

Table 40. Energy and Water Conservation Improvements: 2008 and 2003

[Excludes institutional, research, and experimental farms and farms with horticulture. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Implemented improvements in the last five years				Effect of improvements ¹					
					Improved crop yield or quality			Reduced energy cost		
	Farms	Land in farms (acres)	Acres irrigated ²	Acre-feet applied ²	Farms	Acres irrigated ²	Acre-feet applied ²	Farms	Acres irrigated ²	Acre-feet applied ²
United States	74,846	91,125,142	30,810,026	51,981,131	45,084	22,290,831	37,815,806	34,134	20,182,951	31,647,081
2008 ..										
2003 ..	67,245	89,909,616	26,363,943	45,855,907	38,645	18,677,524	31,510,354	27,077	15,311,259	24,669,321
2008 DATA										
Alabama	154	171,806	33,225	19,819	96	20,223	13,885	67	23,645	14,308
Alaska	11	842	234	44	10	54	8	-	-	-
Arizona	1,130	2,296,088	472,278	2,660,894	739	358,950	1,854,725	533	217,327	1,127,188
Arkansas	1,693	3,090,673	2,405,249	4,457,145	1,364	1,995,797	3,609,142	1,103	1,724,035	3,243,553
California	16,559	7,312,720	4,353,417	13,377,825	7,121	3,136,448	9,603,546	7,805	2,782,362	7,966,826
Colorado	4,353	4,615,025	1,417,674	2,401,679	2,604	975,146	1,666,094	1,289	672,461	1,088,738
Connecticut	23	2,123	677	155	23	677	155	10	493	126
Delaware	104	130,242	58,847	41,099	73	39,528	28,403	75	41,460	29,838
Florida	1,380	1,539,902	722,216	1,050,672	789	515,541	758,716	571	588,786	800,354
Georgia	1,358	1,586,492	601,911	536,942	888	378,824	360,465	777	449,323	397,547
Hawaii	353	135,388	83,699	410,809	220	83,101	410,048	95	75,449	390,038
Idaho	4,511	3,570,030	1,938,272	3,653,964	2,540	1,497,677	2,731,995	1,686	1,245,785	2,394,933
Illinois	348	503,644	233,190	123,211	189	145,836	82,052	269	195,494	105,734
Indiana	268	419,193	161,141	82,099	146	84,111	44,911	200	120,420	59,644
Iowa	167	204,672	76,390	37,001	90	40,672	23,883	133	66,011	33,678
Kansas	2,019	5,799,308	1,448,805	1,819,069	1,247	988,613	1,217,703	1,405	1,142,551	1,407,564
Kentucky	217	84,207	9,165	4,713	180	7,458	3,853	56	4,170	(D)
Louisiana	656	1,102,073	505,783	552,334	409	322,073	364,783	434	357,833	428,692
Maine	55	71,398	13,169	6,075	24	12,643	(D)	22	3,633	776
Maryland	191	138,228	49,726	32,886	118	29,728	20,481	89	35,820	24,695
Massachusetts	264	26,870	9,782	14,275	234	6,630	12,819	107	6,752	11,141
Michigan	805	753,796	332,276	201,315	601	248,849	149,672	387	269,934	169,218
Minnesota	645	755,739	309,993	214,878	386	169,389	127,892	510	259,322	165,633
Mississippi	595	1,398,772	914,035	874,611	484	714,040	680,646	341	449,864	433,552
Missouri	710	1,135,516	683,738	539,088	503	549,361	430,108	465	468,068	360,339
Montana	3,118	8,754,480	965,202	1,386,831	1,888	670,235	987,635	1,087	468,230	622,774
Nebraska	7,236	8,918,730	4,783,920	3,678,295	4,718	3,206,222	2,501,268	4,901	3,828,189	2,947,721
Nevada	855	2,510,774	395,049	866,556	551	293,066	609,289	359	138,604	351,892
New Hampshire	19	2,808	286	64	15	271	49	6	256	45
New Jersey	228	64,018	31,136	24,374	117	20,268	15,521	132	23,187	18,552
New Mexico	1,953	3,544,612	414,545	1,096,531	994	307,001	762,058	366	184,770	531,486
New York	201	44,609	7,884	6,771	97	4,953	3,856	90	4,302	3,826
North Carolina	601	494,846	81,594	40,721	433	40,603	20,295	214	35,913	22,194
North Dakota	207	727,035	115,216	117,595	128	71,440	79,783	153	88,216	88,009
Ohio	112	48,331	6,219	4,096	88	4,043	1,887	46	(D)	2,336
Oklahoma	568	863,786	202,525	237,571	367	134,464	165,504	252	128,884	149,363
Oregon	4,982	3,619,922	1,039,649	1,962,412	3,871	770,688	1,454,218	2,086	605,724	1,102,975
Pennsylvania	259	47,160	6,356	3,404	201	4,284	1,605	131	3,829	2,345
Rhode Island	36	4,343	464	590	22	410	536	24	317	528
South Carolina	179	198,868	50,319	44,106	118	26,513	26,111	122	30,340	31,693
South Dakota	488	1,131,242	176,863	139,041	294	118,834	95,847	288	129,197	93,298
Tennessee	215	111,957	18,356	11,320	153	15,094	9,624	74	11,346	7,162
Texas	4,114	7,823,755	3,056,779	3,798,153	2,770	2,360,165	2,857,515	2,281	1,987,487	2,473,774
Utah	3,342	2,770,011	512,863	1,185,670	1,912	409,593	998,361	565	165,975	417,203
Vermont	20	1,036	128	60	8	20	(D)	7	98	37
Virginia	238	180,982	24,856	15,012	155	17,311	10,024	90	20,449	12,207
Washington	5,095	4,161,743	1,066,903	2,507,979	3,504	706,228	1,655,972	1,643	638,275	1,488,220
West Virginia	7	1,975	110	26	6	31	19	1	(D)	(D)
Wisconsin	545	609,384	293,057	245,668	343	237,475	195,945	359	261,775	220,157
Wyoming	1,659	7,643,988	724,855	1,495,784	1,253	550,250	1,160,898	428	223,738	403,069
Water Resources Regions										
Region 01 New England	408	108,438	24,484	21,198	322	20,639	19,556	176	11,549	12,652
Region 02 Mid-Atlantic	1,063	517,253	169,999	117,925	648	111,118	76,952	511	122,790	87,008
Region 03 South Atlantic-Gulf	3,706	3,986,106	1,482,074	1,687,587	2,373	977,843	1,176,448	1,807	1,123,065	1,261,819
Region 04 Great Lakes	1,119	976,722	432,009	262,006	822	331,878	203,674	563	361,167	225,829
Region 05 Ohio	556	414,361	103,499	53,731	378	62,755	33,585	252	73,503	38,297
Region 06 Tennessee	197	109,448	17,840	10,810	143	10,891	6,524	65	10,813	7,800
Region 07 Upper Mississippi	1,476	1,790,788	795,275	528,416	884	497,567	347,677	1,137	671,413	454,691
Region 08 Lower Mississippi	3,025	6,001,492	4,101,330	5,808,374	2,259	3,255,485	4,570,587	1,978	2,692,325	3,952,623
Region 09 Souris-Red-Rainy	167	274,058	80,490	72,154	101	44,894	46,175	124	55,868	39,431
Region 10 Missouri	14,210	30,650,543	7,763,700	7,982,640	9,318	5,258,855	5,538,099	7,822	5,426,255	4,973,903
Region 11 Arkansas-White-Red	4,143	9,734,171	2,876,670	4,076,467	2,677	2,148,232	3,082,525	1,988	2,117,244	2,967,081
Region 12 Texas-Gulf	2,888	4,316,196	1,974,008	2,209,003	1,953	1,541,859	1,662,633	1,611	1,219,779	1,369,383
Region 13 Rio Grande	1,687	3,182,303	529,423	1,390,959	729	330,241	831,598	430	289,832	831,509
Region 14 Upper Colorado	3,476	2,233,497	525,153	1,066,886	2,057	427,104	910,573	553	55,124	83,302
Region 15 Lower Colorado	1,291	2,517,613	520,077	2,833,633	830	393,754	1,988,232	616	236,987	1,201,641
Region 16 Great Basin	3,582	5,033,611	891,205	1,967,168	2,338	673,315	1,490,756	853	315,734	802,477
Region 17 Pacific Northwest	14,785	11,622,436	4,025,241	8,050,606	9,789	2,932,385	5,769,504	5,713	2,532,213	5,000,893
Region 18 California	16,703	7,519,876	4,413,616	13,430,717	7,233	3,188,861	9,650,653	7,840	2,791,841	7,946,704
Region 19 Alaska	11	842	234	44	10	54	8	-	-	-
Region 20 Hawaii	353	135,388	83,699	410,809	220	83,101	410,048	95	75,449	390,038

See footnote(s) at end of table.

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Table 40. Energy and Water Conservation Improvements: 2008 and 2003 - Con.

[Excludes institutional, research, and experimental farms and farms with horticulture. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Effect of improvements ¹ - con.								
	Reduced water applied			Reduced labor costs			Reduced fertilizer or pesticide losses		
	Farms	Acres irrigated ²	Acre-feet applied ²	Farms	Acres irrigated ²	Acre-feet applied ²	Farms	Acres irrigated ²	Acre-feet applied ²
United States	44,473	21,428,273	36,361,523	30,800	15,746,960	27,282,360	13,408	8,075,076	15,470,797
2008 ..	39,573	18,549,164	32,392,166	27,105	13,807,531	24,649,072	9,919	5,742,343	10,369,455
2008 DATA									
Alabama	73	19,187	10,683	50	8,442	5,607	14	(D)	(D)
Alaska	2	(D)	(D)	3	(D)	(D)	-	-	-
Arizona	883	366,068	2,087,556	610	356,401	1,995,411	366	218,172	1,168,259
Arkansas	1,056	1,559,798	2,648,153	805	1,349,693	2,433,908	261	441,532	896,222
California	9,552	3,125,873	9,689,204	7,177	2,398,395	6,934,978	3,908	1,826,067	5,715,016
Colorado	2,525	962,493	1,537,431	1,954	619,869	994,776	699	292,692	558,636
Connecticut	10	493	126	10	493	126	6	263	(D)
Delaware	68	41,963	28,852	31	16,955	10,884	11	6,405	4,162
Florida	839	585,186	801,888	361	208,634	288,369	277	150,292	205,285
Georgia	681	381,339	338,784	307	194,646	185,626	157	57,247	66,935
Hawaii	170	77,056	397,823	86	7,650	10,442	72	8,833	20,158
Idaho	2,537	1,389,470	2,706,319	2,161	1,161,164	2,191,554	426	429,273	879,369
Illinois	207	151,044	76,760	97	93,466	54,524	53	38,126	20,930
Indiana	142	85,700	42,320	88	51,327	25,541	24	16,416	9,138
Iowa	110	47,476	18,589	50	24,117	7,024	8	4,386	1,331
Kansas	1,285	1,051,207	1,312,748	851	698,993	860,297	234	291,569	359,476
Kentucky	76	3,774	1,627	35	1,940	647	36	1,361	557
Louisiana	378	300,345	331,723	258	220,714	300,920	120	124,562	104,281
Maine	13	1,294	299	21	11,738	(D)	3	24	30
Maryland	83	31,894	22,277	40	14,585	9,987	17	4,945	3,249
Massachusetts	226	7,921	12,301	56	4,687	7,862	117	3,065	5,243
Michigan	361	203,905	122,367	269	172,449	101,194	108	90,556	61,551
Minnesota	408	227,574	159,718	150	83,998	62,440	90	31,748	23,361
Mississippi	269	488,317	467,701	232	389,693	402,400	41	81,015	90,747
Missouri	405	435,563	321,407	359	316,634	240,672	138	136,936	101,328
Montana	1,902	604,078	919,974	1,286	503,590	784,008	231	174,497	296,764
Nebraska	5,396	3,843,891	2,953,999	3,424	2,439,400	1,837,398	2,030	1,455,767	1,217,950
Nevada	593	257,458	602,551	395	222,174	522,857	130	62,587	153,496
New Hampshire	13	277	61	6	256	45	8	202	27
New Jersey	123	21,859	17,645	88	16,920	14,360	56	11,330	9,447
New Mexico	1,265	301,237	728,737	884	188,712	584,837	554	150,033	414,929
New York	88	4,136	3,899	97	4,792	3,010	14	1,142	1,724
North Carolina	278	45,500	25,434	340	40,861	19,125	134	11,919	8,218
North Dakota	154	92,750	94,069	76	50,532	63,767	43	21,098	18,921
Ohio	54	2,896	1,069	40	3,274	1,309	15	1,344	454
Oklahoma	259	123,076	145,018	144	97,565	114,149	26	29,401	41,893
Oregon	3,137	728,326	1,396,189	2,243	583,055	1,023,990	555	322,914	574,066
Pennsylvania	142	3,327	2,534	57	2,582	1,593	79	493	210
Rhode Island	30	409	552	12	236	(D)	3	175	(D)
South Carolina	80	38,566	33,635	32	8,975	15,223	38	8,597	15,226
South Dakota	343	126,865	97,303	152	60,075	51,696	49	29,319	26,557
Tennessee	62	11,249	7,416	44	6,179	2,215	13	1,018	583
Texas	2,136	1,956,264	2,460,846	1,872	1,729,173	2,095,231	892	842,684	840,021
Utah	1,776	323,454	765,841	1,270	278,988	676,621	289	96,688	243,663
Vermont	8	100	48	7	98	37	4	8	1
Virginia	81	14,320	8,211	79	8,841	3,846	2	(D)	(D)
Washington	2,997	820,678	1,923,828	1,084	513,529	1,238,836	729	374,400	884,948
West Virginia	2	(D)	(D)	1	(D)	(D)	6	31	19
Wisconsin	269	123,173	111,434	213	143,258	122,278	122	65,684	63,829
Wyoming	926	439,139	924,513	893	437,187	974,418	200	155,005	359,689
Water Resources Regions									
Region 01 New England	295	10,484	13,375	112	17,508	14,374	141	3,737	5,852
Region 02 Mid-Atlantic	479	111,888	79,197	363	60,537	41,366	153	24,334	17,734
Region 03 South Atlantic-Gulf	1,936	1,064,827	1,206,875	1,063	457,588	510,777	619	228,405	296,032
Region 04 Great Lakes	541	249,513	148,255	414	238,188	145,574	164	110,348	77,676
Region 05 Ohio	238	56,856	30,872	88	30,909	19,030	79	(D)	(D)
Region 06 Tennessee	67	(D)	(D)	63	(D)	(D)	12	(D)	(D)
Region 07 Upper Mississippi	853	478,333	307,240	411	289,838	198,973	234	131,743	100,644
Region 08 Lower Mississippi	1,850	2,513,224	3,360,407	1,397	2,025,284	2,959,988	422	666,834	984,890
Region 09 Souris-Red-Rainy	108	62,701	60,045	54	24,406	24,335	53	15,384	12,373
Region 10 Missouri	9,591	5,862,804	5,870,912	6,455	3,874,211	4,113,515	2,806	2,049,862	2,256,540
Region 11 Arkansas-White-Red	2,566	1,893,923	2,609,489	1,482	1,402,430	1,962,328	748	533,120	787,803
Region 12 Texas-Gulf	1,492	1,270,276	1,454,300	1,310	1,209,909	1,318,719	783	721,492	673,130
Region 13 Rio Grande	1,067	396,718	969,363	969	279,854	828,412	240	101,551	259,228
Region 14 Upper Colorado	1,640	285,295	550,745	1,412	226,345	425,408	507	134,325	341,882
Region 15 Lower Colorado	973	408,204	2,246,338	696	380,661	2,101,979	389	248,624	1,296,679
Region 16 Great Basin	2,020	593,362	1,335,678	1,635	536,920	1,229,117	423	153,443	379,634
Region 17 Pacific Northwest	8,922	2,917,391	6,005,417	5,570	2,272,888	4,483,703	1,649	1,125,655	2,339,737
Region 18 California	9,663	3,166,681	9,708,692	7,217	2,405,997	6,890,388	3,914	1,808,169	5,614,565
Region 19 Alaska	2	(D)	(D)	3	(D)	(D)	-	-	-
Region 20 Hawaii	170	77,056	397,823	86	7,650	10,442	72	8,833	20,158

See footnote(s) at end of table.

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Table 40. Energy and Water Conservation Improvements: 2008 and 2003 - Con.

[Excludes institutional, research, and experimental farms and farms with horticulture. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Effect of improvements ¹ - con.								
	Reduced soil erosion			Reduced tailwater			Other		
	Farms	Acres irrigated ²	Acre-feet applied ²	Farms	Acres irrigated ²	Acre-feet applied ²	Farms	Acres irrigated ²	Acre-feet applied ²
United States	21,782	12,119,994	20,839,498	16,076	9,100,478	18,108,819	5,073	1,233,067	2,261,961
2003 ..	21,373	9,972,000	17,463,670	15,919	8,709,088	17,220,968	5,656	831,261	1,469,581
2008 DATA									
Alabama	42	15,396	9,039	12	5,130	3,440	5	522	241
Alaska	1	(D)	(D)	1	(D)	(D)	-	-	-
Arizona	614	235,184	1,339,250	421	265,432	1,535,753	7	11,300	65,072
Arkansas	740	1,129,998	2,007,721	537	833,953	1,538,432	101	109,854	166,037
California	3,524	1,652,275	5,123,722	4,230	1,962,493	6,502,295	1,023	208,330	645,124
Colorado	2,028	648,103	1,018,199	1,708	419,170	746,008	512	84,436	136,403
Connecticut	6	263	87	-	-	-	1	(D)	(D)
Delaware	12	6,329	3,477	-	-	-	1	(D)	(D)
Florida	317	105,191	141,836	77	91,283	126,991	353	14,701	19,667
Georgia	245	173,392	145,961	71	47,470	68,406	150	24,291	20,448
Hawaii	86	6,784	5,418	5	(D)	(D)	29	139	257
Idaho	1,459	724,375	1,555,096	923	382,930	858,317	210	68,517	169,004
Illinois	59	51,246	30,052	10	15,820	9,707	15	12,048	6,559
Indiana	46	28,891	16,874	6	4,920	3,180	12	19,333	10,308
Iowa	17	5,194	1,798	4	1,934	582	7	1,593	332
Kansas	448	456,813	558,712	550	462,074	538,066	142	88,578	120,208
Kentucky	55	1,036	374	2	(D)	(D)	17	830	404
Louisiana	266	207,821	246,253	104	86,220	102,316	34	13,047	17,775
Maine	13	10,474	(D)	2	(D)	(D)	30	(D)	17
Maryland	39	18,469	13,771	7	3,518	3,277	29	2,187	1,133
Massachusetts	9	1,051	(D)	17	1,153	(D)	1	(D)	(D)
Michigan	223	167,132	107,239	5	10,020	(D)	34	7,126	4,594
Minnesota	144	76,764	57,813	43	24,065	23,280	27	4,937	3,515
Mississippi	131	221,249	228,351	114	189,751	196,474	27	23,448	32,813
Missouri	227	199,714	144,591	183	171,918	120,547	16	9,850	5,224
Montana	773	377,871	507,770	430	263,969	435,887	76	38,502	74,375
Nebraska	2,661	1,994,365	1,546,953	1,822	1,525,986	1,134,087	122	55,370	44,342
Nevada	221	164,460	328,781	301	154,871	394,184	88	24,369	41,515
New Hampshire	5	196	27	2	(D)	(D)	-	-	-
New Jersey	61	13,676	11,536	11	1,996	1,370	21	2,132	1,700
New Mexico	541	180,740	492,982	378	78,135	212,726	4	5,140	13,518
New York	32	1,653	1,969	6	162	308	41	621	1,196
North Carolina	146	18,427	12,558	107	6,963	2,476	48	1,664	222
North Dakota	72	43,794	50,626	27	11,265	12,183	13	4,531	4,820
Ohio	35	1,985	1,074	9	180	90	4	144	144
Oklahoma	122	73,873	93,690	130	64,887	83,799	54	22,700	29,221
Oregon	1,009	458,982	902,914	629	314,109	576,635	395	46,947	90,510
Pennsylvania	39	(D)	(D)	-	-	-	5	65	23
Rhode Island	16	220	(D)	6	(D)	(D)	1	(D)	(D)
South Carolina	33	17,378	21,773	5	1,403	995	22	5,279	13,399
South Dakota	168	67,935	58,616	62	18,433	17,710	22	12,769	12,167
Tennessee	12	2,801	1,279	5	4,997	1,899	26	1,461	1,100
Texas	1,512	1,346,565	1,399,586	996	949,807	1,200,815	202	162,091	165,546
Utah	1,233	253,989	558,519	726	166,556	399,139	395	31,322	89,261
Vermont	3	90	36	-	-	-	-	-	-
Virginia	61	5,645	4,115	5	790	986	2	(D)	(D)
Washington	1,536	526,290	1,218,291	846	302,008	664,189	573	66,774	173,411
West Virginia	1	(D)	(D)	-	-	-	-	-	-
Wisconsin	129	65,880	55,829	36	6,329	11,100	34	4,845	2,743
Wyoming	610	359,155	805,549	505	245,839	566,571	142	38,592	75,832
Water Resources Regions									
Region 01 New England	52	12,294	9,263	27	1,567	4,006	33	571	(D)
Region 02 Mid-Atlantic	225	45,430	33,607	27	6,424	5,933	99	7,116	5,322
Region 03 South Atlantic-Gulf	775	323,276	326,526	266	147,649	199,318	578	46,457	53,977
Region 04 Great Lakes	299	189,030	124,290	30	12,257	8,418	40	8,366	5,104
Region 05 Ohio	97	13,703	9,173	9	11,330	5,899	39	5,490	2,551
Region 06 Tennessee	14	(D)	(D)	8	4,670	(D)	9	(D)	33
Region 07 Upper Mississippi	342	187,611	124,822	89	40,884	32,813	68	34,003	19,851
Region 08 Lower Mississippi	1,096	1,517,028	2,235,527	787	1,089,680	1,639,577	163	134,491	200,847
Region 09 Souris-Red-Rainy	60	22,264	24,359	21	11,395	17,571	12	(D)	(D)
Region 10 Missouri	5,306	3,282,618	3,457,607	3,600	2,374,403	2,544,864	571	218,636	300,352
Region 11 Arkansas-White-Red	1,174	1,040,293	1,496,094	1,038	944,601	1,261,132	148	130,024	189,801
Region 12 Texas-Gulf	1,125	1,006,308	996,257	715	624,895	796,083	179	137,106	133,704
Region 13 Rio Grande	468	146,185	326,901	346	120,394	333,763	4	7,050	12,120
Region 14 Upper Colorado	1,292	289,933	638,287	1,180	152,389	331,698	544	38,388	57,103
Region 15 Lower Colorado	756	249,812	1,404,458	503	287,420	1,640,637	13	22,027	99,879
Region 16 Great Basin	1,048	368,526	796,024	817	292,821	726,503	338	52,158	116,807
Region 17 Pacific Northwest	3,950	1,723,529	3,663,322	2,331	987,086	2,042,208	1,182	187,234	440,567
Region 18 California	3,616	1,688,033	5,162,231	4,276	1,988,548	6,511,849	1,024	201,018	621,368
Region 19 Alaska	1	(D)	(D)	-	(D)	(D)	-	-	-
Region 20 Hawaii	86	6,784	5,418	5	(D)	(D)	29	139	257

¹ Respondents could choose more than one improvement project.

² Acres irrigated and acre-feet applied are totals for all irrigation on these farms and not the amounts conserved as a result of the conservation improvement.