1940..number.....	27	23	7	.....	1	.....	.....	.....
60	.....1940..capacity, hp.....	204	183	11	.....	(?)	.....	.....	.....
61	Pumps.....1940..total number.....	230	218	84	.....	38	18	1	.....
62	.....1930..number.....	65	56	10	.....	5	5	.....	.....
63	.....1920..number.....	70	65	30	.....	22	17	1	.....
64	.....1940..capacity, g.p.m.....	209,559	206,137	66,753	.....	46,623	12,415	260	.....
65	.....1930..capacity, g.p.m.....	86,905	83,071	11,180	.....	4,240	4,240	.....	.....
66	.....1920..capacity, g.p.m.....	39,725	38,220	15,955	.....	9,950	6,990	175	.....
67	(a) Centrifugal.....1940..number.....	153	147	65	.....	33	14	(?)	1
68	.....1940..capacity, g.p.m.....	165,556	163,256	64,448	.....	46,338	12,150	(?)	.....
69	.....1940..average capacity, g.p.m.....	1,082	1,111	992	.....	1,404	868	.....	.....
70	(b) Turbine.....1940..number.....	44	44	3	.....	1	1	.....	.....
71	.....1940..capacity, g.p.m.....	41,073	41,073	1,710	.....	(?)	(?)	.....	.....
72	.....1940..average capacity, g.p.m.....	933	933	570	.....	(?)	(?)	.....	.....
73	(c) Plunger.....1940..number.....	25	20	14	.....	2	1	.....	.....
74	.....1940..capacity, g.p.m.....	692	610	545	.....	(?)	(?)	.....	.....
75	.....1940..average capacity, g.p.m.....	28	30	39	.....	(?)	(?)	.....	.....
76	(d) Other.....1940..number.....	8	7	2	.....	2	2	.....	.....
77	.....1940..capacity, g.p.m.....	2,238	1,198	50	.....	(?)	(?)	.....	.....
78	Pumping lift, from all sources.....1940..average, feet.....	30	29	29	.....	29	33	10	.....
79	.....1930..average, feet.....	21	21	24	.....	9	9	.....	.....
80	.....1920..average, feet.....	31	31	42	.....	40	43	12	.....
81	from pumped wells.....1940..average, feet.....	46	46	53	.....	41	54	.....	.....
82	from surface sources.....1940..average, feet.....	20	18	21	.....	26	24	10	.....

¹Data for 1 enterprise in Niobrara River Drainage Basin (33) (number refers to separate map) are included with Missouri River Total.
²Data for 2 enterprises in Little Horn River Drainage Basin (9) (number refers to separate map) are included with Big Horn River "Direct" Drainage Basin (10).
³Includes interdrainage basin projects counted as independent enterprises in each basin into which they extend. For actual number of enterprises see State table 1.
⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — WYOMING

WORKS, 1940, 1930, AND 1920

MISSOURI RIVER—Continued														
Yellowstone River—Continued														
Big Horn River—Continued							Tongue River			Powder River				
Owl Creek	Cottonwood Creek	Gooseberry Creek	Nowood Creek	Greybull River	Shell Creek	Shoshone River	Total	Direct	Goose Creek	Total	Direct	South Fork	Middle Fork	
(44)	(18)	(17)	(19)	(15)	(74)	(11)		(6)	(8)		(5)	(24)	(22)	
54	23	15	97	53	39	71	210	139	71	209	19	9	31	1
357	203	322	192	1,232	351	1,992	408	342	538	361	291	357	386	2
42	22	14	69	67	42	25	161	119	42	237	13	5	33	3
20	.....	.....	68	26	4	24	56	6	30	54	1	.....	4	4
6	.....	.....	21	46	31	38	160	20	91	135	1	.....	19	5
.....	1	.....	.....	1	.....	.....	28	19	9	6	.....	.....	.....	6
1	.....	1	.....	3	2	3	13	8	5	11	.....	.....	11	7
35	17	7	28	50	14	6	95	73	22	201	13	5	5	8
6	4	6	41	13	26	8	25	19	6	19	.....	.....	17	9
122.0	33.0	58.1	176.4	245.2	128.1	806.9	600.7	377.2	223.5	554.3	32.2	15.0	118.2	10
135	.....	.....	171	304	133	877	407	70	249	382	23	.....	8	11
105	.....	.....	211	398	165	775	550	108	287	778	20	.....	51	12
122	33	58	175	245	126	798	599	376	223	551	32	15	117	13
.....	.....	0.1	1.4	0.2	2.1	8.9	1.7	1.2	0.5	3.3	0.2	.....	1.2	14
663	226	137	514	2,022	268	2,573	2,065	978	1,087	2,153	109	52	206	15
342	.....	.....	357	882	199	3,529	1,053	200	723	1,007	100	.....	8	16
279	.....	.....	388	1,276	433	3,079	1,534	359	874	2,509	72	.....	60	17
0.3	.....	.....	4.1	0.6	4.1	15.3	4.1	3.1	1.0	3.5	0.2	1.1	0.5	18
.....	.....	.....	.....	.....	.....	1.0	.....	.....	.....	.....	.....	.....	.....	19
0.1	.....	.....	0.2	.....	0.2	2.5	0.2	.....	.....	0.3	.....	.....	.....	20
.....	.....	.....	0.5	0.1	.....	7.3	0.2	0.1	0.1	.....	.....	.....	.....	21
0.1	.....	.....	2.1	0.4	.....	3.6	3.9	3.0	0.9	3.3	0.2	1.1	0.5	22
0.2	.....	.....	1.2	.....	4.1	2.4	.....	.....	.....	0.1	.....	.....	.....	23
.....	.....	.....	0.3	0.1	.....	2.0	.....	.....	.....	0.1	.....	.....	.....	24
2	2	.....	4	2	3	7	34	19	15	25	6	3	.....	25
.....	.....	.....	4	.....	3	4	7	1	4	9	.....	.....	.....	26
.....	.....	.....	5	1	5	9	25	.....	21	19	.....	.....	.....	27
.....	.....	.....	.....	.....	.....	1	1	1	.....	1	.....	.....	.....	28
2	2	.....	4	2	3	6	33	18	15	23	6	3	.....	29
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	30
4	2	.....	2	2	3	8	29	16	13	25	5	4	2	31
3	.....	.....	.....	.....	2	2	17	11	6	15	4	3	2	32
1	1	.....	2	.....	.....	1	2	.....	2	7	1	1	.....	33
.....	1	.....	.....	2	1	5	10	5	5	3	.....	.....	.....	34
921	(?)	.....	(?)	(?)	3,220	463,515	43,479	30,085	13,394	32,510	510	234	(?)	35
2	.....	.....	10	.....	1	5	11	1	8	9	.....	.....	.....	36
400	.....	.....	1,120	.....	1,610	459,570	47,544	25	47,510	4,924	.....	.....	.....	37
1	.....	.....	2	.....	.....	.....	1	1	.....	4	4	.....	.....	38
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
(?)	.....	.....	(?)	.....	.....	.....	(?)	(?)	.....	2	.....	.....	.....	40
1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	148	148	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
1	.....	.....	1	.....	.....	.....	4	3	1	9	5	.....	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
(?)	.....	.....	(?)	.....	.....	.....	2	.....	(?)	1	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	300	285	(?)	1,210	85	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
4	3	.....	9	1	.....	3	22	13	9	18	6	.....	1	50
.....	.....	.....	.....	(?)	.....	.....	1	.....	.....	3	.....	.....	.....	51
469	61	.....	128	.....	.....	8	274	147	127	251	58	.....	(?)	52
.....	.....	.....	26	.....	.....	.....	75	.....	50	349	.....	.....	.....	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	.....	.....	.....	54
.....	1	.....	.....	.....	.....	.....	.....	1	5	.....	.....	.....	.....	55
.....	(?)	.....	.....	.....	.....	.....	27	(?)	18	.....	.....	.....	.....	56
4	2	.....	9	1	.....	.....	15	11	4	13	1	.....	1	57
469	(?)	.....	128	(?)	.....	.....	246	137	109	243	(?)	.....	(?)	58
.....	.....	.....	.....	.....	.....	.....	1	1	.....	5	5	.....	.....	59
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	8	.....	.....	60
4	3	.....	9	1	.....	.....	(?)	(?)	.....	.....	.....	.....	.....	61
.....	.....	.....	.....	.....	.....	.....	22	13	9	24	6	.....	1	62
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	63
17,208	7,720	.....	7,300	(?)	.....	520	13,140	10,470	2,670	6,990	185	.....	(?)	64
.....	.....	.....	1,200	.....	.....	.....	435	.....	.....	6,505	.....	.....	.....	65
.....	.....	.....	.....	.....	.....	.....	4,700	.....	3,000	1,305	900	.....	.....	66
4	3	.....	9	1	.....	1	18	10	8	14	1	.....	.....	67
17,208	7,720	.....	7,300	(?)	.....	(?)	12,940	10,185	2,655	5,270	(?)	.....	.....	68
4,302	2,573	.....	811	(?)	.....	(?)	713	1,018	332	376	(?)	.....	.....	69
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	70
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	.....	.....	(?)	71
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(?)	72
.....	.....	.....	.....	.....	.....	.....	4	3	1	8	5	.....	.....	73
.....	.....	.....	.....	.....	.....	.....	300	285	(?)	190	85	.....	.....	74
.....	.....	.....	.....	.....	.....	.....	75	95	(?)	24	17	.....	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77
38	24	.....	23	(?)	.....	30	19	21	16	41	94	.....	(?)	78
.....	.....	.....	.....	.....	.....	.....	8	.....	.....	54	.....	.....	.....	79
.....	.....	.....	58	.....	.....	.....	30	.....	.....	51	26	.....	.....	80
(?)	.....	.....	(?)	.....	.....	.....	26	33	(?)	75	110	.....	.....	81
50	24	.....	25	(?)	.....	30	17	17	18	13	12	.....	(?)	82

⁸ Includes siphons and farm pipe lines reported.
⁹ Total capacity of all reservoirs regardless of size.
⁷ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION — WYOMING

DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	MISSOURI RIVER—Continued								
	Yellowstone River—Continued			Little Missouri River (3)	Total	Cheyenne River			
	Powder River—Continued					Total	Direct (2)	Redwater Creek (1)	
	Crazy Woman Creek (20)	Clear Creek (7)	Little Powder River (4)						
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	43	100	7	5	71	34	25	9
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	217	448	70	85	132	61	60	65
3	Diversion dams.....1940..total number.....	38	135	13	9	56	34	26	8
4	1930..total number.....	9	12	.....	.....	23	5	5	.....
5	1920..total number.....	17	46	.....	.....	71	24	24	.....
6	(a) Concrete and masonry.....1940..number.....	1	5	.....	.....	3	1	.....	1
7	(b) Timber.....1940..number.....	.....	.....	.....	.....	1	1	.....	1
8	(c) Earth and rock.....1940..number.....	37	128	13	1	50	30	25	5
9	(d) Other, mixed, and not reported.....1940..number.....	.....	2	.....	8	2	2	1	1
10	Main canals and laterals.....1940..total length, miles.....	96.4	286.5	6.0	6.0	87.2	35.2	27.2	8.0
11	1930..total length, miles.....	41	234	.....	.....	46	6	6	.....
12	1920..total length, miles.....	123	406	.....	1	264	94	94	.....
13	(a) Earth.....1940..length, miles.....	96	285	6	6	87	35	27	8
14	(b) Lined.....1940..length, miles.....	0.4	1.5	.....	.....	0.2	0.2	0.2	.....
15	1940..capacity, c.f.s. ²	306	1,219	261	23	225	93	64	29
16	1930..capacity, c.f.s. ²	50	741	.....	.....	72	5	5	.....
17	1920..capacity, c.f.s. ²	525	1,468	.....	.....	1,203	397	397	.....
18	Pipe lines ³.....1940..total length, miles.....	0.5	1.1	0.1	.....	1.4	0.8	0.4	0.4
19	1930..total length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....
20	1920..total length, miles.....	.....	0.3	.....	.....	0.2	.....	.....	.....
21	(a) Concrete.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....
22	(b) Metal.....1940..length, miles.....	0.5	0.9	0.1	.....	0.4	0.3	0.2	0.1
23	(c) Wood-stave.....1940..length, miles.....	.....	0.1	.....	.....	0.5	.....	.....	.....
24	(d) Other.....1940..length, miles.....	.....	0.1	.....	.....	0.5	0.5	0.2	0.3
25	Storage dams.....1940..total number.....	8	5	3	4	14	4	4	.....
26	1930..total number.....	3	3	.....	.....	10	4	4	.....
27	1920..total number.....	2	9	.....	1	40	25	25	.....
28	(a) Concrete and masonry.....1940..number.....	.....	1	.....	.....	.....	.....	.....	.....
29	(b) Earth and rock.....1940..number.....	8	3	3	4	14	4	4	.....
30	(c) Other, mixed, and not reported.....1940..number.....	.....	1	.....	.....	.....	.....	.....	.....
31	Reservoirs.....1940..total number.....	7	4	3	5	16	6	6	.....
32	(a) 1-99 acre-feet capacity.....1940..number.....	5	.....	1	4	7	4	4	.....
33	(b) 100-999 acre-feet capacity.....1940..number.....	2	1	2	1	8	2	2	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	.....	3	.....	.....	1	.....	.....	.....
35	1940..total capacity, ac.-ft. ⁴	675	30,395	596	634	4,382	427	427	.....
36	1930..total capacity, ac.-ft.....	3	2	.....	.....	4	1	1	.....
37	1920..total capacity, ac.-ft.....	567	4,354	.....	.....	1,976	40	40	.....
38	Wells, flowing.....1940..number.....	.....	.....	.....	.....	3	2	2	.....
39	1930..number.....	.....	.....	.....	.....	1	1	1	.....
40	1920..number.....	.....	.....	.....	.....	.....	.....	.....	.....
41	1940..yield, g.p.m.....	.....	.....	.....	.....	210	(⁵)	(⁵)	.....
42	1930..yield, g.p.m.....	.....	.....	.....	.....	120	120	120	.....
43	1920..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	2	2	.....	.....	1	1	1	.....
45	1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....
46	1920..number.....	.....	.....	.....	.....	1	1	1	.....
47	1940..yield, g.p.m.....	(⁵)	(⁵)	.....	.....	(⁵)	(⁵)	(⁵)	.....
48	1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
49	1920..yield, g.p.m.....	.....	.....	.....	.....	2,000	2,000	2,000	.....
50	Pumping plants.....1940..total number.....	7	4	.....	.....	17	4	4	.....
51	1930..total number.....	.....	.....	.....	.....	1	.....	.....	.....
52	Prime movers.....1940..capacity, hp.....	142	31	.....	.....	340	42	42	.....
53	1930..capacity, hp.....	.....	.....	.....	.....	16	.....	.....	.....
54	1920..capacity, hp.....	.....	298	.....	.....	119	103	103	.....
55	(a) Electric.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....
56	1940..capacity, hp.....	.....	.....	.....	.....	.....	.....	.....	.....
57	(b) Internal-combustion.....1940..number.....	7	4	.....	.....	16	3	3	.....
58	1940..capacity, hp.....	142	31	.....	.....	339	41	41	.....
59	(c) Other.....1940..number.....	.....	.....	.....	.....	1	1	1	.....
60	1940..capacity, hp.....	.....	.....	.....	.....	(⁵)	(⁵)	(⁵)	.....
61	Pumps.....1940..total number.....	7	10	.....	.....	18	4	4	.....
62	1930..number.....	.....	.....	.....	.....	1	.....	.....	.....
63	1920..number.....	.....	2	.....	.....	5	4	4	.....
64	1940..capacity, g.p.m.....	3,670	1,665	.....	.....	19,144	954	954	.....
65	1930..capacity, g.p.m.....	.....	.....	.....	.....	1,100	.....	.....	.....
66	1920..capacity, g.p.m.....	.....	200	.....	.....	4,491	3,391	3,391	.....
67	(a) Centrifugal.....1940..number.....	5	8	.....	.....	17	3	3	.....
68	1940..capacity, g.p.m.....	3,590	1,580	.....	.....	19,140	950	950	.....
69	1940..average capacity, g.p.m.....	718	198	.....	.....	1,126	317	317	.....
70	(b) Turbine.....1940..number.....	.....	1	.....	.....	.....	.....	.....	.....
71	1940..capacity, g.p.m.....	.....	(⁵)	.....	.....	.....	.....	.....	.....
72	1940..average capacity, g.p.m.....	.....	(⁵)	.....	.....	.....	.....	.....	.....
73	(c) Plunger.....1940..number.....	2	1	.....	.....	1	1	1	.....
74	1940..capacity, g.p.m.....	(⁵)	(⁵)	.....	.....	(⁵)	(⁵)	(⁵)	.....
75	1940..average capacity, g.p.m.....	(⁵)	(⁵)	.....	.....	(⁵)	(⁵)	(⁵)	.....
76	(d) Other.....1940..number.....	.....	.....	.....	.....	.....	.....	.....	.....
77	1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
78	Pumping lift, from all sources.....1940..average, feet.....	12	16	.....	.....	15	18	18	.....
79	1930..average, feet.....	.....	.....	.....	.....	12	.....	.....	.....
80	1920..average, feet.....	.....	54	.....	.....	18	20	20	.....
81	from pumped wells.....1940..average, feet.....	(⁵)	(⁵)	.....	.....	(⁵)	(⁵)	(⁵)	.....
82	from surface sources.....1940..average, feet.....	11	16	.....	.....	13	13	13	.....

¹Data for 2 enterprises in Great Divide Drainage Basin (50) (number refers to separate map) are included with North Platte River "Direct" Drainage Basin (32).
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
³Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION — WYOMING

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WORKS, 1940, 1930, AND 1920—Continued

MISSOURI RIVER—Continued													
Cheyenne River—Con.	North Platte River												
South Fork (21)	Total	Direct ¹ (32)	Beaver Creek (62)	Encampment Creek (61)	Spring Creek (60)	Pass Creek (56)	Medicine Bow River						
							Total	Direct	Rock Creek (71)	Little Medicine Bow River			
										Total	Direct (73)	Sheep Creek (72)	
37	979	311	25	47	19	21	90	40	22	28	8	14	1
198	708	627	299	405	790	681	902	700	2,060	280	261	195	2
22	1,747	380	45	88	48	50	215	111	74	30	9	13	3
18	853	14	14	16	32	37	67	66	.....	1	.....	.....	4
47	865	24	12	13	3	3	113	112	.....	1	.....	.....	5
2	125	12	.....	1	.....	.....	3	1	2	.....	.....	.....	6
.....	236	26	3	13	13	17	123	79	44	.....	.....	.....	7
20	1,197	277	35	50	11	5	83	27	28	28	7	13	8
.....	249	65	7	24	23	28	6	4	.....	2	2	.....	9
52.0	4,351.8	1,353.4	91.0	167.0	92.0	102.0	456.5	199.1	181.3	76.1	19.0	37.1	10
40	3,314	578	22	58	65	42	347	344	.....	3	.....	.....	11
170	3,980	457	63	59	124	93	479	472	.....	7	.....	.....	12
52	4,334	1,349	91	167	92	102	451	194	181	76	19	37	13
.....	17.8	4.4	.....	.....	.....	.....	5.5	5.1	0.3	0.1	.....	0.1	14
132	15,983	6,416	188	402	337	384	1,387	467	788	132	41	45	15
67	11,544	2,251	47	211	202	123	663	654	.....	9	.....	.....	16
806	13,878	3,134	50	106	343	293	939	927	.....	12	.....	.....	17
0.6	13.2	7.9	.....	.....	.....	.....	1.3	0.1	1.2	.....	.....	.....	18
.....	9.2	6.7	.....	.....	.....	.....	0.5	0.5	.....	.....	.....	.....	19
0.2	3.1	0.2	.....	0.1	.....	.....	1.5	1.0	.....	0.5	.....	.....	20
.....	4.3	3.3	.....	.....	.....	.....	0.2	.....	0.2	.....	.....	.....	21
0.1	5.7	4.0	.....	.....	.....	.....	0.1	0.1	.....	.....	.....	.....	22
0.5	1.2	0.2	.....	.....	.....	.....	1.0	.....	1.0	.....	.....	.....	23
.....	2.0	0.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
10	117	34	10	.....	.....	2	6	2	3	1	.....	.....	25
6	99	3	3	.....	.....	2	1	4	.....	.....	.....	.....	26
15	113	4	2	1	2	.....	13	13	.....	.....	.....	.....	27
.....	8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
10	93	28	10	.....	.....	2	6	2	3	1	.....	.....	29
.....	16	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
10	132	51	11	2	.....	2	6	1	4	1	.....	.....	31
3	83	39	6	2	.....	1	2	1	1	.....	.....	.....	32
6	23	5	5	.....	.....	1	1	.....	.....	1	.....	.....	33
1	26	7	.....	.....	.....	.....	3	.....	3	.....	.....	.....	34
3,955	1,550,380	1,166,759	1,348	(5)	.....	(5)	10,295	(5)	10,040	(5)	.....	.....	35
3	98	3	3	.....	.....	2	2	2	.....	.....	.....	.....	36
1,936	1,575,815	1,260,570	286	.....	832	4	3,337	3,337	.....	.....	.....	.....	37
1	8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	40
(5)	751	(5)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42
.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	24	17	.....	.....	.....	.....	1	1	.....	.....	.....	.....	44
.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	9	2	.....	.....	2	.....	3	3	.....	.....	.....	.....	46
.....	16,041	13,968	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	47
.....	370	365	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	4,330	3,180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
13	68	57	.....	.....	.....	.....	1	1	.....	.....	.....	.....	50
1	36	21	.....	.....	.....	.....	1	1	.....	.....	.....	.....	51
298	1,095	1,029	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	52
16	614	477	.....	.....	.....	.....	2	2	.....	.....	.....	.....	53
16	329	240	.....	.....	.....	.....	33	33	.....	.....	.....	.....	54
.....	8	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
.....	107	96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	56
13	49	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57
298	895	855	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58
.....	11	7	.....	.....	.....	.....	1	1	.....	.....	.....	.....	59
.....	93	78	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	60
14	68	57	.....	.....	.....	.....	1	1	.....	.....	.....	.....	61
1	39	22	.....	.....	.....	.....	1	1	.....	.....	.....	.....	62
1	28	11	.....	.....	1	.....	12	12	.....	.....	.....	.....	63
18,190	76,287	71,331	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	64
1,100	62,991	51,752	.....	.....	.....	.....	450	450	.....	.....	.....	.....	65
1,100	17,039	14,602	.....	.....	.....	.....	787	787	.....	.....	.....	.....	66
14	56	48	.....	.....	.....	.....	1	1	.....	.....	.....	.....	67
18,190	70,718	66,325	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	68
1,299	1,263	1,263	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	69
.....	4	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70
.....	4,400	3,850	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71
.....	1,100	1,263	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	72
.....	4	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	73
.....	41	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	74
.....	10	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75
.....	4	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76
.....	1,128	1,120	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77
13	16	16	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	78
12	20	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	79
10	22	25	.....	.....	.....	.....	18	18	.....	.....	.....	.....	80
.....	19	19	.....	.....	.....	.....	(5)	(5)	.....	.....	.....	.....	81
13	15	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	82

¹Total capacity of all reservoirs regardless of size.

⁵Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

IPEM (For definitions and explanations, see text. Major-basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)		MISSOURI RIVER—Continued							
		North Platte River—Continued					Laramie River		
		Medicine Bow River—Con.	Sweetwater River	Box Elder Creek	La Prele Creek	La Bonte Creek			Total	Direct
		Little Medicine Bow River—Con.					Muddy Creek (68)	(38)			(37)	(36)	(35)	(64)	Little Laramie River (63)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	6	46	25	26	35	283	107	78
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	505	386	130	632	211	1,004	1,771	776
3	Diversion dams.....1940..total number.....	8	90	29	56	71	556	217	151
4	.....1930..total number.....	1	21	7	4	9	368	62	63
5	.....1920..total number.....	1	42	13	11	40	358	40	42
6	(a) Concrete and masonry.....1940..number.....	.....	48	3	6	21	12	3	4
7	(b) Timber.....1940..number.....	.....	2	.....	6	13	20	2	17
8	(c) Earth and rock.....1940..number.....	8	38	22	36	29	456	183	105
9	(d) Other, mixed, and not reported.....1940..number.....	.....	2	4	8	8	68	29	25
10	Main canals and laterals.....1940..total length, miles.....	20.0	206.3	50.0	231.1	115.5	1,261.5	614.0	299.1
11	.....1930..total length, miles.....	3	100	87	192	50	1,100	494	206
12	.....1920..total length, miles.....	7	161	84	143	100	1,243	515	156
13	(a) Earth.....1940..length, miles.....	20	206	50	231	113	1,257	613	299
14	(b) Lined.....1940..length, miles.....	.....	0.3	.....	0.1	2.5	4.5	1.0	0.1
15	.....1940..capacity, c.f.s. ¹	46	300	273	242	167	5,239	3,694	885
16	.....1930..capacity, c.f.s. ¹	9	215	21	306	98	5,584	4,347	614
17	.....1920..capacity, c.f.s. ¹	12	174	44	326	54	5,933	1,718	435
18	Pipe lines ².....1940..total length, miles.....	.....	0.2	.....	.....	.....	1.8	1.0	0.6
19	.....1930..total length, miles.....	.....	0.6	.....	0.1	.....	.....	.....	.....
20	.....1920..total length, miles.....	0.5	.....	.....	.....	.....	0.4	0.3	.....
21	(a) Concrete.....1940..length, miles.....	.....	.....	.....	.....	.....	0.8	0.5	0.2
22	(b) Metal.....1940..length, miles.....	.....	0.2	.....	.....	.....	1.0	0.5	0.4
23	(c) Wood-stave.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....
24	(d) Other.....1940..length, miles.....	.....	.....	.....	.....	.....	.....	.....	.....
25	Storage dams.....1940..total number.....	1	4	1	1	.....	50	20	4
26	.....1930..total number.....	.....	9	3	4	.....	20	5	.....
27	.....1920..total number.....	.....	1	3	3	.....	40	7	.....
28	(a) Concrete and masonry.....1940..number.....	.....	.....	.....	.....	.....	5	2	.....
29	(b) Earth and rock.....1940..number.....	1	4	1	.....	.....	38	17	1
30	(c) Other, mixed, and not reported.....1940..number.....	.....	.....	.....	.....	.....	7	1	3
31	Reservoirs.....1940..total number.....	1	8	1	1	.....	44	21	2
32	(a) 1-99 acre-feet capacity.....1940..number.....	.....	5	1	.....	.....	25	9	2
33	(b) 100-999 acre-feet capacity.....1940..number.....	1	3	.....	.....	.....	8	7	.....
34	(c) 1,000 and over acre-feet capacity.....1940..number.....	.....	.....	.....	1	.....	11	5	(⁴)
35	.....1940..total capacity, ac.-ft. ²	(⁴)	1,805	(⁴)	(⁴)	.....	326,235	312,189	(⁴)
36	.....1930..total number.....	.....	5	3	1	.....	23	5	2
37	.....1930..total capacity, ac.-ft.....	.....	796	600	20,000	.....	249,223	236,500	200
38	Wells, flowing.....1940..number.....	.....	.....	.....	.....	.....	7	7	.....
39	.....1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....
40	.....1920..number.....	.....	.....	1	.....	.....	.....	.....	.....
41	.....1940..yield, g.p.m.....	.....	.....	.....	.....	.....	750	750	.....
42	.....1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
43	.....1920..yield, g.p.m.....	.....	.....	40	.....	.....	.....	.....	.....
44	Wells, pumped.....1940..number.....	.....	.....	.....	.....	.....	6	4	.....
45	.....1930..number.....	.....	.....	.....	.....	.....	.....	.....	.....
46	.....1920..number.....	.....	.....	.....	.....	.....	2	.....	.....
47	.....1940..yield, g.p.m.....	.....	.....	.....	.....	.....	1,998	1,593	.....
48	.....1930..yield, g.p.m.....	.....	.....	.....	.....	.....	.....	.....	.....
49	.....1920..yield, g.p.m.....	.....	.....	.....	.....	.....	1,150	.....	.....
50	Pumping plants.....1940..total number.....	.....	.....	.....	.....	.....	9	6	.....
51	.....1930..total number.....	.....	1	.....	.....	.....	.....	.....	.....
52	Prime movers.....1940..capacity, hp.....	.....	.....	.....	.....	.....	54	43	.....
53	.....1930..capacity, hp.....	.....	30	.....	.....	.....	.....	.....	.....
54	.....1920..capacity, hp.....	.....	.....	.....	.....	.....	6	.....	.....
55	(a) Electric.....1940..number.....	.....	.....	.....	.....	.....	1	1	.....
56	.....1940..capacity, hp.....	.....	.....	.....	.....	.....	(⁴)	(⁴)	.....
57	(b) Internal-combustion.....1940..number.....	.....	.....	.....	.....	.....	5	4	.....
58	.....1940..capacity, hp.....	.....	.....	.....	.....	.....	40	32	.....
59	(c) Other.....1940..number.....	.....	.....	.....	.....	.....	3	1	.....
60	.....1940..capacity, hp.....	.....	.....	.....	.....	.....	13	(⁴)	.....
61	Pumps.....1940..total number.....	.....	.....	.....	.....	.....	9	6	.....
62	.....1930..number.....	.....	1	.....	.....	.....	.....	.....	.....
63	.....1920..number.....	.....	.....	.....	.....	.....	3	1	.....
64	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	2,881	2,468	.....
65	.....1930..capacity, g.p.m.....	.....	1,200	.....	.....	.....	.....	.....	.....
66	.....1920..capacity, g.p.m.....	.....	.....	.....	.....	.....	1,650	500	.....
67	(a) Centrifugal.....1940..number.....	.....	.....	.....	.....	.....	6	5	.....
68	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	2,318	1,918	.....
69	.....1940..average capacity, g.p.m.....	.....	.....	.....	.....	.....	386	384	.....
70	(b) Turbine.....1940..number.....	.....	.....	.....	.....	.....	1	1	.....
71	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁴)	(⁴)	.....
72	.....1940..average capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁴)	(⁴)	.....
73	(c) Plunger.....1940..number.....	.....	.....	.....	.....	.....	1	.....	.....
74	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁴)	.....	.....
75	.....1940..average capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁴)	.....	.....
76	(d) Other.....1940..number.....	.....	.....	.....	.....	.....	1	.....	.....
77	.....1940..capacity, g.p.m.....	.....	.....	.....	.....	.....	(⁴)	.....	.....
78	Pumping lift, from all sources.....1940..average, feet.....	.....	.....	.....	.....	.....	19	19	.....
79	.....1930..average, feet.....	.....	15	.....	.....	.....	.....	.....	.....
80	.....1920..average, feet.....	.....	.....	.....	.....	.....	13	10	.....
81	from pumped wells.....1940..average, feet.....	.....	.....	.....	.....	.....	20	20	.....
82	from surface sources.....1940..average, feet.....	.....	.....	.....	.....	.....	18	18	.....

¹Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

²Includes siphons and farm pipe lines reported.

CENSUS OF IRRIGATION - WYOMING

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WORKS, 1940, 1930, AND 1920—Continued

MISSOURI RIVER—Continued									COLORADO RIVER				
North Platte River—Continued					South Platte River				Green River				
Laramie River—Continued			Rawhide Creek (34)	Horse Creek (53)	Total	Cache la Poudre River (70)	Crow Creek (66)	Lodgepole Creek (65)	Total	Direct (40)	Horse Creek (29)		
Sybilie Creek (55)	North Laramie River (52)	Chugwater Creek (54)											
29	50	19	3	48	84	24	22	38	676	105	11	1	
182	156	1,101	113	671	226	277	263	251	499	537	1,412	2	
77	68	43	4	115	192	109	45	38	788	72	6	3	
55	56	41	2	63	171	82	72	17	714	74	11	4	
98	101	37	13	46	42	25	8	9	361	23	6	5	
.....	3	2	.....	18	4	.....	1	3	19	.....	.....	6	
.....	1	1	.....	1	1	.....	.....	1	156	15	3	7	
66	64	38	4	91	187	109	44	34	461	53	3	8	
11	1	2	.....	6	.....	.....	.....	.....	152	4	.....	9	
55.0	123.2	170.2	2.0	223.5	127.9	53.0	35.7	39.2	1,991.0	269.2	53.0	10	
65	97	74	3	215	177	84	64	29	2,323	343	97	11	
122	101	107	22	210	204	97	47	60	2,411	180	82	12	
55	120	170	2	223	127	53	35	39	1,990	269	53	13	
.....	3.2	0.2	.....	0.5	0.9	.....	0.7	0.2	1.0	0.2	.....	14	
113	264	283	5	643	266	76	97	93	7,995	1,540	238	15	
67	194	101	27	589	324	139	159	26	7,652	1,492	94	16	
297	462	152	42	774	429	58	115	256	7,495	1,403	403	17	
.....	0.1	0.1	.....	2.0	2.8	.....	1.7	1.1	1.4	.....	.....	18	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19	
.....	.....	0.1	.....	0.1	0.2	.....	0.2	.....	0.2	0.1	.....	20	
.....	0.1	.....	.....	0.4	2.1	.....	1.5	0.6	1.4	.....	.....	21	
.....	.....	.....	.....	.....	0.5	.....	.....	0.5	.....	.....	.....	22	
.....	.....	.....	.....	1.6	.....	.....	.....	.....	.....	.....	.....	23	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	
11	12	3	.....	9	14	9	4	1	58	9	.....	25	
.....	6	3	.....	16	20	10	5	5	18	1	.....	26	
11	6	10	2	26	22	7	4	11	40	1	.....	27	
.....	3	.....	.....	1	.....	.....	.....	.....	1	.....	.....	28	
11	6	3	.....	4	14	9	4	1	46	9	.....	29	
.....	3	.....	.....	4	.....	.....	.....	.....	11	.....	.....	30	
11	7	3	.....	6	14	9	3	2	51	8	.....	31	
11	1	2	.....	2	2	.....	.....	2	26	8	.....	32	
.....	.....	1	.....	.....	12	9	3	.....	12	.....	.....	33	
.....	6	.....	.....	4	.....	.....	.....	.....	13	.....	.....	34	
277	13,476	193	.....	28,393	5,527	3,672	1,825	(*)	141,841	240	.....	35	
1	5	4	.....	14	16	10	4	2	22	.....	.....	36	
20	6,574	235	.....	29,654	8,064	6,288	1,817	9	57,354	.....	.....	37	
.....	.....	.....	.....	.....	2	1	1	.....	4	.....	.....	38	
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	39	
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	40	
.....	.....	.....	.....	.....	(*)	(*)	(*)	.....	61	.....	.....	41	
.....	.....	.....	.....	.....	.....	.....	.....	.....	120	.....	.....	42	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43	
1	1	.....	.....	.....	43	.....	3	40	5	.....	.....	44	
.....	.....	.....	.....	.....	6	.....	.....	6	3	.....	.....	45	
.....	(*)	1	.....	.....	2	.....	.....	.....	2	.....	.....	46	
(*)	(*)	.....	.....	.....	40,320	.....	390	39,980	82	.....	.....	47	
.....	.....	.....	.....	.....	7,500	.....	.....	7,500	410	.....	.....	48	
.....	700	450	.....	.....	735	.....	.....	735	.....	.....	.....	49	
1	2	.....	.....	1	47	.....	7	40	12	7	.....	50	
(*)	(*)	.....	.....	(*)	6	.....	.....	6	9	.....	.....	51	
.....	.....	.....	.....	.....	1,195	.....	65	1,110	80	50	.....	52	
.....	.....	6	.....	.....	100	.....	.....	100	34	29	.....	53	
.....	.....	.....	.....	.....	20	.....	.....	20	44	22	.....	54	
.....	.....	.....	.....	1	8	.....	3	5	1	.....	.....	55	
.....	.....	.....	.....	(*)	131	.....	26	105	(*)	(*)	.....	56	
.....	(*)	1	.....	.....	35	.....	3	32	7	3	.....	57	
.....	(*)	.....	.....	.....	986	.....	56	930	54	39	.....	58	
(*)	(*)	1	.....	.....	4	.....	1	3	4	3	.....	59	
.....	.....	.....	.....	.....	78	.....	(*)	75	21	6	.....	60	
1	2	.....	.....	1	48	.....	7	41	10	4	.....	61	
.....	.....	.....	.....	.....	6	.....	.....	6	9	6	.....	62	
.....	.....	.....	.....	.....	2	.....	.....	2	2	4	.....	63	
(*)	(*)	1	.....	(*)	43,953	.....	3,973	39,980	3,222	2,140	.....	64	
.....	700	450	.....	.....	7,600	.....	.....	7,600	3,804	3,424	.....	65	
.....	.....	.....	.....	.....	735	.....	.....	735	1,505	1,505	.....	66	
.....	1	.....	.....	1	9	.....	4	5	4	3	.....	67	
.....	(*)	.....	.....	(*)	8,950	.....	3,850	5,100	2,100	1,100	.....	68	
.....	(*)	.....	.....	(*)	994	.....	962	1,020	525	367	.....	69	
.....	.....	.....	.....	.....	37	.....	1	36	.....	.....	.....	70	
.....	.....	.....	.....	.....	34,963	.....	(*)	34,880	.....	.....	.....	71	
.....	.....	.....	.....	.....	945	.....	(*)	969	.....	.....	.....	72	
(*)	.....	.....	.....	.....	1	.....	1	.....	5	.....	.....	73	
(*)	.....	.....	.....	.....	(*)	.....	(*)	.....	82	.....	.....	74	
.....	.....	.....	.....	.....	(*)	.....	(*)	.....	16	.....	.....	75	
.....	(*)	.....	.....	.....	1	.....	1	.....	.....	.....	.....	76	
(*)	(*)	.....	.....	(*)	58	.....	45	61	41	16	.....	78	
.....	.....	.....	.....	.....	26	.....	.....	26	18	12	.....	79	
.....	(*)	.....	.....	.....	12	.....	.....	12	34	39	.....	80	
(*)	(*)	.....	.....	(*)	62	.....	69	61	.....	.....	.....	81	
.....	.....	.....	.....	.....	28	.....	28	.....	41	16	.....	82	

*Total capacity of all reservoirs regardless of size.
 *Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - WYOMING

DRAINAGE BASIN TABLE II—ENTERPRISES AND IRRIGATION

ITEM (For definitions and explanations, see text. Major basin totals from 1930 and 1920 Censuses include figures for unidentified tributary basins. A map index-number is shown in parentheses for each drainage basin)	COLORADO RIVER—Continued						
	Green River—Continued						
	Cottonwood Creek (75)	New Fork (30)	South Piney Creek (41)	La Barge Creek (42)	Fontenelle Creek (43)	Sandy Creek (39)	Bitter Creek (49)
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
1 Enterprises.....1940..number.....	22	143	28	14	20	16	34
2 Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	1,218	432	1,066	486	248	1,342	67
3 Diversion dams.....1940..total number.....	35	105	50	19	29	12	10
4 1930..total number.....	28	83	10	14	5	.....	13
5 1920..total number.....	19	9	26	22	20	.....	3
6 (a) Concrete and masonry.....1940..number.....	2	1	.....	.....	2	2	.....
7 (b) Timber.....1940..number.....	28	10	40	3	1	1	.....
8 (c) Earth and rock.....1940..number.....	1	83	6	3	6	6	5
9 (d) Other, mixed, and not reported.....1940..number.....	4	11	4	13	20	3	5
10 Main canals and laterals.....1940..total length, miles.....	158.0	349.5	84.0	49.0	63.0	166.0	10.0
11 1930..total length, miles.....	136	368	14	54	18	.....	14
12 1920..total length, miles.....	206	327	279	46	41	.....	32
13 (a) Earth.....1940..length, miles.....	158	349	84	49	63	166	10
14 (b) Lined.....1940..length, miles.....	0.5	.....	.....	.....	.....	.....
15 1940..capacity, c.f.s. ⁴	218	1,921	336	151	114	775	56
16 1930..capacity, c.f.s. ⁴	411	1,228	145	142	24	.....	9
17 1920..capacity, c.f.s. ⁴	485	1,011	221	131	73	.....	25
18 Pipe lines ⁵.....1940..total length, miles.....	0.1	1.3
19 1930..total length, miles.....
20 1920..total length, miles.....
21 (a) Concrete.....1940..length, miles.....
22 (b) Metal.....1940..length, miles.....	0.1	1.3
23 (c) Wood-stave.....1940..length, miles.....
24 (d) Other.....1940..length, miles.....
25 Storage dams.....1940..total number.....	9	2	.....	.....	3	12
26 1930..total number.....	4	.....	.....	.....	.....	2
27 1920..total number.....	2	1	.....	.....	.....	1
28 (a) Concrete and masonry.....1940..number.....	1	.....	.....	.....	.....	.....
29 (b) Earth and rock.....1940..number.....	3	1	.....	.....	3	11
30 (c) Other, mixed, and not reported.....1940..number.....	5	1	.....	.....	.....	1
31 Reservoirs.....1940..total number.....	9	2	.....	.....	3	10
32 (a) 1-99 acre-feet capacity.....1940..number.....	1	9
33 (b) 100-999 acre-feet capacity.....1940..number.....	3	.....	.....	.....	1	.....
34 (c) 1,000 and over acre-feet capacity.....1940..number.....	6	2	.....	.....	1	1
35 1940..total capacity, ac.-ft. ⁴	67,755	(⁶)	.....	.....	16,764	4,326
36 1930..total capacity, ac.-ft. ⁴	4	.....	.....	.....	.....	4
37 1930..total capacity, ac.-ft. ⁴	31,670	.....	.....	.....	.....	300
38 Wells, flowing.....1940..number.....	2
39 1930..number.....	1
40 1920..number.....	2
41 1940..yield, g.p.m.....	(⁶)
42 1930..yield, g.p.m.....	120
43 1920..yield, g.p.m.....
44 Wells, pumped.....1940..number.....	5
45 1930..number.....	2
46 1920..number.....
47 1940..yield, g.p.m.....	82
48 1930..yield, g.p.m.....	350
49 1920..yield, g.p.m.....
50 Pumping plants.....1940..total number.....	1	4
51 1930..total number.....	2
52 Prime movers.....1940..capacity, hp.....	(⁶)	15
53 1930..capacity, hp.....	4
54 1920..capacity, hp.....
55 (a) Electric.....1940..number.....
56 1940..capacity, hp.....
57 (b) Internal-combustion.....1940..number.....	4
58 1940..capacity, hp.....	15
59 (c) Other.....1940..number.....	1	.....
60 1940..capacity, hp.....	(⁶)	.....
61 Pumps.....1940..total number.....	1	5
62 1930..number.....	2
63 1920..number.....
64 1940..capacity, g.p.m.....	(⁶)	82
65 1930..capacity, g.p.m.....	350
66 1920..capacity, g.p.m.....
67 (a) Centrifugal.....1940..number.....	(⁶)	.....
68 1940..capacity, g.p.m.....	(⁶)	.....
69 1940..average capacity, g.p.m.....
70 (b) Turbine.....1940..number.....
71 1940..capacity, g.p.m.....
72 1940..average capacity, g.p.m.....
73 (c) Plunger.....1940..number.....	5
74 1940..capacity, g.p.m.....	82
75 1940..average capacity, g.p.m.....	16
76 (d) Other.....1940..number.....
77 1940..capacity, g.p.m.....
78 Pumping lift, from all sources.....1940..average, feet.....	(⁶)	66
79 1930..average, feet.....	20
80 1920..average, feet.....
81 from pumped wells.....1940..average, feet.....
82 from surface sources.....1940..average, feet.....	(⁶)	66

¹Data for 1 enterprise in Cottonwood Creek Drainage Basin (57) (number refers to separate map) are included with Blacks Fork "Direct" Drainage Basin (48).
²Data for 1930 and 1920 not available because tributaries of South Fork of the Snake River were not identified.
³Data for 2 enterprises in Henrys Fork "Direct" Drainage Basin (69) (number refers to separate map) are included with Teton River Drainage Basin (13).
⁴Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION - WYOMING

WORKS, 1940, 1930, AND 1920-Continued

COLORADO RIVER-Continued						GREAT SALT LAKE	COLUMBIA RIVER							
Green River-Continued							Snake River	South Fork					Henrys Fork	
Blacks Fork				Henrys Fork	Little Snake River (Yampa)			Total	Total ²	Direct	Gros Ventre River	Grays River		Salt River	Teton River^{3}
Total	Direct ¹	Muddy Creek	Hams Fork			(58)	(59)						(46)			(14)	(26)	(28)	(27)	(13)
(48)	(47)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)		
188	135	11	42	58	47	102	305	285	128	22	5	130	20	1
394	409	630	284	369	349	657	324	333	238	445	53	419	199	2
280	212	19	49	118	52	139	313	294	137	15	4	138	19	3
271	271	.....	.....	7	4	87	153	.....	3	5	.....	82	.....	4
156	156	.....	.....	45	8	54	105	.....	1	34	.....	50	.....	5
11	2	7	2	1	.....	3	20	.....	4	.....	.....	15	.....	6
38	37	.....	1	17	.....	5	38	.....	3	2	.....	30	.....	7
196	140	10	46	51	48	111	185	175	90	11	4	70	10	8
35	33	2	.....	49	1	20	70	65	40	2	.....	23	5	9
175.3	326.0	66.2	83.1	174.0	140.0	356.2	621.6	593.6	256.2	68.1	1.0	263.3	28.0	10
492	492	.....	.....	158	100	380	509	.....	16	73	.....	215	.....	11
646	646	.....	.....	185	128	420	617	.....	12	115	.....	351	.....	12
475	326	66	83	174	140	356	621	593	258	68	4	263	28	13
0.3	.....	0.2	0.1	.....	.....	0.2	0.6	0.6	0.2	0.1	.....	0.3	.....	14
1,947	1,619	97	231	260	439	1,566	3,833	2,921	901	353	12	1,653	912	15
1,351	1,351	.....	.....	345	377	911	1,699	.....	30	423	.....	753	.....	16
1,867	1,867	.....	.....	301	289	1,306	2,231	.....	42	221	.....	1,355	.....	17
.....	.....	.....	.....	.....	.....	1.1	0.2	0.2	.....	.....	.....	0.2	.....	18
.....	.....	.....	.....	.....	.....	0.4	2.0	.....	.....	.....	.....	2.0	.....	19
.....	.....	.....	.....	.....	0.1	4.0	.....	.....	.....	.....	.....	.....	.....	20
.....	.....	.....	.....	.....	.....	.....	0.2	0.2	.....	.....	.....	0.2	.....	21
.....	.....	.....	.....	.....	.....	0.5	.....	.....	.....	.....	.....	.....	.....	22
.....	.....	.....	.....	.....	.....	0.5	.....	.....	.....	.....	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	0.1	.....	.....	.....	.....	.....	.....	.....	24
19	5	4	10	3	1	2	6	5	3	.....	.....	2	1	25
4	4	.....	.....	1	.....	4	4	.....	1	.....	.....	1	.....	26
9	9	.....	.....	22	.....	7	2	.....	.....	.....	.....	2	.....	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
15	3	4	6	3	1	2	5	4	3	.....	.....	1	1	29
4	2	.....	2	.....	.....	.....	1	1	.....	.....	.....	1	.....	30
16	5	4	7	2	1	2	6	5	3	.....	.....	2	6 ¹	31
7	1	.....	6	1	.....	.....	1	1	.....	.....	.....	1	.....	32
6	3	3	1	1	1	2	1	1	.....	.....	.....	1	.....	33
3	1	1	1	.....	.....	.....	4	3	3	.....	.....	.....	1	34
45,728	18,672	25,966	1,090	(⁶)	(⁶)	(⁶)	866,965	851,761	851,380	.....	.....	(⁶)	15,204	35
5	5	.....	.....	1	1	6	4	.....	1	.....	.....	1	.....	36
1,307	1,307	.....	.....	80	400	931	848,387	.....	847,000	.....	.....	800	.....	37
2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
(⁶)	.....	.....	(⁶)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
60	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
1	1	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	.....	.....	.....	51
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	56
.....	.....	.....	.....	.....	.....	(⁶)	2	.....	.....	.....	.....	.....	.....	57
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	59
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	62
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63
60	60	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	.....	.....	.....	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67
.....	.....	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	.....	.....	.....	68
.....	.....	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	.....	.....	.....	69
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	72
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77
.....	.....	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	.....	.....	.....	78
34	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	79
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	80
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	81
.....	.....	.....	.....	.....	.....	(⁶)	.....	.....	.....	.....	.....	.....	.....	82

¹ Includes siphons and farm pipe lines reported.
² Data for less than 3 enterprises shown with permission of the enterprise involved.
³ Total capacity of all reservoirs regardless of size.
⁴ Data are included only in totals because less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - WYOMING

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

ITEM (For definitions and explanations, see text)	STATE TOTAL	County			
		Albany	Big Horn	Campbell	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*					
1 All farms.....	15,018	458	1,051	852	
2 1940..number.....	16,011	548	948	1,310	
3 1930..number.....	8,637	323	1,003	13	
4 Irrigated farms.....	7,308	327	863	2	
5 1940..number.....	18.2	-1.2	16.2	550.0	
6 Increase or decrease (-), 1930-1940.....	6,427	261	741	13	
7 Operated by—(a) Owners and managers.....	5,426	252	624		
8 1940..number.....	2,210	62	262		
9 1930..number.....	1,882	75	239	2	
10 Land in all farms.....	28,025,979	1,468,810	488,120	2,968,976	
11 1940..acres.....	12,915,523	1,266,524	436,871	95,936	
12 Average per farm.....	1,495	3,921	436	7,380	
13 (a) Operated by owners and managers.....	11,959,992	1,136,277	371,983	95,936	
14 Average per farm.....	1,861	4,354	502	7,380	
15 (b) Operated by tenants.....	955,531	130,247	64,888		
16 Average per farm.....	432	2,101	248		
17 1940..acres.....	162,403,840	2,816,000	2,032,640	3,043,200	
IRRIGATED AND IRRIGABLE AREAS					
18 Area irrigated.....	1,486,496	127,506	110,198	492	
19 (a) Cropland harvested.....	1,193,997	97,525	89,270	452	
20 (b) Crop failure.....	16,550	1,901	1,808		
21 (c) Pasture.....	275,951	28,080	19,120	40	
22 Area irrigated.....	1,236,155	123,570	104,889	440	
23 1919..acres.....	1,207,982	114,248	108,754	1,066	
24 Increase or decrease (-), 1929-1939.....	20.3	3.2	5.1	11.8	
25 Irrigable area in enterprises.....	2,277,046	341,673	163,062	1,257	
26 1930..acres.....	1,958,147	218,800	170,163	440	
27 1920 ² ..acres.....	2,564,668	332,455	213,937	3,278	
28 Excess of irrigable area over the area irrigated.....	790,548	214,167	52,864	765	
29 1930..acres.....	721,992	95,230	65,274		
30 Area works were capable of supplying with water.....	1,913,527	234,893	139,752	1,192	
31 1930..acres.....	1,655,008	182,829	145,783	440	
32 1920..acres.....	1,831,039	218,270	161,341	2,220	
33 Increase or decrease (-), 1930-1940.....	15.6	28.5	-4.1	170.9	
34 Excess, capability of works over area irrigated.....	427,029	107,387	29,554	700	
35 1930..acres.....	418,853	59,259	40,894		
36 Proportion which area irrigated is of all lands in irrigated farms.....	11.5	10.1	25.2	0.5	
37 1929..percent.....	12.4	11.3	61.0	2.0	
38 Proportion which area irrigated is of area works were capable of supplying with water.....	77.7	54.3	78.9	41.3	
39 1929..percent.....	74.7	67.6	71.9	100.0	
CAPITAL INVESTED TO JANUARY 1					
40 Total investment in all enterprises.....	41,522,801	4,358,118	4,228,044	14,353	
41 (a) Cost of irrigation works and equipment.....	41,057,813	4,212,518	4,211,876	13,873	
42 (b) Investment in water rights (reported).....	464,988	145,600	16,168	480	
43 Total investment in all enterprises.....	35,153,187	3,480,280	3,734,074	5,300	
44 1920..dollars.....	34,326,328	3,975,710	4,495,690	85,100	
45 Increase or decrease (-), 1930-1940.....	18.1	25.2	13.2	170.8	
46 Average investment, based on area works were capable of supplying with water, per acre.....	21.70	18.55	30.25	12.04	
47 1930..dollars.....	21.24	19.04	25.61	12.04	
48 1920..dollars.....	18.75	18.21	27.86	38.33	
49 Average investment per acre irrigated.....	27.93	34.18	38.37	29.17	
50 Estimated final investment in existing enterprises.....	48,539,663	5,310,818	4,238,744	16,853	
51 1930..dollars.....	41,970,416	3,633,005	3,929,582	5,300	
52 1920..dollars.....	51,500,288	3,998,180	6,104,440	88,100	
53 Increase or decrease (-), 1930-1940.....	15.7	46.2	7.9	218.0	
54 Average investment, based on estimated final investment and irrigable area, per acre.....	21.32	15.54	25.99	13.41	
55 1930..dollars.....	21.43	16.60	23.09	12.04	
56 1920 ² ..dollars.....	20.08	12.03	28.53	26.88	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS					
57 Enterprises reporting maintenance and operation.....	2,977	62	118	4	5
	1,421,862	93,014	122,631	110,006	197
58 Area irrigated in these enterprises.....	807,345	31,923	44,548	79,422	292
59 Cost of maintenance and operation.....	0.57	0.34	0.36	0.72	1.44
60 Average cost, per acre irrigated.....	0.84	0.33	0.33	1.07	0.45
61 1929..dollars.....	631,343	31,368	25,247	109,181	
62 Total annual charges (reported) ⁴	0.87	0.38	0.56	1.09	
63 Average annual charge per acre irrigated.....	852,728	82,504	56,513	117,017	
64 Area against which charges were assessed.....	0.74	0.38	0.45	0.93	
65 Average annual charge per acre assessed.....	447,354	24,806	16,752	54,981	9,180
66 Total charges collected ⁴	15,770,071	929,414	99,490	1,007,041	718,260
67 Indebtedness to December 31 (reported) ⁵					
WATER DELIVERED TO IRRIGATORS					
68 Enterprises reporting water delivered.....	3,006	55	257	111	3
69 Area irrigated in these enterprises.....	1,360,506	67,746	126,150	101,992	197
70 Water delivered in these enterprises.....	2,833,092	56,521	133,609	272,390	332
71 Average water delivered per acre irrigated.....	2.1	0.8	1.06	2.7	1.7
72 Average cost of water per acre irrigated.....	0.66	0.48	0.88	1.07	1.43
DRAINAGE OF IRRIGATED LAND					
73 Enterprises reporting land drained or needing drainage.....	150		34	23	
74 Irrigable area in these enterprises.....	843,642		117,342	111,718	
75 Irrigated area in these enterprises.....	456,760		23,171	73,618	
76 Area for which drains have been installed.....	175,394		17,471	48,480	
77 Additional area needing drainage.....	44,997		2,277	10,206	

* Census of Agriculture. ¹ Includes 1,875,840 acres in Yellowstone National Park (part of) not shown in detail. ² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁴ Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)	Carbon		Converse		Crook		Fremont ¹		Goshen	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*										
1 All farms.....1940..number.....	524		522		808		1,542		1,328	
2 ..1930..number.....	500		811		953		942		1,487	
3 Irrigated farms.....1940..number.....	392		197		26		1,333		758	
4 ..1930..number.....	358		171		13		833		654	
5 Increase or decrease (-), 1930-1940.....percent.....	9.5		15.2		100.0		60.0		15.9	
6 Operated by—(a) Owners and managers.....1940..number.....	343		146		19		1,010		397	
7 ..1930..number.....	296		134		8		580		349	
8 (b) Tenants.....1940..number.....	49		51		7		323		361	
9 ..1930..number.....	62		37		5		253		305	
10 Land in all farms.....1940..acres.....	2,616,371		2,168,465		1,493,834		1,011,390		1,097,556	
11 Land in irrigated farms.....1940..acres.....	2,000,500		764,401		92,950		698,665		323,950	
12 Average per farm.....1940..acres.....	5,103		3,880		3,575		524		427	
13 (a) Operated by owners and managers.....1940..acres.....	1,876,051		732,817		79,559		638,090		234,801	
14 Average per farm.....1940..acres.....	5,470		5,019		4,187		632		591	
15 (b) Operated by tenants.....1940..acres.....	124,449		31,584		13,391		60,575		89,149	
16 Average per farm.....1940..acres.....	2,540		619		1,913		188		247	
17 Approximate land area.....1940..acres.....	5,097,600		2,666,880		1,854,060		5,916,160		1,427,200	
IRRIGATED AND IRRIGABLE AREAS										
18 Area irrigated.....1939..acres.....	165,340		30,417		926		135,517		96,018	
19 (a) Cropland harvested.....1939..acres.....	116,025		28,358		818		107,006		84,264	
20 (b) Crop failure.....1939..acres.....	954		675		15		993		2,649	
21 (c) Pasture.....1939..acres.....	48,361		1,384		93		27,518		9,105	
22 Area irrigated.....1929..acres.....	121,534		37,398		457		78,985		87,842	
23 ..1919..acres.....	121,293		30,821		951		115,067		55,481	
24 Increase or decrease (-), 1929-1939.....percent.....	36.0		-18.7		102.6		71.6		9.3	
25 Irrigable area in enterprises.....1940..acres.....	187,889		14,437		2,593		267,359		113,512	
26 ..1930..acres.....	155,885		46,400		657		265,225		108,251	
27 ..1920 ² ..acres.....	193,532		53,592		1,925		370,472		138,452	
28 Excess of irrigable area over the area irrigated.....1940..acres.....	22,549		14,020		1,667		131,842		17,494	
29 ..1930..acres.....	34,351		9,002		200		186,240		20,409	
30 Area works were capable of supplying with water.....1940..acres.....	179,469		41,325		1,716		192,110		112,884	
31 ..1930..acres.....	152,789		43,503		632		151,500		105,033	
32 ..1920..acres.....	150,485		43,818		1,689		197,406		85,142	
33 Increase or decrease (-), 1930-1940.....percent.....	17.5		-3.6		171.5		26.8		7.5	
34 Excess, capability of works over area irrigated.....1940..acres.....	14,129		11,508		790		56,593		16,866	
35 ..1930..acres.....	31,255		6,105		175		72,515		17,191	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	8.3		4.0		1.0		19.4		29.6	
37 ..1929..percent.....	8.3		9.1		1.7		11.7		32.0	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	92.1		72.6		54.0		70.5		85.1	
39 ..1929..percent.....	79.5		86.0		72.3		52.1		83.6	
CAPITAL INVESTED TO JANUARY 1										
40 Total investment in all enterprises.....1940..dollars.....	1,558,948		1,484,539		35,161		8,927,587		6,058,054	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	1,511,498		1,472,250		34,484		8,900,801		6,054,820	
42 (b) Investment in water rights (reported).....1940..dollars.....	47,450		12,289		677		26,786		3,234	
43 Total investment in all enterprises.....1930..dollars.....	831,209		915,028		3,100		6,269,771		5,499,544	
44 ..1920 ² ..dollars.....	1,193,535		862,217		20,912		3,784,769		3,680,421	
45 Increase or decrease (-), 1930-1940.....percent.....	87.6		62.2		1,034.2		42.4		10.2	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	8.69		35.41		20.49		46.47		53.67	
47 ..1930..dollars.....	5.14		21.03		4.90		41.38		52.36	
48 ..1920..dollars.....	7.93		19.68		12.38		19.17		43.23	
49 Average investment per acre irrigated.....1939..dollars.....	9.43		48.81		37.97		65.88		69.00	
50 Estimated final investment in existing enterprises.....1940..dollars.....	1,629,473		1,486,632		43,386		13,779,697		6,059,979	
51 ..1930..dollars.....	860,309		939,428		3,200		12,365,371		5,505,344	
52 ..1920..dollars.....	1,253,535		914,867		20,912		11,646,044		6,596,902	
53 Increase or decrease (-), 1930-1940.....percent.....	89.4		58.5		1,255.8		11.4		10.1	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	8.07		33.50		16.73		51.54		53.39	
55 ..1930..dollars.....	5.52		20.25		4.87		46.62		50.86	
56 ..1920 ² ..dollars.....	6.48		17.07		10.86		31.44		47.65	
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS										
57 Enterprises reporting maintenance and operation.....1939..number.....	Primary		Sup.		Crook	Primary		Sup.		Goshen
	Enterprises		Enterprises			Enterprises		Enterprises		
58 Area irrigated in these enterprises.....1939..acres.....	148,264	3,294	28,556		29	127,336	6,131	95,520	(³)	2
59 Cost of maintenance and operation.....1939..dollars.....	35,244	702	33,802		723	151,862	515	72,879	(³)	
60 Average cost, per acre irrigated.....1939..dollars.....	0.24	0.21	1.18		0.79	1.19	0.03	0.76	(³)	
61 ..1929..dollars.....	0.53		1.15		1.84	1.33		1.23		
62 Total annual charges (reported) ⁴.....1939..dollars.....	1,743	402	13,504		76	134,015	600	90,927	10,779	
63 Average annual charge per acre irrigated.....1939..dollars.....	0.24	0.15	1.37		0.48	1.37	0.10	1.02	0.70	
64 Area against which charges were assessed.....1939..acres.....	20,308	2,877	14,680		160	126,240	6,000	95,368	15,398	
65 Average annual charge per acre assessed.....1939..dollars.....	0.23	0.14	0.92		0.48	1.05	0.10	0.95	0.70	
66 Total charges collected ⁴.....1939..dollars.....	4,454	402	13,520			87,871	600	87,062		
67 Indebtedness to December 31 (reported) ⁵.....1939..dollars.....	249					7,167,047	200	4,389,401		
WATER DELIVERED TO IRRIGATORS										
68 Enterprises reporting water delivered.....1939..number.....	293	5	70		22	265	5	42	(³)	2
69 Area irrigated in these enterprises.....1939..acres.....	134,650	3,294	22,287		926	127,380	6,131	87,779	(³)	
70 Water delivered in these enterprises.....1939..acre-feet.....	213,448	1,936	49,212		905	321,393	1,718	174,543	(³)	
71 Average water delivered per acre irrigated.....1939..acre-feet.....	1.6	0.6	2.2		0.9	2.5	0.3	2.0	(³)	
72 Average cost of water per acre irrigated.....1939..dollars.....	0.28	0.21	1.13		0.38	1.23	0.12	1.02	(³)	
DRAINAGE OF IRRIGATED LAND										
73 Enterprises reporting land drained or needing drainage.....1939..number.....	4		2			22		6		
74 Irrigable area in these enterprises.....1939..acres.....	5,208		(³)			201,386		72,801		
75 Irrigated area in these enterprises.....1939..acres.....	1,922		(³)			86,046		63,325		
76 Area for which drains have been installed.....1939..acres.....	560		(³)			24,185		16,089		
77 Additional area needing drainage.....1939..acres.....	430		(³)			6,508		2,070		

* Census of Agriculture. ¹ Part taken to form part of Siblette in 1923. ² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ³ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁴ Annual charges may include cost of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁵ Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)	Hot Springs	Johnson	Laramie	Lincoln ¹	Natrona	Niobrara		
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*								
1 All farms.....1940..number.....	246	505	900	808	359	533		
2 ..1930..number.....	229	536	986	666	389	727		
3 Irrigated farms.....1940..number.....	185	273	111	673	111	16		
4 ..1930..number.....	171	237	94	534	119	3		
5 Increase or decrease (-), 1930-1940.....percent.....	8.2	15.2	18.1	26.0	-6.7	433.3		
6 Operated by—(a) Owners and managers.....1940..number.....	121	189	99	612	99	14		
7 ..1930..number.....	141	173	74	484	103	3		
8 (b) Tenants.....1940..number.....	64	84	12	61	12	2		
9 ..1930..number.....	30	64	20	80	16	.....	
10 Land in all farms.....1940..acres.....	308,335	1,629,388	1,565,539	501,872	1,804,559	1,378,761		
11 ..1930..acres.....	197,168	902,790	752,785	417,579	743,200	62,394		
12 Average per farm.....1940..acres.....	1,668	3,307	5,782	620	6,636	5,150		
13 (a) Operated by owners and managers.....1940..acres.....	179,697	848,767	746,258	395,022	720,381	(²)		
14 Average per farm.....1940..acres.....	1,485	4,491	7,538	645	7,277	(²)		
15 (b) Operated by tenants.....1940..acres.....	17,471	54,023	6,527	22,557	22,819	(²)		
16 Average per farm.....1940..acres.....	273	643	544	370	1,902	(²)		
17 Approximate land area.....1940..acres.....	1,294,080	2,672,000	1,729,920	2,624,640	3,418,880	1,672,320		
IRRIGATED AND IRRIGABLE AREAS								
18 Area irrigated.....1939..acres.....	18,171	46,732	26,454	100,135	25,481	850		
19 (a) Cropland harvested.....1939..acres.....	16,689	37,227	24,760	84,643	20,948	710		
20 (b) Crop failure.....1939..acres.....	592	1,209	969	117	639	40		
21 (c) Pasture.....1939..acres.....	880	8,296	725	15,375	3,894	100		
22 Area irrigated.....1929..acres.....	21,675	30,437	28,383	73,450	14,657	367		
23 ..1919..acres.....	16,443	63,383	24,165	168,428	10,395	759		
24 Increase or decrease (-), 1929-1939.....percent.....	-16.2	53.5	-6.8	36.0	73.8	131.6		
25 Irrigable area in enterprises.....1940..acres.....	28,437	64,706	35,716	112,895	30,486	2,181		
26 ..1930..acres.....	27,570	34,633	34,176	97,973	24,462	778		
27 1920 ³ ..acres.....	23,333	97,630	50,590	288,057	21,918	1,427		
28 Excess of irrigable area over the area irrigated.....1940..acres.....	10,266	17,974	9,262	12,730	5,005	1,331		
29 ..1930..acres.....	6,895	4,196	5,793	24,323	9,806	411		
30 Area works were capable of supplying with water.....1940..acres.....	28,000	60,191	34,833	110,004	29,145	2,181		
31 ..1930..acres.....	26,023	32,361	30,441	92,954	22,702	578		
32 ..1920 ³ ..acres.....	21,125	82,933	29,990	245,723	14,920	1,102		
33 Increase or decrease (-), 1930-1940.....percent.....	7.6	86.0	14.4	18.3	28.4	277.3		
34 Excess, capability of works over area irrigated.....1940..acres.....	9,829	13,459	8,379	9,869	3,664	1,331		
35 ..1930..acres.....	4,348	1,924	2,058	19,304	8,045	211		
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	9.2	5.2	3.5	24.0	3.4	1.0		
37 ..1929..percent.....	11.1	4.1	4.6	19.9	2.9	1.6		
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	64.9	77.6	75.9	91.0	87.4	39.0		
39 ..1929..percent.....	83.3	94.1	93.2	79.2	64.6	63.5		
CAPITAL INVESTED TO JANUARY 1								
40 Total investment in all enterprises.....1940..dollars....	380,544	534,651	432,811	717,171	311,007	12,230		
41 (a) Cost of irrigation works and equipment.....1940..dollars....	374,602	522,589	416,206	702,301	294,612	11,420		
42 (b) Investment in water rights (reported).....1940..dollars....	5,942	12,062	16,605	14,870	16,195	810		
43 Total investment in all enterprises.....1930..dollars....	181,315	458,210	403,226	327,399	234,967	4,829		
44 ..1920 ³ ..dollars....	141,450	861,860	267,863	1,684,382	2,207,139	23,195		
45 Increase or decrease (-), 1930-1940.....percent.....	109.9	16.7	7.3	118.1	32.4	153.3		
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	13.59	8.88	12.43	6.52	10.67	5.61		
47 ..1930..dollars....	6.97	14.16	13.25	3.52	10.35	6.35		
48 ..1920 ³ ..dollars....	6.70	10.39	8.93	(⁴)	(⁴)	21.05		
49 Average investment per acre irrigated.....1939..dollars....	20.94	11.44	16.36	7.16	12.21	14.39		
50 Estimated final investment in existing enterprises.....1940..dollars....	362,044	537,751	441,061	728,556	321,767	12,295		
51 ..1930..dollars....	191,515	458,010	405,226	332,799	238,442	4,829		
52 ..1920 ³ ..dollars....	146,450	878,536	268,863	1,741,382	2,208,139	27,170		
53 Increase or decrease (-), 1930-1940.....percent.....	99.5	17.3	8.8	118.3	34.9	154.6		
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	13.43	8.31	12.35	6.44	10.55	5.64		
55 ..1930..dollars....	6.95	13.24	11.86	3.40	9.75	6.21		
56 ..1920 ³ ..dollars....	6.28	8.98	5.31	(⁴)	(⁴)	19.04		
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57 Enterprises reporting maintenance and operation.....1939..number.....	Primary		Sup.		Primary		Sup.	
	Enterprises		Enterprises		Enterprises			
58 Area irrigated in these enterprises.....1939..acres.....	17,970	4,187	44,941	13,322	19,693	96,625	4,267	23,947
59 Cost of maintenance and operation.....1939..dollars....	11,055	13,550	17,460	1,110	20,771	23,068	60	13,185
60 Average cost, per acre irrigated.....1939..dollars....	0.62	3.24	0.39	0.08	1.05	0.24	0.01	0.55
61 ..1929..dollars....	0.46	0.94	1.46	0.35	0.85
62 Total annual charges (reported) ⁶ ⁷.....1939..dollars....	4,119	15,093	6,861	1,136	759	24,510	20	769
63 Average annual charge per acre irrigated.....1939..dollars....	0.50	3.60	0.40	0.09	0.56	0.53	(⁸)	0.21
64 Area against which charges were assessed.....1939..acres.....	10,620	4,235	18,348	12,700	1,350	49,593	4,110	6,194
65 Average annual charge per acre assessed.....1939..dollars....	0.36	3.58	0.37	0.09	0.56	0.49	(⁸)	0.13
66 Total charges collected ⁸.....1939..dollars....	5,076	6,524	1,136	11,672	800
67 Indebtedness to December 31 (reported) ⁷.....1939..dollars....	45,214	81,562
WATER DELIVERED TO IRRIGATORS								
68 Enterprises reporting water delivered.....1939..number.....	95	⁹ 21	155	7	96	240	4	87
69 Area irrigated in these enterprises.....1939..acres.....	18,146	4,187	46,732	13,361	26,349	87,587	4,267	17,466
70 Water delivered in these enterprises.....1939..acre-feet....	25,787	4,800	62,709	10,427	35,043	211,104	850	19,014
71 Average water delivered per acre irrigated.....1939..acre-feet....	1.4	1.1	1.3	0.8	1.3	2.4	0.2	1.1
72 Average cost of water per acre irrigated.....1939..dollars....	0.61	3.80	0.40	0.10	1.05	0.42	0.01	0.58
DRAINAGE OF IRRIGATED LAND								
73 Enterprises reporting land drained or needing drainage.....1939..number.....	4	4	2	3	1
74 Irrigable area in these enterprises.....1939..acres.....	4,874	2,964	(⁸)	13,974	(⁸)
75 Irrigated area in these enterprises.....1939..acres.....	1,698	2,000	(⁸)	13,770	(⁸)
76 Area for which drains have been installed.....1939..acres.....	80	(⁸)
77 Additional area needing drainage.....1939..acres.....	251	363	(⁸)	5,202

*Census of Agriculture. ¹Parts taken from Teton and part of Sublette in 1923. ²Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census. ³For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁴Average not shown because part of land served by storage works lies in another State. ⁵Data for less than 3 enterprises shown with permission of the enterprises involved. ⁶Annual charges may include cost of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁷Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only. ⁸Less than 1 cent.

CENSUS OF IRRIGATION — WYOMING

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COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)	Park ¹		Platte		Sheridan		Sublette ²	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*								
1 All farms.....1940..number.....	916		778		1,019		312	
2 ..1930..number.....	888		1,148		926		292	
3 Irrigated farms.....1940..number.....	854		445		609		282	
4 ..1930..number.....	852		485		465		262	
5 Increase or decrease (-), 1930-1940.....percent.....	31.0		-8.2		31.0		7.6	
6 Operated by—(a) Owners and managers.....1940..number.....	634		240		396		259	
7 ..1930..number.....	489		304		286		235	
8 (b) Tenants.....1940..number.....	220		205		213		23	
9 ..1930..number.....	163		181		179		27	
10 Land in all farms.....1940..acres.....	702,281		³ 1,528,481		1,318,280		576,872	
11 ..1940..acres.....	687,796		1,082,039		763,747		542,393	
12 Average per farm.....1940..acres.....	782		2,432		1,254		1,823	
13 (a) Operated by owners and managers.....1940..acres.....	615,513		1,012,812		658,443		528,808	
14 Average per farm.....1940..acres.....	871		4,220		1,663		2,030	
15 (b) Operated by tenants.....1940..acres.....	52,283		69,221		105,304		16,585	
16 Average per farm.....1940..acres.....	238		338		484		721	
17 Approximate land area.....1940..acres.....	3,338,880		1,352,960		1,619,840		3,120,640	
IRRIGATED AND IRRIGABLE AREAS								
18 Area irrigated.....1939..acres.....	102,423		71,582		79,883		160,570	
19 (a) Cropland harvested.....1939..acres.....	87,311		69,103		71,355		112,723	
20 (b) Crop failure.....1939..acres.....	113		667		56		63	
21 (c) Pasture.....1939..acres.....	14,999		1,812		8,472		47,784	
22 Area irrigated.....1929..acres.....	81,202		67,346		70,435		125,744	
23 ..1919..acres.....	77,527		66,753		68,311		.....
24 Increase or decrease (-), 1929-1939.....percent.....	26.1		6.3		13.4		27.7	
25 Irrigable area in enterprises.....1940..acres.....	132,872		91,428		100,681		229,065	
26 ..1930..acres.....	119,895		116,123		77,938		198,287	
27 ..1920 ⁴ ..acres.....	180,716		131,362		108,667		.....
28 Excess of irrigable area over the area irrigated.....1940..acres.....	30,449		19,846		20,788		68,495	
29 ..1930..acres.....	38,693		48,777		7,503		72,543	
30 Area works were capable of supplying with water.....1940..acres.....	129,526		88,218		100,332		195,224	
31 ..1930..acres.....	116,694		91,032		75,096		161,138	
32 ..1920..acres.....	121,465		108,639		90,198		.....
33 Increase or decrease (-), 1930-1940.....percent.....	11.0		-3.1		33.6		21.2	
34 Excess, capability of works over area irrigated.....1940..acres.....	27,103		16,636		20,449		34,654	
35 ..1930..acres.....	35,482		23,686		4,661		35,394	
36 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	15.3		6.6		10.5		29.6	
37 ..1929..percent.....	18.6		7.2		14.2		32.0	
38 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	79.1		81.1		79.6		82.2	
39 ..1929..percent.....	69.6		74.0		93.8		78.0	
CAPITAL INVESTED TO JANUARY 1								
40 Total investment in all enterprises.....1940..dollars.....	4,835,612		1,410,560		1,510,851		1,515,125	
41 (a) Cost of irrigation works and equipment.....1940..dollars.....	4,811,691		1,401,825		1,492,122		1,453,305	
42 (b) Investment in water rights (reported).....1940..dollars.....	23,921		8,735		18,729		61,820	
43 Total investment in all enterprises.....1930..dollars.....	6,642,442		989,310		1,089,049		949,868	
44 ..1920..dollars.....	5,640,280		1,642,905		1,096,497		.....
45 Increase or decrease (-), 1930-1940.....percent.....	-27.2		42.6		37.5		59.5	
46 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	37.33		15.99		15.06		7.76	
47 ..1930..dollars.....	56.93		10.87		14.64		5.89	
48 ..1920..dollars.....	46.44		15.12		12.16		.....
49 Average investment per acre irrigated.....1939..dollars.....	48.15		19.71		18.91		9.44	
50 Estimated final investment in existing enterprises.....1940..dollars.....	5,327,922		1,441,435		1,516,066		1,566,645	
51 ..1930..dollars.....	6,758,356		1,036,460		1,149,149		981,868	
52 ..1920..dollars.....	9,862,433		1,907,605		1,040,157		.....
53 Increase or decrease (-), 1930-1940.....percent.....	-21.2		39.1		31.9		59.6	
54 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	40.10		15.77		15.06		6.84	
55 ..1930..dollars.....	56.37		8.92		14.74		4.95	
56 ..1920 ⁴ ..dollars.....	54.57		14.52		9.57		.....
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
57 Enterprises reporting maintenance and operation.....1939..number.....	150	2	85	1	191	9	293	7
	Enterprises		Enterprises		Enterprises		Enterprises	
58 Area irrigated in these enterprises.....1939..acres.....	100,374	(⁵)	70,681	(⁵)	77,555	16,362	154,744	21,270
59 Cost of maintenance and operation.....1939..dollars.....	87,110	(⁵)	37,881	(⁵)	33,738	2,736	41,056	1,149
60 Average cost, per acre irrigated.....1939..dollars.....	0.87	(⁵)	0.54	(⁵)	0.44	0.17	0.27	0.05
61 ..1929..dollars.....	0.88	.....	1.41	.....	1.38	.....	0.32	.....
62 Total annual charges (reported) ⁶.....1939..dollars.....	89,689	.....	28,116	.....	23,265	2,590	4,426	411
63 Average annual charge per acre irrigated.....1939..dollars.....	1.19	.....	0.54	.....	0.41	0.18	0.37	0.02
64 Area against which charges were assessed.....1939..acres.....	80,258	.....	56,694	.....	60,508	14,698	18,293	19,120
65 Average annual charge per acre assessed.....1939..dollars.....	1.11	.....	0.50	.....	0.38	0.18	0.24	0.02
66 Total charges collected ⁶.....1939..dollars.....	30,974	1,620	28,116	.....	19,126	4,042	2,645	2,750
67 Indebtedness to December 31 (reported) ⁷.....1939..dollars.....	2,415,961	126,750	.....	.....	700	.....	21,070	39,000
WATER DELIVERED TO IRRIGATORS								
68 Enterprises reporting water delivered.....1939..number.....	144	1	72	1	208	8	301	5
69 Area irrigated in these enterprises.....1939..acres.....	98,817	(⁵)	69,566	(⁵)	71,383	14,762	156,422	1,039
70 Water delivered in these enterprises.....1939..acre-feet.....	315,717	(⁵)	95,622	(⁵)	110,361	17,326	418,881	2,447
71 Average water delivered per acre irrigated.....1939..acre-feet.....	3.2	(⁵)	1.4	(⁵)	1.5	1.2	2.7	2.4
72 Average cost of water per acre irrigated.....1939..dollars.....	1.07	(⁵)	0.53	(⁵)	0.46	0.18	0.27	0.18
DRAINAGE OF IRRIGATED LAND								
73 Enterprises reporting land drained or needing drainage.....1939..number.....	11	.....	2	.....	11	.....	8	.....
74 Irrigable area in these enterprises.....1939..acres.....	77,311	(⁵)	.....	(⁵)	20,187	.....	7,976	.....
75 Irrigated area in these enterprises.....1939..acres.....	59,922	(⁵)	.....	(⁵)	13,389	.....	5,299	.....
76 Area for which drains have been installed.....1939..acres.....	45,865	(⁵)	.....	(⁵)	442	.....	26	.....
77 Additional area needing drainage.....1939..acres.....	7,853	(⁵)	.....	(⁵)	207	.....	525	.....

¹Census of Agriculture. ²Part annexed to Yellowstone National Park, and part of Yellowstone National Park annexed in 1929. ³Organized from parts of Fremont and Lincoln in 1923. ⁴The excess of farm acreage over approximate land area is due to the fact that the entire acreage of a farm is tabulated as in the county in which the headquarters are located, even though a part of the farm may be situated in an adjoining county. ⁵For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁶Data are included only in State totals because less than 3 enterprises reported in the 1940 Census. ⁷Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION — WYOMING

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940 AND 1930; IRRIGATED AREA, 1939, 1929, AND 1919; IRRIGABLE AREA AND CAPITAL INVESTED, 1940, 1930, AND 1920; MAINTENANCE AND OPERATION, CHARGES, AND INDEBTEDNESS, 1939 AND 1929; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)		Sweetwater	Teton ¹	Uinta	Washakie	Weston	
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS *							
1	All farms.....1940...number.....	256	201	398	306	396	
2	.....1930...number.....	258	280	435	326	616
3	Irrigated farms.....1940...number.....	189	168	376	281	19	
4	.....1930...number.....	173	207	376	285	24
5	Increase or decrease (-), 1930-1940.....percent.....	9.2	-18.8	.....	-1.4	20.8
6	Operated by—(a) Owners and managers.....1940...number.....	161	134	396	186	17	
7	.....1930...number.....	151	184	337	200	19
8	(b) Tenants.....1940...number.....	28	34	40	96	2	
9	.....1930...number.....	23	23	39	85	5
10	Land in all farms.....1940...acres.....	1,304,990	100,447	443,593	179,755	1,169,064	
11	Land in irrigated farms.....1940...acres.....	267,532	92,883	426,488	165,228	121,710	
12	Average per farm.....1940...acres.....	1,416	553	1,161	588	6,406	
13	(a) Operated by owners and managers.....1940...acres.....	256,401	81,989	418,629	142,214	(²)	
14	Average per farm.....1940...acres.....	1,593	612	1,246	765	(²)	
15	(b) Operated by tenants.....1940...acres.....	11,131	10,894	17,859	23,014	(²)	
16	Average per farm.....1940...acres.....	398	320	446	242	(²)	
17	Approximate land area.....1940...acres.....	6,714,880	1,801,600	1,324,800	1,447,680	1,541,120	
IRRIGATED AND IRRIGABLE AREAS							
18	Area irrigated.....1939...acres.....	22,075	30,995	51,192	40,418	3,123	
19	(a) Cropland harvested.....1939...acres.....	17,779	27,973	58,664	37,888	2,496	
20	(b) Crop failure.....1939...acres.....	370	30	2,268	265	157	
21	(c) Pasture.....1939...acres.....	3,926	2,992	30,260	2,265	470	
22	Area irrigated.....1929...acres.....	19,756	18,652	86,122	39,661	2,953	
23	.....1919...acres.....	14,010	.....	102,695	41,179	6,263
24	Increase or decrease (-), 1929-1939.....percent.....	11.7	66.2	5.9	1.9	5.8	
25	Irrigable area in enterprises.....1940...acres.....	75,069	43,838	152,614	49,793	5,513	
26	.....1930...acres.....	51,705	32,673	115,614	53,747	6,762
27	.....1920 ³ ...acres.....	57,591	.....	222,643	60,349	12,642
28	Excess of irrigable area over the area irrigated.....1940...acres.....	52,994	12,843	61,422	9,375	2,390	
29	.....1930...acres.....	31,949	14,021	29,492	14,086	3,799
30	Area works were capable of supplying with water.....1940...acres.....	34,074	40,076	107,573	45,296	4,913	
31	.....1930...acres.....	43,685	26,282	101,567	48,382	3,574
32	.....1920...acres.....	46,805	.....	148,553	50,597	8,618
33	Increase or decrease (-), 1930-1940.....percent.....	22.0	52.5	5.9	-6.4	37.5	
34	Excess, capability of works over area irrigated.....1940...acres.....	11,999	9,081	16,381	4,878	1,790	
35	.....1930...acres.....	23,929	7,690	15,445	8,721	621
36	Proportion which area irrigated is of all lands in irrigated farms.....1939...percent.....	8.3	33.4	20.9	24.5	2.6	
37	.....1929...percent.....	4.7	23.7	25.8	23.1	2.6
38	Proportion which area irrigated is of area works were capable of supplying with water.....1939...percent.....	64.8	77.3	84.8	89.2	63.6	
39	.....1929...percent.....	45.2	71.0	84.8	82.0	62.6
CAPITAL INVESTED TO JANUARY 1							
40	Total investment in all enterprises.....1940...dollars.....	1,184,571	124,082	535,777	1,309,750	43,255	
41	(a) Cost of irrigation works and equipment.....1940...dollars.....	1,179,272	117,320	519,771	1,306,782	41,675	
42	(b) Investment in water rights (reported).....1940...dollars.....	5,299	6,762	16,006	2,968	1,580	
43	Total investment in all enterprises.....1930...dollars.....	790,190	1,381,282	280,955	640,099	31,740	
44	.....1920...dollars.....	882,577	.....	729,294	659,652	170,920
45	Increase or decrease (-), 1930-1940.....percent.....	49.9	-91.0	90.7	104.6	36.3	
46	Average investment, based on area works were capable of supplying with water, per acre.....1940...dollars.....	34.76	3.10	4.98	28.92	8.80	
47	.....1930...dollars.....	18.09	(⁴)	2.77	13.23	8.88
48	.....1920...dollars.....	19.07	.....	4.91	16.99	19.83
49	Average investment per acre irrigated.....1939...dollars.....	53.66	4.00	5.88	32.41	13.85	
50	Estimated final investment in existing enterprises.....1940...dollars.....	1,426,469	130,873	741,667	1,352,275	47,255	
51	.....1930...dollars.....	802,946	1,384,483	288,355	655,099	40,740
52	.....1920...dollars.....	910,727	.....	744,344	921,952	219,560
53	Increase or decrease (-), 1930-1940.....percent.....	77.7	-90.5	157.2	106.4	16.0	
54	Average investment, based on estimated final investment and irrigable area, per acre.....1940...dollars.....	19.00	2.99	4.86	27.16	8.57	
55	.....1930...dollars.....	15.53	(⁴)	2.49	12.19	6.03
56	.....1920 ³ ...dollars.....	15.81	.....	3.34	15.28	17.51
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS							
		Primary	Sup.	Primary	Sup.	Primary	Sup.
		Enterprises		Enterprises		Enterprises	
57	Enterprises reporting maintenance and operation.....1939...number.....	102	1	103	3	189	8
58	Area irrigated in these enterprises.....1939...acres.....	22,075	(²)	28,310	3,440	88,009	1,139
59	Cost of maintenance and operation.....1939...dollars.....	22,348	(²)	6,343	336	15,072	205
60	Average cost, per acre irrigated.....1939...dollars.....	1.01	(²)	0.22	0.10	0.17	0.18
611929...dollars.....	1.68	0.36	0.18
62	Total annual charges (reported) ⁵.....1939...dollars.....	9,056	1,179	337	10,160
63	Average annual charge per acre irrigated.....1939...dollars.....	0.74	0.13	0.10	0.24
64	Area against which charges were assessed.....1939...acres.....	19,807	9,256	3,366	59,981
65	Average annual charge per acre assessed.....1939...dollars.....	0.46	0.13	0.10	0.17
66	Total charges collected ⁵.....1939...dollars.....	30,668	96	4,643
67	Indebtedness to December 31 (reported) ⁶.....1939...dollars.....	393,586
WATER DELIVERED TO IRRIGATORS							
68	Enterprises reporting water delivered.....1939...number.....	100	1	127	3	199	8
69	Area irrigated in these enterprises.....1939...acres.....	20,475	(²)	27,964	3,490	84,541	1,319
70	Water delivered in these enterprises.....1939...acre-feet.....	39,910	(²)	102,381	6,350	149,701	2,510
71	Average water delivered per acre irrigated.....1939...acre-feet.....	1.9	(²)	3.7	1.8	1.8	1.9
72	Average cost of water per acre irrigated.....1939...dollars.....	0.82	(²)	0.24	0.10	0.21	0.18
DRAINAGE OF IRRIGATED LAND							
73	Enterprises reporting land drained or needing drainage.....1939...number.....	(²)	2	(²)	1	4	5
74	Irrigable area in these enterprises.....1939...acres.....	(²)	(²)	47,788
75	Irrigated area in these enterprises.....1939...acres.....	(²)	(²)	30,125
76	Area for which drains have been installed.....1939...acres.....	(²)	(²)	19,006
77	Additional area needing drainage.....1939...acres.....	(²)	(²)	1,825

¹Census of Agriculture. ²Organized from part of Lincoln in 1923. ³Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census. ⁴For 1920 relates to total area in enterprises. Irrigable area for that year was not reported. ⁵Average not shown because part of land served by storage works lies in another State. ⁶Annual charges may include costs of maintenance and operation, and assessments for payments on principal and interest on bonds, notes, warrants, and for special reasons. ⁷Annual charges and indebtedness were reported only by enterprises serving 5 or more farms, and items 62 to 67, inclusive, relate to those enterprises only.

CENSUS OF IRRIGATION - WYOMING

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940, 1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

ITEM (For definitions and explanations, see text)	STATE TOTAL	Albany	Big Horn	Campbell	Carbon	Converse
FARM VALUES, 1940*						
1 Land and buildings, all farms.....dollars..	158,971,294	6,516,436	7,455,943	9,600,555	10,549,825	7,300,382
2 Land and buildings, irrigated farms.....dollars..	106,524,175	5,775,017	7,208,798	292,072	9,278,081	3,625,175
Operated by—						
3 (a) Owners and managers.....dollars..	88,316,333	5,139,340	5,418,673	292,072	8,491,881	3,299,565
4 (b) Tenants.....dollars..	18,207,842	835,877	1,790,125	.....	786,200	325,610
5 Average, land and buildings, per farm.....dollars..	12,333.47	17,879.31	7,187.24	22,487.08	23,688.57	18,401.90
6 per acre in farms.....dollars..	8.25	4.56	16.50	3.04	4.64	4.74
7 Buildings, irrigated farms reporting value.....number...	8,429	322	900	13	383	196
8 Total reported.....dollars..	20,788,958	1,101,829	1,600,161	49,925	1,044,430	505,240
9 Average, per irrigated farm reporting.....dollars..	2,466.36	3,421.83	1,666.83	3,840.38	2,726.97	2,577.76
10 per acre on all irrigated farms.....dollars..	1.61	0.87	3.66	0.52	0.52	0.66
11 Buildings, nonirrigated farms reporting value.....number...	6,117	132	38	823	127	319
12 Total reported.....dollars..	8,546,523	218,675	43,500	1,200,834	166,056	403,849
13 Average, per nonirrigated farm reporting.....dollars..	1,397.18	1,656.63	1,144.74	1,459.09	1,307.54	1,285.98
14 per acre on all nonirrigated farms.....dollars..	0.57	1.08	0.85	0.42	0.27	0.29
15 Implements and machinery, irrigated farms reporting value.....number...	7,742	308	938	13	379	193
16 Total reported.....dollars..	10,873,844	367,314	1,360,300	17,895	636,828	248,765
17 Average, per irrigated farm reporting.....dollars..	1,404.53	1,192.58	1,450.21	1,376.54	1,679.50	1,288.94
18 per acre on all irrigated farms.....dollars..	0.84	0.29	3.11	0.19	0.32	0.33
19 Implements and machinery, nonirrigated farms reporting value.....number...	5,578	105	25	787	118	306
20 Total reported.....dollars..	4,436,003	43,708	16,000	636,490	135,383	216,548
21 Average, per acre, on all nonirrigated farms.....dollars..	0.29	0.22	0.31	0.22	0.22	0.15
ENTERPRISES AND IRRIGATION WORKS JANUARY 1						
22 Enterprises.....1940...number.....	1,340	272	125	21	337	133
23 ..1930...number.....	1,267	232	115	3	270	83
24 ..1920...number.....	3,564	303	198	19	380	118
25 Average size of enterprise based on irrigable area.....1940...acres.....	669	1,256	1,304	60	558	334
26 ..1930...acres.....	743	1,480	1,477	147	577	559
27 ..1920 ² ...acres.....	720	1,097	1,080	173	509	454
28 Diversion dams.....1940...number.....	4,205	589	115	29	679	153
29 Main canals and laterals.....1940...length, miles.....	11,762.1	1,052.7	664.6	16.0	1,366.0	499.5
30 ..1930...length, miles.....	10,775	1,017	725	.....	777	449
31 ..1920...length, miles.....	12,051	923	800	34	1,186	481
32 1940...capacity, c.f.s. ³	46,366	5,150	2,173	61	4,155	950
33 1930...capacity, c.f.s. ³	35,811	4,693	2,715	.....	2,441	746
34 1920...capacity, c.f.s. ³	39,009	4,669	2,904	109	3,057	2,259
35 Pipe lines ⁴.....1940...length, miles.....	70.3	4.0	19.3	0.1	0.1	2.6
36 Storage dams.....1940...number.....	319	39	6	5	30	6
37 Reservoirs.....1940...number.....	334	34	5	6	46	6
38 ..1930...number.....	214	5	1	.....	20	4
39 ..1920...number.....	374	30	12	14	25	10
40 1940...capacity, acre-feet.....	3,379,957	314,514	4,776	650	5,065	20,680
41 1930...capacity, acre-feet.....	3,051,745	119,590	1,806	1	4,593	20,600
42 1920...capacity, acre-feet.....	2,911,748	132,114	2,293	.....	10,336	20,798
43 Wells, flowing.....1940...number.....	36	7	.....	.....	.....	1
44 ..1930...number.....	6	.....	.....	.....	.....	.....
45 ..1920...number.....	7	.....	.....	.....	1	1
46 1940...yield, g.p.m.....	3,830	750	.....	.....	.....	(⁵)
47 1930...yield, g.p.m.....	2,205	.....	.....	.....	.....	.....
48 1920...yield, g.p.m.....	46	.....	.....	.....	.....	40
49 Wells, pumped.....1940...number.....	94	5	1	3	3	2
50 ..1930...number.....	11	.....	.....	.....	.....	.....
51 ..1920...number.....	16	.....	1	2	5	1
52 1940...yield, g.p.m.....	60,522	1,288	(⁵)	74	87	(⁵)
53 1930...yield, g.p.m.....	8,280	.....	.....	.....	.....	.....
54 1920...yield, g.p.m.....	8,020	.....	900	2,005	.....	180
55 Pumping plants.....1940...number.....	224	7	6	3	4	21
56 ..1930...number.....	61	.....	1	.....	3	9
57 ..1920...number.....	57	.....	6	2	6	3
58 Prime movers.....1940...capacity, hp.....	4,152	38	116	5	8	495
59 ..1930...capacity, hp.....	912	.....	45	.....	51	400
60 ..1920...capacity, hp.....	1,304	.....	202	82	40	51
61 Pumps.....1940...capacity, g.p.m.....	209,559	1,379	5,600	74	3,087	33,249
62 ..1930...capacity, g.p.m.....	86,905	.....	1,000	.....	3,850	44,620
63 ..1920...capacity, g.p.m.....	39,725	.....	2,250	2,005	1,287	1,782
64 Pumping lift, from all sources.....1940...average, feet.....	30	25	21	113	6	18
65 ..1930...average, feet.....	21	.....	12	.....	18	20
66 ..1920...average, feet.....	31	.....	14	70	17	35
67 from pumped wells.....1940...average, feet.....	46	18	(⁵)	113	8	(⁵)
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁶						
68 Enterprises reporting pay roll.....number.....	184	9	25	.....	5	3
69 Irrigated area in these enterprises.....acres.....	637,201	37,037	90,354	.....	10,864	9,880
70 Wages and salaries paid and payable.....dollars..	392,047	7,227	32,485	.....	840	11,620
71 Persons employed during week ending April 29.....number...	578	14	69	.....	6	12

* Census of Agriculture.

¹ Includes intercounty projects counted as independent enterprises for each county into which they extend. For actual number of enterprises see State table 1.

² For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.

³ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

⁴ Includes siphons and farm pipe lines reported.

⁵ Data are included only in State totals because less than 3 enterprises reported in the 1940 Census.

⁶ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION—WYOMING

COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940,

ITEM (For definitions and explanations, see text)		Crook	Fremont ¹	Goshen	Hot Springs	Johnson	Laramie
FARM VALUES, 1940*							
1	Land and buildings, all farms.....dollars..	6,601,609	3,831,535	11,135,121	2,144,277	7,502,608	8,929,415
2	Land and buildings, irrigated farms.....dollars..	481,811	8,964,627	7,091,666	1,783,188	5,357,567	3,707,551
Operated by—							
3	(a) Owners and managers.....dollars..	422,459	7,588,232	3,931,311	1,401,895	4,516,052	3,573,951
4	(b) Tenants.....dollars..	59,352	1,376,395	3,160,355	381,293	841,515	133,600
5	Average, land and buildings, per farm.....dollars..	18,531.19	6,725.15	9,355.76	9,638.85	19,624.79	33,401.36
6	per acre in farms.....dollars..	5.18	12.83	21.89	9.04	5.93	4.93
7	Buildings, irrigated farms reporting value.....number..	25	1,312	732	184	262	109
8	Total reported.....dollars..	69,155	1,934,633	1,355,917	342,558	986,780	640,385
9	Average, per irrigated farm reporting.....dollars..	2,059.81	1,474.57	1,852.35	1,861.73	3,766.34	5,875.09
10	per acre on all irrigated farms.....dollars..	0.74	2.77	4.19	1.74	1.09	0.85
11	Buildings, nonirrigated farms reporting value.....number..	768	122	535	54	211	780
12	Total reported.....dollars..	876,592	189,740	612,471	48,180	278,835	1,443,647
13	Average, per nonirrigated farm reporting.....dollars..	1,141.40	1,042.53	1,144.81	892.22	1,321.49	1,850.83
14	per acre on all nonirrigated farms.....dollars..	0.63	0.51	0.79	0.43	0.30	1.78
15	Implements and machinery, irrigated farms reporting value.....number..	24	922	673	172	260	104
16	Total reported.....dollars..	41,260	1,011,496	1,117,844	177,119	392,543	179,426
17	Average, per irrigated farm reporting.....dollars..	1,719.17	1,097.07	1,660.99	1,029.76	1,509.78	1,725.25
18	per acre, on all irrigated farms.....dollars..	0.44	1.45	3.45	0.90	0.43	0.24
19	Implements and machinery, nonirrigated farms reporting value.....number..	735	99	498	43	203	711
20	Total reported.....dollars..	548,232	78,160	448,059	21,540	134,765	670,527
21	Average, per acre, on all nonirrigated farms.....dollars..	0.39	0.25	0.58	0.19	0.15	0.82
ENTERPRISES AND IRRIGATION WORKS JANUARY 1							
22	Enterprises.....1940.....number.....	30	304	58	100	176	98
23	.....1930.....number.....	8	208	29	92	59	95
24	.....1920.....number.....	29	385	89	72	150	90
25	Average size of enterprise based on irrigable area.....1940.....acres.....	86	879	1,957	284	368	364
26	.....1930.....acres.....	82	1,275	3,733	300	587	360
27	.....1920.....acres.....	86	962	2,007	324	652	562
28	Diversion dams.....1940.....number.....	33	192	46	69	202	254
29	Main canals and laterals.....1940.....length, miles.....	25.2	1,316.0	687.2	186.1	452.7	255.4
30	.....1930.....length, miles.....	6	1,302	610	218	291	296
31	.....1920.....length, miles.....	43	1,376	431	179	626	275
32	.....1940.....capacity, c.f.s. ⁸	68	4,396	4,775	979	1,710	544
33	.....1930.....capacity, c.f.s. ⁸	5	4,959	2,276	529	733	566
34	.....1920.....capacity, c.f.s. ⁸	350	4,323	1,803	431	1,724	618
35	Pipe lines ⁹.....1940.....length, miles.....	0.8	9.0	3.9	6.4	2.0	3.8
36	Storage dams.....1940.....number.....	5	21	12	5	18	15
37	Reservoirs.....1940.....number.....	7	29	9	7	17	15
38	.....1930.....number.....	1	11	10	7	8	24
39	.....1920.....number.....	13	31	30	9	8	28
40	.....1940.....capacity, acre-feet.....	641	207,715	26,693	2,625	34,300	5,597
41	.....1930.....capacity, acre-feet.....	40	38,668	29,600	621	7,382	8,585
42	.....1920.....capacity, acre-feet.....	56	6,314	27,728	488	3,871	3,932
43	Wells, flowing.....1940.....number.....	2	6	.....	5	3	2
44	.....1930.....number.....	1	.....	.....	4	.....	.....
45	.....1920.....number.....	.....	1	.....	.....	.....	.....
46	.....1940.....yield, g.p.m.....	(⁶)	338	.....	1,808	118	(⁶)
47	.....1930.....yield, g.p.m.....	120	.....	.....	1,965	.....	.....
48	.....1920.....yield, g.p.m.....	.....	.....	.....	.....	.....	.....
49	Wells, pumped.....1940.....number.....	1	1	4	6	6	43
50	.....1930.....number.....	.....	.....	.....	.....	.....	6
51	.....1920.....number.....	.....	.....	.....	.....	.....	2
52	.....1940.....yield, g.p.m.....	(⁶)	(⁶)	3,450	965	1,136	40,320
53	.....1930.....yield, g.p.m.....	.....	.....	.....	.....	.....	7,500
54	.....1920.....yield, g.p.m.....	.....	.....	.....	50	.....	735
55	Pumping plants.....1940.....number.....	4	1	6	21	13	46
56	.....1930.....number.....	.....	.....	.....	4	2	6
57	.....1920.....number.....	3	5	.....	6	3	2
58	Prime movers.....1940.....capacity, hp.....	42	(⁶)	98	683	232	1,187
59	.....1930.....capacity, hp.....	.....	.....	.....	48	30	100
60	.....1920.....capacity, hp.....	23	62	.....	58	49	20
61	Pumps.....1940.....capacity, g.p.m.....	954	(⁶)	5,525	33,293	5,336	43,870
62	.....1930.....capacity, g.p.m.....	.....	.....	.....	3,240	6,500	7,800
63	.....1920.....capacity, g.p.m.....	1,381	2,460	.....	4,020	1,100	735
64	Pumping lift, from all sources.....1940.....average, feet.....	18	(⁶)	17	36	28	58
65	.....1930.....average, feet.....	.....	.....	.....	8	7	26
66	.....1920.....average, feet.....	13	90	.....	26	33	12
67	from pumped wells.....1940.....average, feet.....	(⁶)	(⁶)	19	51	52	62
PAY ROLL AND NUMBER OF EMPLOYEES 1939¹⁰							
68	Enterprises reporting pay roll.....number.....	.....	12	13	4	11	.....
69	Irrigated area in these enterprises.....acres.....	.....	84,190	89,261	5,712	17,148	.....
70	Wages and salaries paid and payable.....dollars..	.....	188,228	58,890	1,815	3,784	.....
71	Persons employed during week ending April 29.....number..	.....	170	77	.....	14	.....

* Census of Agriculture.

¹ Part taken to form part of Sublette in 1923.² Parts taken to form Teton and part of Sublette in 1923.³ Part annexed to Yellowstone National Park, and part of Yellowstone National Park annexed in 1929.⁴ Organized from parts of Fremont and Lincoln in 1923.⁶ Organized from part of Lincoln in 1923.

CENSUS OF IRRIGATION — WYOMING

1930, AND 1920; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Lincoln ²	Natrona	Niobrara	Park ³	Platte	Sheridan	Sublette ⁴	Sweetwater	Teton ⁵	Uinta	Washakie	Weston	
5,265,657	4,833,501	4,950,260	9,330,260	7,528,015	14,439,390	5,586,036	3,231,030	2,828,877	3,890,334	4,282,432	4,238,160	1
5,688,407	2,515,997	278,959	9,010,370	5,504,867	11,455,607	5,431,076	1,954,209	2,667,445	3,831,943	4,171,702	448,040	2
5,261,857	(⁶)	267,599	7,049,615	4,073,797	8,869,909	5,243,676	1,708,729	2,405,100	3,593,433	2,955,650	(⁶)	3
426,550	(⁶)	11,360	1,950,755	1,431,070	2,585,698	187,400	245,480	262,345	238,510	1,213,052	(⁶)	4
8,452.31	22,666.64	17,434.84	10,550.78	12,370.49	18,810.52	19,259.13	10,339.73	15,877.65	10,131.34	14,845.91	23,581.05	5
13.62	3.39	3.39	13.49	5.09	15.00	10.01	7.30	28.72	8.78	25.25	3.98	6
635	111	16	842	432	602	279	183	163	368	277	19	7
1,121,938	499,350	41,400	2,299,960	898,756	2,872,471	856,455	273,595	498,525	763,498	956,195	75,900	8
1,766.83	4,498.65	2,587.50	2,731.54	2,080.45	4,771.55	3,069.73	1,495.05	3,003.16	2,074.72	3,451.97	3,989.47	9
2.69	0.67	0.50	3.44	0.83	3.76	1.58	1.02	5.37	1.75	5.79	0.62	10
126	246	503	58	311	394	29	41	30	19	24	367	11
91,525	445,963	657,831	145,645	432,645	694,950	27,475	53,895	37,590	14,675	23,930	438,523	12
726.39	1,812.86	1,306.82	2,511.12	1,391.14	1,763.83	947.41	1,314.51	1,253.00	772.37	997.08	1,194.89	13
1.09	0.42	0.51	4.22	0.97	1.25	0.81	0.05	4.97	2.07	1.65	0.42	14
601	103	16	812	417	581	255	173	161	345	273	19	15
635,638	217,243	22,424	1,257,628	452,021	983,349	335,830	179,554	231,606	302,743	677,174	28,145	16
1,057.63	2,109.16	1,401.50	1,548.80	1,083.98	1,692.51	1,316.98	1,037.88	1,438.55	877.52	2,480.49	1,481.32	17
1.52	0.29	0.27	1.88	0.42	1.29	0.62	0.67	2.49	0.69	4.10	0.23	18
88	204	491	51	294	346	12	34	28	16	22	362	19
57,806	167,473	346,057	38,290	247,768	264,911	10,425	34,130	11,835	5,670	13,965	288,261	20
0.69	0.16	0.27	1.11	0.55	0.48	0.31	0.03	1.56	0.80	0.96	0.28	21
256	110	15	160	96	230	315	108	139	218	85	18	22
201	98	6	79	143	102	287	93	140	183	94	17	23
586	61	7	202	178	203	.....	82	.....	308	70	54	24
441	277	145	830	952	438	727	695	315	700	586	306	25
487	250	130	1,518	812	764	691	556	233	632	572	397	26
492	359	204	895	738	535	.....	702	.....	723	862	232	27
288	110	5	172	123	176	291	80	138	390	59	12	28
603.6	177.6	19.0	746.9	466.2	698.5	972.6	272.1	297.3	695.2	252.7	39.0	29
523	58	9	795	316	541	1,370	255	248	719	212	36	30
1,718	156	17	849	740	712	.....	273	.....	817	224	188	31
2,784	532	32	3,699	712	2,209	4,763	532	2,109	2,792	1,164	87	32
1,374	145	9	2,974	1,091	1,306	5,277	550	757	1,928	424	63	33
5,299	238	161	2,668	1,869	2,189	.....	606	.....	2,474	559	699	34
1.2	2.5	.....	4.2	0.2	4.7	0.1	1.3	.....	0.1	3.4	0.6	35
13	15	4	10	18	33	12	28	4	11	3	6	36
10	16	3	11	23	30	12	24	4	11	2	7	37
6	34	3	6	14	13	6	11	3	6	9	3	38
14	17	4	24	24	28	.....	26	.....	9	2	16	39
1,530	1,076,167	514	518,063	91,897	40,856	74,787	37,187	866,594	45,538	(⁶)	3,099	40
940	1,197,533	675	463,570	203,768	45,290	32,128	23,590	847,587	2,098	1,204	1,935	41
847,718	1,081,264	457	463,641	270,895	11,252	.....	19,505	2,864	2,864	60	3,724	42
2	1	.....	.....	.....	2	.....	2	.....	.....	2	1	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
(⁶)	(⁶)	.....	.....	.....	(⁶)	.....	(⁶)	.....	(⁶)	(⁶)	(⁶)	45
.....	.....	.....	.....	.....	.....	.....	120	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52
.....	6,382	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
.....	370	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
.....	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	56
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57
(⁶)	287	296	8	177	288	.....	80	.....	.....	83	(⁶)	58
.....	132	.....	.....	34	22	.....	32	.....	.....	.....	.....	59
(⁶)	166	.....	.....	72	373	.....	44	.....	.....	26	16	60
.....	19,220	17,790	520	13,910	14,720	.....	3,222	.....	5,850	(⁶)	(⁶)	61
.....	10,880	.....	.....	3,646	435	500	3,334	.....	.....	.....	1,100	62
(⁶)	8,850	.....	.....	5,120	4,900	.....	1,505	.....	1,200	.....	(⁶)	63
.....	15	14	30	18	19	.....	41	.....	.....	23	(⁶)	64
.....	26	.....	.....	22	8	.....	21	.....	.....	.....	12	65
.....	19	.....	.....	21	42	.....	39	.....	.....	58	10	66
.....	12	.....	.....	25	26	.....	.....	.....	.....	.....	.....	67
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	68
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	69
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71

⁶ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
⁷ For 1920 relates to total area in enterprises. Irrigable area for that year was not reported.
⁸ Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁹ Includes siphons and farm pipe lines reported.
¹⁰ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION - FLORIDA

STATE TABLE 1.—IRRIGATION SUMMARY FOR THE STATE: 1935 AND 1940

ITEM (For definitions and explanations, see text)	CENSUS OF—	
	1940	1935
Approximate land area of State.....acres.....	34,727,680	35,111,040
CENSUS OF AGRICULTURE		
All farms (irrigated and nonirrigated).....number.....	62,248	72,857
Land in all farms.....acres.....	8,337,708	6,018,406
Farms irrigated: ¹		
Farms.....number.....	3,947	2,751
Proportion of all farms.....percent.....	6.3	3.8
Land in farms.....acres.....	596,139	(²)
Proportion of all farm land.....percent.....	7.1	(²)
Area irrigated.....acres.....	³ 126,191	⁴ 65,832
Proportion of total land area of State.....percent.....	0.4	0.2
Proportion of all farm land.....percent.....	1.5	1.1
Value of irrigated farms (land and buildings).....dollars.....	77,835,579	(²)
Average per farm.....dollars.....	19,720.19	(²)
Average per acre.....dollars.....	130.57	(²)
Value of farm implements and machinery ⁵.....dollars.....	4,685,526	(²)
Average per farm ⁶.....dollars.....	1,187.11	(²)
Average per acre ⁶.....dollars.....	7.86	(²)
CENSUS OF IRRIGATION		
Irrigation enterprises:		
Enterprises.....number.....	3,628	
Farms irrigated.....number.....	3,930	
Area irrigated.....acres.....	132,362	
Area existing works were capable of supplying with water.....acres.....	175,813	
Area irrigable.....acres.....	188,557	
Additional area existing works were capable of supplying with water.....acres.....	43,451	
Additional irrigable area in enterprises not supplied with water.....acres.....	56,195	
Investment in irrigation enterprises.....dollars.....	7,055,921	
Average per acre based on area works were capable of supplying with water.....dollars.....	40.13	
Estimated completed cost of existing enterprises.....dollars.....	7,228,453	
Average per acre based on irrigable area in enterprises.....dollars.....	38.34	
Average annual cost per acre irrigated for maintenance and operation of irrigation works.....dollars.....	3.29	

¹Relates to farms reporting irrigated cropland harvested and/or irrigated pasture.
²Not available.
³Irrigated land from which crops were harvested plus 2,509 acres of irrigated land used only for pasture.
⁴Irrigated land from which crops were harvested.
⁵Total is for irrigated farms reporting this item. Averages are based on all irrigated farms.
⁶The land area shown for 1940 represents redeterminations by the Bureau of the Census and, therefore, differs from that shown for 1935.

STATE TABLE 2.—CENSUS OF AGRICULTURE—NUMBER OF FARMS, FARM ACREAGE ACCORDING TO USE, AND SPECIFIED FARM VALUES FOR IRRIGATED AND NONIRRIGATED FARMS, BY TENURE OF OPERATOR, 1940

ITEM (For definitions and explanations, see text)	Farms	Land in farms	CROPLAND HARVESTED 1939		Irrigated pasture 1939	VALUE OF FARMS (land and buildings)		VALUE OF BUILDINGS		VALUE OF IMPLEMENTS AND MACHINERY	
			Total	Irrigated ¹		Total	Average per acre ²	Total	Average per acre ²	Total	Average per acre ²
	Number	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
All farms.....	62,248	8,337,708	1,679,622	123,682	2,509	324,377,874	38.90	68,211,007	8.18	20,382,246	2.44
Owners and managers.....	46,580	6,994,698	1,265,744	113,518	2,169	294,370,042	42.08	60,920,616	8.71	17,872,906	2.56
Tenants.....	15,668	1,343,010	413,878	10,164	340	30,007,832	23.34	7,290,391	5.43	2,509,340	1.87
Irrigated farms, total.....	3,947	596,139	171,564	123,682	2,509	77,835,579	130.57	10,863,687	18.26	4,685,526	7.86
Owners and managers.....	3,490	573,825	159,651	113,518	2,169	74,622,653	129.59	10,451,380	18.15	4,346,849	7.55
Tenants.....	457	20,314	11,913	10,164	340	3,212,926	158.16	432,307	21.28	338,677	16.67
Wholly irrigated farms.....	2,480	253,385	81,608	81,608	523	38,195,637	150.74	5,783,379	22.82	2,419,123	9.55
Owners and managers.....	2,144	240,430	72,936	72,936	401	36,086,845	150.09	5,515,157	22.94	2,169,159	9.02
Tenants.....	336	12,955	8,672	8,672	122	2,108,792	162.78	268,222	20.70	249,964	19.29
Partly irrigated farms.....	1,467	342,754	89,956	42,074	1,986	39,639,942	115.65	5,100,308	14.88	2,266,403	6.61
Owners and managers.....	1,346	335,395	86,715	40,582	1,768	38,535,808	114.90	4,936,223	14.72	2,177,690	6.49
Tenants.....	121	7,359	3,241	1,492	218	1,104,134	150.04	164,085	22.30	88,713	12.06
Nonirrigated farms, total.....	58,301	7,741,569	1,508,058	.....	.....	246,542,295	31.85	57,327,320	7.41	15,696,720	2.03

¹Does not include irrigated fallow land or land in young irrigated crops not harvested or in irrigated crops that failed.
²Based on all land in farms for each tenure group.

CENSUS OF IRRIGATION — FLORIDA

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STATE TABLE 3.—NUMBER OF ENTERPRISES, IRRIGABLE AREA, AREA WORKS WERE CAPABLE OF SUPPLYING WITH WATER, INVESTMENT, 1940; IRRIGATED AREA, COST OF MAINTENANCE AND OPERATION, 1939; WATER DELIVERED TO IRRIGATORS, 1939; BY SOURCE OF WATER SUPPLY

SOURCE OF WATER SUPPLY (For definitions and explanations, see text)	1940				INVESTMENT, 1940			COST OF MAINTENANCE AND OPERATION, 1939 ¹		DELIVERY OF WATER TO IRRIGATORS, 1939					
	Enterprises	Irrigable area	Area works were capable of supplying with water	Irrigated area 1939	Amount	Pro-portion of total	Average per acre ²	Irrigated area reporting	Average per acre	Irrigated area reporting—			Quantity delivered per acre ³	Cost ³	
										Quantity	Cost	Quantity and cost		Per acre	Per acre-foot
	Number	Acres	Acres	Acres	Dollars	Percent	Dollars	Acres	Dollars	Acres	Acres	Acres	Acres-foot	Dollars	Dollars
Total.....	3,628	188,557	175,813	132,362	7,055,921	100.0	40.13	112,515	3.29	111,375	112,728	101,917	1.7	3.29	1.89
Streams, gravity.....	1	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
Streams, pumped.....	21	11,874	6,278	4,778	173,085	2.5	27.57	4,759	2.74	4,761	4,759	4,759	7.4	2.74	0.37
Wells, pumped.....	1,096	27,283	26,946	20,589	1,798,023	25.5	66.73	17,614	6.18	18,912	17,614	16,846	1.4	6.31	1.63
Wells, flowing.....	1,743	60,154	57,812	44,944	2,320,738	32.9	40.14	38,127	1.45	32,704	38,127	29,369	1.6	1.22	0.77
Wells, pumped and flowing.....	68	5,561	5,490	4,626	505,827	7.2	92.14	4,063	3.69	4,027	4,063	3,637	1.6	3.73	2.36
Lakes, gravity.....	3	30	30	28	1,823	(⁴)	60.77	28	8.96	28	28	28	0.9	8.96	9.65
Lakes, pumped.....	534	42,504	41,147	29,916	1,412,756	20.0	34.33	27,487	4.45	28,474	27,487	26,753	1.0	4.48	4.34
Springs.....	2	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
City water.....	25	533	530	510	11,184	0.2	21.10	105	12.07	476	318	314	0.8	6.04	7.46
Sewage.....	1	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....	.....	.....
Streams, gravity; wells, pumped..	1	(⁴)	(⁴)	.....	(⁴)	(⁴)	(⁴)	.....	.....	.....	.....	.....	.....	.....	.....
Streams, pumped; wells, pumped....	3	3,019	3,019	719	19,000	0.3	6.29	19	21.05	19	19	19	3.2	21.05	6.67
Waste water, seepage or drainage..	82	29,481	26,454	18,876	472,432	6.7	17.86	14,161	1.47	15,832	14,161	14,161	2.5	1.47	0.59
Other mixed.....	47	8,073	8,073	7,347	320,748	4.5	39.73	6,136	3.94	6,126	6,136	6,015	1.0	3.93	4.01

¹Based on irrigated area in enterprises reporting cost of maintenance and operation. ²Based on area works were capable of supplying with water. ³Based on enterprises reporting both quantity and cost of water, assuming (a) that for enterprises serving 1 to 4 farms the cost of water is cost of maintenance and operation, and for enterprises serving 5 or more farms it is total annual charges, and (b) that enterprises reporting cost and quantity of water had used the same quantity of water per acre as all enterprises which reported water delivered. ⁴Data are included only in State totals because less than 3 enterprises reported. ⁵Less than one-tenth of 1 percent. ⁶Includes data for 1 supplemental enterprise (see text for explanation of supplemental enterprises).

STATE TABLE 4.—ENTERPRISES, AREAS, AVERAGE COSTS, AND AREA IRRIGATED, CENSUS OF 1940, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	ENTERPRISES		AREAS		AVERAGE COST			AREA IRRIGATED, 1939 ¹				
	Total	Serving 5 or more farms	Irrigable	Works were capable of supplying with water	Works and equipment per acre ²	Maintenance and operation per acre ³	Farms served	Total area	Cropland			Irrigated pasture
									From which crops were harvested	On which crops failed	.....
	Number	Number	Acres	Acres	Dollars	Dollars	Number	Acres	Acres	Acres	Acres	
Total.....	3,628	18	188,557	175,813	40.13	3.29	3,930	132,362	125,474	4,204	2,684	
Individual and partnership.....	3,578	3	177,187	164,443	41.15	3.20	3,731	123,996	117,108	4,204	2,684	
Cooperative, incorporated.....	27	2	6,603	6,603	27.12	2.89	58	4,498	4,498	.....	.....
Cooperative, unincorporated.....	12	2	2,407	2,407	25.16	3.50	26	1,788	1,788	.....	.....
Commercial.....	10	10	2,360	2,360	20.77	9.93	115	2,080	2,080	.....	.....
Other.....	1	1	(⁴)	(⁴)	(⁴)	.....	(⁴)	(⁴)	(⁴)	.....	.....

¹Reported by enterprises in the Census of Irrigation, not by the Census of Agriculture. ²Based on area works were capable of supplying with water and cost of works and equipment exclusive of water right investment. ³Based on irrigated area in enterprises reporting maintenance and operation in 1939. ⁴Data for 1 "Other" enterprise are included with "Individual and partnership" enterprises in the 1940 Census. ⁵Includes data for 1 supplemental enterprise (see text for explanation of supplemental enterprises).

STATE TABLE 5.—AREAS, INVESTMENT, COST OF MAINTENANCE AND OPERATION, PAY ROLL, AND NUMBER OF EMPLOYEES, CENSUS OF 1940, BY TYPE OF ENTERPRISE

TYPE OF ENTERPRISE (For definitions and explanations, see text)	AREAS			INVESTMENT ¹			COST OF MAINTENANCE AND OPERATION			PAY ROLL AND EMPLOYEES, 1939 ²		
	Irrigated	Works were capable of supplying with water	Irrigable	Total	Average per acre works were capable of supplying water	Estimated investment required to complete works	Irrigated area reporting 1939	Reported cost 1939	Average cost per irrigated acre 1939	Enterprises reporting pay roll	Wages and salaries paid and payable	Employees during week ending April 29
Total.....	132,362	175,813	188,557	7,055,921	40.13	172,532	112,515	370,340	3.29	.....	5,288	5
Individual and partnership.....	123,996	164,443	177,187	6,767,239	41.15	167,661	104,888	335,293	3.20	.....	.....	.....
Cooperative, incorporated.....	4,498	6,603	6,603	179,089	27.12	.....	4,494	13,000	2.89	.....	(⁴)	(⁴)
Cooperative, unincorporated.....	1,788	2,407	2,407	60,567	25.16	.....	1,436	5,023	3.50	.....	(⁴)	(⁴)
Commercial.....	2,080	2,360	2,360	49,026	20.77	.....	1,717	17,051	9.93	.....	(⁴)	(⁴)
Other.....	(³)	(³)	(³)	(³)	(³)	.....	.....	.....	.....	.....	(⁴)	(⁴)

¹Enumerated as cost of irrigation works and equipment to December 31, 1939. ²Only for enterprises serving 5 or more farms. ³Data for 1 "Other" enterprise are included with "Individual and partnership" enterprises. ⁴Data are included only in State totals because less than 3 enterprises reported. ⁵Includes data for 1 supplemental enterprise (see text for explanation of supplemental enterprises).

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STATE TABLE 6.—IRRIGATION WORKS, BY TYPE OF ENTERPRISE, 1940

TYPE OF ENTERPRISE (For definitions and explanations, see text)	DAMS		CANALS			RESERVOIRS		PIPE LINES	FLOWING WELLS		PUMPED WELLS		PUMPING PLANTS			
	Diver-sion	Stor-age	Capac-ity at main head-ing	Length ¹		Num-ber	Capacity	Length	Num-ber	Yield	Number	Yield	Prime movers		Pumps	
				Earth	Lined								Number	Rated capac-ity	Number	Rated capac-ity
	Number	Number	Sec.-ft.	Miles	Miles		Ac.-ft.	Miles		G. p. m.		G. p. m.		Hp.		G. p. m.
Total.....	3	5	1,947	74	.....	7	19,419	4,259.9	4,631	994,828	1,686	482,144	2,321	29,588	2,349	2,104,450
Individual and partnership....	3	5	1,876	67	.....	7	19,419	² 4,207.4	4,600	991,528	1,664	471,834	2,242	27,010	2,269	1,923,450
Cooperative, incorporated.....	.....	.....	38	.....	.....	.....	.....	32.0	.....	.....	10	6,060	47	1,757	49	146,300
Cooperative, unincorporated...	.....	.....	20	.....	.....	.....	.....	16.4	31	3,300	11	3,650	22	489	21	12,900
Commercial.....	.....	.....	13	7	.....	.....	.....	4.1	.....	.....	1	600	10	332	10	21,800
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹Includes main and lateral canals but not farm ditches.

²Mostly tile reported in subirrigation systems.

STATE TABLE 7.—PUMPING PLANTS, BY KIND OF MOTIVE POWER AND TYPE OF PUMP, 1940

PUMPS BY KIND OF POWER EMPLOYED	Pumps	Proportion of total number	Rated capacity of pumps	Proportion of total capacity	Average lift of pumps
	Number	Percent	G. p. m.	Percent	Feet
Total.....	2,349	100.0	2,104,450	100.0	20
Electric motor.....	293	12.5	145,084	6.9	25
Centrifugal.....	196	8.4	120,709	5.7	18
Turbine.....	40	1.7	18,318	0.9	52
Plunger.....	48	2.0	3,532	0.2	29
Other.....	9	0.4	2,525	0.1	30
Internal-combustion engine.....	1,934	82.3	1,870,064	88.8	19
Centrifugal.....	1,575	67.0	853,483	41.0	18
Turbine.....	147	6.3	348,211	16.5	39
Plunger.....	103	4.4	14,108	0.7	22
Other.....	109	4.6	644,262	30.6	14
Other kinds of motive power.....	15	0.6	1,605	0.1	16
Centrifugal.....	1	(¹)	800	(¹)	10
Turbine.....	.....	.....	.....	.....	.....
Plunger.....	12	0.5	540	(¹)	17
Other.....	2	0.1	265	(¹)	12
Mixed kinds of motive power.....	107	4.6	87,697	4.2	21
Centrifugal.....	77	3.2	23,732	1.1	19
Turbine.....	13	0.6	62,510	3.0	41
Plunger.....	13	0.6	975	(¹)	11
Other.....	4	0.2	480	(¹)	18

MOTIVE POWER BY TYPE OF PUMP EMPLOYED	Prime movers	Proportion of total number	Rated capacity of movers	Proportion of total capacity
	Number	Percent	Hp.	Percent
Total.....	2,321	100.0	29,588	100.0
Centrifugal pump.....	1,772	76.3	19,716	66.6
Electric.....	221	9.5	2,951	10.0
Internal-combustion.....	1,550	66.8	16,745	56.5
Other.....	1	(¹)	20	0.1
Turbine pump.....	190	8.2	4,220	14.3
Electric.....	44	1.9	1,152	3.9
Internal-combustion.....	134	5.8	3,032	10.3
Other.....	12	0.5	36	0.1
Plunger pump.....	143	6.2	589	2.0
Electric.....	46	2.0	155	0.5
Internal-combustion.....	95	4.1	426	(¹) 1.4
Other.....	2	0.1	7	(¹)
Other and mixed types of pumps.....	216	9.3	5,063	17.1
Electric.....	36	1.6	373	1.3
Internal-combustion.....	180	7.7	4,690	15.8
Other.....

¹Less than one-tenth of 1 percent.

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STATE TABLE 8.—PIPE LINES, BY MATERIAL, SIZE, AND LENGTH, 1940

MATERIAL AND SIZE (DIAMETER)	Length ¹
	Miles
Total.....	4,259.9
Concrete:	
1 to 12 inches.....	131.9
13 to 24 inches.....	0.7
Over 24 inches.....	.....
Metal:	
1 to 12 inches.....	961.0
13 to 24 inches.....	7.2
Over 24 inches.....	0.5
Wood-stave:	
1 to 12 inches.....	5.3
13 to 24 inches.....	.....
Over 24 inches.....	.....
Clay and other:	
1 to 12 inches.....	² 3,147.1
13 to 24 inches.....	3.2
Over 24 inches.....	.....

¹ Includes siphons and farm pipe lines reported.

² Mostly tile reported in subirrigation systems.

STATE TABLE 9.—DAMS, BY MATERIAL, 1940

MATERIAL	Diversion	Storage
	Number	Number
Total.....	3	5
Concrete or masonry.....	1	1
Timber.....	2	.....
Earth and rock.....	.....	4

STATE TABLE 10.—WATER USED, BY SOURCE OF SUPPLY, 1939

ITEM (For definitions and explanations, see text)	Quantity used
From surface sources reported:	
Total water entering canals.....acre-feet..	¹ 2,842
Area irrigated by these enterprises.....acres.....	¹ 3,186
Average water per acre irrigated.....acre-feet..	¹ 0.9
Total water delivered to irrigators.....acre-feet..	² 68,566
Area irrigated by these enterprises.....acres.....	36,391
Average water per acre irrigated.....acre-feet..	1.9
From underground sources reported:	
Total water delivered to irrigators.....acre-feet..	² 125,953
Area irrigated by these enterprises.....acres.....	74,984
Average water per acre irrigated.....acre-feet..	1.7

¹ Data only for enterprises serving 5 or more farms.

² Quantities of water shown are estimates, no measured water was reported.

STATE TABLE 11.—AREA WITHIN IRRIGATION ENTERPRISES FOR WHICH DRAINS HAVE BEEN INSTALLED, AND ADDITIONAL AREA IN NEED OF DRAINAGE, 1940

ITEM	Area
Enterprises reporting land drained or needing drainage.....number..	847
Area irrigable in these enterprises.....acres.....	73,383
Area irrigated in these enterprises.....acres.....	46,323
Area for which drains have been installed.....acres.....	53,275
Additional area needing drainage.....acres.....	5,573
ITEM	Percent
Ratio of area drained to area irrigated in—	
(a) Enterprises reporting lands drained and/or needing drainage.....percent..	115.0
(b) All irrigation enterprises.....percent..	40.2
Ratio of area drained plus area needing drainage to—	
(a) Irrigable area reporting.....percent..	80.2
(b) Irrigated area reporting.....percent..	127.0

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STATE TABLE 12.—ENTERPRISES, AREA IRRIGATED, CAPITAL INVESTED, MAINTENANCE AND SOURCE OF WATER SUPPLY; BY SPECIFIED GROUPS OF IRRIGATED

	PRIMARY ENTERPRISES (For definitions and explanations, see text)	TOTAL*	IRRIGATED FARMS		
			No farms ¹ *	1 farm	2 to 4 farms
1	Enterprises, 1940.....number...	3,628	104	3,368	140
2	Irrigated farms, 1939.....number...	3,930		3,368	341
3	Area irrigated, 1939.....acres.....	132,362		114,666	12,185
4	(a) From which crops were harvested.....acres.....	125,474		108,920	11,043
5	(b) On which crops failed.....acres.....	4,204		3,070	1,134
6	(c) Irrigated pasture.....acres.....	2,684		2,676	8
CAPITAL INVESTMENT, 1940					
7	Total capital investment in all enterprises ².....dollars.....	7,055,921	130,509	6,121,545	736,512
8	Area works were capable of supplying with water.....acres.....	175,813	3,273	149,040	15,634
9	Average investment per acre irrigated.....dollars.....	53.31		53.39	60.44
10	Average investment per acre which the works could supply with water.....dollars.....	40.13	39.87	41.07	47.11
MAINTENANCE AND OPERATION, 1939					
11	Enterprises reporting maintenance and operation.....number.....	2,944	58	2,749	124
12	(a) Area irrigated in these enterprises.....acres.....	112,515		97,379	11,638
13	(b) Cost of maintenance and operation.....dollars.....	370,340	8,711	304,866	44,232
14	(c) Average cost per irrigated acre reporting.....dollars.....	3.29		3.13	3.80
TYPE, 1940					
15	Individual and partnership.....number.....	3,578	101	3,339	136
16	Cooperative (incorporated and unincorporated).....number.....	39	2	29	4
17	Commercial.....number.....	10	1		
18	All other.....number.....	1			
PAY ROLL AND NUMBER OF EMPLOYEES, ENTERPRISES REPORTING, 1939					
19	Enterprises reporting pay roll.....number.....	3	1		
20	Wages and salaries paid and payable for 1939.....dollars.....	5,288	(3)		
21	Persons employed during week ending April 29, 1939.....number.....	5			
SOURCE OF WATER SUPPLY, 1939					
22	Streams, gravity.....number.....	1		1	
23	Streams, pumped.....number.....	21	1	17	2
24	Wells, pumped.....number.....	1,096	63	999	34
25	Wells, pumped and flowing; or wells flowing.....number.....	1,811	26	1,743	41
26	Lakes, gravity or pumped.....number.....	537	10	471	47
27	Streams and springs; or springs.....number.....	2		2	
28	Mixed, streams and wells.....number.....	4	1	3	
29	Other mixed or stored storm water.....number.....	156	3	132	16

¹Relates to enterprises reporting no irrigation in 1939 but having works capable of supplying water in 1940.

²Enumerated as cost of irrigation works and equipment to December 31, 1939.

STATE TABLE 13.—CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES, 1939

DRAINAGE BASIN AND STATION	County	Elevation of station	PRECIPITATION, OCTOBER 1938—SEPTEMBER 1939										TEMPERATURES, 1939	
			Water year		Oct.-Dec.		Jan.-Mar.		Apr.-June		July-Sept.		Annual mean	Departure ¹
			Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹	Amount	Departure ¹		
St. Johns River														
Jacksonville.....	Duval.....	18	51.39	+1.65	12.36	+2.90	5.68	-3.00	13.78	+2.05	19.57	-0.30	70.7	+1.4
Ocala.....	Marion.....	84	54.37	+1.20	2.50	-5.36	4.91	-4.45	16.36	+2.39	30.60	+8.62	72.3	+2.3
Orlando.....	Orange.....	106	54.94	+2.59	5.67	-2.96	3.31	-4.52	25.48	+11.30	20.48	-1.23	72.3	+0.3
Palatka.....	Putnam.....	50	52.33	-0.42	8.36	+0.70	5.77	-3.32	13.71	-1.84	24.47	+4.04	71.4	+0.5
Sanford.....	Seminole.....	25	54.05	+3.54	5.02	-3.68	2.48	-4.92	19.32	+5.63	27.23	+6.51	73.3	+1.6
North Everglades														
Fort Myers.....	Lee.....	8	60.88	+8.49	4.17	-3.20	1.36	-4.31	27.86	+12.84	27.49	+3.06	74.7	+1.3
Fort Pierce.....	St. Lucie.....	5	42.62	-6.97	11.78	+0.14	2.05	-5.61	14.36	+1.78	14.63	-3.28	(²)	(²)
Kissimmee.....	Osceola.....	69	57.45	+7.39	5.15	-3.09	3.18	-4.89	23.42	+9.79	25.70	+5.58	72.3	+0.1
Moore Haven.....	Glades.....	22	48.79	-1.16	5.55	-0.67	1.32	-4.18	11.17	-5.21	30.75	+8.90	73.4	+0.6
Okeechobee.....	Okeechobee.....	27	55.17	+7.23	7.80	+0.17	3.06	-2.87	22.05	+8.10	22.26	+1.83	73.2	+0.5
South Everglades														
Everglades.....	Collier.....	6	50.09	-3.85	7.26	+1.46	2.02	-2.75	12.06	-4.14	28.75	+1.58	76.0	+1.1
Homestead.....	Dade.....	8	52.06	-10.54	7.56	-6.84	1.58	-4.35	19.75	+1.29	23.17	-0.64	74.0	-0.2
North Gulf of Mexico Slope														
Pensacola.....	Escambia.....	11	59.00	+1.15	3.88	-8.67	9.29	-3.81	17.59	+5.51	28.24	+8.12	68.0	+0.3
Tallahassee.....	Leon.....	192	71.93	+16.35	5.80	-4.15	12.15	-0.39	28.55	+14.79	25.43	+6.10	69.0	+1.3
Suwannee River														
Lake City.....	Columbia.....	197	44.58	-5.30	3.19	-4.75	6.27	-3.98	13.56	+0.41	21.56	+3.02	69.7	+0.6
Withlacoochee River														
Brooksville.....	Hernando.....	275	56.05	+0.29	7.32	-0.87	3.40	-5.12	18.10	+3.31	27.23	+2.97	72.8	+1.7
Bushnell.....	Sumter.....	75	46.80	(²)	4.89	(²)	1.89	(²)	13.05	(²)	26.97	(²)	69.9	(²)
Tampa Bay														
Clearwater.....	Pinellas.....	34	58.58	(²)	11.32	(²)	4.24	(²)	19.88	(²)	23.14	(²)	73.7	(²)
Tampa.....	Hillsborough.....	23	55.91	+6.55	7.93	+1.05	3.25	-4.43	17.22	+4.97	27.51	+4.96	73.1	+1.3
Peace Creek														
Arcadia.....	De Soto.....	56	62.58	+12.42	7.66	+0.60	2.73	-4.17	28.24	+14.90	23.95	+1.09	73.5	+0.7
Bartow.....	Polk.....	115	59.50	+4.19	8.98	+1.49	2.26	-6.04	26.09	+10.51	22.17	-1.77	72.5	+0.3

¹Departure from normal.

²Data not available.

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AND OPERATION, TYPE OF ENTERPRISE, PAY ROLL, NUMBER OF EMPLOYEES, FARMS, AREAS IRRIGATED, AND COST OF WORKS: CENSUS OF 1940

IRRIGATED FARMS—Con.		ACRES IRRIGATED					COST OF IRRIGATION WORKS AND EQUIPMENT				
5 to 24 farms	25 to 99 farms	No acres ¹ *	1 to 99 acres	100 to 299 acres	300 to 1,799 acres	1,800 to 7,499 acres	Less than \$5,000	\$5,000 to \$14,999	\$15,000 to \$99,999 ²	\$100,000 to \$1,499,999	
15 186	1 33	104	3,286 3,437	177 327	56 160	5 6	3,345 3,539	227 318	53 67	3 6	
5,511 5,511			62,126 60,431	28,060 26,851	32,011 29,841	10,165 8,351	84,853 81,427	27,123 25,428	17,392 15,725	2,994 2,894	
			789 906	806 403	1,795 375	814 1,000	1,747 1,679	690 1,005	1,667	100 5	
67,355 7,866 12.22 8.56		130,509 3,273	4,599,651 83,994 74.04 51.76	1,255,974 32,553 44.76 38.58	788,213 42,749 24.62 18.44	281,574 13,250 27.70 21.25	3,401,522 112,545 40.09 30.22	1,666,565 34,685 61.44 48.05	1,539,834 24,437 88.54 63.01	448,000 4,146 149.63 108.06	
13 3,498 12,531 3.56		58 8,711	2,682 53,891 213,950 3.97	155 24,651 76,951 3.12	44 23,808 62,947 2.64	5 10,165 7,781 0.77	2,699 72,523 216,141 2.98	196 23,719 81,585 3.44	46 13,279 65,068 4.90	3 2,994 7,545 2.52	
2 4 9		101 2 1	3,267 19 7	161 9 7	44 9 2	5 2 1	3,312 24 8	214 12 1	49 3 1	3 16 17	
(3) (3)		(3) (3)		(3) (3)			(3) (3)		(3) (3)	19 20	
1 1 1		1 63 26	1 14 992 1,709	1 37 62	4 4 13	1 1	1 16 1,031 1,689	3 54 100	1 10 22	1 24 25	
9		10	459	52	15	1	474	56	7	26	
1 1 4		1 3 1	2 2 107	1 2 25	1 1 19	2	3 129	14	12	27 28 29	

¹Data are included only in State totals because less than 3 enterprises reported.
²Includes data for 1 supplemental enterprise (see text for explanation of supplemental enterprises).

CLIMATOLOGICAL INFLUENCES ON WATER SUPPLIES

GENERAL WEATHER SUMMARY

1938

January was cool and dry, as reported by the U. S. Weather Bureau. Cold weather on the 27-29th overspread the State, with freezing as far south as Homestead. Tender truck was damaged extensively, but citrus damage was small. February, March, and April were warm and dry. Dry weather beginning with December 1937 lasted until near the end of May 1938, the rainfall for this period being about half the normal for the whole State, and considerable less than half for the southern division. Development of spring truck was checked, and citrus groves suffered severely. Leaves were wilting, fruit dropping, and young trees were dying. Abundant rains during the last week of May and the first week in June forced the heaviest June bloom in many years, much of which matured good fruit. In northern Florida, the drought was less severe, cotton made good growth, corn made a good crop, and tobacco matured a large crop of excellent quality.

1939

The dry weather of the closing months of 1938 continued into 1939, January, February, and March being warm and dry. Average temperatures were higher in three previous Februaries, but a maximum of 94° in February has been equalled once only and never exceeded. April was very wet, rainfall averaging about 150 percent of normal. May also was rather wet, heavy rains occurring in Tampa damaging streets and a sewer project, with some wind damage to trees and roofs. June, July, and August rainfall averaged above normal, the August average being the third highest of record and about 150 percent of normal. Heavy rains occurred again in the Tampa area in July, damaging streets and bridge approaches. The final four months of the year were dry, with temperatures varying only slightly from normal except for October which was warm.

Precipitation.—The United States Weather Bureau reports the precipitation in Florida for the "Northern Division" in which De Land, Volusia County, and Ocala, Marion County, are the two most southern stations and a "Southern Division" in which Sanford, Seminole County, and Bushnell, Sumter

County, are the two most northern stations. The greater part of the irrigated lands in Florida is located in the "Southern Division."

COMPARATIVE ANNUAL DATA FOR APPROXIMATELY 92 STATIONS

Year	Remarks	Average North (41 Stations)	Average South (51 Stations)	Average State
		Inches	Inches	Inches
1939.....	Census year.....	54.85	54.22	54.54
1938.....	.....	44.86	41.41	43.17
1927.....	Driest year.....	42.80	38.74	40.78
1912.....	Wettest year.....	67.35	63.19	65.27
Period....	49 years.....	53.32	52.14	52.73

State table 13 shows precipitation in Florida for the water year (October 1938 through September 1939) at 21 Weather Bureau stations located in typical major drainage basins. With the exception of Pensacola, Tallahassee, Lake City, and Ocala located in northwestern Florida, all the stations shown are in or near irrigated areas.

The average rainfall for the water year at 19 of these stations which had complete records, with departures, was 54.94 inches, a departure of +2.36 inches from normal. However, the average rainfall for the 3 months of October, November, and December, 1938, was 6.73 inches, a departure of -1.88 inches, and for the months of January, February, and March, 1939, the average was 4.00 inches, a departure of -4.06 inches from the normal for these 3 months at the 19 stations. Since the principal planting and growing season for many of Florida's most valuable crops is the first 6 months of the water year, the distribution and amount of rainfall during that period indicates the need for irrigation more than the total for either a calendar or water year. The precipitation received during the last half of the water year (April through September), even during the driest of years is usually sufficient to maintain growth and provide replenishment of both underground and surface waters to meet the needs of irrigation during the winter dry season. Therefore, the amount and distribution of rainfall during the last half of the water year are minor factors in determining the need for irrigation in Florida.

CENSUS OF IRRIGATION — FLORIDA

DRAINAGE BASIN TABLE I.—AREA IRRIGATED, 1939, CAPITAL INVESTED AND IRRIGABLE AREA, 1940, AND IRRIGATED FARMS, MAINTENANCE AND OPERATION, WATER DELIVERED TO IRRIGATORS, AND DRAINAGE OF IRRIGATED LAND, 1939

ITEM (For definitions and explanations, see text. A map index-number is shown in parentheses for each drainage basin)	STATE TOTAL	St. Marys River ¹	St. Johns River and North Atlantic Slope ²	Kissimmee and Caloosahatchee Rivers	Everglades	Withlacoochee River	Tampa Bay	Peace Creek
		(1)	(2)	(3)	(4)	(13)	(14)	(15)
IRRIGATED FARMS AND AREAS								
1 Irrigated farms.....1939..number.....	3,930	3	952	1,095	306	103	829	642
2 Area irrigated.....1939..acres.....	132,362	33	26,266	39,749	23,962	1,285	18,411	22,656
3 (a) Cropland harvested.....1939..acres.....	125,474	33	25,830	36,906	21,282	1,256	18,113	22,054
4 (b) Crop failure.....1939..acres.....	4,204	.....	379	883	2,588	29	159	166
5 (c) Pasture.....1939..acres.....	2,684	.....	57	1,960	92	.....	139	436
6 Irrigable area in enterprises.....1940..acres.....	188,557	43	32,864	57,752	36,831	1,529	25,445	34,073
7 Excess of irrigable area over the area irrigated...1940..acres.....	56,195	10	6,618	18,003	12,869	244	7,034	11,417
8 Area works were capable of supplying with water...1940..acres.....	175,813	43	32,474	53,181	30,758	1,528	23,985	33,644
9 Excess of area works were capable of supplying with water over area irrigated.....1940..acres.....	43,451	10	6,208	13,432	6,796	243	5,574	11,188
10 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	75.3	76.7	80.9	74.7	77.9	84.1	76.8	66.9
CAPITAL INVESTED TO JANUARY 1								
11 Total investment in irrigation enterprises ³.....1940..dollars....	7,055,921	5,825	2,634,891	1,058,740	685,870	134,491	1,394,274	1,141,830
12 Average investment based on area works were capable of supplying with water, per acre.....1940..dollars....	40.13	135.47	81.14	19.91	22.30	88.02	58.13	33.74
13 Average investment per acre irrigated.....1939..dollars....	53.31	176.52	100.32	26.64	28.62	104.66	75.73	50.40
14 Estimated final investment in existing enterprises.....1940..dollars....	7,228,453	5,825	2,676,832	1,086,066	753,180	136,446	1,408,944	1,161,160
15 Average investment based on estimated final investment and irrigable area, per acre.....1940..dollars....	38.34	135.47	81.40	18.81	20.45	89.24	55.37	34.08
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
16 Enterprises reporting maintenance and operation...1939..number....	2,944	3	720	911	200	61	589	460
17 Area irrigated in these enterprises.....1939..acres.....	112,515	33	23,880	36,020	20,437	1,071	14,154	16,920
18 Cost of maintenance and operation.....1939..dollars....	370,340	1,160	96,400	57,428	46,254	11,006	66,607	91,485
19 Average cost, per acre irrigated.....1939..dollars....	3.29	35.15	4.04	1.59	2.26	10.28	4.71	5.41
WATER DELIVERED TO IRRIGATORS, 1939								
20 Enterprises reporting water delivered.....1939..number....	2,878	3	704	784	253	100	601	433
21 Area irrigated by these enterprises.....1939..acres.....	111,375	33	23,346	32,476	22,542	1,269	15,042	16,667
22 Water delivered.....1939..acre-feet....	194,519	100	30,723	50,897	72,576	2,879	20,424	16,920
23 Average water delivered per acre irrigated.....1939..acre-feet....	1.7	3.0	1.3	1.6	3.2	2.3	1.4	1.0
24 Average cost of water per acre irrigated.....1939..dollars....	3.29	35.15	3.67	1.72	1.84	10.28	5.17	5.88
25 Average cost of water per acre-foot delivered...1939..dollars....	1.89	11.60	2.79	1.10	0.57	4.53	3.81	5.79
DRAINAGE OF IRRIGATED LAND								
26 Enterprises reporting land drained or needing drainage.....1939..number....	847	.....	244	441	76	5	55	26
27 Irrigable area in these enterprises.....1939..acres.....	73,383	.....	6,307	30,814	27,901	391	2,691	5,279
28 Irrigated area in these enterprises.....1939..acres.....	46,323	.....	5,422	18,716	17,132	384	1,929	2,740
29 Area for which drains have been installed.....1939..acres.....	53,275	.....	5,000	24,778	19,494	260	2,148	1,595
30 Additional area needing drainage.....1939..acres.....	5,573	.....	224	834	4,210	106	97	102

¹ Data for 1 enterprise in Aucilla River Drainage Basin (11) (number refers to separate map) are included with St. Marys River Drainage Basin (1).

² Data for Suwannee River Drainage Basin (12) (number refers to separate map) are included with St. Johns River and North Atlantic Slope Drainage Basin (2).

³ Enumerated as cost of irrigation works and equipment to December 31, 1939.

CENSUS OF IRRIGATION — FLORIDA

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DRAINAGE BASIN TABLE II.—ENTERPRISES AND IRRIGATION WORKS, 1940

	STATE TOTAL	St. Marys River ¹	St. Johns River and North Atlantic Slope ²	Kissimmee and Caloosa- hatchee Rivers	Everglades	Withla- coochee River	Tampa Bay	Peace Creek	
ITEM (For definitions and explanations, see text. A map index-number is shown in parentheses for each drain- age basin)		(1)	(2)	(3)	(4)	(13)	(14)	(15)	
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
1	Enterprises.....1940..number.....	3,628	3	842	1,038	269	102	811	563
2	Average size of enterprise based on area works were capable of supplying with water.....1940..acres.....	48	14	39	51	114	15	30	60
3	Diversion dams.....1940..total number.....	3			2			1	
4	(a) Concrete and masonry.....1940..number.....	1						1	
5	(b) Timber.....1940..number.....	2			2				
6	(c) Earth and rock.....1940..number.....								
7	(d) Other, mixed, and not reported..1940..number.....								
8	Main canals and laterals.....1940..total length, miles.....	74.0		2.0	57.0	8.0	2.0	5.0	
9	(a) Earth.....1940..length, miles.....	74		2	57	8	2	5	
10	(b) Lined.....1940..length, miles.....								
11	1940..capacity, c.f.s. ³	1,947	1	293	669	429	16	124	415
12	Pipe lines ⁴.....1940..total length, miles.....	4,259.9	2.5	3,106.4	64.8	34.8	42.8	728.0	280.6
13	(a) Concrete.....1940..length, miles.....	132.6		16.9	1.4	0.5	3.2	108.5	2.1
14	(b) Metal.....1940..length, miles.....	971.7	2.5	245.5	49.0	33.4	38.4	340.2	262.7
15	(c) Wood-stave.....1940..length, miles.....	5.3		0.5		0.5	1.2	0.1	3.0
16	(d) Other.....1940..length, miles.....	3,150.3		2,843.5	14.4	0.4		279.2	12.8
17	Storage dams.....1940..total number.....	5		1	3				1
18	(a) Concrete and masonry.....1940..number.....	1		1					
19	(b) Earth and rock.....1940..number.....	4			3				1
20	(c) Other, mixed, and not reported..1940..number.....								
21	Reservoirs.....1940..total number.....	7		4	2				1
22	(a) 1-99 acre-feet capacity.....1940..number.....	5		3	1				1
23	(b) 100-999 acre-feet capacity.....1940..number.....	1		1					
24	(c) 1,000 and over acre-feet capacity.....1940..number.....	1			1				
25	1940..total capacity, ac.-ft. ⁵	19,419		216	(⁶)				(⁶)
26	Wells, flowing.....1940..number.....	4,631		2,015	1,480	1		763	372
27	1940..yield, g.p.m.....	994,628		324,765	368,125	(⁶)		221,823	80,090
28	Wells, pumped.....1940..number.....	1,686	3	360	47	209	127	546	394
29	1940..yield, g.p.m.....	482,144	550	92,236	12,598	64,800	30,900	171,113	109,947
30	Pumping plants.....1940..total number.....	2,321	5	577	127	369	126	603	514
31	Prime movers.....1940..capacity, hp.....	29,568	58	6,288	3,053	5,952	961	5,392	7,874
32	(a) Electric.....1940..number.....	347	1	109	21	49	21	86	60
33	1940..capacity, hp.....	4,632	(⁶)	991	639	343	239	1,022	1,329
34	(b) Internal-combustion.....1940..number.....	1,959	4	465	105	317	105	512	451
35	1940..capacity, hp.....	24,893	33	5,302	2,369	5,602	722	4,332	6,533
36	(c) Other.....1940..number.....	15		3	1	3		5	3
37	1940..capacity, hp.....	63		5	(⁶)	7		38	12
38	Pumps.....1940..total number.....	2,349	5	593	127	372	127	608	517
39	1940..capacity, g.p.m.....	2,104,450	1,065	227,653	320,478	1,029,146	38,462	211,843	275,803
40	(a) Centrifugal.....1940..number.....	1,849	3	514	77	196	120	496	443
41	1940..capacity, g.p.m.....	1,008,724	1,015	203,407	46,800	294,474	37,462	177,564	248,002
42	(b) Turbine.....1940..number.....	546	338	395	608	1,502	312	358	560
43	1940..average capacity, g.p.m.....	200		31	26	59	2	53	29
44	(c) Plunger.....1940..number.....	429,039		17,735	82,750	285,951	(⁶)	26,053	16,250
45	1940..average capacity, g.p.m.....	2,145		572	3,183	4,847	(⁶)	492	560
46	(d) Other.....1940..number.....	176	2	32	10	38	4	52	38
47	1940..average capacity, g.p.m.....	19,155	(⁶)	2,204	928	2,271	550	5,451	7,701
48	(d) Other.....1940..number.....	109	(⁶)	69	93	60	138	105	203
49	1940..average capacity, g.p.m.....	124		16	14	79	1	7	7
50	1940..capacity, g.p.m.....	647,532		4,307	190,000	446,450	(⁶)	2,775	3,850
51	Pumping lift, from all sources.....1940..average, feet.....	20	30	19	28	13	14	21	24
52	from pumped wells.....1940..average, feet.....	21	15	17	30	17	14	22	25
53	from surface sources.....1940..average, feet.....	19	35	20	27	5	17	15	23

¹Data for 1 enterprise in Aucilla River Drainage Basin (11) (number refers to separate map) are included with St. Marys River Drainage Basin (1).
²Data for Suwannee River Drainage Basin (12) (number refers to separate map) are included with St. Johns River and North Atlantic Slope Drainage Basin (2).
³Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
⁴Includes siphons and farm pipe lines reported.
⁵Total capacity of all reservoirs regardless of size.
⁶Data are included only in totals because less than 3 enterprises reported.

CENSUS OF IRRIGATION - FLORIDA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940; IRRIGATED AREA, 1939;
IN IRRIGATED FARMS, 1940; WATER DELIVERED TO

ITEM (For definitions and explanations, see text)	STATE TOTAL	Alachua	Broward	Charlotte	Dade	De Soto	Duval	Flagler
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS²								
1 All farms.....1940..number.....	62,248	2,108	946	102	1,439	604	1,436	107
2 Irrigated farms.....1940..number.....	3,947	10	86	23	166	103	28	34
3 Operated by—								
4 (a) Owners and managers.....1940..number.....	3,490	9	38	15	112	97	26	34
4 (b) Tenants.....1940..number.....	457	1	48	8	56	6	2	.....
5 Land in all farms.....1940..acres.....	8,337,708	258,818	77,559	38,094	70,503	146,291	61,067	30,786
6 Land in irrigated farms.....1940..acres.....	596,139	754	23,759	1,605	11,283	25,637	750	22,978
7 Average per farm.....1940..acres.....	151	75	276	70	67	249	27	676
8 (a) Operated by owners and managers.....1940..acres.....	575,825	(¹)	19,847	803	9,553	25,109	(¹)	22,978
9 Average per farm.....1940..acres.....	165	(¹)	522	54	85	260	(¹)	676
10 (b) Operated by tenants.....1940..acres.....	20,314	(¹)	3,912	802	1,730	438	(¹)	.....
11 Average per farm.....1940..acres.....	44	(¹)	82	100	31	73	(¹)	.....
12 Approximate land area.....1940..acres.....	34,727,680	570,890	779,520	451,200	1,314,560	414,720	497,280	309,120
IRRIGATED AND IRRIGABLE AREAS								
13 Area irrigated.....1939..acres.....	132,362	263	10,081	981	1,721	3,099	195	721
14 (a) Cropland harvested.....1939..acres.....	125,474	263	8,806	626	1,656	2,968	193	679
15 (b) Crop failure.....1939..acres.....	4,204	.....	1,260	11	22	73	.....	20
16 (c) Pasture.....1939..acres.....	2,684	.....	15	344	43	58	2	22
17 Irrigable area in enterprises.....1940..acres.....	188,557	393	12,626	2,462	2,500	4,634	282	1,138
18 Excess of irrigable area over the area irrigated...1940..acres.....	56,195	120	2,545	1,481	779	1,535	87	417
19 Area works were capable of supplying with water...1940..acres.....	175,813	323	11,599	2,462	2,460	4,505	252	1,113
20 Excess, capability of works over area irrigated...1940..acres.....	43,451	60	1,518	1,481	739	1,406	57	392
21 Proportion which area irrigated is of all lands in irrigated farms.....1939..percent.....	22.2	34.9	42.4	61.1	15.3	12.1	26.0	3.1
22 Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent.....	75.3	81.4	86.9	39.8	70.0	68.8	77.4	64.8
CAPITAL INVESTED TO JANUARY 1								
23 Total investment in all enterprises ².....1940..dollars.....	7,055,921	11,000	411,047	24,136	86,556	150,069	27,307	12,669
24 Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars.....	40.13	34.06	35.44	9.80	35.19	33.31	108.36	11.38
25 Average investment per acre irrigated.....1939..dollars.....	53.31	41.83	40.77	24.60	50.29	48.42	140.04	17.57
26 Estimated final investment in existing enterprises.....1940..dollars.....	7,228,453	11,000	428,197	24,236	93,316	154,669	27,857	13,119
27 Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars.....	38.34	28.72	33.91	9.84	37.33	33.38	98.78	11.53
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS								
28 Enterprises reporting maintenance and operation...1939..number.....	2,944	5	36	22	80	97	15	35
29 Area irrigated in these enterprises.....1939..acres.....	112,515	134	7,412	731	1,286	2,835	66	611
30 Cost of maintenance and operation.....1939..dollars.....	370,340	754	21,384	404	8,618	6,450	326	509
31 Average cost, per acre irrigated.....1939..dollars.....	3.29	5.63	2.89	0.55	6.70	2.28	4.94	0.83
WATER DELIVERED TO IRRIGATORS								
32 Enterprises reporting water delivered.....1939..number.....	2,878	6	43	14	122	70	9	32
33 Area irrigated in these enterprises.....1939..acres.....	111,975	263	9,066	522	1,675	2,217	35	628
34 Water delivered in these enterprises.....1939..acre-feet..	194,519	468	30,899	1,193	2,495	2,437	60	548
35 Average water delivered per acre irrigated.....1939..acre-feet..	1.7	1.8	3.4	2.3	1.5	1.1	1.7	0.9
36 Average cost of water per acre irrigated.....1939..dollars.....	3.29	5.63	1.72	0.55	6.70	2.94	7.03	0.83
DRAINAGE OF IRRIGATED LAND								
37 Enterprises reporting land drained or needing drainage.....1939..number.....	847	1	40	6	3	4	1	.....
38 Irrigable area in these enterprises.....1939..acres.....	73,382	(¹)	12,207	289	109	140	(¹)	.....
39 Irrigated area in these enterprises.....1939..acres.....	46,323	.....	10,002	124	56	95	(¹)	.....
40 Area for which drains have been installed.....1939..acres.....	53,275	(¹)	10,133	125	90	48	(¹)	.....
41 Additional area needing drainage.....1939..acres.....	5,573	.....	191	1	19	21	.....	.....

²Census of Agriculture.

¹Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

CENSUS OF IRRIGATION - FLORIDA

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IRRIGABLE AREA AND CAPITAL INVESTED, 1940; MAINTENANCE AND OPERATION, 1939; LAND IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939

Hardee	Hendry	Highlands	Hills-borough	Indian River	Lake	Lee	Manatee	Marion	Martin	Orange	Osceola	Palm Beach	Pasco	Pinellas	
1,132	156	389	3,630	742	2,017	291	676	2,146	117	2,399	442	808	1,107	732	1
102	17	15	331	582	138	107	350	11	9	251	8	89	31	88	2
86	15	14	284	570	134	77	258	11	6	244	7	74	31	84	3
16	2	1	47	12	4	30	92	.....	3	7	1	15	.....	4	4
149,812	324,164	334,038	181,408	112,877	113,524	20,984	57,695	220,050	37,204	209,835	488,588	80,175	106,428	28,607	5
6,667	1,403	1,317	18,188	60,502	13,997	8,898	21,751	12,245	10,035	23,932	439	23,645	4,146	8,566	6
65	83	88	55	104	101	83	62	1,113	1,115	95	55	266	134	97	7
6,347	(1)	(1)	16,059	59,739	13,933	7,804	20,347	12,245	9,330	23,665	(1)	22,198	4,146	8,519	8
74	(1)	(1)	57	105	104	101	79	1,113	1,555	97	(1)	300	134	101	9
320	(1)	(1)	2,129	763	64	1,094	1,404	.....	705	267	(1)	1,447	.....	47	10
20	(1)	(1)	45	64	16	36	15	.....	235	38	(1)	96	.....	12	11
403,200	759,680	666,240	665,600	327,040	637,440	503,040	448,640	1,034,880	357,760	586,240	848,000	1,265,920	480,640	168,960	12
787	286	1,038	4,062	16,298	4,032	4,974	8,977	668	3,599	8,341	303	10,244	1,025	3,436	13
758	266	1,038	4,005	15,068	4,032	4,758	8,739	668	2,435	8,158	303	9,718	1,025	3,436	14
23	.....	.....	27	40	.....	70	131	.....	1,164	183	.....	492	.....	.....	15
6	20	.....	30	1,190	.....	146	107	.....	.....	.....	.....	34	.....	.....	16
1,677	629	1,604	6,605	23,647	4,858	5,740	12,369	673	10,620	11,589	303	16,774	1,196	3,798	17
890	343	566	2,543	7,349	826	766	3,392	5	7,021	3,248	.....	6,530	171	362	18
1,653	629	1,508	5,334	22,091	4,816	5,740	12,226	670	5,024	11,559	303	14,768	1,196	3,752	19
866	343	470	1,272	5,793	784	766	3,249	2	1,425	3,218	.....	4,524	171	316	20
11.8	20.4	78.8	22.3	26.9	28.8	55.9	41.3	5.5	35.9	34.9	69.0	43.3	24.7	40.1	21
47.6	45.5	68.8	76.2	73.8	83.7	86.7	73.4	99.7	71.6	72.2	100.0	69.4	85.7	91.6	22
44,379	27,831	49,538	409,696	398,164	136,257	86,290	697,512	26,188	140,500	767,183	10,900	156,267	31,175	173,833	23
26.85	44.25	32.85	76.81	18.02	28.29	15.03	57.05	39.09	27.97	66.37	35.97	10.58	26.07	46.33	24
56.39	97.31	47.72	100.86	24.43	33.79	17.35	77.70	39.20	39.04	91.98	35.97	15.25	30.41	50.59	25
45,579	28,056	54,538	422,841	398,664	136,510	86,690	697,687	26,188	197,000	770,514	10,900	159,667	31,325	174,733	26
27.18	44.60	34.00	64.02	16.86	28.10	15.10	56.41	38.91	18.55	66.49	35.97	9.52	26.19	46.01	27
75	12	10	290	510	86	65	212	11	5	175	7	80	16	48	28
676	212	975	2,874	15,248	3,608	2,985	7,018	650	3,599	8,111	303	9,878	949	2,598	29
3,798	505	4,816	20,386	18,133	19,285	713	25,391	2,376	11,595	34,556	1,124	13,182	7,800	10,490	30
5.62	2.38	4.94	7.0	1.19	5.35	0.24	3.62	3.66	3.22	4.26	3.71	1.33	8.22	4.04	31
80	5	12	322	445	96	5	185	12	5	186	7	82	16	53	32
717	114	1,024	3,960	14,470	3,682	456	6,596	668	3,599	8,258	303	9,865	949	2,709	33
661	41	1,141	4,772	27,768	2,908	631	11,441	651	33,471	7,856	265	14,090	1,015	2,194	34
0.9	0.4	1.1	1.2	1.9	0.7	1.4	1.7	1.0	9.3	1.0	0.9	1.4	1.1	0.8	35
5.63	3.62	4.94	7.08	1.14	5.42	1.29	4.40	3.66	3.22	4.17	3.71	1.33	8.22	3.98	36
(1)	.....	4	21	341	(1)	2	62	23	.....	5	12	.....	32	1	37
(1)	.....	181	283	18,006	(1)	3,866	1,476	.....	10,620	379	.....	10,785	(1)	887	38
(1)	.....	74	190	11,371	(1)	3,220	867	.....	3,599	237	.....	5,274	(1)	832	39
(1)	.....	31	188	15,285	(1)	3,672	1,317	.....	5,024	178	.....	7,471	(1)	619	40
.....	.....	.....	41	116	(1)	15	20	.....	3,700	.....	.....	1,000	(1)	22	41

* Enumerated as cost of irrigation works and equipment to December 31, 1939.

CENSUS OF IRRIGATION — FLORIDA

COUNTY TABLE I.—IRRIGATED FARMS AND TENURE OF FARM OPERATORS, 1940; IRRIGATED AREA, 1939; IRRIGABLE AREA AND CAPITAL INVESTED, 1940; MAINTENANCE AND OPERATION, 1939; LAND IN IRRIGATED FARMS, 1940; WATER DELIVERED TO IRRIGATORS AND DRAINAGE OF IRRIGATED LAND, 1939—Continued

ITEM (For definitions and explanations, see text)		Polk	Putnam	St. Johns	St. Lucie	Sarasota	Seminole	Sumter	Volusia	All other counties
FARMS, ACREAGE, AND TENURE OF FARM OPERATORS*										
1	All farms.....1940..number....	4,273	850	348	598	191	760	804	1,518	29,380
2	Irrigated farms.....1940..number....	340	52	47	294	62	317	99	66	89
Operated by—										
3	(a) Owners and managers.....1940..number....	320	51	46	285	47	287	86	57	85
4	(b) Tenants.....1940..number....	20	1	1	9	15	30	13	9	4
5	Land in all farms.....1940..acres.....	458,825	69,073	33,946	154,668	228,982	65,744	101,610	263,286	3,813,067
6	Land in irrigated farms.....1940..acres.....	131,782	5,799	3,313	79,942	6,439	23,771	14,432	8,322	19,842
7	Average per farm.....1940..acres.....	388	112	70	272	104	75	146	126	223
8	(a) Operated by owners and managers.....1940..acres.....	131,023	(¹)	(¹)	79,012	5,909	23,082	13,615	7,971	19,102
9	Average per farm.....1940..acres.....	409	(¹)	(¹)	277	126	80	158	140	225
10	(b) Operated by tenants.....1940..acres.....	759	(¹)	(¹)	930	530	689	817	351	740
11	Average per farm.....1940..acres.....	38	(¹)	(¹)	103	35	23	63	39	185
12	Approximate land area.....1940..acres.....	1,191,040	513,920	389,760	376,320	375,040	205,440	359,040	713,600	17,112,960
IRRIGATED AND IRRIGABLE AREAS										
13	Area irrigated.....1939..acres.....	17,658	2,136	1,798	12,440	4,392	6,788	694	1,188	137
14	(a) Cropland harvested.....1939..acres.....	17,564	2,117	1,798	11,417	4,392	6,670	665	1,116	137
15	(b) Crop failure.....1939..acres.....	64	.....	.....	419	.....	109	29	67	.....
16	(c) Pasture.....1939..acres.....	30	19	.....	604	.....	9	.....	5	.....
17	Irrigable area in enterprises.....1940..acres.....	26,028	2,670	1,966	15,063	6,496	7,660	876	1,525	166
18	Excess of irrigable area over the area irrigated.....1940..acres.....	8,370	534	168	2,623	2,104	872	182	337	29
19	Area works were capable of supplying with water.....1940..acres.....	25,985	2,661	1,906	14,740	6,463	7,514	875	1,520	166
20	Excess, capability of works over area irrigated.....1940..acres.....	8,327	525	108	2,300	2,071	726	181	332	29
21	Proportion which area irrigated is of all lands in irrigated farms.....1939..percent....	13.4	36.8	54.3	15.6	68.2	28.6	4.8	14.3	0.7
22	Proportion which area irrigated is of area works were capable of supplying with water.....1939..percent....	68.0	80.3	94.3	84.4	68.0	90.3	79.3	78.2	82.5
CAPITAL INVESTED TO JANUARY 1										
23	Total investment in all enterprises.....1940..dollars....	1,061,401	64,538	28,275	231,796	93,070	1,497,992	112,795	77,532	10,025
24	Average investment, based on area works were capable of supplying with water, per acre.....1940..dollars....	40.85	24.25	14.83	15.73	14.40	199.36	128.91	51.01	60.39
25	Average investment per acre irrigated.....1939..dollars....	60.11	30.21	15.73	18.63	21.19	220.68	162.53	65.26	73.18
26	Estimated final investment in existing enterprises.....1940..dollars....	1,079,132	64,538	28,275	232,196	93,570	1,535,199	114,550	77,682	10,025
27	Average investment, based on estimated final investment and irrigable area, per acre.....1940..dollars....	41.46	24.17	14.38	15.41	14.40	200.42	130.76	50.94	60.39
MAINTENANCE AND OPERATION, CHARGES AND INDEBTEDNESS										
28	Enterprises reporting maintenance and operation.....1939..number....	285	44	43	276	45	250	52	51	6
29	Area irrigated in these enterprises.....1939..acres.....	14,939	1,785	1,673	12,387	1,341	5,894	496	1,169	82
30	Cost of maintenance and operation.....1939..dollars....	95,330	2,820	271	13,692	3,507	29,242	5,588	5,795	1,500
31	Average cost, per acre irrigated.....1939..dollars....	6.38	1.58	0.16	1.11	2.62	4.97	11.27	4.96	18.29
WATER DELIVERED TO IRRIGATORS										
32	Enterprises reporting water delivered.....1939..number....	282	49	47	281	51	204	91	58	8
33	Area irrigated in these enterprises.....1939..acres.....	15,247	2,126	1,798	12,439	1,439	4,467	694	1,032	137
34	Water delivered in these enterprises.....1939..acre-feet..	15,480	2,594	2,671	10,699	1,182	11,539	1,844	1,172	343
35	Average water delivered per acre irrigated.....1939..acre-feet..	1.0	1.2	1.5	0.9	0.8	2.6	2.7	1.1	2.5
36	Average cost of water per acre irrigated.....1939..dollars....	6.60	1.59	0.16	1.11	2.94	3.39	11.27	5.42	18.29
DRAINAGE OF IRRIGATED LAND										
37	Enterprises reporting land drained or needing drainage.....1939..number....	9	1	.....	31	8	223	4	4	.....
38	Irrigable area in these enterprises.....1939..acres.....	3,656	(¹)	.....	3,041	1,172	5,144	91	304	.....
39	Irrigated area in these enterprises.....1939..acres.....	1,351	(¹)	.....	2,352	1,143	4,580	84	304	.....
40	Area for which drains have been installed.....1939..acres.....	257	(¹)	.....	2,666	1,152	4,364	60	106	.....
41	Additional area needing drainage.....1939..acres.....	74	.....	.....	3	20	209	6	.....	.....

* Census of Agriculture.

¹ Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.

² Enumerated as cost of irrigation works and equipment to December 31, 1939.

CENSUS OF IRRIGATION — FLORIDA

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COUNTY TABLE II.—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS, 1940; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939

	ITEM (For definitions and explanations, see text)	STATE TOTAL	Alachua	Broward	Charlotte	Dade	De Soto	Duval	Flagler
FARM VALUES, 1940*									
1	Land and buildings, all farms.....dollars..	324,377,874	5,413,993	5,380,151	294,852	12,875,719	3,070,109	6,765,377	691,850
2	Land and buildings, irrigated farms.....dollars..	77,835,579	188,650	1,708,140	93,237	3,286,625	1,138,100	364,810	346,800
3	Operated by—								
4	(a) Owners and managers.....dollars..	74,622,653	(1)	1,415,098	62,000	3,017,900	1,097,400	(1)	346,800
5	(b) Tenants.....dollars..	3,212,926	(1)	293,042	31,237	268,725	40,700	(1)	.....
6	Average, land and buildings, per farm.....dollars..	19,720.19	18,865.00	19,862.09	4,053.78	19,563.24	11,049.51	13,028.93	10,200.00
7	per acre in farms.....dollars..	130.57	250.20	71.89	58.09	291.29	44.39	486.41	15.09
8	Buildings, irrigated farms reporting value.....number...	3,320	9	35	21	160	83	27	34
9	Total reported.....dollars..	10,883,687	16,050	101,859	19,540	852,895	167,550	119,200	73,050
10	Average, per irrigated farm reporting.....dollars..	3,278.22	1,783.33	2,910.26	930.48	5,330.59	2,018.67	4,414.81	2,148.53
11	per acre on all irrigated farms.....dollars..	18.26	21.29	4.29	12.17	75.59	6.54	158.93	3.18
12	Buildings, nonirrigated farms reporting value.....number...	51,591	1,995	283	71	908	421	1,373	71
13	Total reported.....dollars..	57,327,320	1,649,759	619,060	44,550	2,150,743	440,017	2,949,633	109,350
14	Average, per nonirrigated farm reporting.....dollars..	1,111.19	826.95	2,187.49	627.46	2,368.66	1,045.17	2,148.31	1,540.14
15	per acre on all nonirrigated farms.....dollars..	7.41	6.39	11.51	1.22	36.32	3.65	48.90	14.00
16	Implements and machinery, irrigated farms reporting value.....number...	2,850	9	73	16	144	65	27	32
17	Total reported.....dollars..	4,685,526	9,915	234,328	5,235	246,437	80,370	37,785	73,035
18	Average, per irrigated farm reporting.....dollars..	1,644.04	1,101.67	3,209.97	327.19	1,711.37	1,236.46	1,399.44	2,282.34
19	per acre, on all irrigated farms.....dollars..	7.86	13.15	9.86	3.26	21.84	3.13	50.38	3.18
20	Implements and machinery, nonirrigated farms reporting value.....number...	41,515	1,606	678	55	828	286	1,051	67
21	Total reported.....dollars..	15,696,720	604,767	549,701	18,953	971,060	98,381	496,827	56,008
22	Average, per acre, on all nonirrigated farms.....dollars..	2.03	2.34	10.22	0.52	16.40	0.82	8.24	7.17
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
23	Enterprises.....1940..number.....	3,628	7	46	32	133	127	26	37
24	Average size of enterprise based on irrigable area.....1940..acres.....	52	55	274	77	19	36	11	31
25	Diversion dams.....1940..number.....	3							
26	Main canals and laterals.....1940..length, miles.....	74.0		8.6					
27	.....1940..capacity, c.f.s. ²	1,947		37	2				
28	Pipe lines ³.....1940..length, miles.....	4,259.9	1.5	0.9	1.1	21.1	17.9	11.9	1.2
29	Storage dams.....1940..number.....	5			1				
30	Reservoirs.....1940..number.....	7			(1)	1			
31	.....1940..capacity, acre-feet..	19,419							
32	Wells, flowing.....1940..number.....	4,631			37		92	22	41
33	.....1940..yield, g.p.m.....	994,828			16,140		30,800	5,190	13,800
34	Wells, pumped.....1940..number.....	1,686	14	11	3	140	118	4	18
35	.....1940..yield, g.p.m.....	482,144	3,470	13,275	580	36,260	41,832	105	7,000
36	Pumping plants.....1940..number.....	2,321	14	98	4	140	97	4	15
37	Prime movers.....1940..capacity, hp.....	29,588	172	2,399	17	1,037	1,015	10	45
38	Pumps.....1940..capacity, g.p.m.....	2,104,450	8,470	451,401	1,605	37,780	41,993	105	7,020
39	Pumping lift, from all sources.....1940..average, feet.....	20	14	6	26	17	20	11	8
40	from pumped wells.....1940..average, feet.....	21	15	14	48	17	20	11	8
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁴									
41	Enterprises reporting pay roll.....number...	3		1					
42	Irrigated area in these enterprises.....acres.....	542		(1)					
43	Wages and salaries paid and payable.....dollars..	5,288		(1)					
44	Persons employed during week ending April 29.....number..	5		(1)					

*Census of Agriculture.
¹Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.
³Includes siphons and farm pipe lines reported.
⁴Pay roll and number of employees reported only by enterprises serving 5 or more farms.

CENSUS OF IRRIGATION — FLORIDA

COUNTY TABLE II—FARM VALUES, 1940; ENTERPRISES AND IRRIGATION WORKS.

ITEM (For definitions and explanations, see text)	Hardee	Hendry	Highlands	Hills- borough	Indian River	Lake	Lee	Manatee	Marion
FARM VALUES, 1940*									
1 Land and buildings, all farms.....dollars..	3,768,337	9,806,675	7,549,179	15,321,851	8,869,041	19,426,203	2,752,908	5,542,887	8,142,236
2 Land and buildings, irrigated farms.....dollars..	702,325	158,580	458,700	3,136,296	8,031,591	3,428,530	1,559,295	1,070,745	874,606
3 Operated by—									
4 (a) Owners and managers.....dollars..	667,700	(¹)	(¹)	2,851,826	7,853,066	3,420,530	1,409,245	3,713,420	874,606
5 (b) Tenants.....dollars..	34,625	(¹)	(¹)	284,472	178,525	8,000	150,050	357,325	.....
6 Average, land and buildings, per farm.....dollars..	6,885.54	9,328.24	30,580.00	9,475.22	13,799.98	24,844.42	14,572.85	11,630.70	79,509.64
7 per acre in farms.....dollars..	105.34	113.03	348.29	172.44	132.75	244.95	175.24	187.15	71.43
8 Buildings, irrigated farms reporting value.....number...	100	17	11	315	410	107	94	311	11
9 Total reported.....dollars..	157,440	24,465	44,500	687,992	1,095,692	465,285	259,345	766,700	80,423
10 Average, per irrigated farm reporting.....dollars..	1,574.40	1,439.12	4,045.45	2,184.10	2,672.42	4,348.16	2,758.99	2,465.27	7,311.18
11 per acre on all irrigated farms.....dollars..	23.61	17.44	33.79	37.83	18.11	33.24	29.15	35.25	6.57
12 Buildings, nonirrigated farms reporting value.....number...	982	112	242	3,143	96	1,073	164	295	2,018
13 Total reported.....dollars..	791,759	575,350	543,229	3,925,126	105,615	2,375,755	316,237	435,750	2,098,616
14 Average, per nonirrigated farm reporting.....dollars..	806.27	5,137.05	2,244.75	1,248.85	1,100.16	2,120.93	1,928.27	1,477.12	1,039.95
15 per acre on all nonirrigated farms.....dollars..	5.53	1.78	1.63	24.05	2.02	22.87	26.17	12.12	10.10
16 Implements and machinery, irrigated farms reporting value.....number...	91	14	12	281	269	94	75	260	11
17 Total reported.....dollars..	60,405	8,690	33,275	293,220	217,452	188,076	165,683	312,157	43,438
18 Average, per irrigated farm reporting.....dollars..	663.79	620.71	2,772.92	1,043.49	808.37	2,000.81	2,209.11	1,200.60	3,948.91
19 per acre, on all irrigated farms.....dollars..	9.06	6.19	25.27	16.12	3.59	13.44	18.62	14.35	3.55
20 Implements and machinery, nonirrigated farms reporting value.....number...	784	93	134	2,478	73	708	98	185	1,871
21 Total reported.....dollars..	227,694	1,046,823	203,665	900,366	14,271	381,570	58,212	82,150	700,136
Average, per acre, on all nonirrigated farms.....dollars..	1.59	3.24	0.61	5.52	0.27	3.63	4.82	2.29	3.37
ENTERPRISES AND IRRIGATION WORKS JANUARY 1									
22 Enterprises.....1940..number.....	92	18	14	374	583	101	94	325	12
23 Average size of enterprise based on irrigable area.....1940..acres.....	18	35	115	18	41	48	61	38	56
24 Diversion dams.....1940..number.....	.....	.....	.....	1	.....	.....	.....	.....	.....
25 Main canals and laterals.....1940..length, miles.....	.....	.....	.....	5.0	52.0	.....	.....	.....	.....
26 1940..capacity, c.f.s. ².....	.....	.....	1	86	420	6	.....	.....	16
27 Pipe lines ³.....1940..length, miles.....	4.7	13.0	6.8	183.9	.....	45.7	8.0	477.1	9.1
28 Storage dams.....1940..number.....	.....	.....	.....	.....	2	.....	1	.....	.....
29 Reservoirs.....1940..number.....	.....	.....	.....	.....	1	.....	1	.....	.....
30 1940..capacity, acre-feet..	.....	.....	.....	.....	(¹)	.....	(¹)	.....	.....
31 Wells, flowing.....1940..number.....	4	18	.....	263	845	3	178	499	.....
32 1940..yield, g.p.m.....	800	5,500	.....	39,620	231,810	145	46,725	182,153	.....
33 Wells, pumped.....1940..number.....	138	.....	5	256	6	39	3	187	13
34 1940..yield, g.p.m.....	22,336	.....	1,780	74,309	380	16,515	1,090	60,885	1,213
35 Pumping plants.....1940..number.....	102	7	15	308	18	103	4	169	13
36 Prime movers.....1940..capacity, hp.....	648	134	263	2,083	870	992	51	1,116	214
37 Pumps.....1940..capacity, g.p.m.....	23,516	5,630	8,130	92,099	180,380	48,955	1,300	60,675	6,388
38 Pumping lift, from all sources.....1940..average, feet.....	24	17	39	21	9	26	27	13	32
39 from pumped wells.....1940..average, feet.....	24	.....	23	23	15	22	32	13	76
PAY ROLL AND NUMBER OF EMPLOYEES 1939⁴									
40 Enterprises reporting pay roll.....number.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
41 Irrigated area in these enterprises.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42 Wages and salaries paid and payable.....dollars..	.....	.....	.....	.....	.....	.....	.....	.....	.....
43 Persons employed during week ending April 29.....number..	.....	.....	.....	.....	.....	.....	.....	.....	.....

⁰Census of Agriculture.
¹Data are included only in State totals because less than 3 farms or less than 3 enterprises reported in the 1940 Census.
²Total capacity (not necessarily capacities of canals) of heading structures (including pumping plants) for diverting water from natural surface sources.

CENSUS OF IRRIGATION — FLORIDA

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1940; AND PAY ROLL AND NUMBER OF EMPLOYEES, 1939—Continued

Martin	Orange	Osceola	Palm Beach	Pasco	Pinellas	Polk	Putnam	St. Johns	St. Lucie	Sarasota	Seминоle	Sumter	Volusia	All other counties	
893,950	27,941,315	3,156,748	8,416,260	5,729,613	8,566,467	48,201,424	4,150,439	1,553,620	7,527,819	2,660,111	8,197,266	1,770,105	11,527,203	68,214,166	1
360,960	8,550,524	84,855	2,488,155	694,100	2,962,995	17,037,251	780,209	353,300	5,140,750	1,666,346	5,037,178	309,905	1,483,372	1,338,647	2
313,960	8,410,124	(1)	2,338,855	694,100	2,921,995	16,659,451	(1)	(1)	5,096,100	1,411,296	4,735,228	273,905	1,395,297	1,310,147	3
47,000	140,400	(1)	149,300	.....	41,000	377,800	(1)	(1)	44,650	255,050	301,950	36,000	88,075	25,500	4
40,106.67	34,065.83	10,606.88	27,956.80	22,390.32	33,670.40	50,109.56	15,004.02	7,517.02	17,485.54	26,876.55	15,890.15	3,130.35	22,475.33	15,040.98	5
35.97	357.26	193.29	105.23	167.41	345.90	129.28	134.54	106.64	64.31	258.79	211.90	21.47	178.25	67.47	6
8	197	8	81	29	82	267	50	45	218	56	288	96	65	85	7
39,800	1,100,761	11,300	452,034	60,050	321,997	1,370,568	200,809	102,500	633,386	197,732	841,770	80,925	212,769	322,300	8
4,975.00	5,567.62	1,412.50	5,580.67	2,070.69	3,926.79	5,133.21	4,016.18	2,277.78	2,919.20	3,530.93	2,922.81	842.97	3,273.37	3,791.76	9
3.97	46.00	25.74	19.12	14.48	37.59	10.40	34.63	30.94	7.96	30.71	35.41	5.61	25.57	16.24	10
83	1,455	377	481	967	573	2,562	727	295	204	117	384	665	1,222	28,212	11
122,460	3,364,714	566,611	915,430	1,113,623	1,421,627	3,694,538	1,110,145	449,416	427,721	216,665	788,774	433,655	2,399,760	21,271,697	12
1,474.76	2,312.52	1,502.95	1,903.18	1,128.29	2,481.02	1,442.05	1,527.02	1,523.44	2,096.67	1,851.84	2,054.10	652.11	1,963.79	753.99	13
4.51	18.10	1.16	16.19	10.89	70.94	11.30	17.55	14.67	5.72	0.97	18.79	4.97	9.41	5.61	14
9	149	7	88	22	72	206	51	46	158	57	278	94	64	76	15
73,460	308,274	5,075	320,161	23,740	123,718	618,104	100,596	83,233	212,592	137,304	400,819	45,760	82,620	140,349	16
8,164.44	2,068.95	725.00	3,636.19	1,079.09	1,718.31	3,000.50	1,972.47	1,809.41	1,345.52	2,408.84	1,441.79	486.81	1,294.06	1,846.70	17
7.32	12.88	11.56	13.54	5.73	14.44	4.69	17.35	25.12	2.66	21.32	16.86	3.17	9.95	7.07	18
82	736	257	677	537	375	1,618	586	255	110	88	296	625	908	23,370	19
43,680	419,734	104,844	941,993	222,245	272,087	668,560	262,045	138,094	66,145	49,860	145,250	143,169	411,101	5,396,689	20
1.61	2.26	0.21	16.66	2.17	13.58	2.04	4.15	4.51	0.89	0.22	3.46	1.04	1.61	1.42	21
5	189	7	84	20	59	336	53	47	262	60	304	91	62	8	22
2,124	61	43	200	60	64	77	50	42	53	108	25	10	25	21	23
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
5.0	2.0	.....	.....	2.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25
478	241	2	82	12	10	422	5	.....	12	89	6	.....	19	1	26
1.0	819.5	7.1	11.5	12.4	47.2	279.4	7.5	8.4	8.2	1.5	2,187.7	36.3	23.8	4.5	27
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	28
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(1)	1	29
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
.....	9	1	.....	.....	.....	4	145	52	442	209	1,760	.....	7	.....	31
.....	2,420	(1)	.....	.....	.....	230	25,978	5,090	84,940	27,520	275,217	.....	725	.....	32
.....	53	11	48	5	65	179	4	.....	19	5	139	.....	64	16	33
.....	19,067	1,625	10,115	1,325	27,380	57,683	448	.....	1,788	2,400	24,295	30,490	18,298	4,300	34
16	219	6	119	21	73	381	8	.....	25	19	122	113	73	15	35
810	3,421	111	1,866	235	1,457	7,749	70	.....	109	352	887	876	443	133	36
235,500	98,900	2,175	387,815	9,155	34,790	213,393	2,798	.....	10,308	44,450	33,020	32,380	20,172	4,147	37
5	20	17	9	21	34	27	16	.....	15	11	13	13	13	19	38
.....	29	18	16	35	38	31	17	.....	17	21	9	13	14	15	39
.....	(1)	.....	.....	.....	.....	(1)	.....	.....	.....	.....	.....	.....	.....	.....	40
.....	(1)	.....	.....	.....	.....	(1)	.....	.....	.....	.....	.....	.....	.....	.....	41
.....	(1)	.....	.....	.....	.....	(1)	.....	.....	.....	.....	.....	.....	.....	.....	42
.....	(1)	.....	.....	.....	.....	(1)	.....	.....	.....	.....	.....	.....	.....	.....	43

³ Includes siphons and farm pipe lines reported.
⁴ Pay roll and number of employees reported only by enterprises serving 5 or more farms.

APPENDIX (Section E)

**IRRIGATION SCHEDULES
EXPLANATIONS AND INSTRUCTIONS**

CONFIDENTIAL CENSUS REPORT: Your report is required by Act of Congress. This Act also makes it unlawful for the Bureau to disclose any facts, including statistical information concerning the Nation's population, resources, and business activities. Your

<p>DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS WASHINGTON SIXTEENTH CENSUS OF THE UNITED STATES:1940 IRRIGATION—1</p> <p style="text-align: center; font-size: small;">16-246</p> <p>This schedule is to be used ONLY for irrigation enterprises serving LESS than FIVE farms, in the following States:</p> <table style="width:100%; font-size: x-small;"> <tr> <td>Arizona</td> <td>Idaho</td> <td>Nevada</td> <td>South Dakota</td> </tr> <tr> <td>Arkansas</td> <td>Kansas</td> <td>New Mexico</td> <td>Texas</td> </tr> <tr> <td>California</td> <td>Louisiana</td> <td>North Dakota</td> <td>Utah</td> </tr> <tr> <td>Colorado</td> <td>Montana</td> <td>Oklahoma</td> <td>Washington</td> </tr> <tr> <td>Florida</td> <td>Nebraska</td> <td>Oregon</td> <td>Wyoming</td> </tr> </table> <p>I.—MANAGEMENT AND LOCATION OF ENTERPRISE</p> <p>1. Name of this canal or irrigation enterprise</p> <p>2. Individual, partnership, or company controlling this enterprise:</p> <p>Post-office address</p> <p>3. Location:</p> <p>(a) Lands of this enterprise: State County (or counties)</p> <p>(b) Head of main canal; well; spring; reservoir; or other source:</p> <p>..... miles from (Direction) (Nearest town)</p> <p>4. Person furnishing information: Name Title</p> <p>Address</p> <p>II.—SOURCE OF WATER SUPPLY</p> <p>5. Indicate type by X (if more than one type, mark each):</p> <p>Stream <input type="checkbox"/> Pumped well <input type="checkbox"/> Flowing well <input type="checkbox"/> Spring <input type="checkbox"/></p> <p>Stored storm water <input type="checkbox"/> Lake <input type="checkbox"/> City water <input type="checkbox"/> Sewage <input type="checkbox"/></p> <p>6. Name of stream or other source</p> <p>7. Drainage basin</p> <p>(Give name of river system which drains the region in which enterprise is located.)</p> <p>III.—WATER RIGHTS</p> <p>8. Indicate type by X (if more than one type, mark each):</p> <p>(a) Riparian rights</p> <p>(b) Appropriation rights</p> <p>(c) All other rights</p> <p>(Specify, as "underground water," etc.)</p> <p>IV.—TYPE OF ENTERPRISE</p> <p>9. Indicate type of enterprise at the present time by X:</p> <p>Individual <input type="checkbox"/> Partnership <input type="checkbox"/> Cooperative <input type="checkbox"/></p> <p>V.—LANDS</p> <p>10. (a) Are any lands in this enterprise irrigated with water supplied by any other enterprise?</p> <p>(Yes or No)</p> <p>(b) If answer to Question 10(a) is "Yes," give name of other enterprise, show acreage of this enterprise irrigated by such other water:</p> <table style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th style="width:60%;">NAME OF OTHER ENTERPRISE</th> <th style="width:20%;">ACREAGE</th> <th style="width:20%;">TOTAL ACREAGE</th> </tr> </thead> <tbody> <tr> <td>.....</td> <td>.....</td> <td style="text-align: center;">X X X X X X X</td> </tr> <tr> <td>.....</td> <td>.....</td> <td>.....</td> </tr> </tbody> </table> <p>(c) Does this enterprise supply water to other enterprises?</p> <p>(Yes or No)</p> <p>(d) If answer to Question 10(c) is "Yes," give name of other enterprise receiving the water:</p> <p>NAME OF OTHER ENTERPRISE</p> <p style="text-align: right; font-size: x-small;">Code</p> <p>11. Farms supplied with water by this enterprise in 1939..... Number A-1</p> <p>12. Total irrigable acreage this project will cover when completed..... Acres A-2</p>	Arizona	Idaho	Nevada	South Dakota	Arkansas	Kansas	New Mexico	Texas	California	Louisiana	North Dakota	Utah	Colorado	Montana	Oklahoma	Washington	Florida	Nebraska	Oregon	Wyoming	NAME OF OTHER ENTERPRISE	ACREAGE	TOTAL ACREAGE	X X X X X X X	<p style="text-align: center;">V.—LANDS—Continued</p> <p>13. Area to which existing works are capable of supplying water in 1940..... Acres <input type="checkbox"/></p> <p>14. (a) Area actually irrigated in 1939..... Acres <input type="checkbox"/></p> <p style="font-size: x-small;">Actual area irrigated, not areas for which water was available nor total holdings of persons entitled to water.</p> <p>(b) Irrigated land from which crops were harvested in 1939..... Acres <input type="checkbox"/></p> <p style="font-size: x-small;">Do not count land twice, even though two crops were harvested from it. If none, write "None."</p> <p>(c) Irrigated area upon which crops failed in 1939 and no other crops were planted for harvest in 1939..... Acres</p> <p>(d) Irrigated land used only for grazing or pasture in 1939..... Acres</p> <p>VI.—DRAINAGE OF IRRIGATED LANDS</p> <p style="font-size: x-small;">NOTE.—These inquiries relate only to lands that have been irrigated or are to be irrigated by this enterprise.</p> <p>15. Area for which drains or drainage pumps have been installed..... Acres</p> <p>16. Additional area in need of drainage..... Acres</p> <p>VII.—DESCRIPTION OF WORKS</p> <p style="font-size: x-small;">NOTE.—Types of works not specified, and other helpful information should be given briefly on the back of this schedule, with suitable reference to question numbers.</p> <p>17. Diversion dams: (a) Number (b) Material <input type="checkbox"/></p> <p>18. Storage dams: (a) Number (b) Material <input type="checkbox"/></p> <p>19. Canals (mains and laterals, not including farm ditches):</p> <p>(a) Capacity at main canal heading..... Cu. ft. per sec.</p> <p>(b) Earth canals, length..... Miles</p> <p>Lined canals (including flumes), length:</p> <p>(c) Concrete..... Miles (nearest tenth)</p> <p>(d) Other materials Miles (nearest tenth)</p> <p style="font-size: x-small;">(Specify material)</p> <p>20. Pipe lines, including siphons and farm pipe distribution lines. Report lengths to nearest tenth of mile:</p> <table style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th rowspan="2" style="width:30%;">MATERIAL</th> <th colspan="3" style="text-align: center;">DIAMETER IN INCHES</th> </tr> <tr> <th style="width:20%;">1-12 inches</th> <th style="width:20%;">13-24 inches</th> <th style="width:20%;">Over 24 inches</th> </tr> <tr> <td></td> <td style="text-align: center;">Miles</td> <td style="text-align: center;">Miles</td> <td style="text-align: center;">Miles</td> </tr> </thead> <tbody> <tr> <td>(a) Concrete.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(b) Metal (iron, steel, etc.).....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(c) Wood-stave.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(d) Other.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td></td> <td colspan="3" style="font-size: x-small;">(Specify material)</td> </tr> </tbody> </table> <p>21. Reservoirs: (a) Number (b) Total capacity (ac.-ft.)</p> <p style="font-size: x-small;">If reservoir is jointly owned, list below the name of reservoir, names of participating enterprises, and share of each in acre-feet.....</p> <p>22. Pumping equipment:</p> <table style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th style="width:30%;">KIND OF MOTOR OR ENGINE</th> <th style="width:10%;">NUMBER</th> <th style="width:20%;">TOTAL HORSE-POWER</th> <th style="width:20%;">NUMBER OF HOURS OPERATED IN 1939</th> </tr> </thead> <tbody> <tr> <td>(a) Electric.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(b) Internal-combustion.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(c) Other.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td></td> <td colspan="3" style="font-size: x-small;">(Specify kind)</td> </tr> <tr> <th style="width:30%;">KIND OF PUMP</th> <th style="width:10%;">NUMBER</th> <th style="width:20%;">TOTAL CAPACITY (gals. per min.)</th> <th style="width:20%;">AVERAGE LIFT (feet)</th> </tr> <tr> <td>(d) Centrifugal.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(e) Turbine.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(f) Plunger.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>(g) Other.....</td> <td>.....</td> <td>.....</td> <td>.....</td> </tr> <tr> <td></td> <td colspan="3" style="font-size: x-small;">(Specify kind)</td> </tr> <tr> <td>(h) Amount of water pumped in 1939, acre-feet.....</td> <td colspan="3">.....</td> </tr> </tbody> </table> <p>23. Pumped wells: (a) Number (b) Total yield (g.p.m.).....</p> <p>24. Flowing wells: (a) Number (b) Total yield (g.p.m.).....</p>	MATERIAL	DIAMETER IN INCHES			1-12 inches	13-24 inches	Over 24 inches		Miles	Miles	Miles	(a) Concrete.....	(b) Metal (iron, steel, etc.).....	(c) Wood-stave.....	(d) Other.....		(Specify material)			KIND OF MOTOR OR ENGINE	NUMBER	TOTAL HORSE-POWER	NUMBER OF HOURS OPERATED IN 1939	(a) Electric.....	(b) Internal-combustion.....	(c) Other.....		(Specify kind)			KIND OF PUMP	NUMBER	TOTAL CAPACITY (gals. per min.)	AVERAGE LIFT (feet)	(d) Centrifugal.....	(e) Turbine.....	(f) Plunger.....	(g) Other.....		(Specify kind)			(h) Amount of water pumped in 1939, acre-feet.....		
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names or identity, from your census reports. Only sworn census employees will see your statements. Data collected will be used solely for preparing Census Reports Cannot Be Used for Purposes of Taxation, Regulation, or Investigation.

VIII.—CAPITAL INVESTED IN ENTERPRISE

25. Cost of irrigation works and equipment to December 31, 1939..... \$..... (Omit cents)

26. If works were not completed December 31, 1939, estimate additional investment required for completion..... \$..... (Omit cents)

27. Amount actually expended for water rights..... \$..... (Omit cents)

IX.—MAINTENANCE AND OPERATION

28. Cost of maintenance and operation in 1939..... \$..... (Omit cents)
If work was done by owner or operator, estimate cost of labor and material. Expenditures made in 1939 for enlargements and improvements are not to be included here, but under Question 25. Also see instructions below.

X.—QUANTITY OF WATER USED IN 1939 (Gravity and pumped)

29. Total quantity of water delivered to irrigators during season of 1939..... Acre-feet.....

ENUMERATOR'S RECORD

State..... County..... E. D. No.....

Visitation numbers of corresponding farm schedules.....

Enumerated by me on....., 1940.

....., Enumerator.

EXPLANATIONS AND INSTRUCTIONS

LEGAL REQUIREMENT.—A report of every irrigation enterprise in the United States is required by the Decennial Census Act of the Congress, approved June 18, 1929.

DEFINITION OF AN IRRIGATION ENTERPRISE.—An irrigation enterprise, for the purpose of the census, is a canal or other water conduit system, pumping plant, or a reservoir supplying water for irrigation, or any combination of these operated under a single management by either an individual, a partnership, a company, or other organization.

Land should be classed as irrigated which has water supplied to it for agricultural purposes by artificial means or by seepage from canals, reservoirs, or irrigated lands, but land which has natural ground water sufficiently near the surface to support plant life should not be classed as irrigated. Land which is flooded during high-water periods should be classed as irrigated if water is caused to flow over it by dams, canals, or other works, but should not be classed as irrigated if the overflow is due to natural causes alone.

This schedule is to be used by enumerators to report irrigation enterprises serving less than five farms.—Reports for larger enterprises will be secured by enumerators only when they are specifically instructed by their supervisors to do so, and enumerators will then use schedule Irrigation—2. However, enumerators are cautioned to return reports for all pumping plants, wells, canals, or reservoirs operated by individuals or groups of four or less who also obtain water from enterprises serving more than four farms.

If the Farm and Ranch Schedule (Questions 31 and 32) shows that the farm was irrigated, the enumerator should ask whether the irrigation enterprise reported under Question 33 serves less than five farms in all; if the answer is "Yes," he should obtain the names of all the farmers involved, and, from one of them (or other reliable source), obtain the information needed to fill out this Irrigation Schedule, unless, upon further inquiry, he is told that an Irrigation Schedule has already been received from the Bureau of the Census. If such a schedule has been received, he should ask whether it has been filled out and returned. If the answer to this question is "Yes," the enumerator should make an entry to that effect on his daily report. The enumerator should satisfy himself, however, that it was actually a United States Census Irrigation Schedule, and not some other form of schedule, which was received and filled out, and that the irrigation enterprise it described was none other than the one about which he is inquiring.

If the enterprise has received an Irrigation Schedule by mail and has not filled it out, or has filled it out but has not returned it, the enumerator should obtain it. Only a few schedules will have been received by mail by enterprises serving less than five farms, these being individuals or partnerships in isolated sections, or enterprises whose size was not definitely known by the Bureau of the Census.

ALL QUESTIONS ARE TO BE ANSWERED.—If exact information is not available, get the best estimate possible and write "Est." beside the answer. Use the margin or back of this schedule when additional space is necessary to make the answers clear, definite, and complete.

SECTION I.—If a farm is supplied with water by more than one canal or enterprise, and these canals supply water to not more than three other farms, a schedule should be made out for each canal; but if a farm is supplied with water by more than one canal or enterprise, and these canals supply no other farm or farms, all such canals should be included on a single schedule. The names, if the canals are named, should be written on the blank lines under Question 2.

SECTION II.—If water is secured from more than one source, each should be marked and the principal source indicated by underscoring. If water is secured from two or more streams or other sources, the name of each should be given.

"Stored storm water" refers to reservoirs filled by storing storm water from channels that carry water only during storms and are not classed as streams. When water is obtained from a reservoir filled from a stream, the stream should be given as the source.

Under "Drainage basin," the name of the smallest stream that is well known and which is shown on ordinary maps should be given. This inquiry should be answered, even if water is not obtained from a stream.

SECTION III.—These questions relate to the rights of the enterprise to take water from the stream or other source from which it is obtained. Some enterprises have several rights, each of which should be shown; and many rights will fall in more than one of the classes named. In each instance the right should be reported in the class in which it stands at the time of the enumeration.

SECTION IV.—"Individual" or "Partnership" enterprises are those belonging to individual farmers or groups of farmers associated without formal organization. "Cooperative" enterprises are controlled by the water users combined in some organized form of cooperation under State laws, the most common form being the stock company, the stock of which is owned by the water users.

SECTION V.—The answer to Question 11 must conform to the Census definition of a farm, as shown on the Farm and Ranch Schedule.

Under "Total irrigable acreage this project will cover when completed," only the acreage to which it is definitely planned to supply water should be reported. Possible extensions not yet definitely planned should not be included.

The answer to Question 13 should include all land to which the enterprise is ready and able to supply water, whether land is farmed or not.

The "Area actually irrigated in 1939" should be limited to land to which water was actually applied during that year. It should not include land which is under the system and sometimes irrigated, but which was not watered in 1939, nor land not yet irrigated on farms that are in process of reclamation.

The answer to Question 14(a) should be the total of all land irrigated. If the cropland harvested, irrigated pasture, and irrigated area upon which crops failed do not equal the total reported under Question 14(a), write an explanation on the margin or the back of this schedule.

SECTION VI.—This section relates only to lands which have been irrigated or are to be irrigated by this enterprise. The "Additional area in need of drainage" will necessarily be estimated. Enumerators should make the best estimates possible, based on information furnished by the officials of the enterprise and by others in the community, and on their own observations, but they should not attempt to make extended field observations.

SECTION VII.—A main canal is any channel conveying water from the source of supply to the tract of land to be irrigated. A lateral canal is a branch of a main canal conveying water from a main canal to one or more farms. Farm ditches, which distribute the water within the boundaries of the individual farm, should not be reported. Farm pipe distribution lines should be reported, using best figures obtainable.

If the capacity of a reservoir is not known, it should be estimated by multiplying the area (in acres) of the water surface when reservoir is full, by the average depth (in feet) above the level of the bottom of the outlet. The product will be "acre-feet." Length, width, and depth, in feet, should be given for small farm reservoirs.

If yields of either flowing or pumped wells are not known, obtain the best estimates possible.

Under "Kind of motor or engine," if windmills are used, for "Capacity" give diameters of wheels rather than horsepower.

Under "Kind of pump," if some unusual type of pump or other water-lifting device is used, describe it briefly on the margin or back of this schedule, with suitable reference to the question number.

Under "Average lift," give the vertical distance, in feet, between the average level of the water in the source of supply when the pump is running at usual capacity and the average level to which the water is lifted. Do not consider friction and velocity heads or horizontal distances. If more than one pump is reported, give the average lift for each pump separately, with corresponding yield.

SECTION VIII.—In answering Question 25, include the original cost of the irrigation works plus the cost of extensions and improvements; also the cost of equipment, buildings, and land used for maintenance and operation, but not water rights. If works are not completed, give investment to December 31, 1939. If there are no records of cost, or if the owners have done all or part of the construction, the best estimate of cost obtainable should be reported, including the estimated value of the work done by the owners. If drainage works have been built, do not include their cost in the answer to Question 25.

Under "Water rights," include filing and legal fees paid by the enterprise in acquiring them; and, if they were purchased by the enterprise, give the purchase price.

SECTION IX.—In answering Question 28, report only the costs of maintenance, including ordinary cleaning and repairs; and operation, including fuel or power and attendance.

SECTION X.—The answer to Question 29, if the total supply is pumped, should be the same as the answer to Question 22(h). If the water supply is obtained from two or more sources, pumped or gravity, the answer to Question 29 should be the total amount of water delivered from all such sources.

CONFIDENTIAL CENSUS REPORT: Your report is required by Act of Congress. This Act also makes it unlawful for the Bureau to disclose any facts, including statistical information concerning the Nation's population, resources, and business activities. Your

DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS
WASHINGTON
SIXTEENTH CENSUS
OF THE
UNITED STATES: 1940
IRRIGATION—2

16-217

This schedule is to be used ONLY for irrigation enterprises serving FIVE or MORE farms, in the following States:

Arizona	Kansas	New Mexico	Texas
Arkansas	Louisiana	North Dakota	Utah
California	Montana	Oklahoma	Washington
Colorado	Nebraska	Oregon	Wyoming
Idaho	Nevada	South Dakota	

I.—MANAGEMENT AND LOCATION OF ENTERPRISE

1. Name of this canal or irrigation enterprise.....

2. Correct legal or incorporated name of this enterprise:
.....

3. Location:
Post-office address: { Main office.....
Local office.....

(a) Lands of this enterprise: { State.....
County (or counties).....

(b) Head of main canal; well; spring; reservoir; or other source:
Section..... Township..... Range.....
If located on unsurveyed land, describe by direction and distance from some nearby town.....

4. Person furnishing information:
Name..... Title.....
Address.....
Date.....
Signature.....

II.—SOURCE OF WATER SUPPLY

5. Indicate type by X (if more than one type, mark each):
Stream Pumped well Flowing well Spring
Stored storm water Lake City water Sewage

6. Name of stream or other source.....

7. Drainage basin.....
Give name of river system which drains the region in which enterprise is located.....

III.—WATER RIGHTS

8. Indicate type by X (if more than one type, mark each):
NOTE.—Some enterprises have several rights, each of which should be shown; and many rights will fall in more than one of the types named. For instance: A right may have been acquired originally by appropriation and use; later the owner may have filed and posted a notice of his claim; still later the right may have been adjudicated by a court or board; and, finally, a certificate may have been issued by the State. Or a right may have been initiated on a permit from the State and the owner may have received later a certificate from the State. In each instance the right should be reported in the class in which it stands at the time of enumeration.

(a) Riparian rights.....
(b) Appropriation rights.....
(c) All other rights.....
(Specify, as "underground water," etc.)

IV.—TYPE OF ENTERPRISE

NOTE.—The types of enterprises recognized by the census are as follows:
Individual or partnership enterprises, which belong to individual farmers or to groups of farmers associated without formal organization. It is not always possible to distinguish between partnership and cooperative enterprises, but as the difference is slight this is unimportant.
Cooperative or mutual enterprises, which are controlled by the water users combined in some organized form of cooperation under State laws. The most common form of organization is the stock company, the stock of which is owned by the water users. In New Mexico many of the cooperative enterprises are operated under laws regulating "community" ditches.
Irrigation districts, which are public corporations established under State laws and empowered to issue bonds to obtain funds for the purchase or construction of irrigation works, and to levy and collect taxes for the payment of bonds and interest thereon and for the payment of the cost of operation and maintenance. In some States these are called water improvement districts, water conservation districts, water storage districts, etc.
Carey Act enterprises, established under the Federal law of August 18, 1894, granting each of the States in the arid region 1,000,000 acres of land on condition that the State provide for its irrigation and under amendments to that law granting additional areas to Idaho and Wyoming. Practically all Carey Act projects are now organized as irrigation districts or other cooperative enterprises and should be so reported.
Commercial enterprises, incorporated or otherwise, and including public utilities regulated by State commissions, which supply water for compensation to farmers who own no interest in the works. Irrigators obtaining water from such enterprises are required to pay annual charges based in some instances on the acreage irrigated and in others on the quantity of water received, and sometimes must pay in addition for the initial right to receive water.
United States Bureau of Indian Affairs enterprises, established under various acts of the Congress providing for the construction by that Service of works for the irrigation of land in Indian reservations.
United States Bureau of Reclamation enterprises, established under the Federal law of June 17, 1902, providing for the construction of irrigation works with the receipts from the sale of public lands or other sources.
State enterprises.—In a few instances the States themselves have carried out irrigation enterprises under special legislation.
City water or sewage irrigation enterprises.—This type is self-explanatory.

9. Indicate type of enterprise at the present time by X:
Individual..... Carey Act.....
Partnership..... U. S. Bureau of Indian Affairs.....
Cooperative { (a) Incorporated..... U. S. Bureau of Reclamation.....
(b) Unincorporated.....
Irrigation district..... State enterprise.....
Commercial { (a) Incorporated.....
(b) Unincorporated..... City enterprise.....
Many enterprises were organized under one form and later changed to another form. In such cases, state the facts on the blank lines below:
.....

V.—LANDS

10. (a) Are any lands in this enterprise irrigated with water supplied by any other enterprise? (Yes or No).....
(b) If answer to Question 10(a) is "Yes," give names of other enterprises and show acreage of this enterprise irrigated by such other water:

NAME OF OTHER ENTERPRISE	ACREAGE	TOTAL ACREAGE
.....	X X X X X X
.....

(c) Does this enterprise supply water to other enterprises? (Yes or No).....
(d) If answer to Question 10(c) is "Yes," give names of the other enterprises receiving the water:

NAME OF OTHER ENTERPRISE	Code
.....
.....

11. Farms supplied with water by this enterprise in 1939 (see Explanations and Instructions). Number..... A-1

12. Total irrigable acreage this project will cover when completed..... Acres..... A-2

13. Area to which existing works are capable of supplying water in 1940..... Acres..... A-3
E-1

SCHEDULE No. (1)

This entire center space for office use only

CODES

Source of Supply Code (2)

Drainage Basin Code (3)

Water Rights Code (4)

Type Code (5)

SCHEDULES

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names or identity, from your census reports. Only sworn census employees will see your statements. Data collected will be used solely for preparing Census Reports Cannot Be Used for Purposes of Taxation, Regulation, or Investigation.

	Code		Code
V.—LANDS—Continued		VIII.—CAPITAL INVESTED AND FINANCING	
14. (a) Area actually irrigated in 1939..... Acres <input type="checkbox"/>	A-5 E-2 A-6	25. Cost of irrigation works and equipment to December 31, 1939..... \$ (Omit cents)	A-12 D-5
(b) Irrigated land from which crops were harvested in 1939..... Acres	A-7 E-3	26. If works were not completed December 31, 1939, estimate additional investment required for completion..... \$ (Omit cents)	D-6
(c) Irrigated area upon which crops failed in 1939 and no other crops were planted for harvest in 1939..... Acres	A-8	27. Total indebtedness, December 31, 1939..... \$ (Omit cents)	D-7
(d) Irrigated land used only for grazing or pasture in 1939..... Acres	A-9 E-4	28. Amount of water taxes collected in 1939 (include special assessments)..... \$ (Omit cents)	D-8
VI.—DRAINAGE OF IRRIGATED LANDS		29. Amount actually invested in water rights to December 31, 1939..... \$ (Omit cents)	D-9
NOTE.—These inquiries relate only to lands that have been irrigated or are to be irrigated by this enterprise.		30. Was the enterprise in arrears in payment of principal or interest on bonds or other funded obligations, December 31, 1939?..... (Yes or No)	
15. Area for which drains or drainage pumps have been installed..... Acres	A-10	(a) If "Yes," give total arrearage, December 31, 1939..... \$ (Omit cents)	D-10
16. Additional area in need of drainage..... Acres	A-11	(b) What was the amount of arrearage, December 31, 1939?..... \$ (Omit cents)	D-11
VII.—DESCRIPTION OF WORKS		31. Amount expended for construction, etc. (capital expenditures), in 1939..... \$ (Omit cents)	D-12
NOTE.—A main canal is any channel conveying water from the source of supply to the tract of land to be irrigated. A lateral canal is a branch of a main canal conveying water from a main canal to one or more farms. Farm ditches, which distribute the water within the boundaries of the individual farm, should not be reported. Types of works not specified below and other helpful information should be given briefly on the back of the schedule, with suitable reference to question numbers.		IX.—MAINTENANCE AND OPERATION	
17. Diversion dams: (a) Number..... (b) Material..... <input type="checkbox"/>	B-1, 2	32. Cost of maintenance and operation in 1939..... \$ (Omit cents)	A-13 E-5
18. Storage dams: (a) Number..... (b) Material..... <input type="checkbox"/>	B-3, 4	NOTE.—Expenditures made in 1939 for enlargements and improvements are not to be included here but under Question 25. (Also see Instructions.)	
19. Canals (mains and laterals, not including farm ditches):		33. Area against which annual charges were assessed in 1939..... Acres	D-13 E-6
(a) Capacity at main heading..... Cu. ft. per sec.....	B-5	34. Average annual charge per acre in 1939..... \$	E-7
(b) Earth canals, length..... Miles	B-6	If charge is based on some other than this area, give approximate equivalent charge per acre served. Include assessment for maintenance and operation, and for principal and interest on bonds, notes, and warrants, and for special reasons. (a) OFFICE USE ONLY	
Lined canals (including flumes), length:	B-7	35. Of the land assessed with the annual charge, what acreage used no water in 1939?..... Acres	E-8
(c) Concrete..... Miles (nearest tenth)	B-8	X.—QUANTITY OF WATER USED IN 1939 (Gravity and pumped)	
(d) Other..... Miles (nearest tenth)		36. Was the water measured as it was received by the system?..... (Yes or No) (Name unit of measure)	
20. Pipe lines, including siphons and farm pipe distribution lines. Report lengths to nearest tenth of mile.		37. Average volume of water entering the system during season of 1939, cubic feet per second.....	
MATERIAL	DIAMETER IN INCHES		
	1-12 inches	13-24 inches	Over 24 inches
	Miles	Miles	Miles
(a) Concrete.....			
(b) Metal (iron, steel, etc.).....			
(c) Wood-stave.....			
(d) Other..... (Specify material)			
21. Reservoirs: (a) Number..... (b) Total capacity (ac.-ft.).....	B-9 10, 11 B-12 13, 14 B-15 16, 17 B-18 19, 20	38. Total quantity of water entering the system during season of 1939, acre-feet.....	E-9
If reservoir is jointly owned, list below the name of reservoir, names of participating enterprises, and share of each in acre-feet:	B-21, 22	39. Periods during which water was run for irrigation in 1939:	
22. Pumping equipment:		MONTH	DAY
KIND OF MOTOR OR ENGINE	NUMBER	TOTAL HORSEPOWER	NUMBER OF HOURS OPERATED IN 1939
(a) Electric.....			
(b) Internal-combustion.....			
(c) Other..... (Specify kind)			
KIND OF PUMP	NUMBER	TOTAL CAPACITY (Gals. per min.)	AVERAGE LIFT (Feet)
(d) Centrifugal.....			
(e) Turbine.....			
(f) Plunger.....			
(g) Other..... (Specify kind)			
(h) Amount of water pumped in 1939, acre-feet.....	C-1 1, 2, 3 C-4 4, 5, 6 C-7 7, 8, 9	40. Is water measured as it is delivered to each irrigator?..... (Yes or No) (Name unit of measure)	
23. Pumped wells: (a) Number..... (b) Total yield (g.p.m.).....	C-10 11, 12 E-13 14, 15 C-16 17, 18 C-19 20, 21	41. Total quantity of water delivered to irrigators during season of 1939, acre-feet.....	E-10
24. Flowing wells: (a) Number..... (b) Total yield (g.p.m.).....	D-1, 2 D-3, 4	XI.—EMPLOYMENT AND PAY ROLL	
		42. Total amount of wages and salaries paid and payable for 1939..... \$ (Omit cents)	E-11
		43. Total number employed during week ending April 29, 1939..... Number	E-12

(Reduced facsimile)

EXPLANATIONS AND INSTRUCTIONS

Legal requirements.—A report of every irrigation enterprise in the United States is required by the Decennial Census Act of the Congress, approved June 18, 1929.

Enterprises which mail their reports to the Bureau of the Census will not be visited by field representatives unless the reports are incomplete or have been delayed.

Definition of an irrigation enterprise.—An irrigation enterprise, for the purpose of the census, is a canal or other water conduit system, pumping plant, or reservoir supplying water for irrigation, or any combination of these operated under a single management by either an individual, a partnership, a company, or other organization. For classification of enterprises see note under Section IV on the face of the schedule.

Land should be classed as irrigated which has water supplied to it for agricultural purposes by artificial means or by seepage from canals, reservoirs, or irrigated lands, but land which has natural ground water sufficiently near the surface to support plant life should not be classed as irrigated. Land which is flooded during high-water periods should be classed as irrigated if water is caused to flow over the land by dams, canals, or other works, but should not be classed as irrigated if the overflow is due to natural causes alone.

All questions are to be answered.—If exact information is not available, give the best estimate possible and write "Est." beside the answer. Use the blank lines following these Explanations and Instructions when additional space is necessary to make the answers clear, definite, and complete.

Section I.—Census tabulations are made according to counties. Therefore, if the enterprise includes lands in more than one county, a separate schedule should be prepared for the portions of the lands and system in each county. If more blank schedules and further instructions are needed to make this separation accurately, the situation should be explained to the Bureau and the needed additional blanks and instructions will be supplied.

Section II.—If water is secured from more than one source, each should be marked and the principal source indicated by underscoring. If water is secured from two or more streams or other sources, the name of each should be given.

"Stored storm water" refers to reservoirs filled by storing storm water from channels that carry water only during storms and are not classed as streams. When water is obtained from a reservoir filled from a stream, the stream should be given as the source.

Under "Drainage basin," give the name of the main river system to which the "stream or other source" is tributary and which drains the general region where the enterprise is located. If the source or sources of supply are located in drainage basins different from the basin in which the lands served by the enterprise are located, the circumstances should be clearly explained in the space following these Instructions.

Section III.—These questions relate to the rights of the enterprise to take water from the "stream or other source." Some enterprises have several rights, each of which should be shown; and many rights will fall in more than one of several classes. In each instance the right should be reported in the class in which it stands on December 31, 1939.

Section IV.—While most small partnership enterprises will be reported on the Irrigation—1 schedule by enumerators, this Irrigation—2 schedule should be filled out and returned by the enterprise to which it is sent even though it may include less than 5 farms. The extra copy should be retained in the files of the enterprise for future reference and to show to enumerators who may request a report.

Section V.—In answering Question 11, the Census definition for a farm should be observed, as follows:

"A farm, for Census purposes, is all the land on which some agricultural operations are performed by one person, either by his own labor alone or with the assistance of members of his household, or hired employees. The land operated by a partnership is likewise considered a farm. A 'farm' may consist of a single tract of land, or a number of separate tracts, and the several tracts may be held under different tenures, as when one tract is owned by the farmer and another tract is rented by him. When a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a farm. * * * Do not report as a farm any tract of land of less than 3 acres, unless its agricultural products in 1939 were valued at \$250 or more."

Under "Total irrigable acreage the project will cover when completed," only the acreage to which it is definitely planned to supply water should be reported. Possible extensions not yet definitely planned should not be included.

The answer to Question 13 should include all land to which the enterprise is ready and able to supply water, whether the land is farmed or not.

The "Area actually irrigated in 1939" should be limited to land to which water was actually applied during that year. It should not include land which is under the system and sometimes irrigated, but which was not watered in 1939, nor land not yet irrigated on farms that are in process of reclamation.

The answer to Question 14(a) should be the total of all land irrigated. If the cropland harvested, irrigated pasture, and irrigated area upon which crops failed do not equal the total reported under Question 14(a), write an explanation on the blank lines following these Instructions.

Section VI.—This section relates only to lands which have been irrigated or are to be irrigated by this enterprise. The "Additional area in need of drainage" will necessarily be estimated. Officials should make the best estimates possible, based on information obtained from the records of the enterprise, from others in the community, and from their own observations, but they should not attempt to make extended field observations.

If water from drainage pumps or other drainage system is used for irrigation, report the name of the drainage enterprise in answering Question 6; include the amount of drainage water thus used in answering Question 41; include the amount of the capital costs of the drainage works which has been charged to irrigation in answering Question 25; and include the amounts of operating and maintenance costs of the drainage pumps or system which are chargeable to irrigation in answering Question 32. Costs and other information should not be duplicated on the Irrigation Schedule and the Drainage Schedule. Explain segregations made between irrigation and drainage items in space following these Instructions.

Section VII.—The total length, in miles, of the distribution pipe lines on farms (mains and laterals) for the entire project, should be included in the answer to Question 20, using the best figures or estimates obtainable. These farm pipe lines should be in addition to the pipe lines owned by the enterprise. The cost of farm pipe lines should not be included in the answer to Question 25. Describe the conditions in the space following these Instructions, showing lengths and sizes of the pipe lines owned by the enterprise separately from the lengths and sizes of the farm pipe lines.

If the capacity of a reservoir is not known, it should be estimated by multiplying the area (in acres) of the water surface when reservoir is full, by the average depth (in feet) above the level of the bottom of the outlet. The product will be "acre-feet."

If yields of either flowing or pumped wells are not known, obtain the best estimates possible.

Under "Kind of motor or engine," if windmills are used, for "Capacity" give diameters of wheels rather than horsepower.

Under "Kind of pump," if some unusual type of pump or other water-lifting device is used, describe it briefly on the blank lines following these Instructions.

Under "Average lift," give the vertical distance, in feet, between the average level of the water in the source of supply when the pump is running at usual capacity and the average level to which the water is lifted. Do not consider friction and velocity heads or horizontal distances. If more than one pump is reported, give the average lift for each pump separately, with corresponding yield.

Section VIII.—In answering Question 25, include the original cost of the irrigation works plus the cost of extensions and improvements; also the cost of equipment, buildings, and land used for maintenance and operation, but not water rights. If works are not completed, give investment to December 31, 1939. If there are no records of cost, or if the owners have done all or part of the construction, the best estimate of cost obtainable should be reported, including the estimated value of the work done by the owners. Only such costs for drainage works as are chargeable to irrigation should be included. (See Section VI.)

Under "Water rights," include filing and legal fees paid by the enterprise in acquiring them; and, if they were purchased by the enterprise, give the purchase price.

Section IX.—In answering Question 32, report only the costs of maintenance, including ordinary cleaning and repairs, and operations, including fuel, electric energy, and attendance.

Section X.—In replying to Question 37, if measurements of the water were made in units other than cubic feet per second, indicate the units actually used, such as "Miner's inches," "gallons per minute," etc. If water was not measured, give best estimate possible in answer to Question 38.

The answer to Question 41, if the total supply is pumped, should be the same as the answer to Question 22(h). If the water supply is obtained from two or more sources, pumped or gravity, the answer to Question 41 should be the total amount of water delivered from all sources. If deliveries were not measured, give best estimate possible.

Section XI.—In replying to Question 42, show total amount paid to all employees, including officials and members of the management, for services in 1939 on or for the benefit of that portion of the enterprise in the county for which this schedule is made. (See Instructions for Section I.) Do not include payments to a contractor for work done by him or his employees, nor payments to employees working on drainage, power, or on any other occupation not chargeable to irrigation or which has been reported on any other census schedule.

In replying to Question 43, show only the number employed during the week specified, including officials and members of the management on or for the benefit of that area of the enterprise located in the county for which this schedule is made. (See Instructions for Section I.) Do not include employees of a contractor or any others not chargeable to irrigation or reported on other census schedules.

SUPPLEMENTAL INFORMATION

Lined area for supplemental information with horizontal dashed lines.

(Reduced facsimile)