

# 2017 | CENSUS *OF* AGRICULTURE

## 2018 Irrigation and Water Management Survey

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United States Department of Agriculture  
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# Introduction

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## PURPOSE AND SCOPE

The primary purpose of the Irrigation and Water Management Survey (IWMS), formerly known as the Farm and Ranch Irrigation Survey (FRIS), is to provide data relating to on-farm irrigation activities for use in preparing a wide variety of water-related local programs, economic models, legislative initiatives, market analyses, and feasibility studies. The survey name was changed for 2018 to be more inclusive of nursery and greenhouse growers. Selected irrigation data for on-farm irrigation operations have been collected in the census of agriculture since 1890.

The 2018 Irrigation and Water Management Survey is the ninth survey devoted entirely to collecting on-farm irrigation data for the U.S. The 1979, 1984, 1988, and 1994 surveys were conducted by the U.S. Department of Commerce, Bureau of the Census. Responsibility for the survey was transferred to the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) in 1997. The 1998 survey utilized NASS field offices, which expanded opportunities for telephone follow-up or personal enumeration of nonresponse cases. The 1998 Farm and Ranch Irrigation Survey was the first survey to collect and publish data for each of the 50 States. Previously, the farm and ranch irrigation surveys published data only for the leading irrigation States and the U.S. total without including Alaska and Hawaii. In 2008, horticultural specialty operations with sales of \$10,000 or greater were included in the survey for the first time.

## USES OF SURVEY DATA

The 2018 Irrigation and Water Management Survey provides data that supplement the basic irrigation data collected from all farm and ranch operators in the 2017 Census of Agriculture. Irrigation data from this survey, combined with the 2017 census data, provide

one of the most complete and detailed profiles for irrigation in the U.S.

Survey data are used by producers, farm organizations, businesses, State departments of agriculture, elected representatives and legislative bodies at all levels of government, public and private sector analysts, the news media, and colleges and universities. The data are used to:

- Compare water use by application methods;
- Develop improved technologies;
- Develop Federal programs;
- Appraise water use trends;
- Assess impact of congressional legislation; and
- Evaluate the impact of irrigated crops by State.

## AUTHORITY

The census of agriculture is required by law under the "Census of Agriculture Act of 1997," Public Law 105-113 (Title 7, United States Code, Section 2204g). The law authorizes the Secretary of Agriculture to conduct surveys deemed necessary to furnish annual or other data on the subjects covered by the census. The 2018 Irrigation and Water Management Survey was conducted under the provisions of this section.

## FARM DEFINITION

A farm is any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census or survey year.

## DATA COMPARABILITY

The data are mostly comparable between 2018 and 2013. For Tables 35, 36, and 38, the data are not comparable between 2018 and 2013. In the 2013 survey, acres of horticulture in the open were reported

under the all other crops category. In the 2018 survey, horticulture in the open was reported in a separate category.

See Appendix A, Statistical Methodology for a detailed discussion of data comparability.

## **WATER RESOURCES REGIONS MAP**

The map on page 1 shows the Water Resources Regions delineated to the approximate basin boundaries based on the topographical drainage characteristics. Data are tabulated separately for each of the 20 Water Resources Regions shown on the map.

## **PERCENT OF NORMAL PRECIPITATION MAPS**

The maps on pages 2 through 5 show the areas of the U.S. with deviations from normal precipitation during 2018. The maps are included for reference purposes only.

## **TABLES AND APPENDICES**

The tables are divided into three sections: Entire Farm, Crops Grown in the Open and Pasture, and Horticultural Operations.

**Entire Farm Data Tables.** Table 1 shows farms and acres irrigated for the 2002 through 2017 Censuses of Agriculture for each State. Tables 2 through 27 present detailed irrigation data collected in the 2018 Irrigation and Water Management Survey from operations that reported irrigated land during 2018 and in the 2017 census. Excluded from these data are institutional, research, and experimental operations. Table 27 presents data on farm operations that irrigated in 2017 but discontinued irrigation either temporarily or permanently in 2018 while continuing to operate a farm or ranch. Comparable adjusted 2013 U.S. level survey data are also presented in some tables. Data are reported at the national level, for each State, and for the 20 Water Resources Regions.

**Crops Grown in the Open and Pasture Data Tables.** Tables 28 through 39 present detailed 2018 irrigation data collected on crops grown in the open and pasture. Excluded from these data are

institutional, research, and experimental operations, and water use and area of crops grown under protection. Data are reported at the national level and for each State.

**Horticultural Operations Data Tables.** Tables 40 through 45 present detailed 2018 irrigation data collected on horticultural crops grown under protection. Data are from horticultural operations that reported irrigating in the 2017 census and also in the 2018 survey. Data are reported at the national level and for each State.

**Appendix A.** Provides information about data collection and data processing activities and discusses the statistical methodology used in conducting and evaluating the survey. Table A provides the general 2018 Irrigation sample counts and the sample's corresponding 2017 census irrigated acreage. It also provides the general 2018 Irrigation unexpanded and expanded acres irrigated and 2017 census acres irrigated. Table B provides a comparison of the irrigated acres published in the 2017 Census of Agriculture and expanded 2018 Irrigation and Water Management Survey acres irrigated by size group. Table C provides the standard error for selected data for irrigated crops grown in the open in 2018. Table D provides the standard error for selected horticultural data in 2018.

**Appendix B.** Provides information about the development of the report form. It also contains the definitions of specific terms and phrases used in this publication, including items in the publication tables that carry the note "see text." The facsimiles of the report form and the instruction sheet used to collect the Irrigation and Water Management Survey data are included.

## **RESPONDENT CONFIDENTIALITY**

In keeping with the provisions of Title 7 of the United States Code, no data are published that would disclose information about the operations of an individual farm or ranch. All tabulated data are subjected to an extensive disclosure review prior to publication. Any tabulated item that identifies data reported by a respondent or allows a respondent's data to be accurately estimated or derived, was suppressed and coded with a 'D'. However, the number of farms

reporting an item is not considered confidential information and is provided even though other information is withheld.

## **SPECIAL STUDIES AND CUSTOM TABULATIONS**

The 2018 Irrigation and Water Management Survey data, as well as the 2017 Census of Agriculture Volume 1 Geographic Area Series and related reports, are available on the NASS website at [www.nass.usda.gov](http://www.nass.usda.gov).

Custom-designed tabulations may be developed when data are not published elsewhere. These tabulations are developed to individual user specifications on a cost-reimbursable basis and shared with the public. Quick Stats, NASS's online database that allows data users to build customized queries, should be investigated before requesting a custom tabulation.

All NASS publications and custom tabulations are subject to a thorough disclosure review prior to release to prevent the disclosure of any individual respondent data. Requests for custom tabulations can be submitted via the internet from the NASS home page, by mail, or by e-mail to:

DataLab  
National Agricultural Statistics Service  
Room 5305A, Stop 2054  
1400 Independence Ave, S.W.  
Washington, D.C. 20250-2054  
or  
[Datalab@nass.usda.gov](mailto:Datalab@nass.usda.gov)

## **ABBREVIATIONS AND SYMBOLS**

The following abbreviations and symbols are used throughout the tables:

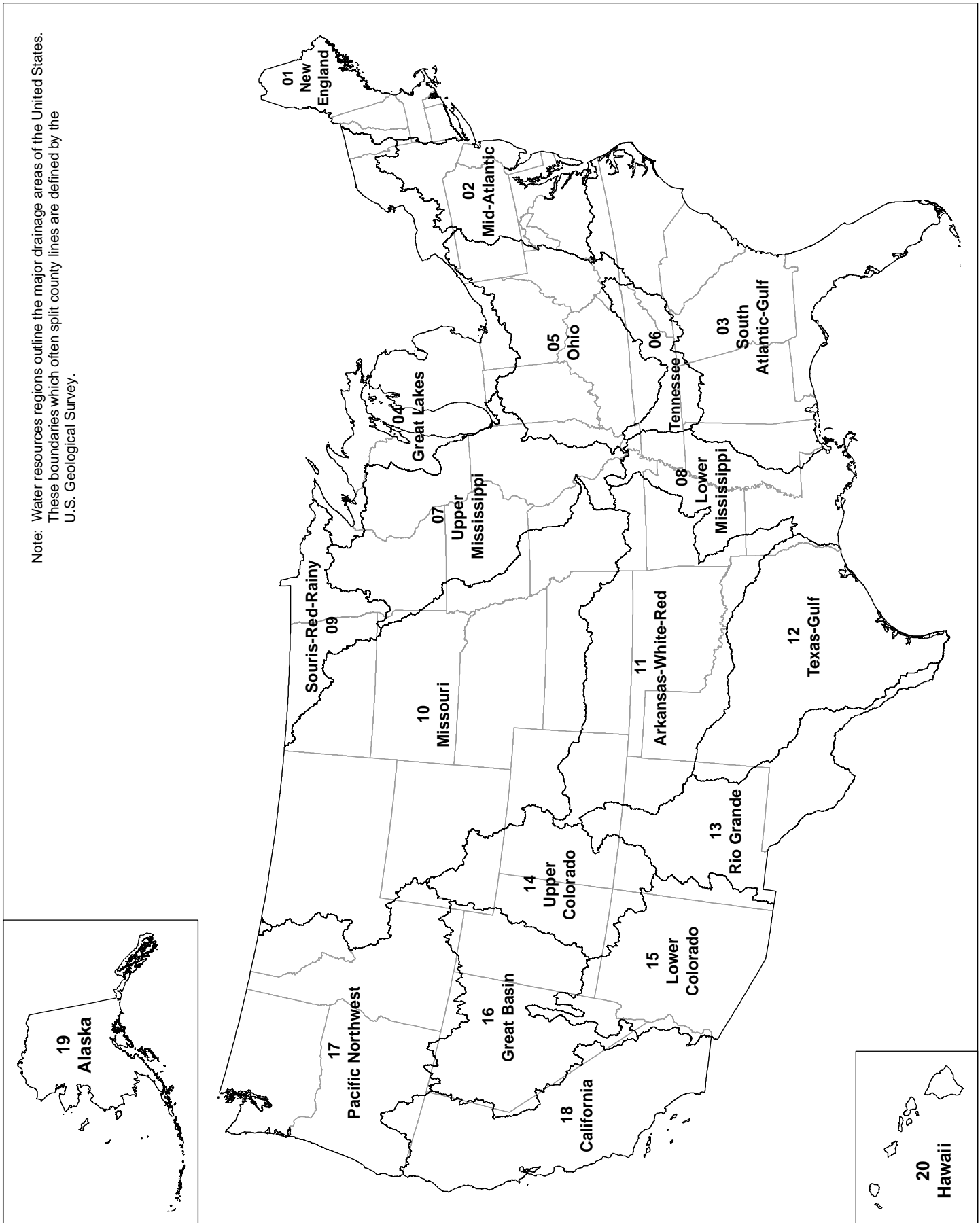
- Represents zero.
- (D) Withheld to avoid disclosing data for individual farms.
- (H) Coefficient of variation is greater than or equal to 99.95 percent or the standard error is greater than or equal to 99.95 percent of mean.
- (L) Coefficient of variation is less than 0.05 percent or the standard error is less than 0.05 percent of the mean.
- WRR Water Resources Regions.
- (NA) Not available.
- (X) Not applicable.
- (Z) Less than half of the unit shown.
- (cwt) Hundredweight.
- gpm Gallons per minute.
- psi Pounds per square inch.
- sq. ft. Square feet





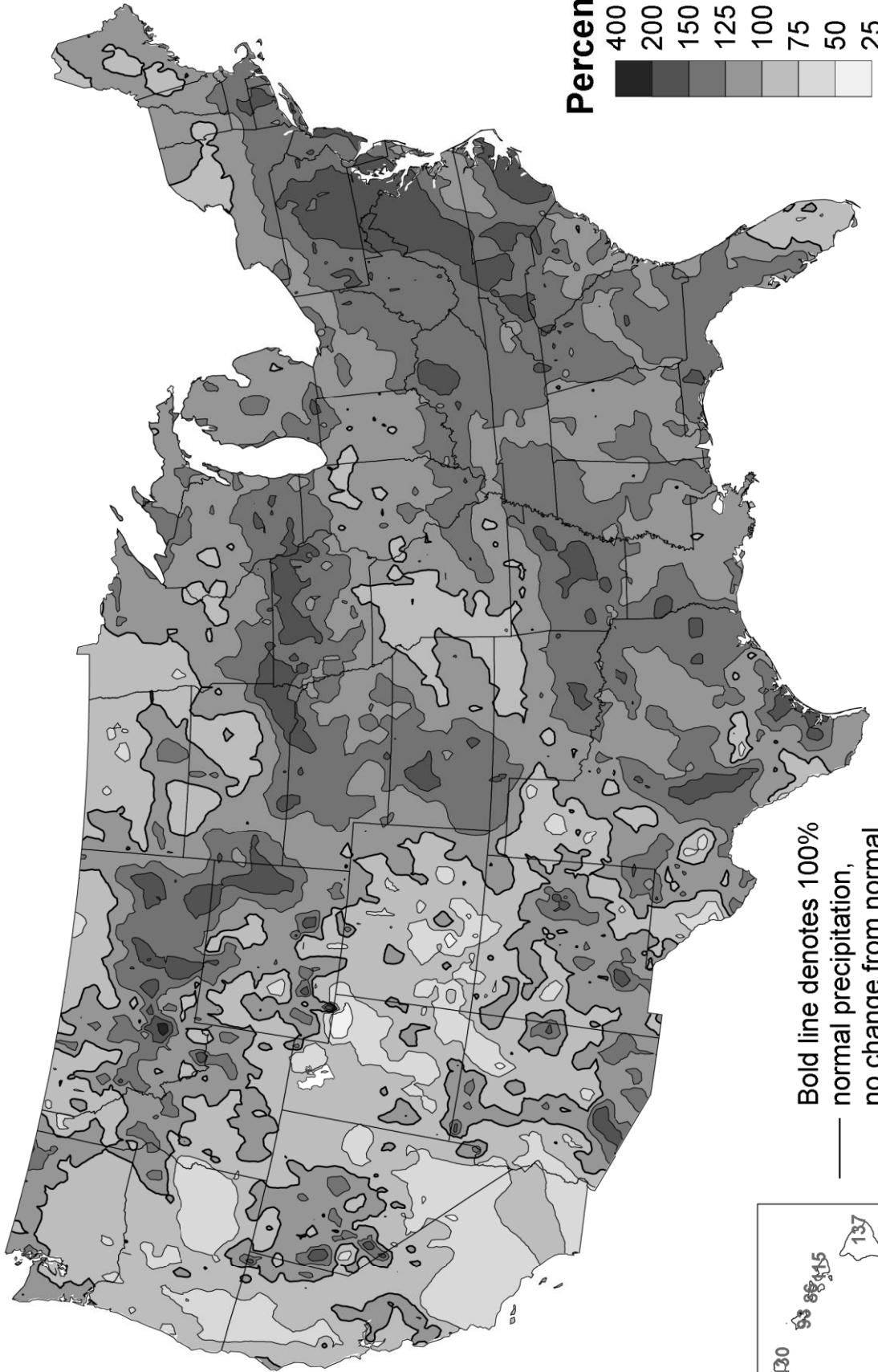
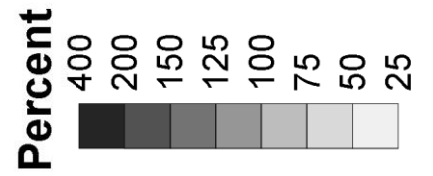
# Water Resources Regions Map of the United States

Note: Water resources regions outline the major drainage areas of the United States. These boundaries which often split county lines are defined by the U.S. Geological Survey.

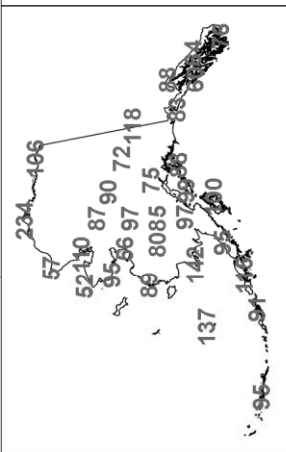


Percent of Normal Precipitation, January - December, 2018

Source: Climate Prediction Center, NOAA  
 Computer generated contours based on preliminary  
 gridded (CONUS) and station (Alaska and Hawaii) data.  
 Normals based on 1998-2017 gridded and 1971-2000  
 station data.

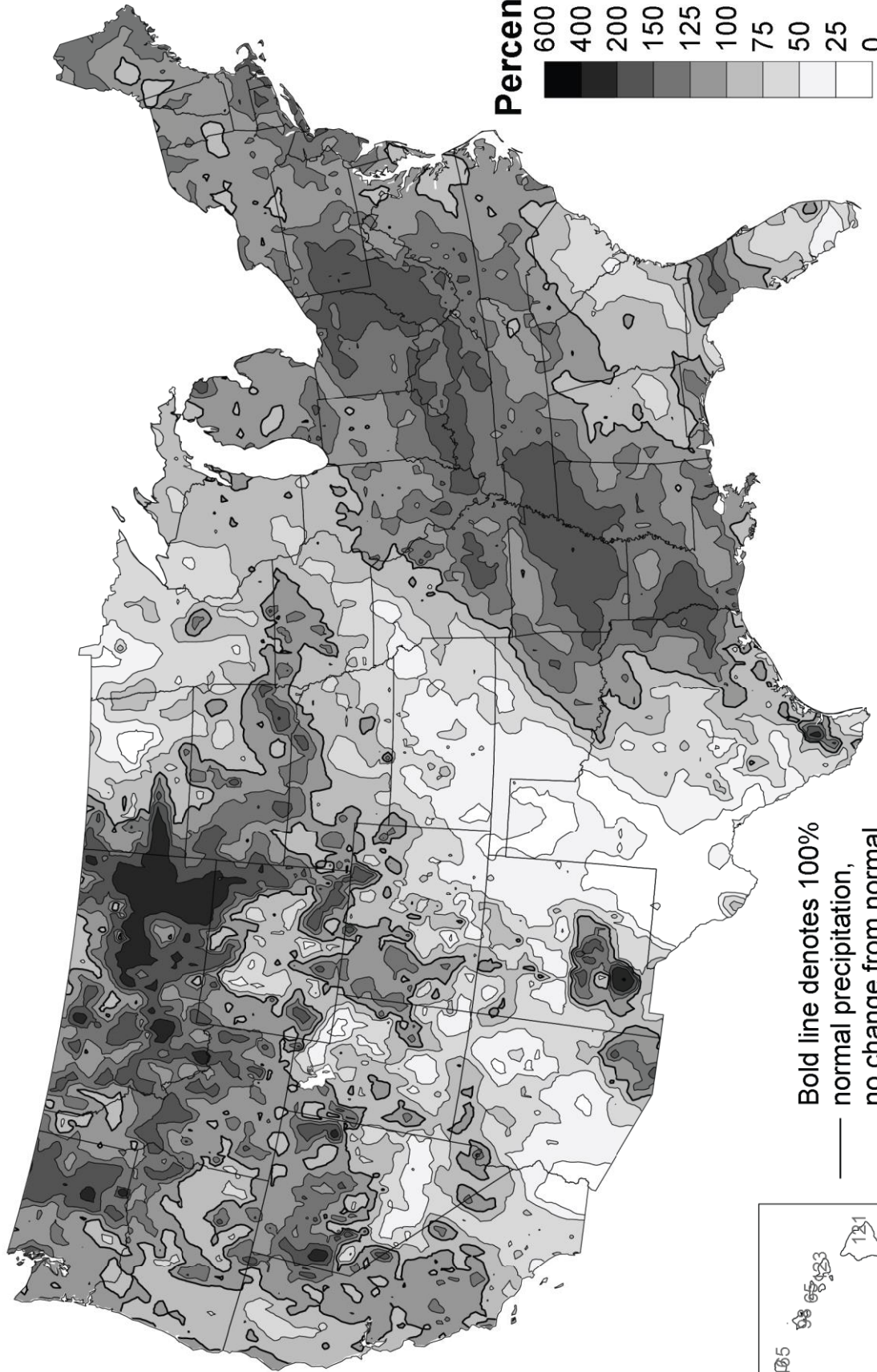
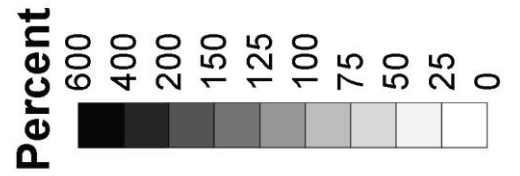


**Bold line denotes 100%**  
 normal precipitation,  
 — no change from normal

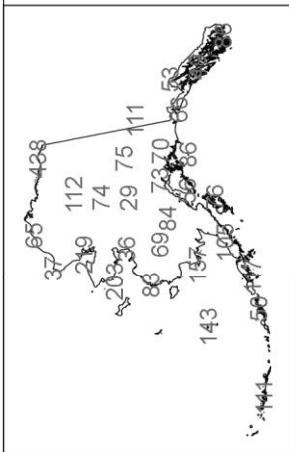


Percent of Normal Precipitation, January 1 - April 30, 2018

Source: Climate Prediction Center, NOAA  
 Computer generated contours based on preliminary  
 gridded (CONUS) and station (Alaska and Hawaii) data.  
 Normals based on 1998-2017 gridded and 1971-2000  
 station data.

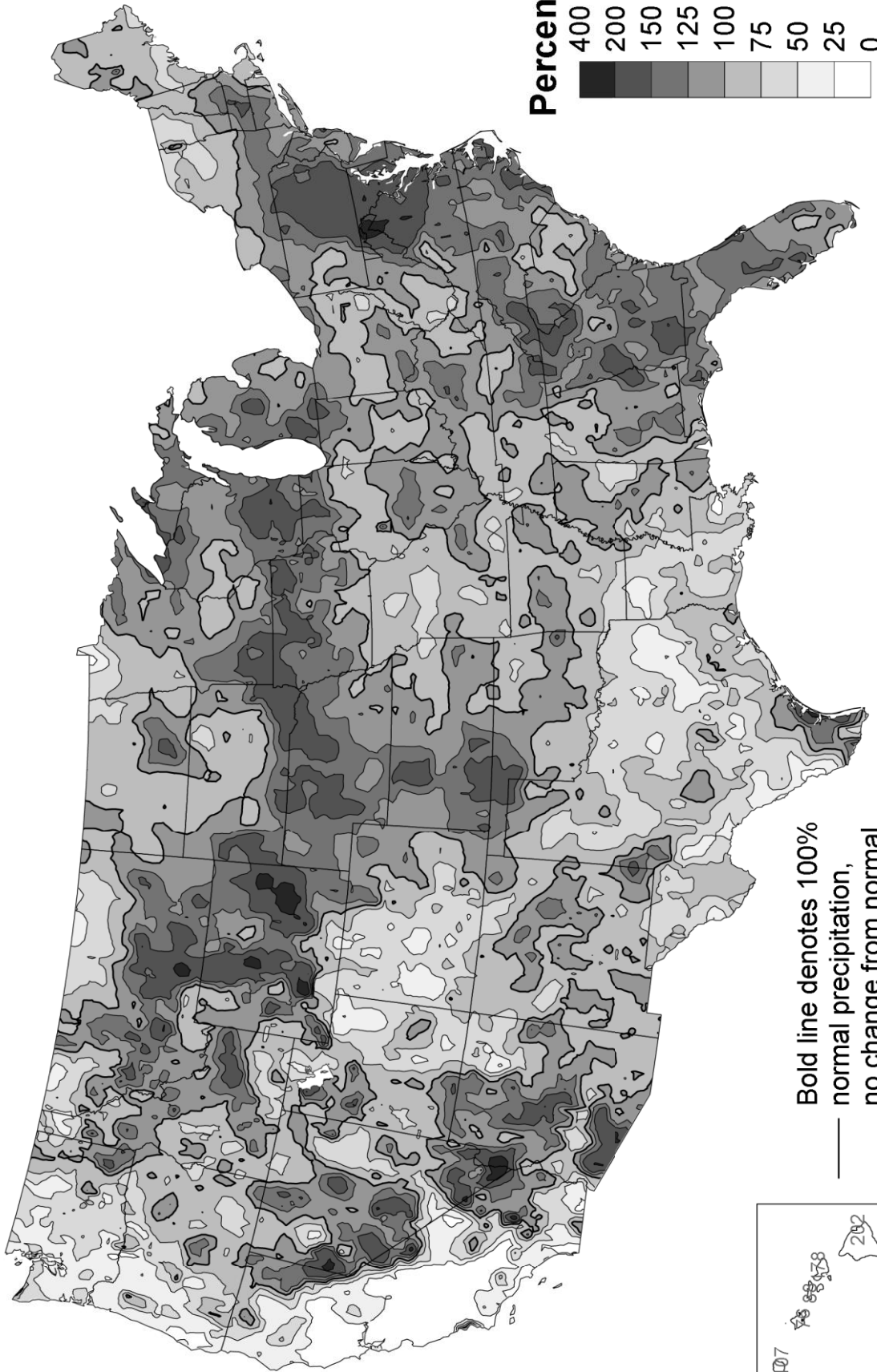
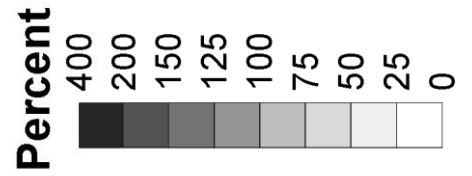


**Bold line denotes 100%**  
 — normal precipitation,  
 — no change from normal

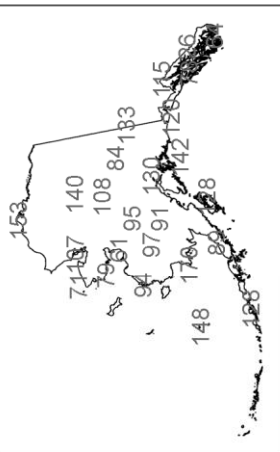


Percent of Normal Precipitation, May 1 - August 31, 2018

Source: Climate Prediction Center, NOAA  
 Computer generated contours based on preliminary  
 gridded (CONUS) and station (Alaska and Hawaii) data.  
 Normals based on 1998-2017 gridded and 1971-2000  
 station data.



**Bold line denotes 100%**  
 normal precipitation,  
 no change from normal





**Table 1. Irrigated Farms in the Censuses of Agriculture: 2017 and Earlier Censuses**

Geographic area	2017		2012		2007		2002	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States .....	294,235	58,013,907	296,303	55,822,231	301,028	56,599,305	299,583	55,311,236
Alabama .....	1,891	142,001	1,747	113,008	2,035	112,819	1,698	108,783
Alaska .....	377	2,400	230	2,451	184	3,730	150	2,742
Arizona .....	4,808	910,883	5,839	880,613	5,094	876,158	4,172	931,735
Arkansas .....	4,475	4,855,143	5,084	4,803,902	5,393	4,460,682	5,847	4,149,766
California .....	52,362	7,833,593	53,546	7,861,964	53,400	8,016,159	55,596	8,709,353
Colorado .....	17,162	2,761,173	15,547	2,516,785	15,774	2,867,957	13,623	2,590,654
Connecticut .....	998	7,376	1,011	9,272	789	9,901	801	10,139
Delaware .....	612	163,255	533	127,272	560	104,562	439	97,167
Florida .....	11,228	1,519,379	11,744	1,493,320	12,868	1,552,118	13,456	1,815,174
Georgia .....	6,191	1,287,541	5,230	1,125,355	5,716	1,017,773	5,369	870,810
Hawaii .....	2,250	45,452	2,498	81,813	2,810	58,635	2,231	69,194
Idaho .....	15,597	3,398,266	15,732	3,365,292	16,124	3,299,889	15,901	3,288,522
Illinois .....	2,541	612,459	2,644	522,479	2,388	474,454	2,031	390,843
Indiana .....	2,836	555,443	2,598	437,445	2,391	397,113	2,212	313,130
Iowa .....	1,707	221,986	1,525	171,656	1,287	189,518	976	142,109
Kansas .....	5,141	2,503,386	6,205	2,881,292	5,957	2,762,748	5,915	2,678,277
Kentucky .....	2,030	83,859	2,910	73,573	2,980	58,730	3,606	36,751
Louisiana .....	3,102	1,235,752	3,015	1,092,881	3,218	954,353	3,496	938,841
Maine .....	1,420	32,312	1,365	30,887	901	20,994	1,031	19,703
Maryland .....	1,318	124,831	1,220	104,910	1,326	92,805	1,265	80,828
Massachusetts .....	1,696	23,928	1,746	23,433	1,630	23,133	1,580	23,720
Michigan .....	5,153	670,212	5,025	592,243	5,078	500,428	4,413	456,278
Minnesota .....	3,220	611,621	2,853	524,016	2,918	506,357	2,433	454,850
Mississippi .....	2,561	1,814,548	2,454	1,651,978	2,284	1,368,661	2,235	1,175,530
Missouri .....	3,523	1,529,155	3,727	1,180,886	3,613	1,199,981	3,304	1,032,973
Montana .....	9,941	2,061,236	9,451	1,903,019	10,457	2,013,167	10,150	1,976,111
Nebraska .....	16,112	8,588,389	17,136	8,296,573	17,128	8,558,559	17,970	7,625,170
Nevada .....	2,217	790,425	2,512	687,790	2,054	691,030	1,981	746,653
New Hampshire .....	618	2,207	686	2,630	505	2,482	451	2,292
New Jersey .....	1,980	86,819	1,769	88,376	2,055	95,277	2,124	96,893
New Mexico .....	10,745	626,034	11,430	680,318	10,167	830,048	8,282	844,799
New York .....	3,285	53,257	3,404	59,807	3,036	68,010	3,307	74,663
North Carolina .....	3,708	143,444	4,699	174,526	5,788	232,075	6,721	264,057
North Dakota .....	764	263,885	744	218,407	795	236,138	659	202,817
Ohio .....	2,935	50,665	2,462	46,569	2,402	37,959	2,623	40,685
Oklahoma .....	2,668	573,776	2,500	479,750	3,026	534,768	2,942	517,553
Oregon .....	16,291	1,664,921	14,975	1,629,735	16,792	1,845,194	17,776	1,907,627
Pennsylvania .....	3,904	32,139	4,539	38,990	3,958	37,786	4,108	42,516
Rhode Island .....	234	2,956	325	3,954	313	4,306	264	3,963
South Carolina .....	2,167	210,437	1,973	159,239	2,030	132,439	1,918	95,642
South Dakota .....	1,798	492,452	1,656	378,678	1,627	373,842	1,755	401,083
Tennessee .....	2,011	184,899	2,146	146,442	2,453	81,405	2,592	61,217
Texas .....	17,932	4,363,345	18,169	4,489,163	19,713	5,010,416	21,164	5,074,638
Utah .....	13,159	1,097,219	12,296	1,104,257	12,492	1,134,144	11,587	1,091,011
Vermont .....	672	3,017	766	3,565	523	2,295	508	2,335
Virginia .....	2,053	63,433	2,456	68,651	2,347	82,187	3,331	98,913
Washington .....	14,887	1,689,377	14,736	1,633,571	15,492	1,735,917	15,534	1,823,155
West Virginia .....	581	1,660	466	2,064	457	2,189	408	1,981
Wisconsin .....	3,284	454,362	3,240	421,721	2,907	377,291	2,457	385,902
Wyoming .....	6,090	1,567,599	5,739	1,435,710	5,793	1,550,723	5,191	1,541,688

**Table 2. Irrigated Farms by Acres Irrigated: 2018 and 2013**

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

Geographic area	Total			1 to 49 acres			50 to 99 acres			100 to 199 acres		
	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated
United States .....2018	231,474	222,028,954	55,938,795	136,429	17,594,549	1,535,201	19,825	12,949,629	1,383,478	22,259	28,476,787	3,026,351
.....2013	229,237	213,993,983	55,319,417	135,931	24,955,392	1,441,866	19,400	11,084,598	1,365,432	19,298	23,809,212	2,660,802
<b>2018 DATA</b>												
Alabama .....	1,069	755,249	163,338	666	83,446	4,778	117	49,232	7,538	60	57,190	8,080
Alaska .....	308	9,374	1,721	301	7,137	589	3	577	241	2	(D)	(D)
Arizona .....	3,054	2,728,642	945,570	2,030	998,023	26,873	254	226,823	17,112	132	79,506	17,828
Arkansas .....	3,173	5,142,393	4,246,491	588	58,065	8,565	178	38,024	12,918	185	91,526	25,398
California .....	42,093	16,682,862	8,408,282	27,459	1,346,704	332,317	3,979	751,284	273,467	3,505	1,122,250	485,176
Colorado .....	14,529	15,008,030	2,458,742	8,920	910,371	132,935	1,505	1,744,314	107,779	1,403	1,449,799	187,665
Connecticut .....	669	71,297	6,104	633	58,587	2,398	27	7,973	1,653	6	3,107	719
Delaware .....	521	412,855	201,305	119	12,329	1,392	44	5,940	2,464	73	44,750	11,460
Florida .....	7,615	4,207,457	1,331,739	5,631	203,362	53,194	616	390,846	43,264	684	313,281	92,366
Georgia .....	3,861	2,894,113	1,163,038	2,045	358,178	29,201	234	62,884	16,220	394	209,233	50,059
Hawaii .....	1,863	859,752	26,700	1,827	443,894	8,026	5	892	(D)	-	-	-
Idaho .....	14,867	7,331,473	3,393,063	8,511	846,896	111,365	1,848	299,338	131,267	1,358	903,495	192,592
Illinois .....	1,807	2,181,475	566,024	644	54,369	3,975	2,891	124,690	13,244	198	153,392	28,791
Indiana .....	2,039	2,242,201	582,661	686	24,455	3,258	153	134,895	11,157	465	522,992	59,772
Iowa .....	1,061	757,055	166,193	560	54,297	3,262	89	109,655	6,393	178	126,653	24,680
Kansas .....	4,249	12,476,720	2,386,816	524	168,126	7,493	432	905,361	29,376	889	2,064,377	116,964
Kentucky .....	1,188	332,495	58,234	1,119	120,140	6,747	12	2,100	720	8	(D)	(D)
Louisiana .....	1,862	1,918,931	1,072,033	626	77,420	7,229	90	11,541	6,279	173	102,930	23,660
Maine .....	990	232,175	35,695	895	53,640	2,814	60	15,976	4,002	6	(D)	(D)
Maryland .....	959	317,376	125,024	618	36,941	5,235	101	34,552	7,118	65	21,285	8,198
Massachusetts .....	1,335	105,147	19,311	1,277	71,583	9,664	32	5,210	2,320	15	(D)	(D)
Michigan .....	3,886	2,232,115	827,010	2,280	234,042	18,489	282	103,239	20,070	356	326,137	50,076
Minnesota .....	2,367	1,836,298	554,605	794	155,077	7,923	249	103,098	17,753	617	391,822	79,843
Mississippi .....	1,621	2,484,250	1,667,023	482	46,276	3,940	65	28,038	4,870	150	108,448	19,496
Missouri .....	2,705	2,818,743	1,429,074	1,278	117,888	7,748	152	70,717	10,865	192	169,168	25,446
Montana .....	8,887	25,620,445	10,210,162	4,201	456,090	68,242	1,174	1,154,316	83,039	1,112	2,923,411	151,818
Nebraska .....	13,013	23,550,244	7,666,152	1,115	274,784	21,021	1,228	580,457	87,935	2,230	3,421,731	307,249
Nevada .....	1,857	4,437,112	693,520	785	50,777	12,152	212	33,190	16,700	170	82,874	24,926
New Hampshire .....	731	63,546	3,218	727	62,116	2,560	2	(D)	(D)	1	(D)	(D)
New Jersey .....	1,585	250,582	89,941	1,170	50,478	8,318	213	48,364	13,615	87	27,825	11,686
New Mexico .....	10,093	5,672,426	675,330	8,481	2,422,271	81,083	540	77,984	37,500	508	768,073	70,771
New York .....	2,148	344,024	47,974	1,967	171,578	11,609	40	(D)	(D)	90	43,788	11,520
North Carolina .....	2,451	1,198,677	132,870	2,001	318,761	15,956	240	104,075	16,250	69	30,288	7,549
North Dakota .....	720	2,404,884	297,001	106	362,600	1,369	62	488,219	4,371	211	578,791	31,221
Ohio .....	1,601	298,020	39,258	1,424	73,369	6,622	93	102,376	(D)	43	38,070	5,643
Oklahoma .....	1,835	3,471,123	601,492	811	213,721	6,286	128	144,700	9,660	269	456,439	34,214
Oregon .....	13,794	10,520,208	1,579,108	9,899	754,092	117,076	1,000	1,403,845	70,780	1,292	1,534,575	170,174
Pennsylvania .....	2,766	264,235	40,596	2,689	182,589	15,338	19	14,279	(D)	36	37,030	4,226
Rhode Island .....	227	11,444	3,231	214	6,110	798	-	-	(D)	10	4,059	1,420
South Carolina .....	1,489	985,917	252,720	1,053	140,798	11,033	84	30,062	5,750	87	105,732	12,999
South Dakota .....	1,219	4,546,759	378,413	202	16,528	2,853	136	999,122	8,751	247	345,273	34,905
Tennessee .....	1,452	1,400,647	190,746	1,001	65,753	3,320	80	162,916	6,208	93	125,695	13,689
Texas .....	11,997	20,053,541	4,085,754	6,177	1,753,911	71,691	750	751,902	51,805	1,077	4,312,027	142,699
Utah .....	12,575	6,480,550	1,181,700	8,606	1,600,935	127,636	1,333	498,181	89,123	1,238	866,753	169,497
Vermont .....	573	65,691	3,022	566	63,987	2,482	5	(D)	(D)	2	(D)	(D)
Virginia .....	1,377	389,164	48,248	1,184	166,652	6,234	50	13,778	2,572	110	123,095	14,194
Washington .....	11,259	7,444,705	1,866,110	7,701	1,304,915	88,679	878	385,060	59,872	793	1,038,235	113,900
West Virginia .....	482	75,438	6,525	471	62,413	755	6	(D)	375	-	-	-
Wisconsin .....	2,127	1,446,654	518,312	1,185	111,653	5,641	176	209,009	13,306	293	211,014	44,882
Wyoming .....	5,525	14,994,440	1,561,596	2,180	366,422	46,473	652	505,888	46,238	1,077	3,126,207	134,085
<b>Water Resources Regions</b>												
Region 01 New England .....	4,164	524,450	69,036	3,957	292,430	19,656	122	29,983	8,185	38	17,891	5,498
Region 02 Mid-Atlantic .....	7,317	1,601,902	524,394	5,837	399,241	37,569	406	103,767	26,097	418	261,305	55,618
Region 03 South Atlantic-Gulf .....	16,770	10,017,021	3,042,488	11,618	1,162,349	115,855	1,339	654,791	91,902	1,333	715,912	175,841
Region 04 Great Lakes .....	7,093	3,278,600	1,129,500	4,794	479,705	31,917	379	201,763	26,644	581	440,833	79,598
Region 05 Ohio .....	4,904	2,544,562	444,046	3,825	283,921	16,572	234	184,294	16,859	292	486,041	36,306
Region 06 Tennessee .....	1,250	410,535	71,536	1,117	92,237	4,786	14	4,725	(D)	29	(D)	(D)
Region 07 Upper Mississippi .....	6,691	5,480,324	1,627,970	2,779	278,641	16,837	681	524,634	48,571	1,243	852,128	172,514
Region 08 Lower Mississippi .....	6,595	11,235,684	7,625,812	1,137	111,536	15,801	345	212,803	25,662	471	308,169	64,202
Region 09 Souris-Red-Rainy .....	587	1,130,845	207,655	209	23,042	2,425	76	64,361	5,324	73	145,995	8,599
Region 10 Missouri .....	32,856	80,020,280	13,107,678	8,792	1,841,839	147,033	3,587	4,516,176	253,230	5,601	12,609,847	756,343
Region 11 Arkansas-White-Red .....	9,554	22,713,444	4,877,419	3,302	972,143	39,440	696	815,911	51,789	1,389	4,420,272	188,487
Region 12 Texas-Gulf .....	9,986	11,669,233	2,695,393	5,508	1,581,069	63,333	711	684,646	49,965	754	731,543	101,056
Region 13 Rio Grande .....	8,740	4,629,864	709,642	7,264	2,068,390	66,517	487	61,422	31,368	430	629,922	54,070
Region 14 Upper Colorado .....	13,188	8,285,836	1,472,632	9,006	429,327	132,808	1,345	1,242,657	95,894	1,267	801,489	175,069
Region 15 Lower Colorado .....	3,838	3,723,087	1,035,373	2,641	1,268,153	34,500	326	239,633	22,287	207	681,906	27,533
Region 16 Great Basin .....	11,322	9,724,114	1,763,616	7,216	1,551,853	107,647	1,064	502,441	72,577	996	660,514	135,181
Region 17 Pacific Northwest .....	41,905	27,055,051	7,014,019	27,677	2,954,629	340,176	3,955	2,145,049	278,444	3,534	3,525,550	489,088
Region 18 California .....	42,543	17,114,996	8,492,165	27,622	1,353,013	333,714	4,050	759,104	277,257	3,601	1,138,498	498,136
Region 19 Alaska .....	308	9,374	1,721	301	7,137	589	3	577	241	2	(D)	(D)
Region 20 Hawaii .....	1,863	859,752	26,700	1,827	443,894	8,026	5	892	(D)	-	-	-

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**Table 2. Irrigated Farms by Acres Irrigated: 2018 and 2013 (continued)**

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

Geographic area	200 to 499 acres			500 to 999 acres			1,000 to 1,999 acres			2,000 acres or more		
	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated
United States .....2018	24,749	52,671,371	7,669,292	13,790	34,638,796	9,503,359	9,170	33,445,785	12,245,392	5,252	42,252,037	20,575,722
.....2013	25,956	48,672,931	8,391,260	14,723	34,157,306	10,252,156	8,928	28,555,362	12,133,801	5,001	42,759,182	19,074,100
<b>2018 DATA</b>												
Alabama .....	157	332,276	47,515	25	47,986	18,506	23	78,399	28,419	21	106,720	48,502
Alaska .....	2	(D)	(D)	-	-	-	-	-	-	-	-	-
Arizona .....	202	483,871	56,300	173	145,890	128,826	164	246,016	216,098	99	548,513	482,533
Arkansas .....	364	229,971	119,515	417	385,149	293,415	693	1,214,190	970,140	748	3,125,468	2,816,540
California .....	3,745	4,042,432	1,182,497	1,563	1,625,835	1,049,310	1,049	2,304,965	1,434,269	793	5,489,392	3,651,246
Colorado .....	1,435	4,166,470	431,062	676	1,554,408	475,319	437	2,943,484	571,674	153	2,239,184	552,308
Connecticut .....	2	(D)	(D)	1	(D)	(D)	-	-	-	-	-	-
Delaware .....	190	151,586	64,791	49	66,525	33,363	27	65,560	36,746	19	66,165	51,089
Florida .....	386	1,436,391	112,315	97	98,911	72,487	98	336,881	141,062	103	1,427,785	817,051
Georgia .....	504	556,987	161,085	457	738,816	332,905	115	330,014	163,404	112	638,001	410,164
Hawaii .....	24	340,130	7,050	1	(D)	(D)	4	19,536	(D)	2	(D)	(D)
Idaho .....	1,602	1,548,859	457,407	804	1,063,530	526,845	432	871,897	563,107	312	1,797,458	1,410,480
Illinois .....	488	922,848	147,938	140	327,403	105,709	103	345,607	132,265	37	253,166	134,102
Indiana .....	395	581,343	128,467	192	510,176	128,716	91	235,256	105,734	57	233,084	145,357
Iowa .....	141	217,244	42,059	69	156,637	47,623	19	61,273	22,611	5	31,296	19,001
Kansas .....	1,058	3,511,053	321,287	653	1,855,343	450,586	442	1,672,478	574,389	251	2,299,982	886,721
Kentucky .....	1	(D)	(D)	35	114,789	21,135	8	35,690	10,948	5	54,213	17,608
Louisiana .....	292	185,302	90,700	345	496,157	248,316	212	530,687	291,813	124	514,894	404,036
Maine .....	17	36,393	4,429	4	(D)	(D)	5	16,575	6,429	3	(D)	(D)
Maryland .....	86	56,960	30,623	72	124,274	48,885	12	27,643	13,520	5	15,721	11,445
Massachusetts .....	10	7,518	2,975	-	-	-	-	-	-	1	(D)	(D)
Michigan .....	505	486,423	166,979	304	556,822	194,427	97	213,792	128,273	62	311,660	248,696
Minnesota .....	476	545,764	146,230	121	208,049	84,207	81	210,104	112,584	29	222,384	106,065
Mississippi .....	214	223,634	68,928	198	231,934	137,107	236	515,788	328,382	276	1,330,132	1,104,300
Missouri .....	350	612,173	113,172	207	340,406	139,601	307	621,235	401,459	219	887,156	730,783
Montana .....	1,145	6,822,371	367,061	723	5,659,311	487,661	407	5,203,790	524,813	125	3,401,156	457,528
Nebraska .....	3,395	5,665,839	1,087,406	2,551	5,540,316	1,807,059	1,916	4,493,456	2,586,417	578	3,573,661	1,769,065
Nevada .....	291	302,888	88,216	260	1,119,152	170,268	71	317,087	91,184	68	2,531,144	290,074
New Hampshire .....	1	(D)	(D)	-	-	-	-	-	-	-	-	-
New Jersey .....	76	61,735	24,552	29	31,312	19,310	10	30,868	12,460	-	-	-
New Mexico .....	229	563,943	64,577	205	632,142	127,123	83	232,717	101,133	47	975,296	193,143
New York .....	39	52,477	13,090	10	46,877	6,520	2	(D)	(D)	-	-	-
North Carolina .....	73	350,414	20,680	14	14,789	10,340	51	367,350	55,050	3	13,000	7,045
North Dakota .....	143	374,200	49,605	128	292,035	89,435	54	168,385	63,130	16	140,654	57,870
Ohio .....	23	52,839	7,378	17	(D)	10,628	-	-	-	1	(D)	(D)
Oklahoma .....	314	1,148,996	82,762	167	563,376	110,751	64	239,349	90,478	82	704,542	267,341
Oregon .....	977	3,077,445	308,348	313	1,398,103	220,365	198	748,178	262,542	115	1,603,970	429,823
Pennsylvania .....	16	8,337	4,236	1	(D)	(D)	-	-	-	5	(D)	15,000
Rhode Island .....	2	(D)	(D)	1	(D)	(D)	-	-	-	-	-	-
South Carolina .....	65	60,459	19,165	162	506,925	115,150	27	74,253	38,231	11	67,688	50,392
South Dakota .....	490	2,304,851	144,100	75	134,609	57,522	44	275,999	49,285	25	470,377	80,997
Tennessee .....	176	474,498	45,130	43	188,298	29,987	48	322,913	64,166	11	60,574	28,246
Texas .....	1,693	4,221,622	537,365	1,143	3,043,154	771,122	743	2,968,871	1,013,234	414	3,002,054	1,497,838
Utah .....	824	721,364	258,614	357	1,038,511	226,254	187	1,371,362	218,006	30	383,444	92,570
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	14	29,782	5,665	9	(D)	(D)	9	28,909	11,593	1	(D)	(D)
Washington .....	1,095	2,830,650	330,500	417	641,985	300,148	264	453,686	358,537	111	790,174	614,474
West Virginia .....	-	-	-	-	-	-	5	(D)	5,395	-	-	-
Wisconsin .....	229	283,449	67,063	130	233,390	90,227	63	148,533	88,219	51	249,606	209,774
Wyoming .....	793	2,581,254	238,044	432	2,777,087	305,263	269	3,073,954	350,061	122	2,563,628	440,632
<b>Water Resources Regions</b>												
Region 01 New England .....	32	46,106	8,848	6	22,360	3,948	5	16,575	6,429	4	99,105	16,472
Region 02 Mid-Atlantic .....	400	317,693	135,718	163	253,670	109,844	63	164,740	79,714	30	101,486	79,834
Region 03 South Atlantic-Gulf .....	1,163	2,640,235	352,654	751	1,381,257	545,048	320	1,233,527	435,166	246	2,228,950	1,326,022
Region 04 Great Lakes .....	696	622,799	225,706	427	796,270	278,315	129	319,959	171,917	87	417,271	315,403
Region 05 Ohio .....	286	620,996	94,147	164	484,286	107,477	79	303,207	89,256	24	181,817	83,429
Region 06 Tennessee .....	54	(D)	(D)	16	(D)	(D)	13	54,722	(D)	7	(D)	(D)
Region 07 Upper Mississippi .....	1,279	1,867,861	385,673	346	708,804	246,162	239	592,279	323,752	124	655,977	434,461
Region 08 Lower Mississippi .....	1,058	1,141,090	335,048	1,030	1,360,049	722,732	1,324	2,735,766	1,829,278	1,230	5,366,271	4,633,089
Region 09 Souris-Red-Rainy .....	100	389,598	38,041	79	264,097	56,779	35	99,070	38,640	15	144,682	57,847
Region 10 Missouri .....	6,912	21,115,398	2,163,417	4,166	15,115,678	2,912,815	2,862	13,860,366	3,816,411	936	10,960,976	3,058,429
Region 11 Arkansas-White-Red .....	1,641	5,205,210	506,489	1,085	2,918,069	753,483	808	2,924,280	1,062,769	633	5,457,559	2,274,962
Region 12 Texas-Gulf .....	1,352	3,182,150	420,967	918	2,166,069	613,303	519	1,930,679	708,667	224	1,393,077	738,102
Region 13 Rio Grande .....	184	361,623	52,557	201	788,969	131,753	94	216,802	123,145	80	502,736	250,232
Region 14 Upper Colorado .....	910	1,744,069	264,448	351	604,546	236,639	249	2,106,204	321,338	60	1,357,544	246,436
Region 15 Lower Colorado .....	202	483,871	56,300	180	154,290	133,726	167	252,475	221,732	115	642,759	539,295
Region 16 Great Basin .....	1,060	931,104	324,854	595	2,111,731	384,704	297	1,821,201	362,899	94	2,145,270	375,754
Region 17 Pacific Northwest .....	3,578	7,230,158	1,074,103	1,742	3,786,466	1,201,904	880	2,357,637	1,158,525	539	5,055,562	2,471,779
Region 18 California .....	3,816	4,300,496	1,206,315	1,569	1,637,364	1,052,327	1,083	2,436,760	1,474,492	802	5,489,761	3,649,924
Region 19 Alaska .....	2	(D)	(D)	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	24	340,130	7,050	1	(D)	(D)	4	19,536	(D)	2	(D)	(D)



**Table 3. Land Use on Farms with Irrigation: 2018 and 2013**

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

Geographic area	Land in farms			Total cropland			Cropland harvested in the open (see text)			Nursery, greenhouse, and other horticulture under protection <sup>1</sup> (see text)		
	Farms	Acres	Acres irrigated	Farms	Acres	Acres irrigated	Farms	Acres	Acres irrigated	Farms	Acres	Acres irrigated
United States ..... 2018	231,474	222,028,954	55,938,795	210,508	100,895,082	52,518,832	199,694	88,362,432	51,500,526	24,876	52,325	52,325
..... 2013	229,237	213,993,983	55,319,417	213,621	96,014,108	52,602,871	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
<b>2018 DATA</b>												
Alabama .....	1,069	755,249	163,338	1,065	521,146	163,330	965	514,115	162,484	313	726	726
Alaska .....	308	9,374	1,721	308	4,231	1,721	174	2,167	1,499	208	(D)	(D)
Arizona .....	3,054	2,728,642	945,570	2,294	1,026,296	922,333	2,162	934,151	914,102	127	334	334
Arkansas .....	3,173	5,142,393	4,246,491	3,150	4,873,446	4,236,040	3,073	4,759,799	4,232,437	157	196	196
California .....	42,093	16,682,862	8,408,282	39,224	8,873,271	7,738,818	38,105	7,810,594	7,499,738	1,697	8,401	8,401
Colorado .....	14,529	15,008,030	2,458,742	12,981	3,993,216	2,123,151	12,570	3,242,302	2,032,664	380	622	622
Connecticut .....	669	71,297	6,104	669	30,574	6,044	628	23,487	4,876	455	1,168	1,168
Delaware .....	521	412,855	201,305	499	364,882	201,195	489	360,481	198,599	44	81	81
Florida .....	7,615	4,207,457	1,331,739	7,280	1,733,218	1,301,936	6,554	1,547,466	1,277,872	1,346	7,268	7,268
Georgia .....	3,861	2,894,113	1,163,038	3,838	1,888,180	1,159,604	3,662	1,762,175	1,118,493	334	658	658
Hawaii .....	1,863	859,752	26,700	1,821	284,856	(D)	1,558	26,828	20,766	569	(D)	(D)
Idaho .....	14,867	7,331,473	3,393,063	11,128	3,829,722	3,004,499	10,473	3,446,685	2,959,294	336	389	389
Illinois .....	1,807	2,181,475	566,024	1,807	2,077,620	565,939	1,738	2,019,197	560,505	434	1,449	1,449
Indiana .....	2,039	2,242,201	582,661	2,039	2,084,064	582,553	1,990	2,067,522	581,635	435	559	559
Iowa .....	1,061	757,055	166,193	1,061	681,407	166,193	954	664,239	165,597	379	572	572
Kansas .....	4,249	12,476,720	2,386,616	4,235	9,405,628	2,379,886	4,162	8,243,729	2,355,537	210	333	333
Kentucky .....	1,188	332,495	58,234	1,188	267,241	58,182	1,097	250,337	57,454	686	728	728
Louisiana .....	1,862	1,918,931	1,072,033	1,862	1,698,310	1,067,893	1,750	1,502,965	1,049,262	274	469	469
Maine .....	990	232,175	35,695	990	104,680	35,695	833	82,017	30,275	558	(D)	(D)
Maryland .....	959	317,376	125,024	959	276,963	125,016	891	270,555	124,470	383	538	538
Massachusetts .....	1,335	105,147	19,311	1,335	45,059	18,975	1,129	40,379	18,386	434	477	477
Michigan .....	3,886	2,232,115	827,010	3,886	1,983,416	821,710	3,521	1,952,409	818,068	1,205	2,792	2,792
Minnesota .....	2,367	1,836,298	554,605	2,367	1,658,622	554,605	2,252	1,628,243	553,784	420	747	747
Mississippi .....	1,621	2,484,250	1,621,023	1,621	2,291,463	1,666,640	1,527	2,230,416	1,665,864	203	(D)	(D)
Missouri .....	2,705	2,818,743	1,429,074	2,658	2,483,342	1,425,618	2,488	2,418,280	1,411,995	639	764	764
Montana .....	8,887	25,620,445	2,140,162	7,551	3,949,554	1,671,780	7,339	3,158,102	1,634,567	265	284	284
Nebraska .....	13,013	23,550,244	7,666,152	12,887	12,286,735	7,614,245	12,757	11,800,954	7,558,644	236	272	272
Nevada .....	1,857	4,437,112	693,520	1,474	614,426	568,444	1,412	555,094	549,983	54	54	54
New Hampshire .....	731	63,546	3,218	731	13,244	3,218	652	10,119	2,499	431	(D)	(D)
New Jersey .....	1,585	250,582	89,941	1,585	190,817	89,941	1,498	175,634	88,084	574	1,337	1,337
New Mexico .....	10,093	5,672,426	675,330	8,431	1,338,577	595,444	8,172	786,881	563,957	179	238	238
New York .....	2,148	344,024	47,974	2,125	242,149	47,951	1,972	203,904	45,042	1,244	212	2,127
North Carolina .....	2,451	1,198,677	132,870	2,396	1,023,622	128,154	2,175	929,990	125,835	807	1,239	1,239
North Dakota .....	720	2,404,884	297,001	720	1,532,900	297,001	704	1,413,540	296,834	37	(D)	(D)
Ohio .....	1,601	298,020	39,258	1,601	245,983	(D)	1,259	232,478	37,652	905	1,518	1,518
Oklahoma .....	1,835	3,471,123	601,492	1,745	1,557,227	539,447	1,643	1,255,312	534,087	234	(D)	(D)
Oregon .....	13,794	10,520,208	1,679,108	11,353	2,141,967	1,261,030	10,756	1,677,116	1,232,266	1,020	2,100	2,100
Pennsylvania .....	2,766	264,235	40,596	2,766	183,799	40,354	2,196	169,230	37,270	1,568	2,747	2,747
Rhode Island .....	227	11,444	3,231	227	6,878	(D)	199	4,364	3,019	134	(D)	(D)
South Carolina .....	1,489	985,917	252,720	1,464	760,326	248,576	1,415	708,242	247,065	241	311	311
South Dakota .....	1,219	4,546,759	378,413	1,219	2,264,894	377,929	1,200	2,203,401	366,947	73	104	104
Tennessee .....	1,452	1,400,647	190,746	1,452	1,219,551	190,746	1,309	1,205,970	190,003	617	743	743
Texas .....	11,997	20,053,541	4,085,754	11,008	9,733,638	3,965,188	10,529	6,878,824	3,842,020	686	2,303	2,303
Utah .....	12,575	6,480,550	1,181,700	10,492	1,376,528	952,689	9,997	1,043,666	919,073	226	399	399
Vermont .....	573	65,691	3,022	573	16,816	(D)	474	13,070	2,514	389	409	409
Virginia .....	1,377	389,164	48,248	1,377	289,032	48,248	1,236	270,442	47,136	696	1,112	1,112
Washington .....	11,259	7,444,705	1,866,110	9,619	4,241,951	1,749,328	9,080	3,135,683	1,734,063	856	1,350	1,350
West Virginia .....	482	75,438	6,525	482	26,745	6,525	434	22,786	6,188	306	337	337
Wisconsin .....	2,127	1,446,654	518,312	2,127	1,088,716	518,312	1,917	1,037,252	514,988	783	918	918
Wyoming .....	5,525	14,994,440	1,561,596	4,838	2,068,154	1,208,425	4,624	1,669,840	1,105,134	89	90	90
<b>Water Resources Regions</b>												
Region 01 New England .....	4,164	524,450	69,036	4,164	211,193	68,630	3,653	169,167	60,426	2,110	2,974	2,974
Region 02 Mid-Atlantic .....	7,317	1,601,902	524,394	7,272	1,278,930	524,011	6,516	1,222,629	513,970	3,378	6,392	6,392
Region 03 South Atlantic-Gulf .....	16,770	10,017,021	3,042,488	16,328	5,813,891	3,000,126	15,035	5,340,209	2,930,074	3,119	10,261	10,261
Region 04 Great Lakes .....	7,093	3,278,600	1,129,500	7,093	2,860,312	1,124,144	6,409	2,784,778	1,117,170	2,801	5,259	5,259
Region 05 Ohio .....	4,904	2,544,562	444,046	4,904	2,209,810	443,992	4,237	2,152,167	438,134	2,423	2,966	2,966
Region 06 Tennessee .....	1,250	410,535	71,536	1,250	335,532	(D)	1,081	325,191	70,601	635	(D)	(D)
Region 07 Upper Mississippi .....	6,691	5,480,324	1,627,970	6,683	4,897,418	1,627,457	6,251	4,766,314	1,620,520	1,773	3,201	3,201
Region 08 Lower Mississippi .....	6,595	11,235,684	7,625,812	6,586	10,645,068	7,621,230	6,423	10,332,837	7,602,935	471	(D)	(D)
Region 09 Souris-Red-Rainy .....	587	1,130,845	207,655	587	860,557	207,218	572	769,139	207,158	47	60	60
Region 10 Missouri .....	32,856	80,020,280	13,107,678	31,051	27,758,125	12,423,653	30,286	25,309,806	12,253,285	1,220	1,769	1,769
Region 11 Arkansas-White-Red .....	9,554	22,713,444	4,877,419	9,148	12,223,142	4,744,085	8,807	10,089,719	4,645,871	594	691	691
Region 12 Texas-Gulf .....	9,986	11,669,233	2,695,399	9,046	6,594,588	2,590,402	8,598	4,594,502	2,505,189	649	2,148	2,148
Region 13 Rio Grande .....	8,740	4,629,864	709,642	7,461	1,146,179	605,065	7,241	596,442	586,270	199	412	412
Region 14 Upper Colorado .....	13,188	8,285,836	1,472,632	11,054	1,388,323	1,040,714	10,841	999,772	905,649	273	312	312
Region 15 Lower Colorado .....	3,838	3,723,087	1,035,373	2,963	1,160,997	1,003,320	2,726	1,016,474	994,863	140	350	350
Region 16 Great Basin .....	11,322	9,724,114	1,763,616	9,571	1,965,363	1,492,630	9,126	1,649,796	1,459,177	186	345	345
Region 17 Pacific Northwest .....	41,905	27,055,051	7,014,019	33,755	10,371,744	6,168,863	31,901	8,407,572	6,073,951	2,370	3,967	3,967
Region 18 California .....	42,543	17,114,996	8,492,165	39,463	8,884,823	7,737,312	38,259	7,806,923	7,493,018	1,711	8,447	8,447
Region 19 Alaska .....	308	9,374	1,721	308	4,231	1,721	174	2,167	1,499	208	(D)	(D)
Region 20 Hawaii .....	1,863	859,752	26,700	1,821	284,856	(D)	1,558	26,828	20,766	569	(D)	(D)

See footnote(s) at end of table.

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**Table 3. Land Use on Farms with Irrigation: 2018 and 2013 (continued)**

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

Geographic area	Other pasture and grazing land that could have been used for crops without additional improvements			Cropland not harvested or grazed			Woodland pastured		Permanent pasture and rangeland			All other land		
	Farms	Acres	Acres irrigated	Farms	Acres	Acres irrigated	Farms	Acres	Farms	Acres	Acres irrigated	Farms	Acres	
United States	2018 2013	15,327 12,468	3,073,084 3,466,637	473,703 301,201	41,597 53,567	9,407,241 13,847,666	492,278 394,248	20,107 17,369	5,257,540 4,798,521	97,532 87,800	105,474,363 103,798,714	3,419,963 2,716,546	124,446 122,466	10,401,969 9,382,640
<b>2018 DATA</b>														
Alabama		28	1,667	120	194	4,638	-	212	24,342	308	35,850	8	741	173,911
Alaska		11	(D)	-	48	1,755	(D)	45	270	50	500	-	198	4,373
Arizona		231	28,275	4,661	469	63,536	3,236	82	976	1,292	1,640,428	23,237	1,134	60,942
Arkansas		52	9,483	5	639	103,968	3,402	225	26,503	458	65,320	10,451	1,173	177,124
California		1,245	312,300	21,406	5,969	741,976	209,273	1,438	699,026	7,195	6,287,807	669,464	19,782	822,758
Colorado		1,134	206,823	61,965	2,638	543,469	27,900	1,580	506,858	8,707	9,714,645	335,591	8,381	793,311
Connecticut		7	41	-	100	5,878	-	122	5,600	228	4,324	60	547	30,799
Delaware		31	842	-	87	3,478	2,515	53	1,067	98	15,198	110	386	31,708
Florida		398	64,250	1,884	1,169	114,234	14,912	719	539,497	1,852	1,493,040	29,803	3,690	441,702
Georgia		229	19,020	3,807	1,022	106,327	36,646	764	66,606	1,232	146,058	3,434	2,648	793,269
Hawaii		45	(D)	-	201	256,545	(D)	136	(D)	463	405,621	(D)	802	(D)
Idaho		1,205	133,236	42,030	1,428	249,412	2,786	932	193,301	9,456	2,978,969	388,564	8,463	329,481
Illinois		9	49	-	583	56,925	3,985	153	2,591	296	14,838	85	997	86,426
Indiana		102	3,978	-	367	12,005	359	253	9,004	500	15,802	108	1,257	133,331
Iowa		32	1,179	-	300	15,417	24	128	12,664	224	44,089	-	622	18,895
Kansas		171	21,463	627	1,747	1,140,103	23,389	207	10,824	2,284	2,885,160	6,930	2,211	175,108
Kentucky		219	4,249	-	312	11,927	-	346	7,780	652	21,532	52	948	35,942
Louisiana		99	8,996	770	630	185,880	17,392	122	9,602	412	44,402	4,140	853	166,617
Maine		138	(D)	30	276	20,649	(D)	177	3,199	376	3,349	-	845	120,947
Maryland		71	1,504	-	167	4,366	8	118	6,165	198	1,617	8	684	32,631
Massachusetts		34	143	-	330	4,060	112	208	7,452	142	1,758	336	934	50,878
Michigan		190	2,584	250	953	25,631	600	310	15,429	662	20,735	5,300	2,895	212,535
Minnesota		88	3,329	-	471	26,303	74	280	32,276	469	37,295	-	1,406	108,105
Mississippi		59	(D)	(D)	301	59,210	390	149	42,969	236	35,042	383	766	114,776
Missouri		193	42,553	12,720	438	21,745	139	574	43,617	965	170,500	3,456	1,567	121,284
Montana		706	498,614	36,878	967	292,554	51	1,243	774,636	6,735	20,096,892	468,382	4,813	799,363
Nebraska		644	102,307	19,067	2,324	383,202	36,262	682	128,661	6,214	10,662,351	51,907	5,837	472,497
Nevada		150	24,858	11,452	281	34,420	6,955	38	(D)	1,075	3,323,070	125,076	1,241	(D)
New Hampshire		87	(D)	-	157	2,457	(D)	71	833	167	2,318	-	692	47,151
New Jersey		58	276	144	483	13,570	376	197	6,985	239	4,805	-	1,218	47,975
New Mexico		581	446,833	14,864	1,131	104,625	16,385	586	125,775	4,533	4,116,462	79,886	4,294	91,612
New York		191	2,122	-	908	33,996	782	196	2,260	521	10,529	23	1,615	89,086
North Carolina		97	2,432	1,080	841	89,961	-	315	11,189	550	23,313	4,716	1,568	140,553
North Dakota		39	(D)	-	208	116,065	(D)	26	(D)	302	843,960	-	316	(D)
Ohio		175	2,409	-	344	9,578	(D)	234	4,517	433	8,088	(D)	1,312	39,432
Oklahoma		175	(D)	4,660	468	177,974	(D)	328	30,942	1,284	1,772,671	62,045	840	110,283
Oregon		1,073	112,748	23,940	2,070	350,003	2,724	1,846	973,442	8,010	6,812,214	318,078	8,361	592,585
Pennsylvania		302	3,703	-	706	8,119	337	281	3,029	1,182	13,517	242	2,120	63,890
Rhode Island		23	(D)	-	84	2,293	(D)	37	277	76	363	(D)	178	3,926
South Carolina		160	9,708	-	422	42,065	1,200	329	7,866	635	45,569	4,144	1,005	172,156
South Dakota		103	5,179	4,813	300	56,210	6,065	87	21,691	688	2,171,028	484	677	89,146
Tennessee		101	1,464	-	347	11,374	-	221	12,668	700	53,714	-	928	114,714
Texas		1,388	496,795	80,640	3,404	2,355,716	40,225	1,519	191,254	6,317	9,811,142	120,566	4,754	317,507
Utah		1,330	102,026	24,793	1,363	230,437	8,424	567	294,581	8,464	4,323,878	229,011	6,084	485,563
Vermont		106	1,800	-	118	1,537	(D)	40	687	212	5,715	(D)	457	42,473
Virginia		156	4,570	-	406	12,908	-	275	14,215	512	12,780	-	1,000	73,137
Washington		826	40,961	10,648	2,217	1,063,957	3,267	692	81,833	4,939	2,926,864	116,782	6,302	194,057
West Virginia		70	568	-	172	3,054	-	207	4,213	252	18,077	-	417	26,403
Wisconsin		225	9,194	399	487	41,352	2,007	201	27,190	452	10,179	-	1,518	320,569
Wyoming		540	207,847	89,890	550	190,377	13,311	556	204,606	4,285	12,320,985	353,171	2,969	400,695
<b>Water Resources Regions</b>														
Region 01 New England		318	3,427	(D)	964	35,625	(D)	670	18,000	1,102	17,226	406	3,352	278,031
Region 02 Mid-Atlantic		547	7,879	144	1,912	42,030	3,505	857	23,152	2,109	60,257	383	5,430	239,563
Region 03 South Atlantic-Gulf		984	97,410	7,033	3,798	366,011	52,758	2,451	680,168	4,786	1,771,600	42,362	9,948	1,751,362
Region 04 Great Lakes		523	8,798	250	1,944	61,477	1,465	615	23,296	1,456	34,883	5,356	5,234	360,109
Region 05 Ohio		682	14,506	-	1,230	40,171	2,892	966	25,217	1,863	56,326	54	3,725	253,209
Region 06 Tennessee		72	(D)	-	263	7,452	-	282	(D)	508	14,308	(D)	859	(D)
Region 07 Upper Mississippi		222	8,384	399	1,550	119,519	3,337	684	57,027	1,390	91,314	513	4,123	434,565
Region 08 Lower Mississippi		116	(D)	(D)	1,500	298,358	16,831	298	40,562	834	94,722	4,582	2,472	455,332
Region 09 Souris-Red-Rainy		43	1,753	-	230	89,605	-	79	14,919	180	203,756	437	333	51,613
Region 10 Missouri		2,185	775,722	90,273	5,740	1,670,828	78,326	2,508	1,095,321	19,691	49,197,935	684,025	16,519	1,968,899
Region 11 Arkansas-White-Red		789	327,667	64,987	3,251	1,805,065	32,536	952	272,817	5,537	9,768,396	133,334	4,560	449,089
Region 12 Texas-Gulf		1,006	380,404	43,790	2,628	1,617,534	39,275	1,347	164,388	5,203	4,703,199	104,991	4,048	207,058
Region 13 Rio Grande		483	429,436	7,004	921	119,889	11,379	484	40,477	3,373	3,195,492	104,577	3,540	247,716
Region 14 Upper Colorado		1,422	236,407	125,603	1,606	151,832	9,150	1,615	314,981	8,793	5,928,275	431,918	7,742	654,257
Region 15 Lower Colorado		282	28,993	4,871	605	115,180	3,236	115	2,527	1,849	2,487,261	32,053	1,533	72,302
Region 16 Great Basin		1,037	125,370	19,835	1,354	189,852	13,273	471	354,482	7,203	6,631,732	270,986	5,747	772,537
Region 17 Pacific Northwest		3,211	277,822	82,117	5,900	1,682,383	8,828	3,989	1,234,329	23,596	14,266,570	845,156	24,309	1,182,408
Region 18 California		1,349	333,323	26,574	5,952	736,130	209,273	1,543	860,401	7,546	6,544,990	754,853	19,972	824,782
Region 19 Alaska		11	(D)	-	48	1,755	(D)	45	270	50	500	-	198	4,373
Region 20 Hawaii		45	(D)	-	201	256,545	(D)	136	(D)	463	405,621	(D)	802	(D)

<sup>1</sup> Acres were rounded to the nearest whole acre for individual farms.

**Table 4. Estimated Quantity of Water Applied By Source: 2018 and 2013**

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

Geographic area	Water applied from all sources									
	Total area <sup>1</sup>				Acres in the open			Area under protection		
	Farms	Acres irrigated	Acre-feet applied <sup>2</sup>	Average acre-feet per acre	Acres irrigated	Acre-feet applied	Average acre-feet per acre	Farms	Square feet irrigated	Gallons applied (1,000)
United States .....	2018 231,474	55,938,795	83,380,955	1.5	55,886,470	83,332,760	1.5	24,876	1,525,130,873	15,704,320
.....	2013 229,237	55,319,417	88,510,811	1.6	55,283,340	88,455,968	1.6	24,829	1,405,381,805	17,870,533
<b>2018 DATA</b>										
Alabama .....	1,069	163,338	96,231	0.6	162,612	95,915	0.6	313	22,691,124	103,119
Alaska .....	308	1,721	1,251	0.7	(D)	1,207	0.8	208	2,112,835	14,418
Arizona .....	3,054	945,570	4,410,437	4.7	945,236	4,409,708	4.7	127	11,974,228	237,527
Arkansas .....	3,173	4,246,491	5,071,730	1.2	4,246,295	5,071,653	1.2	157	4,050,788	25,230
California .....	42,093	8,408,282	24,505,123	2.9	8,399,881	24,490,687	2.9	1,697	328,881,801	4,703,858
Colorado .....	14,529	2,458,742	3,841,308	1.6	2,458,120	3,840,763	1.6	380	14,421,673	177,729
Connecticut .....	669	6,104	4,142	0.7	4,936	2,906	0.6	455	37,531,652	402,831
Delaware .....	521	201,305	79,762	0.4	201,224	79,744	0.4	44	2,339,000	5,908
Florida .....	7,615	1,331,739	1,359,050	1.0	1,324,471	1,352,233	1.0	1,346	286,871,042	2,221,415
Georgia .....	3,861	1,163,038	818,459	0.7	1,162,380	817,940	0.7	334	20,312,514	169,196
Hawaii .....	1,863	26,700	36,520	1.4	(D)	35,530	1.4	569	30,119,031	322,731
Idaho .....	14,867	3,393,063	6,614,948	1.9	3,392,674	6,614,755	1.9	336	4,346,965	62,808
Illinois .....	1,807	566,024	333,081	0.6	564,575	332,220	0.6	434	50,054,950	280,622
Indiana .....	2,039	582,661	247,882	0.4	582,102	247,555	0.4	435	9,841,976	106,681
Iowa .....	1,061	166,193	61,239	0.4	165,621	60,983	0.4	379	11,823,816	83,257
Kansas .....	4,249	2,386,816	2,459,175	1.0	2,386,483	2,458,994	1.0	210	8,776,130	58,944
Kentucky .....	1,188	58,234	22,157	0.4	57,506	21,991	0.4	686	9,068,660	53,949
Louisiana .....	1,862	1,072,033	1,020,121	1.0	1,071,564	1,019,977	1.0	274	12,058,977	46,973
Maine .....	990	35,695	15,639	0.4	(D)	15,535	0.4	558	6,785,654	33,875
Maryland .....	959	125,024	68,447	0.5	124,486	68,096	0.5	383	10,812,493	114,299
Massachusetts .....	1,335	19,311	22,791	1.2	18,834	22,588	1.2	434	6,586,132	66,158
Michigan .....	3,886	827,010	457,523	0.6	824,218	454,261	0.6	1,205	86,902,965	1,062,814
Minnesota .....	2,367	554,605	249,004	0.4	553,858	248,126	0.4	420	18,144,370	286,126
Mississippi .....	1,621	1,667,023	1,168,393	0.7	(D)	1,168,359	0.7	203	4,289,424	11,034
Missouri .....	2,705	1,429,074	1,109,427	0.8	1,428,310	1,109,102	0.8	639	10,912,436	105,773
Montana .....	8,887	2,140,162	2,548,942	1.2	2,139,878	2,548,878	1.2	265	2,265,336	20,871
Nebraska .....	13,013	7,666,152	4,856,160	0.6	7,665,880	4,856,075	0.6	236	3,026,039	27,541
Nevada .....	1,857	693,520	1,920,222	2.8	693,466	1,920,216	2.8	54	358,536	1,873
New Hampshire .....	731	3,218	1,967	0.6	(D)	1,688	0.6	431	8,274,578	90,784
New Jersey .....	1,585	89,941	51,653	0.6	88,604	50,318	0.6	574	45,713,398	434,989
New Mexico .....	10,093	675,330	1,337,807	2.0	675,092	1,337,721	2.0	179	4,076,540	27,991
New York .....	2,148	47,974	34,109	0.7	45,847	33,011	0.7	1,244	52,378,469	357,639
North Carolina .....	2,451	132,870	55,669	0.4	131,631	54,315	0.4	807	28,491,080	441,111
North Dakota .....	720	297,001	189,930	0.6	(D)	189,921	0.6	37	526,745	2,892
Ohio .....	1,601	39,258	17,136	0.4	37,740	15,877	0.4	905	37,618,396	410,236
Oklahoma .....	1,835	601,492	662,063	1.1	(D)	661,996	1.1	234	4,338,472	21,774
Oregon .....	13,794	1,579,108	2,719,424	1.7	1,577,008	2,716,564	1.7	1,020	64,333,453	931,860
Pennsylvania .....	2,766	40,596	39,135	1.0	37,849	38,272	1.0	1,568	72,735,326	281,214
Rhode Island .....	227	3,231	979	0.3	(D)	936	0.3	134	1,855,229	14,047
South Carolina .....	1,489	252,720	203,411	0.8	252,409	203,351	0.8	241	5,365,322	19,596
South Dakota .....	1,219	378,413	261,443	0.7	378,309	261,342	0.7	73	2,325,959	32,841
Tennessee .....	1,452	190,746	81,382	0.4	190,003	80,824	0.4	617	10,823,843	181,752
Texas .....	11,997	4,085,754	5,345,738	1.3	4,083,451	5,343,356	1.3	686	81,189,374	776,321
Utah .....	12,575	1,181,700	2,326,630	2.0	1,181,301	2,326,069	2.0	226	11,147,052	182,962
Vermont .....	573	3,022	2,135	0.7	2,613	2,025	0.8	389	4,577,962	35,866
Virginia .....	1,377	48,248	14,106	0.3	47,136	13,542	0.3	696	24,913,206	183,681
Washington .....	11,259	1,866,110	4,072,575	2.2	1,864,760	4,071,696	2.2	856	29,307,707	286,518
West Virginia .....	482	6,525	1,788	0.3	6,188	1,740	0.3	306	2,804,956	15,518
Wisconsin .....	2,127	518,312	293,908	0.6	517,394	293,431	0.6	783	13,742,493	155,444
Wyoming .....	5,525	1,561,596	2,268,804	1.5	1,561,506	2,268,768	1.5	89	1,230,796	11,722
<b>Water Resources Regions</b>										
Region 01 New England .....	4,164	69,036	46,422	0.7	66,062	44,532	0.7	2,110	62,320,465	615,776
Region 02 Mid-Atlantic .....	7,317	524,394	266,968	0.5	518,002	263,819	0.5	3,378	179,232,386	1,025,976
Region 03 South Atlantic-Gulf .....	16,770	3,042,488	2,530,310	0.8	3,032,227	2,521,236	0.8	3,119	363,677,616	2,956,783
Region 04 Great Lakes .....	7,093	1,129,500	579,597	0.5	1,124,241	574,437	0.5	2,801	138,040,985	1,681,343
Region 05 Ohio .....	4,904	444,046	209,970	0.5	441,080	208,453	0.5	2,423	50,237,208	494,258
Region 06 Tennessee .....	1,250	71,536	45,334	0.6	(D)	45,012	0.6	635	14,692,612	105,058
Region 07 Upper Mississippi .....	6,691	1,627,970	862,439	0.5	1,624,769	860,160	0.5	1,773	81,170,356	742,500
Region 08 Lower Mississippi .....	6,595	7,625,812	7,423,134	1.0	(D)	7,422,885	1.0	471	15,576,031	81,105
Region 09 Souris-Red-Rainy .....	587	207,655	116,955	0.6	207,595	116,902	0.6	47	1,004,028	17,185
Region 10 Missouri .....	32,856	13,107,678	11,266,945	0.9	13,105,909	11,265,893	0.9	1,220	36,318,201	342,827
Region 11 Arkansas-White-Red .....	9,554	4,877,419	5,714,278	1.2	4,876,728	5,714,078	1.2	594	10,134,679	65,123
Region 12 Texas-Gulf .....	9,986	2,695,393	3,511,259	1.3	2,693,245	3,509,476	1.3	649	75,432,738	581,124
Region 13 Rio Grande .....	8,740	709,642	1,484,099	2.1	709,230	1,483,424	2.1	199	11,098,640	220,081
Region 14 Upper Colorado .....	13,188	1,472,632	2,558,675	1.7	1,472,320	2,558,532	1.7	273	3,879,584	46,753
Region 15 Lower Colorado .....	8,740	1,035,373	4,727,131	4.6	1,035,023	4,726,392	4.6	140	12,175,428	240,813
Region 16 Great Basin .....	11,322	1,763,616	3,942,604	2.2	1,763,271	3,942,124	2.2	186	10,055,408	156,393
Region 17 Pacific Northwest .....	41,905	7,014,019	13,595,585	1.9	7,010,052	13,591,647	1.9	2,370	97,211,841	1,283,271
Region 18 California .....	42,543	8,492,165	24,461,478	2.9	8,483,718	24,447,021	2.9	1,711	330,640,801	4,710,802
Region 19 Alaska .....	308	1,721	1,251	0.7	(D)	1,207	0.8	208	2,112,835	14,418
Region 20 Hawaii .....	1,863	26,700	36,520	1.4	(D)	35,530	1.4	569	30,119,031	322,731

See footnote(s) at end of table.

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**Table 4. Estimated Quantity of Water Applied By Source: 2018 and 2013 (continued)**

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

Geographic area	Ground water from wells												
	Applied in the open						Applied under protection						
	Total			Only source			Total			Only source			
	Farms	Acres irrigated	Acres-foot applied	Farms	Acres irrigated	Average acre-foot applied	Farms	Square feet irrigated	Gallons applied (1,000)	Farms	Square feet irrigated	Gallons applied (1,000)	
United States	2018 2013	111,913 115,674	36,158,867 37,199,644	41,503,077 48,482,419	89,956 92,587	27,309,018 27,182,385	1.1 1.2	16,362 14,661	1,025,109,884 841,607,093	9,912,941 10,474,182	15,252 13,544	803,985,687 676,370,353	8,098,759 8,034,222
<b>2018 DATA</b>													
Alabama		533	89,753	42,391	442	40,257	0.4	204	9,085,280	44,064	165	5,125,120	26,466
Alaska		124	1,375	1,109	121	1,365	0.8	152	1,871,024	12,900	150	1,636,704	11,897
Arizona		1,182	339,817	1,144,070	964	187,395	4.1	59	9,841,648	212,410	56	9,837,988	212,396
Arkansas		2,780	3,866,663	4,391,548	1,976	2,616,810	1.1	71	1,596,374	6,463	63	1,582,774	6,446
California		24,048	4,510,064	10,598,738	16,926	2,210,718	2.5	927	214,405,436	2,974,859	763	140,659,075	1,931,537
Colorado		2,799	1,150,142	1,586,391	2,002	863,617	1.3	155	7,558,640	77,744	141	7,363,240	75,278
Connecticut		363	2,615	751	311	2,092	0.3	361	27,518,772	206,145	343	25,022,812	195,241
Delaware		501	181,061	70,439	470	152,219	0.9	40	2,313,800	5,876	40	2,313,800	5,876
Florida		6,503	722,062	686,228	6,217	621,121	0.4	1,286	249,560,584	2,034,909	1,240	239,859,504	1,971,071
Georgia		3,177	990,162	709,375	2,584	706,851	0.7	219	14,758,376	72,284	212	9,683,792	61,078
Hawaii		81	2,969	3,002	74	1,695	1.1	8	844,960	16,723	8	844,960	16,723
Idaho		2,929	1,046,997	1,858,993	1,646	480,680	1.7	191	3,282,207	45,320	164	3,004,307	44,270
Illinois		1,438	543,763	320,207	1,368	524,934	0.6	335	44,174,850	113,847	301	12,606,150	95,356
Indiana		1,605	522,902	221,794	1,486	459,246	0.4	325	5,899,208	46,412	314	5,728,408	46,331
Iowa		715	156,950	58,136	669	154,015	0.4	237	2,439,586	19,464	175	1,084,586	11,714
Kansas		3,729	2,296,164	2,382,812	3,409	2,091,587	1.1	188	4,199,616	20,745	74	4,087,616	19,697
Kentucky		154	33,504	11,870	143	29,111	0.4	88	1,561,148	12,036	161	1,394,528	11,910
Louisiana		1,510	973,312	895,925	1,302	814,750	1.0	190	5,651,525	14,827	170	4,446,565	10,846
Maine		518	12,024	4,615	383	1,060	0.6	484	5,596,579	28,438	473	5,452,319	28,055
Maryland		615	103,754	57,327	545	77,539	0.6	347	10,400,373	94,646	319	8,545,573	84,919
Massachusetts		419	4,497	1,714	363	2,865	0.2	294	4,920,332	54,094	283	4,789,432	53,957
Michigan		2,853	682,008	373,837	2,276	496,157	0.5	938	59,476,501	749,642	922	42,403,101	598,488
Minnesota		1,901	529,079	232,219	1,802	507,445	0.4	326	14,749,002	196,133	317	9,686,602	154,449
Mississippi		1,291	1,572,017	1,089,944	1,068	1,134,135	0.7	141	3,342,204	8,458	135	3,285,804	8,081
Missouri		1,823	1,355,453	1,058,913	1,630	1,285,198	0.8	447	6,570,676	52,832	379	6,063,676	50,424
Montana		1,213	67,696	60,731	941	43,863	0.9	205	1,531,904	14,174	193	1,402,304	13,680
Nebraska		11,744	7,009,795	4,217,362	9,561	5,595,375	0.6	208	2,477,408	23,536	199	2,476,454	23,528
Nevada		749	308,472	893,058	461	208,526	3.0	30	218,236	1,636	30	218,236	1,636
New Hampshire		390	1,217	806	355	737	0.6	258	6,325,538	74,423	251	6,280,734	74,258
New Jersey		1,081	65,673	36,742	920	54,123	0.6	472	43,064,140	356,670	428	32,110,260	314,950
New Mexico		4,069	390,452	735,421	2,589	328,327	1.7	91	2,186,260	8,403	84	2,144,260	7,796
New York		796	18,023	8,197	653	14,734	0.5	836	32,546,325	120,754	747	23,012,808	104,376
North Carolina		834	23,956	8,960	705	15,841	0.4	581	10,301,998	84,829	541	9,033,012	81,035
North Dakota		415	189,038	104,039	371	155,672	0.5	15	240,712	1,008	15	240,712	1,008
Ohio		550	17,343	7,732	427	15,124	0.5	550	16,454,359	161,468	531	15,840,839	157,748
Oklahoma		1,235	498,442	563,515	1,174	395,576	1.2	146	1,277,066	5,951	131	685,316	3,943
Oregon		4,280	435,962	690,098	3,597	297,682	1.6	656	37,775,643	548,039	623	34,604,423	499,016
Pennsylvania		1,293	29,000	36,045	1,133	25,108	1.3	1,219	51,321,360	207,822	1,164	43,005,000	197,759
Rhode Island		151	1,623	659	134	1,095	0.5	102	1,504,969	9,812	87	1,271,209	9,460
South Carolina		1,109	216,564	175,732	983	142,008	0.8	195	5,281,636	16,637	174	4,046,836	14,322
South Dakota		719	208,416	102,336	657	180,897	0.5	28	1,330,000	13,763	26	1,314,000	13,745
Tennessee		644	176,428	66,176	628	176,132	0.4	154	2,702,136	24,099	145	2,173,136	20,572
Texas		8,834	3,393,200	3,988,113	8,194	3,183,716	1.2	401	46,335,471	618,478	361	28,879,590	428,729
Utah		1,496	242,386	513,797	760	139,000	2.2	11	4,902,932	108,897	10	3,902,932	77,940
Vermont		196	862	748	144	424	1.0	237	2,212,126	16,324	231	2,162,126	16,107
Virginia		594	9,877	3,362	553	5,876	0.4	497	12,547,674	67,365	493	8,796,574	52,728
Washington		3,809	525,576	1,028,759	3,051	326,032	1.8	598	16,921,227	145,110	571	10,670,627	90,493
West Virginia		86	516	217	55	126	0.9	129	685,480	5,973	123	657,880	5,944
Wisconsin		1,432	475,100	269,659	1,300	416,060	0.5	710	13,093,293	153,398	706	12,654,693	152,373
Wyoming		603	164,143	188,465	433	124,102	1.1	20	253,290	3,103	20	253,290	3,103
<b>Water Resources Regions</b>													
Region 01 New England		1,995	22,649	9,092	1,664	8,108	0.4	1,565	46,913,610	379,760	1,502	43,853,926	367,781
Region 02 Mid-Atlantic		4,182	398,249	209,484	3,687	324,856	0.5	2,737	143,261,007	774,469	2,545	109,743,599	684,730
Region 03 South Atlantic-Gulf		12,384	2,025,357	1,614,723	11,159	1,522,753	0.8	2,506	291,773,408	2,260,270	2,357	271,533,398	2,162,703
Region 04 Great Lakes		4,344	929,856	462,982	3,525	704,400	0.5	2,013	79,172,157	950,881	1,953	60,698,176	795,476
Region 05 Ohio		1,717	373,035	178,441	1,498	351,108	0.5	1,134	19,932,413	184,167	1,071	18,745,205	177,097
Region 06 Tennessee		400	31,350	15,074	333	14,186	0.6	311	5,447,518	32,505	299	3,740,918	30,793
Region 07 Upper Mississippi		5,033	1,518,509	806,317	4,765	1,408,620	0.5	1,391	66,935,704	403,633	1,276	28,747,004	334,882
Region 08 Lower Mississippi		6,045	7,163,415	6,662,259	4,980	5,471,170	0.9	294	7,518,989	22,629	254	6,221,229	(D)
Region 09 Souris-Red-Rainy		352	176,631	93,756	300	153,874	0.5	10	675,520	15,317	10	675,520	15,317
Region 10 Missouri		18,073	9,092,442	6,242,956	14,642	7,318,379	0.7	782	17,461,354	159,437	726	17,212,600	157,059
Region 11 Arkansas-White-Red		6,527	4,424,026	5,160,842	5,916	3,848,036	1.2	347	3,807,652	25,538	310	(D)	22,452
Region 12 Texas-Gulf		7,264	2,134,675	3,444,968	6,775	2,018,669	1.1	356	40,566,835	423,271	316	23,110,954	233,521
Region 13 Rio Grande		3,826	381,861	879,725	2,209	255,825	2.4	123	10,553,440	205,824	116	10,511,440	205,218
Region 14 Upper Colorado		422	32,814	36,299	264	23,068	1.0	15	195,040	1,632	8	(D)	(D)
Region 15 Lower Colorado		1,460	376,905	1,236,055	1,242	224,483	3.8	62	9,976,648	215,002	59	9,972,988	214,988
Region 16 Great Basin		2,159	609,069	1,495,532	1,119	371,324	2.6	41	5,121,168	110,533	40	4,121,168	79,576
Region 17 Pacific Northwest		11,305	1,936,058	3,448,812	8,628	1,067,073	1.8	1,591	58,811,001	746,184	1,492	48,981,681	641,000
Region 18 California		24,220	4,527,622	10,601,649	17,055	2,220,026	2.5	924	214,270,436	2,972,267	760	140,524,075	1,928,945
Region 19 Alaska		124	1,375	1,109	121	1,365	0.8	152	1,871,024	12,900	150	1,636,704	11,897
Region 20 Hawaii		81	2,969	3,002	74	1,695	1.1	8	844,960	16,723	8	844,960	16,723

See footnote(s) at end of table.

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**Table 4. Estimated Quantity of Water Applied By Source: 2018 and 2013 (continued)**

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

Geographic area	On-farm surface water												
	Applied in the open						Applied under protection						
	Total			Only source			Total			Only source			
	Farms	Acres irrigated	Acre-feet applied	Farms	Acres irrigated	Average acre-feet applied	Farms	Square feet irrigated	Gallons applied (1,000)	Farms	Square feet irrigated	Gallons applied (1,000)	
United States .....	2018 2013	35,179 34,322	6,286,005 6,369,961	8,272,467 9,193,479	23,080 19,917	3,184,852 2,961,176	1.4 1.6	3,564 3,114	271,338,773 318,948,518	1,909,476 3,493,459	2,637 2,082	109,927,686 168,533,862	1,119,162 1,831,371
<b>2018 DATA</b>													
Alabama .....		331	66,019	40,571	275	43,875	0.6	58	5,976,264	14,144	27	983,704	4,594
Alaska .....		18	109	78	16	100	0.7	53	233,331	1,286	37	111,011	1,217
Arizona .....		189	61,325	150,643	50	(D)	(D)	-	-	-	-	-	-
Arkansas .....		985	586,004	661,339	190	44,953	0.9	22	964,440	2,011	15	743,840	1,842
California .....		4,070	1,053,393	2,150,327	1,596	273,008	2.9	139	37,924,545	242,883	70	4,237,340	50,801
Colorado .....		2,222	321,482	415,599	1,609	235,976	1.3	44	347,600	3,873	32	177,200	2,776
Connecticut .....		186	2,470	(D)	133	1,172	1.0	85	8,894,320	(D)	66	(D)	(D)
Delaware .....		26	8,703	3,301	1	(D)	(D)	-	-	-	-	-	-
Florida .....		575	292,031	170,304	383	144,413	0.7	77	24,370,720	67,394	32	9,624,720	25,170
Georgia .....		1,048	155,095	97,385	489	44,251	0.4	61	7,713,270	85,400	54	2,119,570	38,308
Hawaii .....		162	2,733	4,424	161	2,716	1.6	65	1,230,360	14,825	61	213,400	1,056
Idaho .....		2,168	472,739	920,349	1,636	295,995	2.1	35	155,480	691	32	143,480	687
Illinois .....		238	14,960	7,101	168	9,497	0.5	85	35,962,000	159,758	51	4,393,300	16,140
Indiana .....		306	50,899	22,698	207	23,239	0.4	32	1,488,400	32,642	21	1,317,600	(D)
Iowa .....		114	5,105	1,433	90	4,003	0.3	69	2,076,620	17,105	26	247,620	7,458
Kansas .....		414	51,278	25,351	187	18,417	0.7	38	1,950,470	8,274	13	1,830,770	7,205
Kentucky .....		397	24,730	8,652	364	20,559	0.3	175	3,932,720	13,782	130	2,050,020	8,595
Louisiana .....		371	102,104	97,788	163	37,098	1.4	36	6,476,912	25,282	24	5,292,400	21,334
Maine .....		353	23,197	10,062	188	12,649	0.5	66	818,987	(D)	55	648,227	(D)
Maryland .....		234	24,817	10,592	164	7,106	(D)	41	1,893,680	19,319	13	112,320	337
Massachusetts .....		668	13,365	20,196	613	11,430	1.4	80	1,323,140	(D)	39	292,240	(D)
Michigan .....		948	142,566	77,302	395	40,348	0.5	58	3,178,680	27,100	56	2,978,680	27,023
Minnesota .....		262	20,362	11,000	169	12,496	0.6	60	1,494,768	33,920	52	838,416	23,557
Mississippi .....		376	135,050	77,959	158	43,153	0.5	4	(D)	(D)	4	(D)	(D)
Missouri .....		648	104,774	48,275	432	48,124	0.4	148	1,909,520	10,786	96	1,480,520	6,706
Montana .....		1,512	578,622	743,711	1,275	514,951	1.3	18	286,060	2,190	12	24,700	(D)
Nebraska .....		1,371	134,363	62,526	280	35,100	0.6	-	-	-	-	-	-
Nevada .....		461	178,917	392,846	310	77,850	1.9	-	-	-	-	-	-
New Hampshire .....		128	1,072	797	116	852	0.7	98	1,134,540	5,423	96	1,107,640	5,299
New Jersey .....		382	25,088	13,094	221	16,887	0.6	93	11,995,638	76,144	49	1,124,258	13,632
New Mexico .....		1,124	28,843	29,712	982	19,320	1.2	34	51,000	(D)	34	51,000	(D)
New York .....		587	21,780	19,585	463	17,154	1.0	265	5,704,820	14,258	222	3,430,130	8,397
North Carolina .....		1,235	108,355	45,193	1,089	97,608	0.4	177	17,462,094	327,950	137	15,694,958	314,411
North Dakota .....		97	20,839	18,590	68	4,423	1.1	3	(D)	(D)	2	(D)	(D)
Ohio .....		473	17,977	6,654	372	14,427	0.4	189	14,766,722	151,932	145	14,068,322	146,100
Oklahoma .....		269	42,914	37,727	220	33,082	0.9	30	2,136,426	10,724	14	480,500	252
Oregon .....		2,690	332,419	489,566	2,137	207,414	1.5	153	9,031,010	96,267	128	3,194,520	29,030
Pennsylvania .....		605	9,910	1,880	425	5,284	0.2	233	13,962,402	26,435	185	3,789,510	19,248
Rhode Island .....		23	924	(D)	5	356	0.3	27	248,520	311	12	(D)	52
South Carolina .....		272	43,332	26,313	167	14,219	0.4	22	1,237,136	2,385	8	19,136	104
South Dakota .....		121	23,317	22,588	79	16,832	1.2	13	51,984	442	11	39,984	337
Tennessee .....		257	13,102	14,301	228	12,306	1.1	192	3,388,944	68,293	170	2,836,944	64,383
Texas .....		1,127	232,125	297,901	661	137,523	1.6	117	19,939,439	60,323	62	6,229,020	26,908
Utah .....		1,451	118,611	226,030	1,185	89,236	2.1	-	-	-	-	-	-
Vermont .....		180	1,034	1,049	130	754	1.1	66	1,350,886	13,219	61	1,310,886	13,040
Virginia .....		476	38,215	10,093	436	31,953	0.2	126	14,678,372	101,400	122	8,714,672	43,802
Washington .....		1,373	115,267	218,746	1,065	76,769	1.7	43	2,545,360	9,737	37	1,323,760	6,199
West Virginia .....		147	5,545	1,437	139	(D)	0.3	84	223,248	2,041	78	207,648	1,988
Wisconsin .....		433	40,832	21,334	304	23,026	0.7	23	666,600	1,610	19	228,000	1,175
Wyoming .....		1,076	417,292	535,786	886	350,877	1.3	27	151,120	1,517	27	151,120	1,517
<b>Water Resources Regions</b>													
Region 01 New England .....		1,399	41,330	33,585	1,062	26,581	0.9	359	12,479,507	161,457	271	8,163,107	152,140
Region 02 Mid-Atlantic .....		1,700	115,645	47,273	1,239	66,730	0.4	538	40,550,382	190,876	393	10,500,050	51,335
Region 03 South Atlantic-Gulf .....		3,542	690,938	389,495	2,465	372,864	0.5	371	53,131,804	488,243	245	28,114,408	378,508
Region 04 Great Lakes .....		1,763	183,312	100,470	964	59,317	0.5	330	19,812,860	188,331	264	18,670,770	186,090
Region 05 Ohio .....		1,400	62,537	26,055	1,166	51,834	0.4	547	17,496,414	150,160	452	13,626,714	122,239
Region 06 Tennessee .....		340	29,444	25,160	299	21,125	0.9	188	6,219,552	29,783	177	2,919,552	24,833
Region 07 Upper Mississippi .....		918	101,433	45,569	692	58,676	0.5	206	35,899,812	207,733	112	2,163,160	45,068
Region 08 Lower Mississippi .....		1,273	683,065	725,743	208	60,344	1.2	38	6,847,552	26,329	24	5,660,240	22,334
Region 09 Souris-Red-Rainy .....		197	29,184	18,602	149	(D)	(D)	22	80,400	121	22	80,400	121
Region 10 Missouri .....		4,379	1,048,264	1,152,559	2,495	766,496	1.2	174	4,188,699	20,975	125	3,437,274	15,639
Region 11 Arkansas-White-Red .....		1,337	280,581	222,442	854	111,289	1.0	79	3,007,926	14,240	31	976,500	2,398
Region 12 Texas-Gulf .....		927	128,675	188,485	553	56,063	2.0	117	19,939,439	60,323	62	6,229,020	26,908
Region 13 Rio Grande .....		1,095	98,040	142,468	936	82,403	1.5	34	51,000	867	34	51,000	867
Region 14 Upper Colorado .....		1,956	343,959	466,346	1,499	297,896	1.3	59	241,200	2,363	52	101,200	1,628
Region 15 Lower Colorado .....		314	66,353	160,510	175	(D)	(D)	-	-	-	-	-	-
Region 16 Great Basin .....		1,549	250,670	518,434	1,164	125,021	1.9	-	-	-	-	-	-
Region 17 Pacific Northwest .....		6,794	1,047,015	1,818,946	5,379	705,535	1.8	245	12,003,990	108,680	205	4,672,540	35,982
Region 18 California .....		4,116	1,082,718	2,185,823	1,604	285,088	2.8	139	37,924,545	242,883	70	4,237,340	50,801
Region 19 Alaska .....		18	109	78	16	100	0.7	53	233,331	1,286	37	111,011	1,217
Region 20 Hawaii .....		162	2,733	4,424	161	2,716	1.6	65	1,230,360	14,825	61	213,400	1,056

See footnote(s) at end of table.

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**Table 4. Estimated Quantity of Water Applied By Source: 2018 and 2013 (continued)**

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

Geographic area	Off-farm water from all suppliers												
	Applied in the open						Applied under protection						
	Total			Only source			Total			Only source			
	Farms	Acres irrigated	Acre-feet applied	Farms	Acres irrigated	Average acre-feet applied	Farms	Square feet irrigated	Gallons applied (1,000)	Farms	Square feet irrigated	Gallons applied (1,000)	
United States	2018 2013	98,490 96,646	15,923,220 14,448,939	33,557,216 30,780,070	83,643 78,901	11,279,603 9,434,701	2.1 2.2	6,310 8,490	391,322,140 368,339,216	3,881,903 3,902,891	5,671 7,824	286,425,822 283,422,445	3,050,366 3,114,107
<b>2018 DATA</b>													
Alabama		142	19,899	12,953	97	12,423	0.8	98	9,490,140	44,912	74	9,202,140	44,269
Alaska		18	27	20	17	25	0.8	20	132,800	233	4	10,800	115
Arizona		1,923	658,483	3,114,995	1,723	503,595	5.1	71	2,136,240	25,117	68	2,132,580	25,104
Arkansas		147	18,635	18,766	118	9,826	1.2	77	1,721,374	16,756	66	1,492,774	16,623
California		21,415	4,235,756	11,741,622	15,316	2,143,046	3.1	812	148,161,234	1,486,116	687	93,108,716	909,868
Colorado		10,532	1,094,638	1,838,773	9,710	861,291	1.7	202	6,845,433	96,111	193	6,685,433	95,820
Connecticut		5	115	(D)	3	62	(D)	28	3,793,160	(D)	27	3,023,160	46,501
Delaware		10	12,460	6,004	4	16	0.3	4	25,200	32	4	25,200	32
Florida		236	333,586	495,701	140	309,658	1.5	29	14,408,458	119,113	28	13,885,738	118,129
Georgia		132	35,184	11,180	98	10,564	0.3	61	1,975,308	11,512	61	1,975,308	11,512
Hawaii		1,293	20,369	28,104	1,285	16,770	1.4	500	28,363,711	291,183	496	26,141,311	275,599
Idaho		11,145	1,885,411	3,835,413	10,012	1,410,601	2.0	140	1,161,248	16,798	110	908,748	15,991
Illinois		89	6,581	4,912	79	6,096	0.8	48	1,486,800	7,017	48	1,486,800	7,017
Indiana		94	8,309	3,063	74	7,134	0.4	89	2,625,168	27,626	89	2,625,168	27,626
Iowa		94	5,023	1,414	70	3,211	0.3	136	9,174,610	46,688	115	8,594,610	45,057
Kansas		396	78,312	50,831	235	24,765	0.9	109	2,738,044	29,925	98	2,668,744	29,727
Kentucky		296	2,479	1,469	270	2,443	0.6	373	4,959,812	28,131	345	3,716,312	26,900
Louisiana		96	24,794	26,264	83	15,694	1.6	68	635,500	6,864	60	627,500	6,801
Maine		78	3,089	858	48	2,546	0.3	19	383,348	(D)	19	383,348	(D)
Maryland		23	1,443	177	19	643	0.2	23	299,800	335	23	299,800	335
Massachusetts		98	2,243	678	97	2,044	0.3	101	1,373,560	(D)	71	473,560	(D)
Michigan		84	9,861	3,122	60	5,077	0.3	225	24,447,784	286,072	211	18,071,704	235,882
Minnesota		91	6,773	4,907	85	4,893	0.5	43	3,105,080	56,073	42	2,551,800	55,651
Mississippi		74	675	456	68	365	1.0	64	940,020	(D)	58	756,420	2,262
Missouri		240	5,157	1,914	167	2,873	0.3	116	2,663,840	42,155	94	2,560,640	41,903
Montana		6,500	1,496,472	1,744,436	6,081	1,376,878	1.1	54	576,972	4,507	48	567,372	4,256
Nebraska		2,142	653,634	576,187	884	250,865	1.0	37	549,585	(D)	28	548,460	(D)
Nevada		920	230,939	634,312	757	153,960	3.0	24	140,300	237	24	140,300	237
New Hampshire		82	561	85	39	98	(D)	82	858,700	10,939	77	841,300	10,919
New Jersey		121	911	482	121	911	0.5	53	1,510,000	2,174	53	1,510,000	2,174
New Mexico		6,404	309,874	572,588	4,957	243,485	2.0	61	1,867,280	(D)	54	1,839,280	18,115
New York		401	6,979	5,229	299	4,937	0.4	232	19,644,841	222,628	186	13,345,345	218,532
North Carolina		145	835	162	67	172	0.4	89	839,924	28,332	89	839,924	28,332
North Dakota		236	91,229	67,292	219	77,220	0.7	20	283,633	(D)	19	283,000	(D)
Ohio		222	2,564	1,491	188	2,387	0.6	210	7,095,715	96,835	185	6,983,715	95,676
Oklahoma		288	65,532	60,754	248	48,732	1.1	85	2,108,256	5,100	62	912,080	3,190
Oregon		7,390	814,713	1,536,900	6,970	642,470	1.8	245	17,544,800	287,554	236	13,172,840	205,467
Pennsylvania		189	879	347	156	691	0.4	192	9,927,316	46,957	164	9,448,548	46,436
Rhode Island		20	1,065	(D)	19	990	0.1	20	335,500	3,923	20	335,500	3,923
South Carolina		186	1,488	1,306	164	1,225	0.7	45	81,350	575	38	64,550	563
South Dakota		427	151,658	136,418	369	130,512	0.7	34	943,975	18,636	34	943,975	18,636
Tennessee		203	531	347	181	443	0.7	301	5,471,763	89,359	272	4,473,763	82,739
Texas		2,355	523,490	1,057,342	2,141	404,378	2.1	236	22,340,874	97,519	196	8,216,784	72,098
Utah		10,447	854,766	1,586,242	9,688	744,514	1.8	216	6,374,120	74,065	215	6,244,120	71,633
Vermont		54	733	228	49	671	0.2	97	1,104,950	6,323	91	1,054,950	6,196
Virginia		87	105	87	86	104	0.8	78	2,174,760	14,916	76	954,160	(D)
Washington		6,671	1,236,367	2,824,191	6,073	947,442	2.3	248	13,343,440	131,670	218	7,141,120	94,138
West Virginia		84	150	86	61	127	0.5	99	1,908,828	7,505	99	1,908,828	7,505
Wisconsin		75	8,431	2,438	36	2,214	0.6	54	421,200	436	54	421,200	436
Wyoming		4,090	1,000,012	1,544,517	3,912	888,516	1.5	42	826,386	7,102	42	826,386	7,102
<b>Water Resources Regions</b>													
Region 01 New England		314	7,479	1,855	235	6,144	0.3	280	6,934,068	74,558	243	5,236,668	67,968
Region 02 Mid-Atlantic		464	15,673	7,062	378	2,239	0.4	316	18,886,165	60,631	248	12,542,821	57,461
Region 03 South Atlantic-Gulf		869	378,749	517,018	613	324,788	1.5	399	28,019,460	208,270	360	26,572,740	204,963
Region 04 Great Lakes		522	22,864	10,985	416	16,001	0.4	546	40,401,429	542,131	501	33,501,309	489,437
Region 05 Ohio		690	8,941	3,957	612	8,420	0.4	852	16,232,181	159,932	790	13,874,801	143,245
Region 06 Tennessee		191	13,048	4,778	158	9,974	0.4	148	3,198,542	42,770	147	2,466,542	39,689
Region 07 Upper Mississippi		293	19,259	8,274	205	9,712	0.6	291	12,479,020	131,134	270	11,865,740	130,539
Region 08 Lower Mississippi		135	26,552	34,883	115	18,072	1.6	179	2,007,250	32,147	153	1,909,250	31,923
Region 09 Souris-Red-Rainy		74	3,697	4,544	70	1,937	1.0	15	248,108	1,746	15	248,108	1,746
Region 10 Missouri		13,817	3,193,098	3,870,378	11,520	2,468,543	1.2	324	15,320,127	162,414	309	14,766,377	160,831
Region 11 Arkansas-White-Red		2,135	323,493	330,794	1,878	230,290	1.1	235	4,880,177	25,344	188	3,384,901	23,084
Region 12 Texas-Gulf		1,942	476,611	976,023	1,814	362,314	2.2	244	22,352,874	97,530	204	8,228,784	72,108
Region 13 Rio Grande		5,471	309,766	461,231	3,899	190,888	1.7	49	522,200	13,390	42	494,200	12,783
Region 14 Upper Colorado		11,291	1,106,586	2,055,887	10,825	1,023,790	1.9	213	3,723,344	42,758	206	3,583,344	42,513
Region 15 Lower Colorado		2,301	706,154	3,329,827	2,101	551,266	5.1	81	2,202,440	25,811	78	2,198,780	25,797
Region 16 Great Basin		8,719	962,238	1,928,158	7,869	763,878	2.0	146	5,064,240	45,861	145	4,934,240	43,429
Region 17 Pacific Northwest		26,252	4,053,506	8,323,889	24,061	3,110,232	2.0	643	30,298,770	428,408	568	19,462,390	307,731
Region 18 California		21,699	4,275,110	11,659,549	15,572	2,164,320	3.0	829	150,055,234	1,495,652	704	95,002,716	919,404
Region 19 Alaska		18	27	20	17	25	0.8	20	132,800	233	4	10,800	115
Region 20 Hawaii		1,293	20,369	28,104	1,285	16,770	1.4	500	28,363,711	291,183	496	26,141,311	275,599

<sup>1</sup> Irrigated square feet under protection were converted to acres for each operation, rounded to nearest whole acre, and added to acres irrigated for the Total area column.

<sup>2</sup> Total gallons were converted to acre-feet. May not add due to rounding.

**Table 5. Farms Using Off-Farm Water: 2018 and 2013**

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

Geographic area	Farms using any off-farm water											
	Acres in the open						Area under protection					
	Farms	Acres irrigated with off-farm water	Acre-feet applied	Supplier of off-farm water <sup>1</sup>			Farms	Square feet irrigated	Gallons applied (1,000)	Supplier of off-farm water <sup>1</sup>		
				Bureau of Reclamation	Other Federal agencies	All other suppliers				Bureau of Reclamation	Other Federal agencies	All other suppliers
United States .....2018	98,490	15,923,220	33,557,216	29,630	6,903	47,765	6,310	391,322,140	3,881,903	219	183	4,940
.....2013	96,646	14,448,939	30,780,070	24,376	6,129	47,191	8,490	368,339,216	3,902,891	255	250	6,090
<b>2018 DATA</b>												
Alabama .....	142	19,899	12,953	-	1	133	98	9,490,140	44,912	-	-	65
Alaska .....	18	27	20	-	-	17	20	132,800	233	-	-	20
Arizona .....	1,923	658,483	3,114,995	511	164	867	71	2,136,240	25,117	22	-	49
Arkansas .....	147	18,635	18,766	-	12	118	77	1,721,374	16,756	-	-	55
California .....	21,415	4,235,756	11,741,622	4,536	1,092	13,664	812	148,161,234	1,486,116	50	39	612
Colorado .....	10,532	1,094,638	1,838,773	3,571	728	4,888	202	6,845,433	96,111	11	7	162
Connecticut .....	5	115	(D)	-	-	4	28	3,793,160	(D)	-	-	27
Delaware .....	10	12,460	6,004	-	-	4	4	25,200	32	-	-	4
Florida .....	236	333,586	495,701	-	12	191	29	14,408,458	119,113	-	23	6
Georgia .....	132	35,184	11,180	-	-	74	61	1,975,308	11,512	-	-	57
Hawaii .....	1,293	20,369	28,104	-	3	951	500	28,363,711	291,183	-	7	403
Idaho .....	11,145	1,885,411	3,835,413	4,629	746	3,453	140	1,161,248	16,798	21	9	85
Illinois .....	89	6,581	4,912	-	-	44	48	1,486,800	7,017	-	-	48
Indiana .....	94	8,309	3,063	-	-	75	89	2,625,168	27,626	-	-	57
Iowa .....	94	5,023	1,414	-	-	94	136	9,174,610	46,688	-	-	116
Kansas .....	396	78,312	50,831	131	19	163	109	2,738,044	29,925	-	10	99
Kentucky .....	296	2,479	1,469	-	27	240	373	4,959,812	28,131	-	-	361
Louisiana .....	96	24,794	26,264	-	13	56	68	635,500	6,864	-	-	40
Maine .....	78	3,089	858	-	1	70	19	383,348	(D)	-	-	13
Maryland .....	23	1,443	177	-	-	23	23	299,800	335	-	-	23
Massachusetts .....	98	2,243	678	-	43	45	101	1,373,560	(D)	-	-	31
Michigan .....	84	9,861	3,122	-	-	65	225	24,447,784	286,072	-	-	192
Minnesota .....	91	6,773	4,907	-	-	73	43	3,105,080	56,073	-	-	29
Mississippi .....	74	675	456	-	6	67	64	940,020	(D)	-	-	58
Missouri .....	240	5,157	1,914	-	7	162	116	2,663,840	42,155	-	1	99
Montana .....	6,500	1,496,472	1,744,436	1,539	561	2,365	54	576,972	4,507	-	4	39
Nebraska .....	2,142	653,634	576,187	943	154	871	37	549,585	(D)	9	9	19
Nevada .....	920	230,939	634,312	307	31	429	24	140,300	237	-	-	22
New Hampshire .....	82	561	85	-	1	48	82	858,700	10,939	-	-	78
New Jersey .....	121	911	482	-	-	98	53	1,510,000	2,174	-	-	53
New Mexico .....	6,404	309,874	572,588	2,149	456	3,050	61	1,867,280	(D)	-	1	60
New York .....	401	6,979	5,229	-	-	376	232	19,644,841	222,628	-	-	186
North Carolina .....	145	835	162	-	-	137	89	839,924	28,332	-	-	74
North Dakota .....	236	91,229	67,292	98	-	76	20	283,633	(D)	-	-	16
Ohio .....	222	2,564	1,491	-	-	197	210	7,095,715	96,835	-	16	145
Oklahoma .....	288	65,532	60,754	89	53	183	85	2,108,256	5,100	-	1	74
Oregon .....	7,390	814,713	1,536,900	2,571	255	3,426	245	17,544,800	287,554	49	8	175
Pennsylvania .....	189	879	347	-	3	162	192	9,927,316	46,957	-	-	147
Rhode Island .....	20	1,065	(D)	-	-	20	20	335,500	3,923	-	-	20
South Carolina .....	186	1,488	1,306	-	-	105	45	81,350	575	-	-	45
South Dakota .....	427	151,658	136,418	243	28	61	34	943,975	18,636	-	-	27
Tennessee .....	203	531	347	-	-	203	301	5,471,763	89,359	-	-	301
Texas .....	2,355	523,490	1,057,342	267	358	1,441	236	22,340,874	97,519	3	1	221
Utah .....	10,447	854,766	1,586,242	3,256	1,504	5,307	216	6,374,120	74,065	15	40	156
Vermont .....	54	733	228	-	-	27	97	1,104,950	6,323	-	-	44
Virginia .....	87	105	87	-	-	86	78	2,174,760	14,916	-	-	77
Washington .....	6,671	1,236,367	2,824,191	3,031	326	2,078	248	13,343,440	131,670	39	7	136
West Virginia .....	84	150	86	-	-	84	99	1,908,828	7,505	-	-	75
Wisconsin .....	75	8,431	2,438	-	-	73	54	421,200	436	-	-	-
Wyoming .....	4,090	1,000,012	1,544,517	1,759	299	1,321	42	826,386	7,102	-	-	39
<b>Water Resources Regions</b>												
Region 01 New England .....	314	7,479	1,855	-	45	193	280	6,934,068	74,558	-	-	174
Region 02 Mid-Atlantic .....	464	15,673	7,062	-	3	408	316	18,886,165	60,631	-	-	251
Region 03 South Atlantic-Gulf .....	869	378,749	517,018	-	19	661	399	28,019,460	208,270	-	23	317
Region 04 Great Lakes .....	522	22,864	10,985	-	-	443	546	40,401,429	542,131	-	16	395
Region 05 Ohio .....	690	8,941	3,957	-	27	606	852	16,232,181	159,932	-	-	765
Region 06 Tennessee .....	191	13,048	4,778	-	-	191	148	3,198,542	42,770	-	-	148
Region 07 Upper Mississippi .....	293	19,259	8,274	-	-	263	291	12,479,020	131,134	-	-	214
Region 08 Lower Mississippi .....	135	26,552	34,883	-	2	109	179	2,007,250	32,147	-	-	151
Region 09 Souris-Red-Rainy .....	74	3,697	4,544	-	-	56	15	248,108	1,746	-	-	15
Region 10 Missouri .....	13,817	3,193,098	3,870,378	4,636	912	5,458	324	15,320,127	162,414	10	24	260
Region 11 Arkansas-White-Red .....	2,135	323,493	330,794	505	348	1,105	235	4,880,177	25,344	-	1	202
Region 12 Texas-Gulf .....	1,942	476,611	976,023	239	259	1,235	244	22,352,874	97,530	3	1	221
Region 13 Rio Grande .....	5,471	309,766	461,231	1,817	241	2,687	49	522,200	13,390	-	-	49
Region 14 Upper Colorado .....	11,291	1,106,586	2,055,887	4,313	1,273	4,629	213	3,723,344	42,758	13	15	181
Region 15 Lower Colorado .....	2,301	706,154	3,329,827	580	191	1,131	81	2,202,440	25,811	22	-	55
Region 16 Great Basin .....	8,719	962,238	1,928,158	2,509	948	4,643	146	5,064,240	45,861	12	33	88
Region 17 Pacific Northwest .....	26,252	4,053,506	8,323,889	10,264	1,540	9,266	643	30,298,770	428,408	101	24	410
Region 18 California .....	21,699	4,275,110	11,659,549	4,767	1,092	13,713	829	150,055,234	1,495,652	58	39	621
Region 19 Alaska .....	18	27	20	-	-	17	20	132,800	233	-	-	20
Region 20 Hawaii .....	1,293	20,369	28,104	-	3	951	500	28,363,711	291,183	-	7	403

<sup>1</sup> Counts include only farms reporting a source of off-farm water.

**Table 6. Farms Using Recycled or Reclaimed Water: 2018 and 2013**

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

Geographic area	Recycled water used <sup>1</sup>				Reclaimed water used									
	Acres in the open		Area under protection		Acres in the open		Area under protection		Total acre-feet applied	Source of reclaimed water <sup>2</sup>				
	Farms	Acres irrigated	Farms	Square feet	Farms <sup>3</sup>	Acres irrigated	Farms <sup>3</sup>	Square feet		Municipal	Industrial	On-farm livestock operation	Off-farm livestock operation	Other
United States .....2018	4,829	975,941	456	126,777,377	2,556	519,735	95	22,140,886	640,491	688	70	1,059	229	413
.....2013	5,718	1,080,526	535	164,777,627	2,323	309,075	216	6,739,618	341,784	766	56	962	159	557
<b>2018 DATA</b>														
Alabama .....	35	537	20	1,689,024	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	36	5,001	-	-	18	4,036	9	2,160	2,345	17	1	1	1	1
Arkansas .....	573	320,944	2	(D)	5	500	-	-	500	-	-	5	-	-
California .....	800	273,694	54	29,110,385	756	260,395	21	9,102,628	377,595	343	6	302	52	94
Colorado .....	230	12,947	3	30,000	173	17,894	-	-	10,886	24	-	34	42	73
Connecticut .....	29	1,136	2	(D)	-	-	-	-	-	-	-	-	-	-
Delaware .....	6	1,200	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	54	22,069	26	1,766,800	4	5,810	24	(D)	764	27	-	-	-	-
Georgia .....	68	5,154	2	(D)	23	460	-	-	207	-	-	23	-	-
Hawaii .....	34	50	-	-	2	(D)	-	-	(D)	1	-	-	-	-
Idaho .....	152	6,542	-	-	124	24,767	3	12,000	45,209	7	-	9	3	80
Illinois .....	25	555	30	31,444,260	5	475	-	-	120	-	-	-	-	5
Indiana .....	67	6,941	3	(D)	-	-	1	(D)	(D)	-	-	1	-	-
Iowa .....	24	1,995	5	13,500	18	720	-	-	144	-	-	-	-	-
Kansas .....	110	8,673	-	-	73	16,985	-	-	6,160	3	-	48	18	-
Kentucky .....	3	(D)	2	(D)	-	-	-	-	-	-	-	-	-	-
Louisiana .....	129	29,484	13	5,007,952	-	-	-	-	-	-	-	-	-	-
Maine .....	59	(D)	35	114,080	-	-	-	-	-	-	-	-	-	-
Maryland .....	23	240	2	(D)	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	204	6,138	-	-	6	18	-	-	12	6	-	-	-	6
Michigan .....	103	4,890	41	2,484,000	81	6,500	-	-	2,138	-	-	81	-	-
Minnesota .....	72	1,223	8	656,352	37	2,560	-	-	2,214	18	19	-	-	-
Mississippi .....	164	57,682	-	-	15	1,881	-	-	853	-	-	15	-	-
Missouri .....	51	3,118	2	(D)	16	520	2	(D)	370	-	-	10	-	8
Montana .....	40	9,015	-	-	74	3,266	-	-	3,128	4	-	-	-	23
Nebraska .....	514	37,061	-	-	295	48,504	-	-	15,651	29	32	185	34	-
Nevada .....	1	(D)	-	-	36	7,770	-	-	8,840	1	-	5	-	15
New Hampshire .....	5	(D)	5	(D)	-	-	-	-	-	-	-	-	-	-
New Jersey .....	41	1,395	40	4,924,780	-	-	-	-	-	-	-	-	-	-
New Mexico .....	10	1,900	-	-	76	6,408	-	-	3,282	9	-	33	-	-
New York .....	3	300	23	4,440,942	23	575	-	-	46	23	-	-	-	-
North Carolina .....	89	2,875	4	12,583,640	32	1,412	-	-	424	8	-	24	-	-
North Dakota .....	-	-	2	(D)	31	4,960	-	-	806	31	-	-	-	-
Ohio .....	13	1,368	37	11,711,456	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	7	(D)	5	525,902	2	(D)	-	-	(D)	-	-	-	-	2
Oregon .....	274	24,700	14	5,015,706	93	4,270	-	-	1,073	-	-	69	-	24
Pennsylvania .....	25	558	-	-	22	44	-	-	22	-	-	22	-	-
Rhode Island .....	1	(D)	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	38	5,710	-	-	25	100	14	17,500	17,575	14	-	25	-	-
South Dakota .....	25	692	2	(D)	38	4,085	-	-	1,672	19	-	19	-	-
Tennessee .....	14	77	21	862,848	-	-	-	-	-	-	-	-	-	-
Texas .....	267	67,795	17	(D)	180	41,231	21	(D)	37,256	47	-	94	-	59
Utah .....	60	2,396	-	-	81	2,079	-	-	810	27	-	-	27	-
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	37	302	24	(D)	-	-	-	-	-	-	-	-	-	-
Washington .....	100	4,382	6	18,000	92	34,547	-	-	63,078	30	12	-	27	23
West Virginia .....	2	(D)	3	32,670	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	109	16,859	2	(D)	-	-	-	-	-	-	-	-	-	-
Wyoming .....	103	21,720	1	(D)	100	15,023	-	-	36,040	-	-	54	25	-
<b>Water Resources Regions</b>														
Region 01 New England .....	298	7,659	42	229,800	6	18	-	-	12	6	-	-	-	6
Region 02 Mid-Atlantic .....	133	3,880	88	10,630,360	22	(D)	-	-	22	-	-	22	-	-
Region 03 South Atlantic-Gulf .....	267	38,021	52	17,542,322	92	8,998	38	(D)	19,158	49	-	80	-	-
Region 04 Great Lakes .....	183	12,646	52	15,845,998	104	7,075	-	-	2,184	23	-	81	-	-
Region 05 Ohio .....	70	3,891	58	3,435,121	-	-	1	(D)	(D)	-	-	1	-	-
Region 06 Tennessee .....	54	304	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	142	16,986	45	32,166,112	24	1,235	2	(D)	472	-	19	2	-	5
Region 08 Lower Mississippi .....	740	360,783	15	5,010,752	7	665	-	-	665	-	-	7	-	-
Region 09 Souris-Red-Rainy .....	38	684	2	(D)	18	1,800	-	-	1,872	18	-	-	-	-
Region 10 Missouri .....	737	59,432	6	(D)	679	89,568	-	-	62,666	103	32	322	98	71
Region 11 Arkansas-White-Red .....	303	99,750	5	525,902	83	24,711	-	-	22,240	12	-	39	18	10
Region 12 Texas-Gulf .....	194	24,650	17	(D)	182	27,602	21	(D)	17,029	43	-	119	-	40
Region 13 Rio Grande .....	31	2,524	-	-	57	11,041	-	-	6,824	4	-	-	-	19
Region 14 Upper Colorado .....	157	19,231	-	-	79	6,856	-	-	6,700	-	-	-	-	3
Region 15 Lower Colorado .....	36	5,001	-	-	18	4,036	9	2,160	2,345	17	1	1	1	1
Region 16 Great Basin .....	60	2,396	-	-	85	5,025	-	-	6,939	28	-	-	27	15
Region 17 Pacific Northwest .....	545	43,654	20	5,033,706	337	65,056	3	12,000	110,832	41	12	78	30	127
Region 18 California .....	807	274,399	54	29,110,385	761	264,625	21	9,102,628	379,820	343	6	307	52	94
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	34	50	-	-	2	(D)	-	-	(D)	1	-	-	-	-

<sup>1</sup> Amount of recycled water applied was not collected.

<sup>2</sup> Respondents could report more than one source of reclaimed water.

<sup>3</sup> Respondents could report reclaimed water for both acres in the open and area under protection.



**Table 7. Irrigation by Estimated Quantity of Water Applied: 2018 and 2013**

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

Geographic area	Acres in the open											
	Total			Less than 100 acre-feet			100 to 199 acre-feet			200 to 499 acre-feet		
	Farms	Acres irrigated	Acre-feet of water applied	Farms	Acres irrigated	Acre-feet of water applied	Farms	Acres irrigated	Acre-feet of water applied	Farms	Acres irrigated	Acre-feet of water applied
United States .....	220,566	55,886,470	83,332,760	145,428	4,501,839	2,979,498	20,832	3,487,471	2,908,005	22,748	7,484,890	7,209,250
2013 .....	218,172	55,283,340	88,455,968	140,098	3,502,479	2,734,968	19,109	2,996,660	2,715,995	23,538	6,966,970	7,387,859
<b>2018 DATA</b>												
Alabama .....	910	162,612	95,915	720	38,019	10,417	76	21,670	8,990	74	34,987	20,845
Alaska .....	157	(D)	1,207	154	(D)	423	2	(D)	(D)	1	(D)	(D)
Arizona .....	3,004	945,236	4,409,708	1,946	44,345	41,156	159	7,275	23,635	182	10,319	52,955
Arkansas .....	3,088	4,246,295	5,071,653	753	35,753	19,372	182	38,716	26,023	314	142,431	105,535
California .....	41,431	8,399,881	24,490,687	26,751	395,052	558,713	3,728	276,943	511,407	4,028	569,652	1,336,043
Colorado .....	14,413	2,458,120	3,840,763	9,856	246,173	234,596	1,415	184,322	200,861	1,305	298,165	430,013
Connecticut .....	500	4,936	2,906	498	(D)	(D)	-	-	-	1	(D)	(D)
Delaware .....	506	201,224	79,744	292	33,381	8,329	135	57,880	19,189	42	35,943	13,108
Florida .....	7,027	1,324,471	1,352,233	6,013	159,406	87,248	416	70,667	55,900	247	58,182	70,675
Georgia .....	3,764	1,162,380	817,940	2,591	145,736	48,612	280	80,419	39,128	405	208,813	131,883
Hawaii .....	1,528	(D)	35,530	1,496	7,217	8,187	1	(D)	(D)	20	5,472	(D)
Idaho .....	14,741	3,392,674	6,614,755	8,901	174,064	207,283	1,712	170,894	247,513	1,794	336,734	545,924
Illinois .....	1,690	564,575	332,220	956	85,185	25,415	320	91,950	43,446	259	146,951	86,342
Indiana .....	1,886	582,102	247,555	1,336	156,167	43,524	198	67,360	27,887	233	159,657	66,957
Iowa .....	876	165,621	60,983	723	65,571	16,173	63	28,942	8,704	78	46,905	25,441
Kansas .....	4,176	2,386,483	2,458,994	1,310	108,835	58,977	892	179,717	125,266	756	291,799	233,677
Kentucky .....	812	57,506	21,991	763	7,541	3,687	21	10,590	3,615	19	15,820	6,044
Louisiana .....	1,756	1,071,564	1,019,977	718	36,190	15,238	109	28,750	17,755	361	208,348	118,199
Maine .....	784	(D)	15,535	769	11,513	4,289	1	(D)	(D)	8	8,664	(D)
Maryland .....	798	124,486	68,096	604	17,573	10,144	105	41,724	14,944	50	32,353	16,914
Massachusetts .....	1,129	18,834	22,588	1,085	12,578	3,953	37	2,446	4,975	-	-	-
Michigan .....	3,308	824,218	454,261	2,417	142,505	34,708	357	124,232	49,241	277	185,737	85,528
Minnesota .....	2,155	553,858	248,126	1,630	158,867	37,612	229	74,683	30,946	174	108,856	57,259
Mississippi .....	1,517	(D)	1,168,359	575	(D)	(D)	161	50,506	23,519	217	126,431	68,999
Missouri .....	2,470	1,428,310	1,109,102	1,426	70,823	22,010	203	59,425	28,534	306	211,696	96,846
Montana .....	8,743	2,139,878	2,548,878	5,246	195,250	162,054	948	162,505	134,989	1,165	365,666	360,250
Nebraska .....	12,937	7,665,880	4,856,075	4,658	659,925	196,596	2,286	704,196	319,012	2,946	1,825,282	949,573
Nevada .....	1,825	693,466	1,920,216	712	14,261	23,868	163	10,330	25,387	305	41,585	89,565
New Hampshire .....	555	(D)	1,688	553	(D)	(D)	1	(D)	(D)	1	(D)	(D)
New Jersey .....	1,423	88,604	50,318	1,342	49,936	17,435	23	8,768	3,226	40	17,212	12,931
New Mexico .....	10,046	675,092	1,337,721	8,499	113,260	121,355	432	32,121	60,596	691	91,253	191,899
New York .....	1,586	45,847	33,011	1,528	31,396	11,795	28	5,371	3,111	17	4,709	5,621
North Carolina .....	2,024	131,631	54,315	1,864	46,747	15,808	73	16,779	9,825	78	53,980	19,937
North Dakota .....	703	(D)	189,921	300	33,880	11,515	111	(D)	15,662	219	122,284	67,888
Ohio .....	1,111	37,740	15,877	1,079	21,557	5,250	15	5,285	1,985	8	4,830	2,315
Oklahoma .....	1,704	(D)	661,996	951	37,315	19,465	106	(D)	14,451	342	102,611	108,733
Oregon .....	13,505	1,577,008	2,716,564	10,487	209,047	181,439	906	122,058	122,879	992	194,950	335,790
Pennsylvania .....	1,899	37,849	38,272	1,885	20,614	6,503	3	490	(D)	6	1,745	(D)
Rhode Island .....	176	(D)	936	174	(D)	(D)	2	(D)	(D)	-	-	-
South Carolina .....	1,440	252,409	203,351	1,156	28,486	13,065	50	11,006	6,581	114	71,104	44,263
South Dakota .....	1,186	378,309	261,342	442	46,155	11,916	409	100,200	55,386	255	106,219	69,447
Tennessee .....	1,067	190,003	80,824	942	67,917	18,544	42	(D)	6,016	42	36,987	13,197
Texas .....	11,644	4,083,451	5,343,356	6,852	186,364	121,882	1,076	201,120	149,436	1,386	493,817	428,406
Utah .....	12,487	1,181,301	2,326,069	8,982	178,678	239,527	1,336	112,288	186,246	1,018	191,155	312,570
Vermont .....	375	2,613	2,025	374	(D)	(D)	-	-	-	1	(D)	(D)
Virginia .....	1,116	47,136	13,542	1,091	27,138	6,922	14	9,982	1,698	8	(D)	2,544
Washington .....	11,014	1,864,760	4,071,896	7,720	128,518	148,358	868	71,748	121,239	944	197,936	307,478
West Virginia .....	286	6,188	1,740	281	793	405	-	-	-	5	5,395	1,335
Wisconsin .....	1,790	517,394	293,431	1,379	93,325	26,708	189	72,023	24,318	119	78,409	32,121
Wyoming .....	5,498	1,561,506	2,268,768	2,648	117,659	102,609	949	124,807	133,170	895	227,986	273,093
<b>Water Resources Regions</b>												
Region 01 New England .....	3,334	66,062	44,532	3,269	34,899	12,934	41	(D)	5,438	10	9,072	2,990
Region 02 Mid-Atlantic .....	5,822	518,002	263,819	5,257	156,424	51,996	303	121,495	41,915	156	98,815	49,742
Region 03 South Atlantic-Gulf .....	15,502	3,032,227	2,521,236	12,687	422,630	178,841	906	204,641	121,578	895	412,436	281,228
Region 04 Great Lakes .....	5,752	1,124,241	574,437	4,574	224,438	58,649	491	186,315	67,664	371	254,195	111,526
Region 05 Ohio .....	3,536	441,080	208,453	3,089	117,833	38,054	152	53,273	21,047	234	163,293	76,219
Region 06 Tennessee .....	857	(D)	45,012	784	(D)	4,495	19	(D)	(D)	32	(D)	(D)
Region 07 Upper Mississippi .....	5,953	1,624,769	860,160	4,318	391,483	101,156	695	205,120	93,453	553	306,927	170,390
Region 08 Lower Mississippi .....	6,368	(D)	7,422,885	1,763	155,077	55,605	476	(D)	70,696	1,005	612,196	331,825
Region 09 Souris-Red-Rainy .....	571	207,595	116,902	297	12,134	5,727	115	29,795	16,186	87	51,260	30,134
Region 10 Missouri .....	32,378	13,105,909	11,265,893	14,947	1,161,436	521,305	5,248	1,224,532	733,479	6,068	2,873,841	1,924,795
Region 11 Arkansas-White-Red .....	9,289	4,876,728	5,714,078	4,258	181,926	109,562	986	176,384	140,592	1,460	468,128	451,970
Region 12 Texas-Gulf .....	9,635	2,693,245	3,509,476	6,015	155,032	106,752	847	160,812	119,904	1,146	418,124	353,005
Region 13 Rio Grande .....	8,690	709,230	1,483,424	7,318	90,156	96,530	334	23,374	45,828	527	56,354	146,569
Region 14 Upper Colorado .....	13,125	1,472,320	2,558,532	9,601	228,091	238,928	1,484	181,640	210,501	959	177,422	300,089
Region 15 Lower Colorado .....	3,785	1,035,023	4,726,392	2,581	53,306	55,768	201	11,175	28,405	260	19,949	79,430
Region 16 Great Basin .....	11,259	1,763,271	3,942,124	7,351	144,467	191,532	1,150	100,062	162,855	1,077	199,999	324,564
Region 17 Pacific Northwest .....	41,158	7,010,052	13,591,647	28,674	548,167	579,330	3,545	355,691	497,454	3,811	755,519	1,205,586
Region 18 California .....	41,867	8,483,718	24,447,021	26,995	402,953	563,724	3,836	304,262	527,761	4,076	584,268	1,353,947
Region 19 Alaska .....	157	(D)	1,207	154	(D)	423	2	(D)	(D)	1	(D)	(D)
Region 20 Hawaii .....	1,528	(D)	35,530	1,496	7,217	8,187	1	(D)	(D)	20	5,472	(D)

See footnote(s) at end of table.

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**Table 7. Irrigation by Estimated Quantity of Water Applied: 2018 and 2013 (continued)**

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

Geographic area	Acres in the open - con.								
	500 to 999 acre-feet			1,000 to 1,999 acre-feet			2,000 acre-feet or more		
	Farms	Acres irrigated	Acre-feet of water applied	Farms	Acres irrigated	Acre-feet of water applied	Farms	Acres irrigated	Acre-feet of water applied
United States .....2018	13,631	8,532,800	9,563,173	9,222	9,250,342	12,832,775	8,705	22,629,128	47,840,059
.....2013	14,069	7,751,010	9,852,171	11,582	10,631,863	16,146,214	9,776	23,434,358	49,618,761
<b>2018 DATA</b>									
Alabama .....	16	(D)	(D)	22	42,046	35,677	2	(D)	(D)
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	163	28,344	122,596	136	53,900	190,239	418	801,053	3,979,127
Arkansas .....	451	405,998	325,060	575	810,222	820,433	813	2,813,175	3,775,230
California .....	2,518	754,765	1,823,202	1,820	868,256	2,580,859	2,586	5,535,213	17,680,463
Colorado .....	825	385,812	595,998	590	502,676	856,083	422	840,972	1,523,212
Connecticut .....	1	(D)	(D)	-	-	-	-	-	-
Delaware .....	27	42,977	20,551	3	10,294	4,213	7	20,749	14,354
Florida .....	155	106,459	116,577	88	172,508	128,501	108	757,249	893,332
Georgia .....	295	303,669	205,146	133	186,606	159,869	60	237,137	233,302
Hawaii .....	4	(D)	2,580	4	4,671	5,887	3	6,681	12,911
Idaho .....	996	383,321	697,892	670	515,458	979,495	668	1,812,203	3,936,648
Illinois .....	88	88,777	64,644	57	88,253	69,928	10	63,459	42,445
Indiana .....	92	130,999	63,550	16	35,210	21,683	11	32,709	23,954
Iowa .....	10	(D)	(D)	1	(D)	(D)	1	(D)	(D)
Kansas .....	620	475,840	442,083	321	443,823	467,450	277	886,469	1,131,541
Kentucky .....	5	9,956	3,713	4	13,599	4,932	-	-	-
Louisiana .....	226	196,932	159,282	190	259,684	244,554	152	341,660	464,949
Maine .....	4	2,729	(D)	1	(D)	(D)	1	(D)	(D)
Maryland .....	35	30,436	21,894	4	2,400	4,200	-	-	-
Massachusetts .....	2	(D)	(D)	4	(D)	(D)	1	(D)	(D)
Michigan .....	165	139,517	112,962	70	102,230	86,753	22	129,997	85,069
Minnesota .....	93	107,023	62,895	22	56,548	31,116	7	47,881	28,298
Mississippi .....	225	298,312	156,628	162	370,134	230,832	177	792,888	677,356
Missouri .....	209	260,353	153,594	194	340,122	267,072	132	485,891	541,046
Montana .....	810	463,791	565,913	375	409,936	522,744	199	542,730	802,928
Nebraska .....	1,813	1,930,220	1,238,985	956	1,541,786	1,255,844	278	1,004,471	896,065
Nevada .....	149	43,585	110,160	216	103,276	296,403	280	480,429	1,374,833
New Hampshire .....	-	-	-	-	-	-	-	-	-
New Jersey .....	15	8,656	10,492	2	(D)	(D)	1	(D)	(D)
New Mexico .....	208	94,816	145,505	122	113,316	168,093	94	230,326	650,273
New York .....	9	2,841	6,634	4	1,530	5,850	-	-	-
North Carolina .....	4	6,875	2,645	5	7,250	6,100	-	-	-
North Dakota .....	28	30,319	15,778	36	49,255	49,400	9	42,302	29,678
Ohio .....	9	6,068	6,327	-	-	-	-	-	-
Oklahoma .....	142	81,312	95,799	113	172,900	157,496	50	191,604	266,052
Oregon .....	573	239,713	389,342	270	196,578	361,501	277	614,662	1,325,613
Pennsylvania .....	-	-	-	-	-	-	5	15,000	30,000
Rhode Island .....	-	-	-	-	-	-	-	-	-
South Carolina .....	68	51,064	45,656	41	40,557	46,350	11	50,192	47,436
South Dakota .....	39	38,171	26,006	10	21,115	13,180	31	66,449	85,407
Tennessee .....	21	40,191	(D)	19	30,155	26,751	1	(D)	(D)
Texas .....	907	639,163	601,753	742	794,839	1,058,337	681	1,768,148	2,983,542
Utah .....	573	194,070	394,306	374	228,931	490,016	204	276,179	703,404
Vermont .....	-	-	-	-	-	-	-	-	-
Virginia .....	2	(D)	(D)	1	(D)	(D)	-	-	-
Washington .....	587	164,425	428,966	461	298,777	621,648	434	1,003,356	2,444,007
West Virginia .....	-	-	-	-	-	-	-	-	-
Wisconsin .....	31	33,661	17,459	36	74,092	54,072	36	165,884	138,753
Wyoming .....	418	273,444	272,658	352	275,306	495,297	236	542,304	991,941
<b>Water Resources Regions</b>									
Region 01 New England .....	7	(D)	(D)	5	4,456	7,784	2	(D)	(D)
Region 02 Mid-Atlantic .....	79	85,763	54,065	14	18,251	18,888	13	37,254	47,213
Region 03 South Atlantic-Gulf .....	551	501,942	388,785	281	434,450	365,784	182	1,056,128	1,185,020
Region 04 Great Lakes .....	215	198,800	146,411	74	117,845	93,424	27	142,648	96,763
Region 05 Ohio .....	39	32,552	27,453	10	27,877	13,443	12	46,252	32,237
Region 06 Tennessee .....	6	(D)	(D)	15	22,797	21,675	1	(D)	(D)
Region 07 Upper Mississippi .....	220	268,259	148,470	121	213,950	162,352	46	239,030	184,339
Region 08 Lower Mississippi .....	969	1,043,182	691,148	1,026	1,657,289	1,421,882	1,129	4,016,263	4,851,729
Region 09 Souris-Red-Rainy .....	56	56,527	36,481	12	27,600	13,855	4	30,279	14,519
Region 10 Missouri .....	3,268	2,810,209	2,228,999	1,995	2,561,350	2,724,737	852	2,474,541	3,132,578
Region 11 Arkansas-White-Red .....	1,147	821,144	809,043	732	944,820	1,074,915	706	2,284,326	3,127,996
Region 12 Texas-Gulf .....	686	485,540	464,211	536	567,647	731,378	405	906,090	1,734,226
Region 13 Rio Grande .....	148	52,774	96,420	156	113,854	228,821	207	372,718	869,256
Region 14 Upper Colorado .....	577	250,267	412,863	246	196,904	358,219	258	437,996	1,037,932
Region 15 Lower Colorado .....	163	28,344	122,596	143	58,800	198,639	437	863,449	4,241,554
Region 16 Great Basin .....	630	209,539	444,792	595	373,871	810,811	456	735,333	2,007,570
Region 17 Pacific Northwest .....	2,348	921,310	1,654,962	1,428	1,019,454	1,985,270	1,352	3,409,911	7,669,045
Region 18 California .....	2,518	754,765	1,823,202	1,829	884,456	2,595,011	2,613	5,553,014	17,583,376
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	4	(D)	2,580	4	4,671	5,887	3	6,681	12,911

See footnote(s) at end of table.

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**Table 7. Irrigation by Estimated Quantity of Water Applied: 2018 and 2013 (continued)**

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

Geographic area	Area under protection											
	Total			Less than 250,000 gallons			250,000 to 499,999 gallons			500,000 to 999,999 gallons		
	Farms	Acres irrigated <sup>1</sup>	Gallons applied (1,000)	Farms	Acres irrigated <sup>1</sup>	Gallons applied (1,000)	Farms	Acres irrigated <sup>1</sup>	Gallons applied (1,000)	Farms	Acres irrigated <sup>1</sup>	Gallons applied (1,000)
United States .....	2018 24,876	35,012	15,704,320	19,413	4,926	961,973	1,911	2,591	667,078	1,412	2,938	973,475
2013	24,829	32,263	17,870,533	19,108	3,492	861,748	2,105	1,938	729,608	1,231	1,874	863,470
<b>2018 DATA</b>												
Alabama .....	313	521	103,119	223	59	10,588	40	(D)	(D)	30	135	19,280
Alaska .....	208	49	14,418	200	33	5,260	-	-	-	5	5	3,919
Arizona .....	127	275	237,527	70	40	4,953	20	15	(D)	14	12	(D)
Arkansas .....	157	93	25,230	133	50	6,740	10	(D)	3,375	11	32	7,421
California .....	1,697	7,550	4,703,858	818	284	38,226	191	439	65,755	238	651	178,977
Colorado .....	380	331	177,729	285	29	14,613	60	(D)	21,248	2	(D)	(D)
Connecticut .....	455	862	402,831	291	42	10,549	39	83	(D)	44	21	23,794
Delaware .....	44	54	5,908	34	29	1,442	8	19	(D)	1	(D)	(D)
Florida .....	1,346	6,586	2,221,415	811	421	57,027	84	94	26,106	127	467	100,054
Georgia .....	334	466	169,196	202	94	11,692	69	53	25,119	37	93	24,909
Hawaii .....	569	691	322,731	485	217	31,127	6	9	1,602	21	29	13,028
Idaho .....	336	100	62,808	316	32	10,772	3	(D)	(D)	12	15	7,566
Illinois .....	434	1,149	280,622	331	121	24,305	30	23	10,030	36	65	22,265
Indiana .....	435	226	106,681	375	63	18,287	41	52	13,558	3	4	2,650
Iowa .....	379	271	83,257	297	55	10,999	47	36	16,059	25	48	(D)
Kansas .....	210	201	58,944	139	43	7,846	40	25	14,389	13	12	8,309
Kentucky .....	686	208	53,949	629	138	23,733	41	16	11,690	9	18	(D)
Louisiana .....	274	277	46,973	233	69	10,035	20	69	(D)	11	(D)	8,089
Maine .....	558	156	33,875	535	90	14,427	20	21	(D)	-	-	-
Maryland .....	383	248	114,299	317	52	8,800	37	21	11,882	5	27	3,260
Massachusetts .....	434	151	66,158	402	103	43,340	-	-	-	30	33	(D)
Michigan .....	1,205	1,995	1,062,814	878	237	45,407	86	135	34,760	55	143	37,181
Minnesota .....	420	417	286,126	324	60	17,740	22	10	(D)	20	17	15,878
Mississippi .....	203	98	11,034	194	72	7,698	8	(D)	(D)	1	(D)	(D)
Missouri .....	639	251	105,773	566	89	25,887	23	10	7,102	30	36	20,482
Montana .....	265	52	20,871	234	16	4,787	21	19	7,562	8	(D)	(D)
Nebraska .....	236	69	27,541	214	23	10,494	10	7	4,133	10	11	8,460
Nevada .....	54	8	1,873	51	5	896	3	3	978	-	-	-
New Hampshire .....	431	190	90,784	335	80	30,829	58	40	(D)	34	(D)	30,521
New Jersey .....	574	1,049	434,989	432	211	22,669	17	21	4,597	45	43	29,458
New Mexico .....	179	94	27,991	166	51	7,582	-	-	-	1	(D)	(D)
New York .....	1,244	1,202	357,639	1,047	216	44,696	53	221	(D)	92	(D)	54,060
North Carolina .....	807	654	441,111	624	128	29,438	77	59	26,008	52	37	36,044
North Dakota .....	37	12	2,892	35	8	1,443	1	(D)	(D)	-	-	-
Ohio .....	905	864	410,236	745	191	44,585	71	43	23,998	33	56	19,523
Oklahoma .....	234	100	21,774	224	39	6,123	8	(D)	(D)	-	-	-
Oregon .....	1,020	1,477	931,860	684	149	37,404	109	96	42,693	116	168	83,633
Pennsylvania .....	1,568	1,670	281,214	1,309	525	73,981	132	456	47,971	58	(D)	40,309
Rhode Island .....	134	43	14,047	121	36	10,168	13	6	3,879	-	-	-
South Carolina .....	241	123	19,596	225	39	7,565	14	(D)	(D)	1	(D)	(D)
South Dakota .....	73	53	32,841	48	8	3,965	7	(D)	(D)	7	6	3,850
Tennessee .....	617	248	181,752	456	43	16,604	50	18	(D)	49	45	29,815
Texas .....	686	1,864	776,321	450	101	23,059	96	46	32,582	54	198	34,371
Utah .....	226	256	182,962	148	23	6,826	35	43	13,464	17	28	11,033
Vermont .....	389	105	35,866	346	50	18,076	40	41	(D)	2	(D)	(D)
Virginia .....	696	572	183,681	633	144	25,978	33	55	11,530	10	(D)	(D)
Washington .....	856	673	286,518	734	148	29,876	53	(D)	(D)	34	44	27,073
West Virginia .....	306	64	15,518	302	36	8,313	2	(D)	(D)	-	-	-
Wisconsin .....	783	315	155,444	690	118	31,421	50	35	19,183	5	23	3,907
Wyoming .....	89	28	11,722	72	18	4,066	13	8	4,394	4	3	3,262
<b>Water Resources Regions</b>												
Region 01 New England .....	2,110	1,431	615,776	1,778	369	115,634	132	161	42,276	110	91	71,211
Region 02 Mid-Atlantic .....	3,378	4,115	1,025,976	2,757	1,013	136,026	251	735	87,044	166	304	100,516
Region 03 South Atlantic-Gulf .....	3,119	8,349	2,956,783	2,210	801	117,959	245	289	81,318	228	631	170,066
Region 04 Great Lakes .....	2,801	3,169	1,681,343	2,309	430	104,737	161	202	63,858	88	204	57,467
Region 05 Ohio .....	2,423	1,153	494,258	2,057	437	97,504	168	97	54,181	87	147	59,403
Region 06 Tennessee .....	635	337	105,058	483	58	16,088	90	92	32,805	40	139	(D)
Region 07 Upper Mississippi .....	1,773	1,863	742,500	1,430	324	75,644	127	91	43,275	78	107	50,608
Region 08 Lower Mississippi .....	471	358	81,105	396	112	19,048	26	74	9,049	38	68	26,175
Region 09 Souris-Red-Rainy .....	47	23	17,185	40	5	887	5	3	(D)	-	-	-
Region 10 Missouri .....	1,220	834	342,827	996	161	50,750	108	88	40,646	51	55	35,908
Region 11 Arkansas-White-Red .....	594	233	65,123	518	106	22,380	59	43	19,366	13	34	(D)
Region 12 Texas-Gulf .....	649	1,732	581,124	427	101	22,545	96	46	32,582	42	186	22,641
Region 13 Rio Grande .....	199	255	220,081	171	23	5,677	-	-	-	13	17	12,708
Region 14 Upper Colorado .....	273	89	46,753	249	54	11,795	7	3	2,450	7	4	4,231
Region 15 Lower Colorado .....	140	280	240,813	80	41	5,647	20	15	(D)	17	15	(D)
Region 16 Great Basin .....	186	231	156,393	119	19	4,545	38	46	14,441	10	24	(D)
Region 17 Pacific Northwest .....	2,370	2,232	1,283,271	1,890	338	80,493	172	125	63,674	155	219	113,762
Region 18 California .....	1,711	7,590	4,710,802	818	284	38,226	200	471	70,064	243	660	181,612
Region 19 Alaska .....	208	49	14,418	200	33	5,260	-	-	-	5	5	3,919
Region 20 Hawaii .....	569	691	322,731	485	217	31,127	6	9	1,602	21	29	13,028

See footnote(s) at end of table.

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**Table 7. Irrigation by Estimated Quantity of Water Applied: 2018 and 2013 (continued)**

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

Geographic area	Area under protection - con.								
	1,000,000 to 1,999,999 gallons			2,000,000 to 4,999,999 gallons			5,000,000 gallons or more		
	Farms	Acres irrigated <sup>1</sup>	Gallons applied (1,000)	Farms	Acres irrigated <sup>1</sup>	Gallons applied (1,000)	Farms	Acres irrigated <sup>1</sup>	Gallons applied (1,000)
United States .....2018	959	4,110	1,297,353	572	3,893	1,724,090	609	16,554	10,080,351
.....2013	911	2,582	1,243,733	821	4,672	2,548,503	653	17,705	11,623,472
<b>2018 DATA</b>									
Alabama .....	15	101	25,992	2	(D)	(D)	3	119	29,315
Alaska .....	2	(D)	(D)	1	(D)	(D)	-	-	-
Arizona .....	8	33	13,664	12	49	50,486	3	128	(D)
Arkansas .....	2	(D)	(D)	-	-	-	1	(D)	(D)
California .....	105	562	157,847	124	601	358,510	221	5,014	3,904,542
Colorado .....	17	87	(D)	11	61	35,487	5	109	85,757
Connecticut .....	72	387	100,866	2	(D)	(D)	7	(D)	248,281
Delaware .....	1	(D)	(D)	-	-	-	-	-	-
Florida .....	117	806	145,120	102	727	252,340	105	4,072	1,640,769
Georgia .....	14	(D)	(D)	1	(D)	(D)	11	174	87,623
Hawaii .....	8	27	9,956	40	273	172,557	9	137	94,461
Idaho .....	-	-	-	2	(D)	(D)	3	39	34,540
Illinois .....	28	110	53,145	4	(D)	9,038	5	745	161,839
Indiana .....	9	35	13,447	3	29	9,542	4	43	49,197
Iowa .....	2	(D)	(D)	7	47	22,245	1	(D)	(D)
Kansas .....	11	76	13,200	7	46	15,200	-	-	-
Kentucky .....	6	(D)	9,542	1	(D)	(D)	-	-	-
Louisiana .....	1	(D)	(D)	9	90	19,800	-	-	-
Maine .....	2	(D)	(D)	-	-	-	1	(D)	(D)
Maryland .....	15	86	17,662	-	-	-	9	63	72,695
Massachusetts .....	1	(D)	(D)	-	-	-	1	(D)	(D)
Michigan .....	79	206	96,752	50	276	186,163	57	998	662,911
Minnesota .....	37	71	47,924	1	(D)	(D)	16	214	194,785
Mississippi .....	-	-	-	-	-	-	-	-	-
Missouri .....	1	(D)	(D)	18	80	40,702	1	(D)	(D)
Montana .....	2	(D)	(D)	-	-	-	-	-	-
Nebraska .....	1	(D)	(D)	1	(D)	(D)	-	-	-
Nevada .....	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	4	(D)	(D)	-	-	-
New Jersey .....	32	130	43,933	41	262	118,079	7	382	216,254
New Mexico .....	10	10	12,578	2	(D)	(D)	-	-	-
New York .....	28	206	29,881	1	(D)	(D)	23	335	207,770
North Carolina .....	42	95	60,309	9	56	20,654	3	280	268,658
North Dakota .....	1	(D)	(D)	-	-	-	-	-	-
Ohio .....	30	109	36,730	20	79	46,420	6	386	238,980
Oklahoma .....	-	-	-	-	-	-	2	(D)	(D)
Oregon .....	39	176	59,135	31	159	124,153	41	729	584,843
Pennsylvania .....	60	270	83,290	8	306	(D)	1	(D)	(D)
Rhode Island .....	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	1	(D)	(D)
South Dakota .....	10	16	14,121	-	-	-	1	(D)	(D)
Tennessee .....	50	61	63,396	10	49	26,723	2	(D)	(D)
Texas .....	34	128	43,720	22	109	65,052	30	1,282	577,536
Utah .....	14	23	16,670	8	27	23,647	4	112	111,323
Vermont .....	1	(D)	(D)	-	-	-	-	-	-
Virginia .....	2	(D)	(D)	12	125	29,543	6	221	108,729
Washington .....	14	69	20,883	5	(D)	(D)	16	309	175,464
West Virginia .....	1	(D)	(D)	1	(D)	(D)	-	-	-
Wisconsin .....	35	62	43,215	-	-	-	3	77	57,719
Wyoming .....	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>									
Region 01 New England .....	75	392	104,766	6	59	18,179	9	359	263,710
Region 02 Mid-Atlantic .....	132	688	171,771	51	624	147,757	21	750	382,862
Region 03 South Atlantic-Gulf .....	189	1,044	249,619	124	896	304,596	123	4,686	2,033,226
Region 04 Great Lakes .....	101	321	125,337	54	364	197,965	88	1,649	1,131,978
Region 05 Ohio .....	71	133	90,101	32	233	79,814	8	107	113,255
Region 06 Tennessee .....	21	31	29,484	1	(D)	(D)	-	-	-
Region 07 Upper Mississippi .....	89	207	129,884	27	130	64,950	22	1,003	378,140
Region 08 Lower Mississippi .....	1	(D)	(D)	9	90	19,800	1	(D)	(D)
Region 09 Souris-Red-Rainy .....	1	(D)	(D)	-	-	-	1	(D)	(D)
Region 10 Missouri .....	39	180	49,207	19	158	55,680	7	192	110,635
Region 11 Arkansas-White-Red .....	2	(D)	(D)	-	-	-	2	(D)	(D)
Region 12 Texas-Gulf .....	34	128	43,720	22	109	65,052	28	1,162	394,584
Region 13 Rio Grande .....	12	70	14,778	1	(D)	(D)	2	(D)	(D)
Region 14 Upper Colorado .....	-	-	-	10	28	28,277	-	-	-
Region 15 Lower Colorado .....	8	33	13,664	12	49	50,486	3	128	(D)
Region 16 Great Basin .....	14	23	16,670	1	(D)	(D)	4	112	111,323
Region 17 Pacific Northwest .....	55	247	82,818	38	227	147,677	60	1,077	794,847
Region 18 California .....	105	562	157,847	124	601	358,510	221	5,014	3,904,542
Region 19 Alaska .....	2	(D)	(D)	1	(D)	(D)	-	-	-
Region 20 Hawaii .....	8	27	9,956	40	273	172,557	9	137	94,461

<sup>1</sup> Acres irrigated are the square feet under protection converted to acres, without rounding.

**Table 8. Irrigation Wells Used on Farms: 2018**

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

Geographic area	Wells used									
	Farms	Number	With flow meters				With backflow prevention devices			
			Farms	Number	Acres irrigated in the open	Square feet under protection irrigated	Farms	Number	Acres irrigated in the open	Square feet under protection irrigated
United States .....	119,235	462,788	41,717	167,946	15,901,044	246,819,352	86,900	342,643	25,524,194	701,583,207
Alabama .....	625	1,021	64	150	18,926	150,720	449	771	45,375	5,403,919
Alaska .....	232	292	10	13	(D)	(D)	122	174	606	1,157,138
Arizona .....	1,195	3,932	519	2,404	215,512	5,232,200	832	2,391	245,566	7,029,940
Arkansas .....	2,814	41,247	541	3,828	457,204	-	1,486	14,251	1,432,811	644,105
California .....	24,342	67,354	8,627	26,499	2,201,411	116,788,922	18,817	53,289	3,339,468	158,612,107
Colorado .....	2,853	10,306	1,839	8,077	935,656	5,891,175	2,082	8,715	961,878	6,414,095
Connecticut .....	468	1,018	61	94	127	4,554,000	327	860	696	22,493,220
Delaware .....	517	2,747	79	379	27,087	(D)	417	2,385	142,976	1,289,808
Florida .....	7,043	18,646	1,805	6,038	344,300	24,617,277	5,419	13,852	491,389	176,187,179
Georgia .....	3,256	11,198	1,582	7,593	650,828	7,675,299	2,494	9,385	692,899	10,560,901
Hawaii .....	83	87	13	14	2,323	816,960	15	17	2,591	704,966
Idaho .....	3,015	7,371	1,185	3,876	593,923	620,373	1,903	5,053	714,955	2,045,636
Illinois .....	1,548	5,095	249	744	87,514	1,592,200	1,280	4,424	442,848	37,199,635
Indiana .....	1,709	5,056	306	613	49,269	49,000	1,348	4,179	360,370	4,099,115
Iowa .....	826	1,947	69	202	15,159	79,120	629	1,415	109,133	2,398,836
Kansas .....	3,758	18,877	3,421	18,005	2,144,645	3,324,640	3,273	17,625	2,134,256	3,943,920
Kentucky .....	285	549	15	27	899	32,832	221	442	28,540	699,726
Louisiana .....	1,575	10,102	86	462	43,812	680,700	918	4,121	372,608	3,717,058
Maine .....	740	950	30	47	(D)	34,020	376	468	1,381	1,185,566
Maryland .....	776	2,136	107	204	9,474	895,729	557	1,712	68,547	5,679,094
Massachusetts .....	518	790	72	144	(D)	608,760	485	667	2,559	2,319,401
Michigan .....	3,254	9,691	598	2,252	106,382	8,446,720	2,694	7,599	526,412	20,746,734
Minnesota .....	2,079	5,905	813	2,126	219,306	8,466,372	1,671	4,982	429,313	11,911,132
Mississippi .....	1,354	14,684	685	4,505	491,360	262,080	934	9,533	955,677	1,864,320
Missouri .....	2,037	14,641	161	679	85,084	299,300	1,283	7,306	583,632	2,911,700
Montana .....	1,336	1,817	204	269	19,874	186,360	901	988	26,445	986,844
Nebraska .....	11,801	66,940	7,931	38,311	4,095,335	27,000	9,932	56,892	5,995,061	957,620
Nevada .....	771	2,204	467	1,598	199,573	7,903	441	1,561	161,155	(D)
New Hampshire .....	510	655	36	61	154	1,367,400	329	441	520	2,624,822
New Jersey .....	1,233	2,708	291	652	16,341	6,519,114	851	2,205	47,727	34,178,537
New Mexico .....	4,103	9,977	2,072	4,724	207,854	442,314	2,258	7,390	338,460	635,250
New York .....	1,302	1,896	92	114	970	1,475,760	896	1,280	8,721	23,406,911
North Carolina .....	1,228	1,643	67	101	4,131	174,800	723	962	10,454	5,212,206
North Dakota .....	420	2,157	319	1,618	130,849	6,400	411	2,090	169,977	240,712
Ohio .....	892	1,203	164	170	2,690	205,920	631	860	11,345	6,992,013
Oklahoma .....	1,303	5,702	246	1,101	137,831	136,726	912	3,722	321,415	1,119,066
Oregon .....	4,518	8,992	1,137	2,345	180,583	10,549,894	2,943	5,670	277,546	34,806,914
Pennsylvania .....	1,983	2,764	272	449	10,287	3,259,673	1,313	1,944	21,723	26,345,248
Rhode Island .....	192	279	16	16	4	362,790	153	190	797	1,068,416
South Carolina .....	1,144	3,296	251	844	63,948	1,218,000	786	2,499	140,346	3,915,995
South Dakota .....	721	1,952	141	245	18,493	(D)	467	1,381	142,301	248,400
Tennessee .....	753	1,799	110	246	30,856	147,000	547	1,368	123,174	1,455,816
Texas .....	8,975	72,939	2,767	20,302	1,432,393	17,714,946	6,532	62,604	2,618,735	33,696,646
Utah .....	1,500	3,005	278	527	66,863	(D)	730	1,630	149,003	(D)
Vermont .....	329	419	36	36	170	65,520	216	297	624	1,521,269
Virginia .....	786	1,182	65	138	2,174	1,916,104	481	776	6,147	9,142,402
Washington .....	4,003	6,881	1,021	2,504	265,103	3,517,620	2,641	4,990	365,932	10,532,930
West Virginia .....	179	222	24	49	(D)	175,440	85	113	104	426,520
Wisconsin .....	1,733	5,166	448	1,779	205,047	2,692,332	1,242	4,163	389,075	8,436,100
Wyoming .....	618	1,348	325	772	101,754	143,821	447	1,011	110,921	197,748
<b>Water Resources Regions</b>										
Region 01 New England .....	2,606	3,942	248	395	7,952	6,979,650	1,800	2,821	6,508	30,549,645
Region 02 Mid-Atlantic .....	5,545	12,087	842	1,872	66,334	13,861,884	3,813	9,377	291,705	93,903,456
Region 03 South Atlantic-Gulf .....	13,416	36,214	3,812	14,765	1,076,063	34,217,680	9,968	27,854	1,375,371	202,885,077
Region 04 Great Lakes .....	5,307	13,492	894	2,917	163,678	11,157,940	4,165	10,528	700,500	29,963,762
Region 05 Ohio .....	2,480	5,065	380	694	61,640	379,228	1,788	3,882	271,261	13,606,982
Region 06 Tennessee .....	598	752	2	(D)	(D)	-	472	564	15,244	4,549,773
Region 07 Upper Mississippi .....	5,624	16,191	1,369	3,932	411,010	10,212,604	4,329	13,443	1,204,469	53,020,988
Region 08 Lower Mississippi .....	6,182	72,908	1,423	9,408	1,067,032	827,700	3,582	32,754	3,197,492	4,332,541
Region 09 Souris-Red-Rainy .....	358	2,177	244	1,422	117,484	96,000	299	1,921	153,267	(D)
Region 10 Missouri .....	18,367	86,798	11,355	50,912	5,487,822	7,390,443	14,873	73,376	7,723,673	10,949,687
Region 11 Arkansas-White-Red .....	6,652	44,752	3,728	23,772	2,745,637	554,374	5,310	34,701	3,339,043	2,946,746
Region 12 Texas-Gulf .....	7,403	58,207	1,795	12,271	638,179	12,487,746	5,340	50,024	1,680,899	28,279,934
Region 13 Rio Grande .....	3,857	8,601	2,128	5,429	297,267	8,277,274	1,906	5,707	274,429	8,659,710
Region 14 Upper Colorado .....	430	617	95	(D)	(D)	145,045	184	207	8,878	165,040
Region 15 Lower Colorado .....	1,476	4,370	570	2,582	243,364	5,232,200	1,042	2,744	275,920	7,029,940
Region 16 Great Basin .....	2,185	5,182	750	2,203	289,757	(D)	1,165	3,357	353,446	(D)
Region 17 Pacific Northwest .....	11,923	23,506	3,421	8,713	1,013,057	14,868,887	7,840	15,800	1,305,286	47,897,344
Region 18 California .....	24,511	67,548	8,638	26,491	2,201,994	116,788,922	18,887	53,392	3,343,606	158,612,107
Region 19 Alaska .....	232	292	10	13	(D)	(D)	122	174	606	1,157,138
Region 20 Hawaii .....	83	87	13	14	2,323	816,960	15	17	2,591	704,966

--continued

**Table 8. Irrigation Wells Used on Farms: 2018 (continued)**

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

Geographic area	Farms by number of wells used									
	1 well	2 wells	3 wells	4 wells	5 wells	6 wells	7 to 9 wells	10 to 14 wells	15 to 19 wells	20 wells or more
United States .....	63,189	17,837	9,423	5,554	4,232	3,181	5,212	4,585	2,076	3,946
Alabama .....	488	71	21	9	5	3	22	5	1	-
Alaska .....	195	16	19	2	-	-	-	-	-	-
Arizona .....	588	354	66	58	16	32	29	14	8	30
Arkansas .....	432	221	151	143	124	142	289	424	207	681
California .....	14,221	3,570	2,287	1,091	707	537	931	467	204	327
Colorado .....	1,286	626	173	142	159	88	188	82	40	69
Connecticut .....	254	62	107	28	-	2	-	15	-	-
Delaware .....	123	79	58	26	79	24	55	38	12	23
Florida .....	3,998	1,381	566	427	152	119	169	76	31	124
Georgia .....	1,655	413	369	276	152	27	67	187	46	64
Hawaii .....	80	2	1	-	-	-	-	-	-	-
Idaho .....	2,042	399	184	87	47	67	43	85	30	31
Illinois .....	701	326	157	59	66	29	114	47	28	21
Indiana .....	902	279	84	72	154	53	79	38	36	12
Iowa .....	543	50	86	32	40	25	33	6	8	3
Kansas .....	1,148	530	424	323	282	254	344	200	115	138
Kentucky .....	207	41	6	18	-	2	3	4	2	2
Louisiana .....	456	225	117	170	89	32	197	109	45	135
Maine .....	607	85	40	3	1	3	-	-	1	-
Maryland .....	458	91	72	32	9	13	48	39	10	4
Massachusetts .....	323	130	53	12	-	-	-	-	-	-
Michigan .....	1,804	548	275	216	86	94	63	70	24	74
Minnesota .....	1,038	512	156	49	109	63	26	89	11	26
Mississippi .....	280	153	122	90	63	87	102	118	77	262
Missouri .....	990	196	81	82	60	52	86	133	162	195
Montana .....	1,060	135	94	42	1	-	4	-	-	-
Nebraska .....	3,012	1,887	1,238	902	730	645	1,239	1,238	390	520
Nevada .....	402	141	73	40	46	11	19	20	15	4
New Hampshire .....	389	114	-	5	-	-	2	-	-	-
New Jersey .....	816	114	140	17	50	39	22	26	6	3
New Mexico .....	2,984	416	230	78	43	75	75	105	39	58
New York .....	937	241	74	30	8	6	1	5	-	-
North Carolina .....	1,033	131	18	17	10	2	9	5	2	1
North Dakota .....	161	11	62	26	81	-	5	46	23	5
Ohio .....	725	130	16	7	3	1	3	2	5	-
Oklahoma .....	653	176	105	78	34	63	44	56	31	63
Oregon .....	3,082	717	282	120	103	36	74	37	21	46
Pennsylvania .....	1,422	475	31	28	14	2	5	6	-	-
Rhode Island .....	127	55	4	-	6	-	-	-	-	-
South Carolina .....	709	143	82	42	15	52	36	20	32	13
South Dakota .....	235	202	133	38	73	5	18	12	5	-
Tennessee .....	430	150	63	2	35	30	17	19	3	4
Texas .....	3,600	1,110	559	398	444	305	590	648	370	951
Utah .....	1,051	217	39	59	4	71	33	15	5	6
Vermont .....	272	28	27	-	2	-	-	-	-	-
Virginia .....	614	80	33	11	34	10	3	1	-	-
Washington .....	3,089	366	217	119	33	39	73	54	2	11
West Virginia .....	149	23	1	6	-	-	-	-	-	-
Wisconsin .....	1,123	275	106	22	43	31	49	22	23	39
Wyoming .....	295	140	121	20	20	10	3	2	6	1
<b>Water Resources Regions</b>										
Region 01 New England .....	1,838	458	230	48	9	5	2	15	1	-
Region 02 Mid-Atlantic .....	3,458	1,015	376	135	161	94	133	115	28	30
Region 03 South Atlantic-Gulf .....	7,898	2,140	1,103	794	367	203	306	292	111	202
Region 04 Great Lakes .....	3,300	842	353	271	108	122	100	85	49	77
Region 05 Ohio .....	1,777	296	86	52	100	46	73	21	24	5
Region 06 Tennessee .....	501	79	8	3	2	-	3	1	1	-
Region 07 Upper Mississippi .....	3,132	1,129	386	140	261	104	176	141	65	90
Region 08 Lower Mississippi .....	1,158	623	416	444	284	313	642	717	398	1,187
Region 09 Souris-Red-Rainy .....	109	38	37	18	52	14	4	52	30	4
Region 10 Missouri .....	6,069	3,166	1,989	1,159	1,159	842	1,519	1,390	484	590
Region 11 Arkansas-White-Red .....	2,260	865	532	476	412	302	498	461	365	481
Region 12 Texas-Gulf .....	3,053	885	521	392	273	281	477	523	216	782
Region 13 Rio Grande .....	2,853	429	207	4	88	62	77	75	19	43
Region 14 Upper Colorado .....	341	54	14	-	-	21	-	-	-	-
Region 15 Lower Colorado .....	840	354	88	58	16	32	29	19	8	32
Region 16 Great Basin .....	1,322	378	123	132	50	61	47	42	20	10
Region 17 Pacific Northwest .....	8,681	1,448	630	335	180	142	190	176	53	88
Region 18 California .....	14,324	3,620	2,304	1,091	710	537	936	460	204	325
Region 19 Alaska .....	195	16	19	2	-	-	-	-	-	-
Region 20 Hawaii .....	80	2	1	-	-	-	-	-	-	-

**Table 9. Characteristics of Irrigation Wells Used on Farms: 2018**

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

Geographic area	All wells used		Flowing wells used (see text)		Change in average depth to water <sup>1</sup>					
	Farms	Number	Farms	Number	Did not change		Increased		Decreased	
					Farms	Number of wells	Farms	Number of wells	Farms	Number of wells
United States .....	119,235	462,788	1,520	2,844	88,174	299,615	13,033	63,621	18,028	99,552
Alabama .....	625	1,021	2	(D)	578	946	13	23	34	52
Alaska .....	232	292	22	22	186	240	18	20	28	32
Arizona .....	1,195	3,932	27	45	871	2,377	173	1,151	151	404
Arkansas .....	2,814	41,247	10	40	2,246	32,916	229	3,361	339	4,970
California .....	24,342	67,354	362	555	14,662	36,256	3,937	12,891	5,743	18,207
Colorado .....	2,853	10,306	58	178	1,538	4,400	497	2,889	818	3,017
Connecticut .....	468	1,018	28	28	364	854	76	136	28	28
Delaware .....	517	2,747	-	-	394	2,169	73	378	50	200
Florida .....	7,043	18,646	114	124	6,206	15,510	459	1,187	378	1,949
Georgia .....	3,256	11,198	29	104	2,500	8,244	355	1,500	401	1,454
Hawaii .....	83	87	1	(D)	83	87	-	-	-	-
Idaho .....	3,015	7,371	162	213	2,448	5,773	274	771	293	827
Illinois .....	1,548	5,095	6	6	1,428	4,672	68	162	52	261
Indiana .....	1,709	5,056	-	-	1,590	4,656	86	348	33	52
Iowa .....	826	1,947	-	-	703	1,584	77	229	46	134
Kansas .....	3,758	18,877	-	-	2,202	9,089	624	4,459	932	5,329
Kentucky .....	285	549	-	-	250	511	27	(D)	8	(D)
Louisiana .....	1,575	10,102	26	52	1,343	8,014	103	1,206	129	882
Maine .....	740	950	4	4	675	852	34	67	31	31
Maryland .....	776	2,136	-	-	695	1,805	31	264	50	67
Massachusetts .....	518	790	-	-	467	679	11	11	40	100
Michigan .....	3,254	9,691	1	(D)	3,073	9,111	135	428	46	152
Minnesota .....	2,079	5,905	20	20	1,790	5,086	210	597	79	222
Mississippi .....	1,354	14,684	6	60	1,112	10,630	128	2,054	114	2,000
Missouri .....	2,037	14,641	24	64	1,847	12,707	63	406	127	1,528
Montana .....	1,336	1,817	58	90	1,281	1,707	-	-	55	110
Nebraska .....	11,801	66,940	5	10	8,136	43,548	1,835	11,918	1,830	11,474
Nevada .....	771	2,204	15	15	464	796	91	527	216	881
New Hampshire .....	510	655	21	21	493	628	7	7	10	20
New Jersey .....	1,233	2,708	1	(D)	1,166	2,339	26	74	41	295
New Mexico .....	4,103	9,977	-	-	2,508	4,679	428	2,060	1,167	3,238
New York .....	1,302	1,896	91	91	1,222	1,749	52	86	28	61
North Carolina .....	1,228	1,643	31	50	1,089	1,496	77	77	62	70
North Dakota .....	420	2,157	-	-	363	1,951	7	84	50	122
Ohio .....	892	1,203	-	-	867	1,133	24	(D)	1	(D)
Oklahoma .....	1,303	5,702	7	80	866	2,577	135	532	302	2,593
Oregon .....	4,518	8,992	39	39	3,888	7,719	276	501	354	772
Pennsylvania .....	1,983	2,764	22	22	1,713	2,373	219	323	51	68
Rhode Island .....	192	279	-	-	155	203	23	52	14	24
South Carolina .....	1,144	3,296	-	-	1,048	2,770	36	350	60	176
South Dakota .....	721	1,952	-	-	540	1,464	125	329	56	159
Tennessee .....	753	1,799	-	-	705	1,686	27	92	21	21
Texas .....	8,975	72,939	46	276	5,104	27,874	1,214	10,346	2,657	34,719
Utah .....	1,500	3,005	151	439	724	1,499	320	624	456	882
Vermont .....	329	419	34	34	320	405	-	-	9	14
Virginia .....	786	1,182	-	-	705	1,096	54	54	27	32
Washington .....	4,003	6,881	67	73	3,415	5,626	163	305	425	950
West Virginia .....	179	222	5	20	155	198	-	-	24	24
Wisconsin .....	1,733	5,166	-	-	1,454	3,832	162	537	117	797
Wyoming .....	618	1,348	25	57	542	1,099	31	124	45	125
<b>Water Resources Regions</b>										
Region 01 New England .....	2,606	3,942	59	59	2,332	3,466	151	273	123	203
Region 02 Mid-Atlantic .....	5,545	12,087	97	115	4,949	10,313	369	1,071	227	703
Region 03 South Atlantic-Gulf .....	13,416	36,214	164	270	11,491	29,317	973	3,174	952	3,723
Region 04 Great Lakes .....	5,307	13,492	51	51	4,874	12,332	264	798	169	362
Region 05 Ohio .....	2,480	5,065	-	-	2,342	4,844	121	185	17	36
Region 06 Tennessee .....	598	752	12	12	583	722	-	-	15	30
Region 07 Upper Mississippi .....	5,624	16,191	25	25	4,994	13,744	419	1,223	211	1,224
Region 08 Lower Mississippi .....	6,182	72,908	46	196	5,119	58,125	482	6,929	581	7,854
Region 09 Souris-Red-Rainy .....	358	2,177	1	(D)	278	1,862	26	157	54	158
Region 10 Missouri .....	18,367	86,798	112	273	12,861	55,915	2,534	15,009	2,972	15,874
Region 11 Arkansas-White-Red .....	6,652	44,752	20	95	3,913	20,092	1,056	7,898	1,683	16,762
Region 12 Texas-Gulf .....	7,403	58,207	45	273	4,243	23,032	963	8,135	2,197	27,040
Region 13 Rio Grande .....	3,857	8,601	4	12	2,446	4,291	396	1,887	1,015	2,423
Region 14 Upper Colorado .....	430	617	43	(D)	295	424	49	49	86	144
Region 15 Lower Colorado .....	1,476	4,370	27	45	1,071	2,669	220	1,263	185	438
Region 16 Great Basin .....	2,185	5,182	155	435	1,163	2,308	345	1,091	677	1,783
Region 17 Pacific Northwest .....	11,923	23,506	271	328	10,158	19,397	674	1,532	1,091	2,577
Region 18 California .....	24,511	67,548	365	558	14,793	36,435	3,973	12,927	5,745	18,186
Region 19 Alaska .....	232	292	22	22	186	240	18	20	28	32
Region 20 Hawaii .....	83	87	1	(D)	83	87	-	-	-	-

See footnote(s) at end of table.

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**Table 9. Characteristics of Irrigation Wells Used on Farms: 2018 (continued)**

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

Geographic area	All pumped wells <sup>2</sup>							
	Farms	Number	Average well depth (feet)	Average depth to water at start of irrigation season (feet)	Average depth to bowls or impellers (feet)	Average pumping capacity (gpm)	Average operating pressure (psi)	Average engine size (hp)
United States .....	118,185	459,944	235	94	151	708	39	81
Alabama .....	623	(D)	193	78	117	332	44	60
Alaska .....	210	270	112	51	78	37	48	19
Arizona .....	1,184	3,887	450	174	277	743	28	116
Arkansas .....	2,810	41,207	119	48	80	1,439	32	65
California .....	24,138	66,799	373	123	209	730	41	121
Colorado .....	2,813	10,128	206	89	144	704	40	78
Connecticut .....	440	990	185	60	125	52	62	12
Delaware .....	517	2,747	91	28	58	579	49	53
Florida .....	6,962	18,522	335	106	151	800	41	72
Georgia .....	3,231	11,094	293	98	170	496	49	87
Hawaii .....	82	(D)	244	94	144	202	44	155
Idaho .....	2,904	7,158	307	135	197	1,072	57	164
Illinois .....	1,545	5,089	129	40	78	722	40	66
Indiana .....	1,709	5,056	96	31	64	669	48	58
Iowa .....	826	1,947	125	34	68	610	41	52
Kansas .....	3,758	18,877	226	107	174	568	29	116
Kentucky .....	285	549	150	74	107	474	51	52
Louisiana .....	1,549	10,050	121	49	81	1,429	21	67
Maine .....	740	946	206	44	135	78	45	63
Maryland .....	776	2,136	137	47	88	354	43	56
Massachusetts .....	518	790	201	47	114	77	51	16
Michigan .....	3,254	(D)	121	44	77	462	59	52
Minnesota .....	2,059	5,885	136	45	80	556	44	49
Mississippi .....	1,354	14,624	112	42	69	1,604	28	67
Missouri .....	2,021	14,577	138	38	75	1,215	34	64
Montana .....	1,294	1,727	145	52	94	217	53	36
Nebraska .....	11,801	66,930	200	76	128	760	42	95
Nevada .....	771	2,189	403	102	220	1,050	44	138
New Hampshire .....	489	634	363	96	230	20	58	14
New Jersey .....	1,232	(D)	161	48	87	311	56	54
New Mexico .....	4,103	9,977	254	114	168	515	31	65
New York .....	1,256	1,805	119	47	81	108	55	39
North Carolina .....	1,199	1,593	229	86	155	91	51	45
North Dakota .....	420	2,157	69	20	45	603	45	43
Ohio .....	892	1,203	103	45	69	139	55	25
Oklahoma .....	1,299	5,622	194	87	151	368	37	79
Oregon .....	4,513	8,953	211	69	129	349	60	60
Pennsylvania .....	1,961	2,742	191	66	118	75	60	16
Rhode Island .....	192	279	161	65	109	39	42	11
South Carolina .....	1,144	3,296	367	130	209	336	49	48
South Dakota .....	721	1,952	98	41	71	594	49	45
Tennessee .....	753	1,799	215	74	123	714	42	64
Texas .....	8,947	72,663	285	161	229	213	29	59
Utah .....	1,361	2,566	361	109	184	628	53	104
Vermont .....	306	385	293	116	191	19	50	79
Virginia .....	786	1,182	277	80	173	58	47	9
Washington .....	3,936	6,808	271	104	168	414	64	85
West Virginia .....	174	202	157	46	120	24	46	3
Wisconsin .....	1,733	5,166	166	49	97	650	54	75
Wyoming .....	594	1,291	254	93	156	556	38	56
<b>Water Resources Regions</b>								
Region 01 New England .....	2,557	3,883	229	64	147	55	53	29
Region 02 Mid-Atlantic .....	5,471	11,972	155	51	95	298	52	42
Region 03 South Atlantic-Gulf .....	13,291	35,944	314	103	161	611	44	72
Region 04 Great Lakes .....	5,284	13,441	124	43	77	443	58	51
Region 05 Ohio .....	2,480	5,065	100	36	69	561	49	55
Region 06 Tennessee .....	586	740	212	101	148	150	46	37
Region 07 Upper Mississippi .....	5,602	16,166	142	43	82	633	45	63
Region 08 Lower Mississippi .....	6,148	72,712	121	46	78	1,433	30	65
Region 09 Souris-Red-Rainy .....	357	(D)	101	38	68	599	43	40
Region 10 Missouri .....	18,291	86,525	196	77	128	726	41	93
Region 11 Arkansas-White-Red .....	6,644	44,657	268	146	218	592	29	94
Region 12 Texas-Gulf .....	7,375	57,934	253	139	198	184	30	46
Region 13 Rio Grande .....	3,857	8,589	257	81	143	682	34	78
Region 14 Upper Colorado .....	387	(D)	138	56	89	243	39	50
Region 15 Lower Colorado .....	1,465	4,325	437	169	273	729	30	115
Region 16 Great Basin .....	2,057	4,747	387	112	206	902	48	130
Region 17 Pacific Northwest .....	11,734	23,178	255	98	159	573	60	97
Region 18 California .....	24,307	66,990	372	123	208	729	41	121
Region 19 Alaska .....	210	270	112	51	78	37	48	19
Region 20 Hawaii .....	82	(D)	244	94	144	202	44	155

See footnote(s) at end of table.

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**Table 9. Characteristics of Irrigation Wells Used on Farms: 2018 (continued)**

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

Geographic area	Average well depth <sup>2</sup>				Number of wells with an average well depth of -					
	For all pumped wells (feet)	For farms with 1 well (feet)	For farms with 2 wells (feet)	For farms with 3 wells (feet)	Under 50 feet	50 to 99 feet	100 to 199 feet	200 to 299 feet	300 to 499 feet	500 feet or more
United States .....	235	240	246	254	17,629	68,774	166,939	85,893	77,399	43,310
Alabama .....	193	185	191	291	34	58	626	168	69	62
Alaska .....	112	128	79	89	22	111	110	(D)	12	-
Arizona .....	450	406	452	546	-	769	808	227	444	1,639
Arkansas .....	119	156	142	117	473	6,767	32,906	871	123	67
California .....	373	306	341	326	725	2,722	11,326	14,865	20,429	16,732
Colorado .....	206	184	147	244	995	1,926	2,510	1,932	2,368	397
Connecticut .....	185	166	211	201	43	90	610	129	73	45
Delaware .....	91	(D)	93	88	24	1,518	1,191	(D)	(D)	-
Florida .....	335	242	311	378	3,065	1,696	5,323	2,100	1,449	4,889
Georgia .....	293	342	321	332	57	233	3,051	3,004	3,268	1,481
Hawaii .....	244	(D)	(D)	-	4	-	4	66	(D)	6
Idaho .....	307	248	300	281	78	609	1,591	1,685	1,930	1,265
Illinois .....	129	172	139	104	164	1,723	2,608	295	241	58
Indiana .....	96	114	127	103	605	2,500	1,637	238	76	-
Iowa .....	125	212	120	93	211	515	946	152	84	39
Kansas .....	226	173	117	175	583	4,952	4,730	3,697	3,029	1,886
Kentucky .....	150	107	147	253	36	250	90	124	49	-
Louisiana .....	121	150	119	113	38	3,019	6,181	759	27	26
Maine .....	206	224	92	276	198	92	202	69	347	(D)
Maryland .....	137	181	115	200	305	769	457	405	175	25
Massachusetts .....	201	149	141	253	101	164	176	162	127	60
Michigan .....	121	127	120	138	810	3,712	4,050	857	261	-
Minnesota .....	136	142	102	202	205	2,190	2,330	754	402	(D)
Mississippi .....	112	183	116	105	40	2,193	12,260	73	52	6
Missouri .....	138	326	340	130	264	4,335	8,942	270	329	437
Montana .....	145	165	146	113	335	436	533	202	205	16
Nebraska .....	200	205	205	228	925	10,180	22,952	22,905	9,346	622
Nevada .....	403	335	387	390	31	62	99	311	1,088	598
New Hampshire .....	363	249	542	-	167	75	18	82	58	234
New Jersey .....	161	245	144	102	224	709	1,305	153	250	63
New Mexico .....	254	171	198	364	184	425	3,467	3,468	1,638	795
New York .....	119	125	122	74	417	591	549	164	45	39
North Carolina .....	229	242	236	227	85	146	587	417	223	135
North Dakota .....	69	118	(D)	100	794	946	382	31	4	-
Ohio .....	103	114	92	(D)	215	498	375	47	68	-
Oklahoma .....	194	198	214	167	422	1,783	1,175	998	951	293
Oregon .....	211	193	247	228	1,196	1,098	3,182	1,264	1,701	512
Pennsylvania .....	191	181	199	166	138	394	1,061	752	307	90
Rhode Island .....	161	169	159	218	(D)	61	65	113	12	(D)
South Carolina .....	367	329	323	264	6	369	808	323	666	1,124
South Dakota .....	98	111	170	63	733	531	467	147	30	44
Tennessee .....	215	245	167	174	-	203	573	568	441	14
Texas .....	285	329	273	265	727	4,217	19,979	18,508	21,833	7,399
Utah .....	361	340	423	227	171	20	334	194	1,235	612
Vermont .....	293	231	327	485	(D)	77	24	40	113	94
Virginia .....	277	345	275	185	173	64	141	375	280	149
Washington .....	271	227	264	331	1,379	1,386	1,536	729	712	1,066
West Virginia .....	157	142	195	(D)	20	51	72	50	9	-
Wisconsin .....	166	200	205	236	115	1,419	2,259	717	517	139
Wyoming .....	254	236	274	342	28	120	331	406	297	109
<b>Water Resources Regions</b>										
Region 01 New England .....	229	205	248	260	540	530	1,099	571	684	459
Region 02 Mid-Atlantic .....	155	218	173	120	820	3,719	4,497	1,688	959	289
Region 03 South Atlantic-Gulf .....	314	270	303	340	3,386	2,575	10,451	6,093	5,692	7,747
Region 04 Great Lakes .....	124	130	130	151	1,283	4,958	5,472	1,188	507	33
Region 05 Ohio .....	100	124	126	85	349	2,959	1,333	297	120	7
Region 06 Tennessee .....	212	232	203	106	23	104	294	147	138	34
Region 07 Upper Mississippi .....	142	187	133	163	1,055	4,971	7,068	1,712	1,080	280
Region 08 Lower Mississippi .....	121	171	141	121	393	13,705	55,500	2,271	615	228
Region 09 Souris-Red-Rainy .....	101	(D)	(D)	148	600	743	660	50	123	-
Region 10 Missouri .....	196	191	196	201	3,129	15,122	27,749	26,922	12,170	1,433
Region 11 Arkansas-White-Red .....	268	238	177	215	1,273	8,148	10,308	6,098	11,754	7,076
Region 12 Texas-Gulf .....	253	333	260	234	649	3,356	20,028	17,499	14,091	2,311
Region 13 Rio Grande .....	257	182	228	439	272	823	3,098	1,832	1,604	960
Region 14 Upper Colorado .....	138	173	185	-	149	129	150	(D)	(D)	9
Region 15 Lower Colorado .....	437	355	452	519	34	776	883	276	619	1,737
Region 16 Great Basin .....	387	346	403	388	62	71	450	651	2,250	1,263
Region 17 Pacific Northwest .....	255	215	265	271	2,861	3,259	6,335	3,545	4,428	2,750
Region 18 California .....	372	306	340	324	725	2,715	11,450	14,948	20,464	16,688
Region 19 Alaska .....	112	128	79	89	22	111	110	(D)	12	-
Region 20 Hawaii .....	244	(D)	(D)	-	4	-	4	66	(D)	6

See footnote(s) at end of table.

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**Table 9. Characteristics of Irrigation Wells Used on Farms: 2018 (continued)**

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

Geographic area	Average depth to water at start of irrigation season				Number of wells with an average depth to water of -					
	For all pumped wells (feet)	For farms with 1 well (feet)	For farms with 2 wells (feet)	For farms with 3 wells (feet)	Under 50 feet	50 to 99 feet	100 to 199 feet	200 to 299 feet	300 to 499 feet	500 feet or more
United States .....	94	89	88	90	184,468	125,088	97,430	30,468	20,056	2,434
Alabama .....	78	82	83	74	225	533	236	17	(D)	(D)
Alaska .....	51	58	38	39	185	62	20	(D)	(D)	-
Arizona .....	174	198	182	187	1,063	848	557	475	783	161
Arkansas .....	48	60	57	49	25,540	13,706	1,886	68	(D)	6
California .....	123	114	122	111	12,998	19,545	22,193	8,383	3,315	365
Colorado .....	89	83	68	92	4,014	1,888	3,271	854	85	16
Connecticut .....	60	48	22	78	633	236	121	-	-	-
Delaware .....	28	(D)	26	36	2,692	39	16	-	-	-
Florida .....	106	78	111	120	9,265	5,591	1,589	674	481	922
Georgia .....	98	122	78	113	2,604	3,586	4,073	629	178	24
Hawaii .....	94	(D)	(D)	-	6	69	3	(D)	(D)	-
Idaho .....	135	112	119	113	1,578	1,376	3,066	557	534	47
Illinois .....	40	65	43	34	3,990	759	254	86	-	-
Indiana .....	31	38	52	43	4,194	697	165	-	-	-
Iowa .....	34	66	46	25	1,535	321	70	18	3	-
Kansas .....	107	84	46	85	7,373	3,384	4,565	2,805	750	-
Kentucky .....	74	48	55	(D)	343	116	42	-	48	-
Louisiana .....	49	59	42	41	5,249	4,345	443	13	-	-
Maine .....	44	57	18	15	645	113	188	-	-	-
Maryland .....	47	72	44	71	1,325	540	247	17	7	-
Massachusetts .....	47	61	29	46	453	280	45	6	6	-
Michigan .....	44	54	39	62	6,846	2,190	569	40	45	-
Minnesota .....	45	51	33	70	4,169	1,227	481	8	-	-
Mississippi .....	42	67	53	35	10,758	3,788	55	23	-	-
Missouri .....	38	91	94	31	13,128	754	375	128	48	144
Montana .....	52	66	33	23	1,094	336	255	30	10	(D)
Nebraska .....	76	75	73	87	20,725	28,933	15,910	1,362	-	-
Nevada .....	102	98	78	85	417	748	890	105	29	-
New Hampshire .....	96	77	126	-	332	31	175	25	71	-
New Jersey .....	48	74	48	37	1,831	548	247	78	-	-
New Mexico .....	114	61	92	78	3,011	2,138	3,712	505	611	-
New York .....	47	53	39	31	1,221	480	88	-	-	16
North Carolina .....	86	96	92	85	653	404	397	86	26	27
North Dakota .....	20	35	(D)	17	2,114	39	4	-	-	-
Ohio .....	45	58	21	29	927	180	51	-	45	-
Oklahoma .....	87	87	106	65	2,900	969	863	637	252	(D)
Oregon .....	69	74	90	72	5,043	1,956	1,509	208	129	108
Pennsylvania .....	66	67	66	66	1,223	947	508	54	10	-
Rhode Island .....	65	54	86	113	157	30	71	21	-	-
South Carolina .....	130	139	129	73	1,270	608	550	514	329	25
South Dakota .....	41	37	79	23	1,488	380	38	(D)	(D)	-
Tennessee .....	74	91	65	64	520	815	429	28	-	7
Texas .....	161	125	109	123	10,338	15,321	23,919	11,129	11,598	358
Utah .....	109	112	120	82	637	590	1,037	238	64	-
Vermont .....	116	86	63	243	133	53	113	86	-	-
Virginia .....	80	89	113	44	442	257	454	18	11	-
Washington .....	104	88	89	159	3,504	1,214	1,013	469	407	201
West Virginia .....	46	40	65	(D)	115	81	3	-	3	-
Wisconsin .....	49	69	55	47	3,174	1,549	384	40	19	-
Wyoming .....	93	92	125	117	388	488	280	28	107	-
<b>Water Resources Regions</b>										
Region 01 New England .....	64	63	58	80	2,297	714	662	133	77	-
Region 02 Mid-Atlantic .....	51	75	59	44	7,714	2,626	1,431	167	18	16
Region 03 South Atlantic-Gulf .....	103	93	103	109	14,443	10,786	6,813	1,924	1,003	975
Region 04 Great Lakes .....	43	52	39	61	9,509	3,036	784	45	67	-
Region 05 Ohio .....	36	48	52	33	4,004	758	270	-	26	7
Region 06 Tennessee .....	101	112	100	36	222	217	215	36	23	27
Region 07 Upper Mississippi .....	43	63	41	47	11,744	3,236	987	168	31	-
Region 08 Lower Mississippi .....	46	64	53	44	47,421	22,278	2,729	92	48	144
Region 09 Souris-Red-Rainy .....	38	(D)	(D)	70	1,766	237	473	-	-	-
Region 10 Missouri .....	77	70	73	75	30,453	32,121	20,999	2,721	231	-
Region 11 Arkansas-White-Red .....	146	109	83	105	15,706	5,863	8,720	6,952	7,225	191
Region 12 Texas-Gulf .....	139	124	100	98	8,976	14,364	21,408	7,356	5,667	163
Region 13 Rio Grande .....	81	64	97	93	4,096	2,087	1,612	410	365	19
Region 14 Upper Colorado .....	56	72	68	-	380	48	82	25	(D)	8
Region 15 Lower Colorado .....	169	169	182	180	1,119	930	732	600	783	161
Region 16 Great Basin .....	112	109	104	131	988	1,308	1,989	309	153	-
Region 17 Pacific Northwest .....	98	87	97	105	10,326	4,727	5,537	1,214	1,016	358
Region 18 California .....	123	114	121	110	13,113	19,621	22,264	8,312	3,315	365
Region 19 Alaska .....	51	58	38	39	185	62	20	(D)	(D)	-
Region 20 Hawaii .....	94	(D)	(D)	-	6	69	3	(D)	(D)	-

See footnote(s) at end of table.

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**Table 9. Characteristics of Irrigation Wells Used on Farms: 2018 (continued)**

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

Geographic area	Average depth to bowls or impellers				Number of wells with an average depth to bowls of -					
	For all pumped wells (feet)	For farms with 1 well (feet)	For farms with 2 wells (feet)	For farms with 3 wells (feet)	Under 50 feet	50 to 99 feet	100 to 199 feet	200 to 299 feet	300 to 499 feet	500 feet or more
United States .....	151	147	149	153	58,063	140,470	150,464	59,907	41,218	9,806
Alabama .....	117	113	134	131	97	368	465	60	17	10
Alaska .....	78	90	61	56	96	108	54	(D)	(D)	-
Arizona .....	277	285	279	365	16	1,452	380	323	1,118	598
Arkansas .....	80	100	88	80	3,446	28,739	8,711	286	18	7
California .....	209	188	202	190	1,909	9,538	27,289	14,784	10,696	2,583
Colorado .....	144	119	107	157	1,933	2,355	3,486	1,779	405	170
Connecticut .....	125	98	105	134	49	441	382	73	(D)	-
Delaware .....	58	(D)	48	55	844	1,799	90	14	-	-
Florida .....	151	122	160	176	5,178	4,526	6,026	728	1,011	1,053
Georgia .....	170	192	170	195	661	1,836	4,856	2,896	728	117
Hawaii .....	144	(D)	(D)	-	(D)	(D)	71	(D)	(D)	(D)
Idaho .....	197	171	190	177	534	1,190	2,359	2,002	864	209
Illinois .....	78	105	80	60	1,107	3,097	649	175	61	-
Indiana .....	64	67	90	75	1,786	2,603	609	40	18	-
Iowa .....	68	111	76	64	777	833	273	39	21	4
Kansas .....	174	137	85	127	3,241	5,105	3,710	3,549	2,930	342
Kentucky .....	107	71	102	(D)	140	251	99	11	48	-
Louisiana .....	81	92	72	68	919	7,066	1,949	116	-	-
Maine .....	135	134	68	225	268	169	190	255	64	-
Maryland .....	88	117	93	123	663	780	555	105	33	-
Massachusetts .....	114	95	75	202	234	217	211	26	96	6
Michigan .....	77	85	77	95	3,015	4,289	2,048	273	65	-
Minnesota .....	80	84	59	112	1,938	2,465	1,361	121	-	-
Mississippi .....	69	107	75	62	864	12,957	749	43	11	-
Missouri .....	75	167	195	59	5,213	8,094	659	208	154	249
Montana .....	94	109	75	78	633	453	430	168	35	8
Nebraska .....	128	128	130	148	6,420	16,775	36,218	6,385	1,116	-
Nevada .....	220	193	178	198	76	101	662	987	259	104
New Hampshire .....	230	138	384	-	221	38	90	(D)	165	76
New Jersey .....	87	139	72	61	956	1,118	415	152	40	23
New Mexico .....	168	107	138	148	(D)	2,167	3,337	2,996	821	(D)
New York .....	81	82	77	51	784	598	317	67	23	16
North Carolina .....	155	161	172	142	205	464	548	235	73	68
North Dakota .....	45	84	(D)	54	1,480	539	138	-	-	-
Ohio .....	69	79	56	50	552	392	214	-	45	-
Oklahoma .....	151	153	185	123	1,652	1,084	1,228	734	877	(D)
Oregon .....	129	127	160	123	1,693	2,977	2,721	978	417	167
Pennsylvania .....	118	113	118	120	371	921	1,118	252	78	(D)
Rhode Island .....	109	101	122	142	54	88	98	(D)	(D)	-
South Carolina .....	209	215	192	167	373	277	1,373	404	818	51
South Dakota .....	71	72	114	43	985	541	343	39	44	-
Tennessee .....	123	141	110	103	112	644	901	128	7	7
Texas .....	229	198	174	189	2,447	6,379	27,812	16,095	16,702	3,228
Utah .....	184	190	188	125	198	219	1,203	595	350	(D)
Vermont .....	191	136	133	404	89	50	59	95	92	-
Virginia .....	173	197	217	151	212	118	384	347	64	57
Washington .....	168	140	153	246	2,114	1,573	1,089	947	534	551
West Virginia .....	120	97	183	(D)	45	(D)	70	26	9	-
Wisconsin .....	97	113	111	103	689	2,422	1,799	197	59	-
Wyoming .....	156	146	179	183	164	200	666	82	179	-
<b>Water Resources Regions</b>										
Region 01 New England .....	147	121	163	198	855	1,012	991	488	455	82
Region 02 Mid-Atlantic .....	95	131	110	76	3,191	4,998	2,682	816	219	66
Region 03 South Atlantic-Gulf .....	161	150	162	178	6,592	7,657	13,315	4,444	2,632	1,304
Region 04 Great Lakes .....	77	82	77	99	4,135	6,062	2,772	376	96	-
Region 05 Ohio .....	69	80	91	59	1,586	2,748	607	70	47	7
Region 06 Tennessee .....	148	162	151	84	159	163	283	63	45	27
Region 07 Upper Mississippi .....	82	106	78	86	4,586	7,363	3,515	497	182	23
Region 08 Lower Mississippi .....	78	103	88	74	8,681	51,394	11,895	521	77	144
Region 09 Souris-Red-Rainy .....	68	(D)	(D)	97	1,065	597	491	23	-	-
Region 10 Missouri .....	128	117	126	131	11,741	21,553	41,422	9,544	2,059	190
Region 11 Arkansas-White-Red .....	218	175	139	156	5,789	10,817	6,976	7,345	10,655	3,075
Region 12 Texas-Gulf .....	198	197	156	154	1,853	5,611	26,559	13,542	9,811	558
Region 13 Rio Grande .....	143	109	156	186	806	2,966	2,721	1,312	685	99
Region 14 Upper Colorado .....	89	108	132	-	197	(D)	176	24	4	(D)
Region 15 Lower Colorado .....	273	255	279	335	54	1,455	470	532	1,216	598
Region 16 Great Basin .....	206	189	184	229	(D)	352	2,024	1,488	635	105
Region 17 Pacific Northwest .....	159	140	165	172	4,625	5,876	6,015	3,957	1,770	935
Region 18 California .....	208	188	201	189	1,905	9,599	27,425	14,853	10,625	2,583
Region 19 Alaska .....	78	90	61	56	96	108	54	(D)	(D)	-
Region 20 Hawaii .....	144	(D)	(D)	-	(D)	(D)	71	(D)	(D)	(D)

<sup>1</sup> Increases and decreases in depth are reported over a five year period.

<sup>2</sup> Data do not include flowing wells.

**Table 10. Irrigation Pumps on Farms: 2018**

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

Geographic area	Farms	Total pumps	Farms with -									
			1 pump	2 pumps	3 pumps	4 pumps	5 pumps	6 or 7 pumps	8 or 9 pumps	10 to 19 pumps	20 to 29 pumps	30 pumps or more
United States .....	160,690	600,522	84,167	26,468	12,400	7,598	5,688	6,829	4,049	8,713	2,474	2,304
Alabama .....	937	2,047	618	92	66	71	15	37	13	21	4	-
Alaska .....	245	1,333	191	26	24	3	-	1	-	-	-	-
Arizona .....	1,325	4,560	680	345	65	73	17	50	26	29	9	31
Arkansas .....	3,024	45,090	531	239	137	145	135	216	197	674	360	390
California .....	29,950	97,228	16,189	4,878	2,533	1,432	895	1,343	841	1,275	302	262
Colorado .....	4,759	14,906	2,375	1,095	283	231	142	264	105	188	27	49
Connecticut .....	612	1,332	378	68	115	3	29	-	2	17	-	-
Delaware .....	517	2,851	120	80	60	22	79	74	5	54	20	3
Florida .....	7,458	20,926	4,140	1,585	547	405	195	141	168	138	77	62
Georgia .....	3,793	13,449	1,861	453	534	267	202	50	41	318	29	38
Hawaii .....	318	503	238	45	5	2	23	3	2	-	-	-
Idaho .....	7,548	23,214	4,397	1,170	566	257	345	168	154	350	77	64
Illinois .....	1,720	5,467	804	352	167	74	72	119	32	79	14	7
Indiana .....	1,969	5,734	1,006	364	107	97	139	125	36	73	19	3
Iowa .....	958	2,301	605	48	108	78	40	54	6	15	2	2
Kansas .....	4,043	19,954	1,206	662	453	341	269	416	224	334	91	47
Kentucky .....	709	1,236	522	101	14	48	-	11	2	8	3	-
Louisiana .....	1,769	11,232	530	279	118	171	96	99	133	207	74	62
Maine .....	945	1,775	583	169	101	11	37	32	5	6	1	-
Maryland .....	930	2,511	549	120	79	54	11	25	22	65	5	-
Massachusetts .....	1,183	2,356	653	334	20	130	1	30	2	9	2	2
Michigan .....	3,724	11,923	1,915	673	235	297	171	171	57	114	46	45
Minnesota .....	2,286	6,250	1,203	517	181	49	112	76	22	99	15	12
Mississippi .....	1,505	15,811	353	187	135	102	75	144	46	175	152	136
Missouri .....	2,436	15,636	1,048	421	182	83	70	90	52	285	81	124
Montana .....	4,893	12,232	2,909	993	340	171	93	153	33	136	16	49
Nebraska .....	12,465	72,591	3,194	1,908	1,323	835	718	1,236	817	1,878	401	155
Nevada .....	831	2,563	414	134	93	60	57	11	14	38	2	8
New Hampshire .....	603	845	439	121	33	5	1	2	-	2	-	-
New Jersey .....	1,454	3,354	910	157	184	35	64	46	20	31	6	1
New Mexico .....	4,655	11,286	3,226	599	296	45	110	111	65	144	36	23
New York .....	1,743	2,874	1,126	365	128	85	14	7	6	12	-	-
North Carolina .....	2,315	3,982	1,672	316	109	100	24	28	55	7	1	3
North Dakota .....	622	2,684	284	39	82	22	63	44	10	69	5	4
Ohio .....	1,343	2,015	972	277	56	9	9	6	2	10	2	-
Oklahoma .....	1,588	6,530	873	175	109	106	45	76	34	104	27	39
Oregon .....	9,360	19,205	6,312	1,537	495	299	205	186	73	169	56	28
Pennsylvania .....	2,474	3,974	1,596	658	82	85	9	13	-	31	-	-
Rhode Island .....	203	333	123	54	10	9	6	1	-	-	-	-
South Carolina .....	1,347	3,909	826	198	73	51	27	65	27	64	11	5
South Dakota .....	910	2,713	321	243	127	72	58	30	22	31	5	1
Tennessee .....	1,030	2,215	648	180	70	1	56	36	13	22	3	1
Texas .....	10,007	75,258	4,174	1,329	652	435	495	533	410	1,006	391	582
Utah .....	3,835	6,738	2,741	627	99	141	4	157	39	23	2	2
Vermont .....	410	688	309	49	10	11	5	26	-	-	-	-
Virginia .....	1,268	2,020	943	159	91	1	50	5	11	7	1	-
Washington .....	7,745	21,095	4,583	1,201	667	345	253	171	123	294	71	37
West Virginia .....	326	460	241	73	5	2	-	-	-	5	-	-
Wisconsin .....	2,037	6,691	1,142	331	185	57	81	66	51	79	26	19
Wyoming .....	2,563	5,642	1,494	442	246	170	71	81	31	18	2	8
<b>Water Resources Regions</b>												
Region 01 New England .....	3,729	7,023	2,314	749	289	162	76	91	9	34	3	2
Region 02 Mid-Atlantic .....	6,807	15,352	3,993	1,376	520	276	181	169	59	197	32	4
Region 03 South Atlantic-Gulf .....	16,048	44,876	9,231	2,646	1,361	893	506	323	304	550	126	108
Region 04 Great Lakes .....	6,368	17,012	3,711	1,115	403	377	202	216	86	150	60	48
Region 05 Ohio .....	3,845	7,413	2,548	737	153	90	113	105	42	51	2	4
Region 06 Tennessee .....	929	1,403	712	121	46	17	21	5	1	3	3	-
Region 07 Upper Mississippi .....	6,291	18,597	3,378	1,176	513	239	294	264	79	253	62	33
Region 08 Lower Mississippi .....	6,402	77,796	1,227	646	398	453	306	529	385	1,196	619	643
Region 09 Souris-Red-Rainy .....	554	2,452	284	39	50	18	37	36	4	82	-	4
Region 10 Missouri .....	24,591	108,609	9,002	4,591	2,468	1,429	1,211	1,839	1,035	2,300	466	250
Region 11 Arkansas-White-Red .....	7,503	47,286	2,831	991	563	524	404	473	386	823	240	268
Region 12 Texas-Gulf .....	8,308	60,009	3,607	1,052	594	396	357	500	291	707	332	472
Region 13 Rio Grande .....	4,237	10,106	2,887	651	237	-	126	87	86	119	10	34
Region 14 Upper Colorado .....	2,817	5,097	1,805	591	198	75	30	71	31	14	-	2
Region 15 Lower Colorado .....	1,611	5,032	932	347	87	73	17	50	26	37	11	31
Region 16 Great Basin .....	3,768	8,473	2,416	584	189	233	67	148	32	78	4	17
Region 17 Pacific Northwest .....	25,994	65,304	16,407	4,069	1,721	906	809	569	350	837	204	122
Region 18 California .....	30,325	97,846	16,453	4,916	2,581	1,432	908	1,350	841	1,282	300	262
Region 19 Alaska .....	245	333	191	26	24	3	-	1	-	-	-	-
Region 20 Hawaii .....	318	503	238	45	5	2	23	3	2	-	-	-

**Table 11. Irrigation Pumps Used on Farms for Wells Pumped: 2018**

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

Geographic area	Farms	Pumps	Average pumping capacity (see text) for -				Well pumps with average pumping capacity of -							
			All pumped wells (gpm)	Farms with 1 well (gpm)	Farms with 2 wells (gpm)	Farms with 3 wells (gpm)	Less than 500 gpm	500 to 749 gpm	750 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 or more gpm		
												Well pumps	Average gpm	
United States .....	118,185	459,944	708	343	545	619	188,850	69,189	85,795	61,576	32,406	22,128	2,426	
Alabama .....	623	(D)	332	204	344	378	654	205	90	65	(D)	-	-	
Alaska .....	210	(D)	37	35	100	(D)	(D)	(D)	(D)	(D)	(D)	-	-	
Arizona .....	1,184	3,887	743	390	526	943	1,071	988	941	550	198	139	2,758	
Arkansas .....	2,810	41,207	1,439	829	934	1,304	1,314	1,773	6,727	12,942	10,288	8,163	2,345	
California .....	24,138	66,799	730	348	609	619	28,071	10,011	7,273	13,467	5,740	2,237	2,338	
Colorado .....	2,813	10,128	704	494	614	823	3,042	2,212	3,303	1,118	445	8	2,300	
Connecticut .....	440	990	52	26	137	46	990	-	-	-	-	-	-	
Delaware .....	517	2,747	579	401	668	536	936	1,199	496	116	-	-	-	
Florida .....	6,962	18,522	800	530	808	652	8,736	1,572	1,425	2,660	3,074	1,055	3,083	
Georgia .....	3,231	11,094	496	179	453	515	5,679	2,186	1,707	1,233	289	-	-	
Hawaii .....	82	(D)	202	(D)	(D)	-	76	-	-	(D)	(D)	-	-	
Idaho .....	2,904	7,158	1,072	461	1,140	1,518	1,925	573	608	1,566	1,896	590	2,310	
Illinois .....	1,545	5,089	722	554	513	737	644	1,349	2,620	366	110	-	-	
Indiana .....	1,709	5,056	669	522	629	616	1,282	1,609	1,361	778	26	-	-	
Iowa .....	826	1,947	610	346	336	569	705	258	670	314	-	-	-	
Kansas .....	3,758	18,877	568	526	512	497	7,412	6,304	3,959	1,202	-	-	-	
Kentucky .....	285	549	474	360	47	617	267	48	133	101	-	-	-	
Louisiana .....	1,549	10,050	1,429	856	1,142	1,585	739	1,238	1,317	1,447	2,471	2,838	2,494	
Maine .....	740	946	78	50	14	50	908	-	(D)	(D)	-	-	-	
Maryland .....	776	2,136	354	293	90	363	1,492	500	111	(D)	-	(D)	(D)	
Massachusetts .....	518	790	77	51	85	131	(D)	(D)	-	-	-	-	-	
Michigan .....	3,254	(D)	462	228	388	512	5,033	2,085	2,012	(D)	-	-	-	
Minnesota .....	2,059	5,885	556	495	411	613	1,926	2,841	1,053	21	19	25	2,784	
Mississippi .....	1,354	14,624	1,604	586	985	1,122	536	360	1,179	3,957	4,477	4,115	2,330	
Missouri .....	2,021	14,577	1,215	511	729	595	1,587	700	1,229	7,470	1,825	1,766	2,601	
Montana .....	1,294	1,727	217	176	333	114	1,523	71	78	31	(D)	(D)	(D)	
Nebraska .....	11,801	66,930	760	752	745	766	5,905	18,399	37,132	5,369	45	80	3,200	
Nevada .....	771	2,189	1,050	625	844	1,041	376	72	501	790	331	119	2,354	
New Hampshire .....	489	634	20	20	16	-	634	-	-	-	-	-	-	
New Jersey .....	1,232	(D)	311	115	151	275	1,952	513	181	(D)	-	-	-	
New Mexico .....	4,103	9,977	515	478	626	642	6,798	571	877	838	356	537	2,466	
New York .....	1,256	1,805	108	27	77	285	1,665	122	18	-	-	-	-	
North Carolina .....	1,199	1,593	91	60	45	109	1,538	55	-	-	-	-	-	
North Dakota .....	420	2,157	603	786	499	700	1,052	389	531	185	-	-	-	
Ohio .....	892	1,203	139	58	199	72	1,110	(D)	(D)	(D)	-	-	-	
Oklahoma .....	1,299	5,622	368	224	575	420	3,772	976	627	247	-	-	-	
Oregon .....	4,513	8,953	349	193	296	441	6,851	882	398	612	102	108	2,370	
Pennsylvania .....	1,961	2,742	75	63	35	49	2,638	44	60	-	-	-	-	
Rhode Island .....	192	279	39	28	28	(D)	(D)	(D)	-	-	-	-	-	
South Carolina .....	1,144	3,296	336	126	199	219	2,044	953	(D)	(D)	-	-	-	
South Dakota .....	721	1,952	594	537	686	537	(D)	554	877	(D)	-	-	-	
Tennessee .....	753	1,799	714	197	508	662	532	270	451	394	(D)	(D)	(D)	
Texas .....	8,947	72,663	213	257	271	351	63,856	5,039	2,272	1,212	191	93	2,566	
Utah .....	1,361	2,566	628	363	620	947	1,188	295	521	346	154	62	2,468	
Vermont .....	306	385	19	18	16	(D)	385	-	-	-	-	-	-	
Virginia .....	786	1,182	58	45	42	24	(D)	-	-	(D)	-	-	-	
Washington .....	3,936	6,808	414	236	315	608	4,764	892	325	450	224	153	2,394	
West Virginia .....	174	202	24	(D)	(D)	(D)	202	-	-	-	-	-	-	
Wisconsin .....	1,733	5,166	650	239	544	609	1,578	500	2,095	993	-	-	-	
Wyoming .....	594	1,291	556	446	487	505	440	540	304	(D)	(D)	-	-	
<b>Water Resources Regions</b>														
Region 01 New England .....	2,557	3,883	55	37	54	65	3,840	5	(D)	(D)	-	-	-	
Region 02 Mid-Atlantic .....	5,471	11,972	298	111	110	309	8,538	2,369	848	(D)	-	(D)	(D)	
Region 03 South Atlantic-Gulf .....	13,291	35,944	611	340	644	531	19,072	4,966	3,514	3,961	3,369	1,062	3,083	
Region 04 Great Lakes .....	5,284	13,441	443	193	387	513	7,165	2,940	2,513	823	-	-	-	
Region 05 Ohio .....	2,480	5,065	561	254	410	571	2,078	809	1,266	793	119	-	-	
Region 06 Tennessee .....	586	740	150	(D)	(D)	(D)	643	(D)	(D)	22	(D)	-	-	
Region 07 Upper Mississippi .....	5,602	16,166	633	407	467	621	4,391	4,529	5,645	1,520	(D)	(D)	2,800	
Region 08 Lower Mississippi .....	6,148	72,712	1,433	812	1,061	1,249	2,366	3,844	9,609	24,593	17,549	14,751	2,374	
Region 09 Souris-Red-Rainy .....	357	(D)	599	1,142	561	688	931	811	378	31	-	(D)	2,784	
Region 10 Missouri .....	18,291	86,525	726	606	681	671	13,072	23,587	42,242	7,018	481	125	2,920	
Region 11 Arkansas-White-Red .....	6,644	44,657	592	371	490	603	24,026	7,852	6,533	2,679	1,491	2,076	2,518	
Region 12 Texas-Gulf .....	7,375	57,934	184	252	286	361	52,661	2,867	994	1,088	191	133	2,696	
Region 13 Rio Grande .....	3,857	8,589	682	495	580	695	4,426	635	1,496	1,024	511	497	2,423	
Region 14 Upper Colorado .....	387	(D)	243	226	563	-	(D)	102	32	-	-	(D)	(D)	
Region 15 Lower Colorado .....	1,465	4,325	729	372	526	925	1,252	1,091	1,020	575	248	139	2,758	
Region 16 Great Basin .....	2,057	4,747	902	516	707	1,297	1,300	367	1,096	1,235	488	261	2,395	
Region 17 Pacific Northwest .....	11,734	23,178	573	255	536	747	14,084	2,338	1,227	2,557	2,213	759	2,318	
Region 18 California .....	24,307	66,990	729	352	603	613	28,258	10,034	7,330	13,417	5,702	2,249	2,341	
Region 19 Alaska .....	210	270	37	35	100	(D)	(D)	(D)	(D)	-	-	-	-	
Region 20 Hawaii .....	82	(D)	202	(D)	(D)	-	76	-	-	(D)	(D)	-	-	

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**Table 11. Irrigation Pumps Used on Farms for Wells Pumped: 2018 (continued)**

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

Geographic area	Average operating pressure (see text) for -				Well pumps with average operating pressure of -						
	All pumped wells (psi)	Farms with 1 well (psi)	Farms with 2 wells (psi)	Farms with 3 wells (psi)	Under 30 psi	30 to 59 psi	60 to 79 psi	80 to 99 psi	100 or more psi		
									Well pumps	Average psi	
United States .....	39	47	45	45	143,349	246,989	52,440	10,833	6,333	124	
Alabama .....	44	39	49	57	233	518	239	(D)	-	-	
Alaska .....	48	52	51	32	9	178	58	8	17	100	
Arizona .....	28	39	35	29	2,403	1,195	235	48	6	132	
Arkansas .....	32	39	35	30	18,882	20,605	1,402	290	28	100	
California .....	41	44	42	45	18,251	36,712	8,687	1,974	1,175	136	
Colorado .....	40	43	41	47	1,622	7,385	962	54	105	117	
Connecticut .....	62	54	64	67	43	42	845	60	-	-	
Delaware .....	49	50	48	46	(D)	2,335	225	-	(D)	108	
Florida .....	41	44	42	45	3,963	12,016	2,163	54	326	128	
Georgia .....	49	44	47	45	988	7,450	1,925	440	291	191	
Hawaii .....	44	(D)	(D)	-	-	77	(D)	(D)	(D)	(D)	
Idaho .....	57	55	52	58	356	2,893	3,300	504	105	113	
Illinois .....	40	45	43	41	805	3,610	617	57	-	-	
Indiana .....	48	45	51	49	384	3,591	830	167	84	108	
Iowa .....	41	50	43	39	119	1,536	287	5	-	-	
Kansas .....	29	29	30	30	9,878	8,874	95	30	-	-	
Kentucky .....	51	67	42	(D)	39	344	78	6	82	100	
Louisiana .....	21	24	26	29	8,427	1,491	132	-	-	-	
Maine .....	45	37	43	63	251	459	128	60	48	108	
Maryland .....	43	48	45	44	263	1,523	303	47	-	-	
Massachusetts .....	51	56	47	58	48	446	232	58	6	125	
Michigan .....	59	56	66	56	1,087	4,503	2,554	779	(D)	112	
Minnesota .....	44	47	50	47	519	4,306	759	161	140	121	
Mississippi .....	28	34	31	33	8,571	5,154	803	96	-	-	
Missouri .....	34	51	46	34	5,537	8,046	766	204	24	127	
Montana .....	53	56	47	54	74	1,109	438	94	12	426	
Nebraska .....	42	46	44	43	9,103	49,463	7,974	309	81	100	
Nevada .....	44	49	42	43	244	1,548	328	54	15	135	
New Hampshire .....	58	58	59	-	18	189	416	11	-	-	
New Jersey .....	56	61	60	47	261	1,509	402	(D)	335	112	
New Mexico .....	31	37	36	24	4,941	4,667	359	-	10	100	
New York .....	55	51	55	61	134	792	608	187	84	105	
North Carolina .....	51	51	50	65	74	947	506	40	26	122	
North Dakota .....	45	(D)	(D)	43	31	1,730	396	-	-	-	
Ohio .....	55	55	48	53	68	504	543	79	9	118	
Oklahoma .....	37	34	30	31	2,054	3,360	57	151	-	-	
Oregon .....	60	59	57	58	804	3,334	2,781	1,507	527	111	
Pennsylvania .....	60	68	49	59	348	1,237	704	285	168	227	
Rhode Island .....	42	41	46	65	53	189	21	(D)	(D)	108	
South Carolina .....	49	45	50	55	171	2,191	358	573	3	105	
South Dakota .....	49	41	58	70	223	1,267	153	44	265	104	
Tennessee .....	42	57	40	40	256	1,431	59	-	53	132	
Texas .....	29	40	34	31	40,851	27,373	3,736	681	22	132	
Utah .....	53	58	65	37	167	1,669	367	12	351	117	
Vermont .....	50	45	52	60	-	229	143	(D)	(D)	124	
Virginia .....	47	44	57	37	(D)	634	403	-	(D)	(D)	
Washington .....	64	60	64	73	227	2,023	2,771	995	792	107	
West Virginia .....	46	46	40	(D)	(D)	170	(D)	-	(D)	110	
Wisconsin .....	54	57	53	67	163	3,143	1,248	441	171	110	
Wyoming .....	38	38	37	37	255	992	(D)	(D)	-	-	
<b>Water Resources Regions</b>											
Region 01 New England .....	53	48	52	63	435	1,420	1,738	231	59	109	
Region 02 Mid-Atlantic .....	52	58	50	49	1,018	7,424	2,226	594	710	137	
Region 03 South Atlantic-Gulf .....	44	45	43	46	5,540	23,408	5,241	1,109	646	156	
Region 04 Great Lakes .....	58	55	61	58	1,286	6,511	3,551	1,137	956	111	
Region 05 Ohio .....	49	54	50	45	632	3,025	1,142	121	145	109	
Region 06 Tennessee .....	46	43	53	58	94	482	139	25	-	-	
Region 07 Upper Mississippi .....	45	49	49	48	1,416	11,426	2,541	560	223	119	
Region 08 Lower Mississippi .....	30	39	32	31	38,984	30,658	2,519	458	93	119	
Region 09 Souris-Red-Rainy .....	43	(D)	(D)	35	185	1,556	408	(D)	-	-	
Region 10 Missouri .....	41	44	44	44	13,794	62,326	9,450	490	465	109	
Region 11 Arkansas-White-Red .....	29	34	32	30	23,540	20,134	754	(D)	(D)	(D)	
Region 12 Texas-Gulf .....	30	41	35	30	30,486	23,334	3,453	639	22	132	
Region 13 Rio Grande .....	34	37	37	30	3,241	4,809	482	(D)	(D)	100	
Region 14 Upper Colorado .....	39	35	49	-	115	345	(D)	-	-	-	
Region 15 Lower Colorado .....	30	46	35	37	2,556	1,401	256	52	60	157	
Region 16 Great Basin .....	48	53	58	42	384	3,148	837	66	312	111	
Region 17 Pacific Northwest .....	60	58	55	64	1,421	8,574	8,771	3,028	1,384	111	
Region 18 California .....	41	44	43	45	18,213	36,753	8,786	2,017	1,221	134	
Region 19 Alaska .....	48	52	51	32	9	178	58	8	17	100	
Region 20 Hawaii .....	44	(D)	(D)	-	-	77	(D)	(D)	(D)	(D)	

**Table 12. Irrigation Pumps Used on Farms Other Than for Wells: 2018**

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

Geographic area	Pumps to discharge water from tailwater pits												
	Farms	Pumps	Average pumping lift (feet)	Average operating pressure (psi)	Average discharge capacity (gpm)	Pumps by discharge capacity						3,000 or more gpm	
						Less than 500 gpm	500 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 to 2,999 gpm	Pumps	Average gpm	
United States .....	2,899	6,870	16	30	1,124	2,014	1,707	1,002	783	942	422	4,490	
Alabama .....	3	(D)	9	56	900	-	(D)	-	-	-	-	-	
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	
Arizona .....	58	102	21	21	878	32	36	(D)	-	(D)	-	-	
Arkansas .....	429	1,244	14	24	1,778	-	5	475	339	283	142	3,335	
California .....	771	2,401	19	29	1,129	747	591	287	306	339	131	5,139	
Colorado .....	43	77	15	28	612	24	53	-	-	-	-	-	
Connecticut .....	1	(D)	(D)	(D)	(D)	-	-	(D)	-	-	-	-	
Delaware .....	3	9	10	50	2,000	-	-	-	-	9	-	-	
Florida .....	8	24	12	30	6,183	-	-	(D)	(D)	-	(D)	(D)	
Georgia .....	23	69	40	50	600	-	69	-	-	-	-	-	
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-	
Idaho .....	112	210	18	61	308	129	81	-	-	-	-	-	
Illinois .....	6	6	10	40	200	6	-	-	-	-	-	-	
Indiana .....	34	34	5	120	600	-	34	-	-	-	-	-	
Iowa .....	18	18	40	30	300	18	-	-	-	-	-	-	
Kansas .....	70	85	10	23	677	30	37	-	18	-	-	-	
Kentucky .....	1	(D)	(D)	(D)	(D)	(D)	-	-	-	-	-	-	
Louisiana .....	67	219	10	17	3,294	-	(D)	23	(D)	(D)	123	4,577	
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-	
Maryland .....	1	(D)	(D)	(D)	(D)	-	-	-	-	(D)	-	-	
Massachusetts .....	79	(D)	6	(D)	(D)	-	36	-	-	104	(D)	(D)	
Michigan .....	42	64	9	53	619	(D)	(D)	-	-	-	-	-	
Minnesota .....	1	(D)	(D)	(D)	(D)	-	(D)	-	-	-	-	-	
Mississippi .....	95	218	16	24	1,917	(D)	-	(D)	(D)	87	15	3,600	
Missouri .....	8	8	50	50	50	8	-	-	-	-	-	-	
Montana .....	62	126	44	32	694	92	-	-	-	34	-	-	
Nebraska .....	508	926	12	21	525	318	560	48	-	-	-	-	
Nevada .....	2	(D)	(D)	(D)	(D)	(D)	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-	
New Jersey .....	2	(D)	(D)	(D)	(D)	-	(D)	-	-	-	-	-	
New Mexico .....	-	-	-	-	-	-	-	-	-	-	-	-	
New York .....	25	28	7	37	49	28	-	-	-	-	-	-	
North Carolina .....	9	12	20	55	905	-	12	-	-	-	-	-	
North Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-	
Ohio .....	1	(D)	(D)	(D)	(D)	-	(D)	-	-	-	-	-	
Oklahoma .....	-	-	-	-	-	-	-	-	-	-	-	-	
Oregon .....	173	325	18	48	414	187	53	85	-	-	-	-	
Pennsylvania .....	22	22	10	30	3	22	-	-	-	-	-	-	
Rhode Island .....	1	(D)	(D)	(D)	(D)	-	-	-	-	(D)	-	-	
South Carolina .....	3	6	2	100	500	-	6	-	-	-	-	-	
South Dakota .....	23	23	4	40	750	-	23	-	-	-	-	-	
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-	
Texas .....	75	154	17	32	581	80	19	55	-	-	-	-	
Utah .....	41	130	5	42	117	130	-	-	-	-	-	-	
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-	
Virginia .....	2	(D)	(D)	(D)	(D)	(D)	-	-	-	-	-	-	
Washington .....	64	116	11	32	61	116	-	-	-	-	-	-	
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-	
Wisconsin .....	-	-	-	-	-	-	-	-	-	-	-	-	
Wyoming .....	13	13	22	22	687	(D)	-	-	-	(D)	-	-	
<b>Water Resources Regions</b>													
Region 01 New England .....	81	146	6	37	1,642	-	36	(D)	-	(D)	(D)	(D)	
Region 02 Mid-Atlantic .....	55	78	9	40	399	(D)	(D)	-	-	11	-	-	
Region 03 South Atlantic-Gulf .....	60	130	28	48	1,773	4	90	5	16	(D)	(D)	(D)	
Region 04 Great Lakes .....	59	81	8	67	615	(D)	(D)	-	-	-	-	-	
Region 05 Ohio .....	18	18	6	115	608	-	18	-	-	-	-	-	
Region 06 Tennessee .....	2	(D)	(D)	(D)	(D)	-	(D)	-	-	-	-	-	
Region 07 Upper Mississippi .....	15	(D)	25	60	400	(D)	(D)	-	-	-	-	-	
Region 08 Lower Mississippi .....	526	1,551	14	23	1,946	(D)	(D)	485	433	362	256	3,822	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	633	1,120	16	23	577	392	643	48	-	37	-	-	
Region 11 Arkansas-White-Red .....	171	312	14	22	1,412	82	41	72	28	65	24	4,667	
Region 12 Texas-Gulf .....	9	28	9	70	300	28	-	-	-	-	-	-	
Region 13 Rio Grande .....	2	(D)	(D)	(D)	(D)	-	(D)	-	-	-	-	-	
Region 14 Upper Colorado .....	28	36	5	37	168	36	-	-	-	-	-	-	
Region 15 Lower Colorado .....	58	102	21	21	878	32	36	(D)	-	(D)	-	-	
Region 16 Great Basin .....	39	136	7	40	125	136	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	365	690	16	49	291	478	134	78	-	-	-	-	
Region 18 California .....	778	2,408	19	29	1,129	747	591	294	306	339	131	5,139	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-	

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**Table 12. Irrigation Pumps Used on Farms Other Than for Wells: 2018 (continued)**

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

Geographic area	Pumps to discharge water from ponds, lakes, reservoirs, rivers, canals, etc.												
	Farms	Pumps	Average pumping lift (feet)	Average operating pressure (psi)	Average discharge capacity (gpm)	Pumps by discharge capacity						3,000 or more gpm	
						Less than 500 gpm	500 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 to 2,999 gpm	Pumps	Average gpm	
United States .....	43,004	95,003	23	53	1,105	40,124	25,491	12,428	5,781	4,268	6,911	6,910	
Alabama .....	362	973	17	45	813	257	572	59	(D)	(D)	52	4,417	
Alaska .....	36	44	27	62	360	(D)	(D)	-	(D)	(D)	-	-	
Arizona .....	58	135	28	53	4,320	6	22	(D)	34	(D)	56	8,571	
Arkansas .....	792	2,360	19	25	1,822	97	283	438	611	583	348	3,782	
California .....	5,435	12,108	22	50	1,286	3,691	2,390	2,494	1,439	1,365	729	6,690	
Colorado .....	1,387	2,863	17	48	692	791	1,523	232	317	-	-	-	
Connecticut .....	228	333	17	56	231	267	(D)	-	-	(D)	-	-	
Delaware .....	28	93	6	57	716	15	78	-	-	-	-	-	
Florida .....	674	2,045	9	51	5,755	454	189	300	178	214	710	14,700	
Georgia .....	1,008	2,236	28	79	616	756	880	571	(D)	-	(D)	3,000	
Hawaii .....	124	180	12	47	961	73	21	-	86	-	-	-	
Idaho .....	4,008	12,010	27	56	1,106	4,025	4,318	1,577	1,003	434	653	7,838	
Illinois .....	222	359	14	46	875	139	124	39	24	19	14	9,000	
Indiana .....	355	608	11	45	1,125	173	336	(D)	17	(D)	72	5,000	
Iowa .....	167	303	15	40	158	267	36	-	-	-	-	-	
Kansas .....	512	878	15	43	907	118	601	114	30	-	15	12,000	
Kentucky .....	455	674	21	33	121	617	39	18	-	-	-	-	
Louisiana .....	399	911	14	25	2,482	184	55	59	42	233	338	4,537	
Maine .....	323	624	41	55	403	456	123	(D)	(D)	-	(D)	(D)	
Maryland .....	220	372	22	48	466	220	109	(D)	-	-	(D)	(D)	
Massachusetts .....	696	1,297	12	54	1,522	(D)	273	222	(D)	(D)	(D)	6,129	
Michigan .....	917	2,035	12	72	534	550	1,375	65	-	45	-	-	
Minnesota .....	257	317	12	46	605	205	38	23	-	51	-	-	
Mississippi .....	268	819	14	36	1,106	210	70	332	56	85	66	3,306	
Missouri .....	584	941	27	71	645	498	342	63	8	-	30	7,200	
Montana .....	3,236	8,928	23	47	1,231	3,248	2,107	1,314	604	288	1,367	4,167	
Nebraska .....	1,559	3,315	14	34	597	1,103	2,036	176	-	-	-	-	
Nevada .....	77	165	32	49	2,980	(D)	(D)	(D)	-	67	(D)	(D)	
New Hampshire .....	154	170	31	57	100	(D)	(D)	(D)	(D)	-	-	-	
New Jersey .....	282	611	9	58	684	269	172	123	-	47	-	-	
New Mexico .....	470	993	9	36	459	645	(D)	205	(D)	-	(D)	(D)	
New York .....	605	958	14	64	282	782	91	54	(D)	(D)	(D)	(D)	
North Carolina .....	1,265	2,166	27	58	852	1,068	281	568	32	-	217	4,066	
North Dakota .....	222	411	20	50	1,419	9	200	63	45	32	62	3,500	
Ohio .....	500	687	14	47	712	488	94	49	-	18	38	7,958	
Oklahoma .....	309	872	15	48	524	325	380	145	(D)	(D)	-	-	
Oregon .....	4,478	8,108	24	66	940	4,758	2,066	391	161	218	514	7,972	
Pennsylvania .....	669	1,076	39	52	196	881	154	41	-	-	-	-	
Rhode Island .....	31	47	12	62	834	40	-	(D)	-	-	(D)	(D)	
South Carolina .....	304	601	48	65	955	207	284	50	-	-	60	5,400	
South Dakota .....	176	520	75	55	1,628	154	165	79	-	70	52	8,000	
Tennessee .....	313	405	26	42	140	398	-	7	-	-	-	-	
Texas .....	1,082	1,785	23	57	1,292	1,176	227	146	(D)	(D)	148	11,105	
Utah .....	1,866	2,531	25	42	478	1,866	129	76	417	22	21	3,000	
Vermont .....	126	217	20	48	82	211	6	-	-	-	-	-	
Virginia .....	488	724	36	69	331	471	234	(D)	-	(D)	-	-	
Washington .....	3,008	9,464	23	64	1,262	4,552	1,965	1,468	314	138	1,027	6,989	
West Virginia .....	130	186	12	33	194	186	-	-	-	-	-	-	
Wisconsin .....	417	1,411	10	60	592	829	419	60	-	57	46	3,065	
Wyoming .....	1,722	3,134	35	48	535	1,753	514	706	131	-	30	4,050	
<b>Water Resources Regions</b>													
Region 01 New England .....	1,471	2,552	21	55	928	1,399	456	249	27	230	191	6,074	
Region 02 Mid-Atlantic .....	1,651	2,991	25	56	399	1,922	740	243	20	55	11	4,279	
Region 03 South Atlantic-Gulf .....	3,663	8,191	23	62	1,995	2,917	2,090	1,674	250	220	1,040	11,390	
Region 04 Great Lakes .....	1,681	3,273	13	65	522	1,440	1,645	102	(D)	(D)	(D)	7,978	
Region 05 Ohio .....	1,518	2,089	19	43	395	1,641	289	73	17	18	51	6,141	
Region 06 Tennessee .....	401	596	27	39	496	374	168	(D)	(D)	(D)	22	4,409	
Region 07 Upper Mississippi .....	912	2,234	12	63	615	1,236	724	89	24	79	82	3,915	
Region 08 Lower Mississippi .....	1,033	3,067	17	24	2,038	188	221	601	621	758	678	4,039	
Region 09 Souris-Red-Rainy .....	223	276	17	36	1,146	(D)	(D)	36	-	51	(D)	3,500	
Region 10 Missouri .....	6,913	16,268	23	45	995	5,600	6,061	2,192	599	366	1,450	4,362	
Region 11 Arkansas-White-Red .....	948	2,008	16	41	1,046	479	749	316	223	145	96	5,521	
Region 12 Texas-Gulf .....	1,034	1,599	23	60	1,368	1,063	202	118	(D)	(D)	148	11,105	
Region 13 Rio Grande .....	375	1,104	10	35	579	544	272	254	(D)	-	(D)	(D)	
Region 14 Upper Colorado .....	1,513	2,636	20	43	529	1,532	477	227	391	-	9	(D)	
Region 15 Lower Colorado .....	58	135	28	53	4,320	6	22	(D)	34	(D)	56	8,571	
Region 16 Great Basin .....	1,474	2,341	31	44	754	1,338	381	138	347	96	41	8,854	
Region 17 Pacific Northwest .....	12,372	30,958	25	61	1,081	14,375	8,463	3,457	1,611	814	2,238	7,408	
Region 18 California .....	5,604	12,461	22	50	1,266	3,854	2,455	2,626	1,439	1,358	729	6,690	
Region 19 Alaska .....	36	44	27	62	360	(D)	(D)	-	(D)	-	-	-	
Region 20 Hawaii .....	124	180	12	47	961	73	21	-	86	-	-	-	

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**Table 12. Irrigation Pumps Used on Farms Other Than for Wells: 2018 (continued)**

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

Geographic area	Relifing or boosting water within systems												
	Farms	Pumps	Average pumping lift (feet)	Average operating pressure (psi)	Average discharge capacity (gpm)	Pumps by discharge capacity						3,000 or more gpm	
						Less than 500 gpm	500 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 to 2,999 gpm	Pumps	Average gpm	
United States .....	16,339	38,705	25	48	1,015	15,985	10,486	3,939	3,911	2,506	1,878	6,909	
Alabama .....	46	52	13	28	196	42	10	-	-	-	-	-	
Alaska .....	13	19	15	44	104	(D)	-	(D)	-	-	-	-	
Arizona .....	64	436	7	53	1,309	145	-	90	94	(D)	(D)	(D)	
Arkansas .....	95	279	12	25	1,229	37	56	89	31	47	19	3,000	
California .....	5,639	15,920	24	44	1,133	5,368	3,315	1,639	2,844	1,912	842	4,976	
Colorado .....	1,018	1,838	15	40	592	965	778	24	-	-	71	4,000	
Connecticut .....	7	7	(D)	88	457	3	4	-	-	-	-	-	
Delaware .....	1	(D)	(D)	(D)	(D)	-	(D)	-	-	-	-	-	
Florida .....	82	335	9	20	2,795	177	-	92	-	3	63	13,171	
Georgia .....	19	50	14	60	690	(D)	(D)	30	-	-	-	-	
Hawaii .....	120	239	11	42	520	86	153	-	-	-	-	-	
Idaho .....	1,720	3,836	21	52	1,214	1,708	1,686	130	62	108	142	19,818	
Illinois .....	9	13	15	54	36	13	-	-	-	-	-	-	
Indiana .....	36	36	16	21	158	(D)	-	(D)	-	-	-	-	
Iowa .....	17	33	10	31	238	33	-	-	-	-	-	-	
Kansas .....	73	114	33	36	530	74	25	12	3	-	-	-	
Kentucky .....	3	(D)	(D)	29	(D)	(D)	-	(D)	-	-	-	-	
Louisiana .....	24	52	8	14	3,250	-	-	(D)	(D)	(D)	(D)	4,000	
Maine .....	92	205	11	52	170	178	27	-	-	-	-	-	
Maryland .....	1	(D)	(D)	(D)	(D)	(D)	-	-	-	-	-	-	
Massachusetts .....	101	127	24	35	3,274	56	-	47	-	-	24	15,000	
Michigan .....	90	134	6	73	308	93	41	-	-	-	-	-	
Minnesota .....	28	38	7	74	366	12	26	-	-	-	-	-	
Mississippi .....	67	150	21	32	1,610	37	-	8	-	105	-	-	
Missouri .....	20	110	85	46	819	10	100	-	-	-	-	-	
Montana .....	725	1,451	15	45	997	583	396	226	62	48	136	4,412	
Nebraska .....	425	1,420	12	38	727	214	1,059	137	-	10	-	-	
Nevada .....	75	191	5	37	1,615	14	-	151	-	11	15	9,000	
New Hampshire .....	35	41	(D)	69	150	41	-	-	-	-	-	-	
New Jersey .....	16	33	14	22	632	(D)	(D)	-	-	-	-	-	
New Mexico .....	234	316	19	36	332	265	41	-	-	10	-	-	
New York .....	83	83	16	37	158	66	17	-	-	-	-	-	
North Carolina .....	106	211	41	131	650	82	-	129	-	-	-	-	
North Dakota .....	27	116	20	32	119	116	-	-	-	-	-	-	
Ohio .....	91	124	9	88	928	60	(D)	-	-	-	(D)	(D)	
Oklahoma .....	34	36	8	56	574	26	(D)	3	-	-	(D)	(D)	
Oregon .....	1,137	1,819	40	64	895	1,139	338	168	-	113	61	12,820	
Pennsylvania .....	113	134	28	32	122	134	-	-	-	-	-	-	
Rhode Island .....	5	5	10	140	1,400	-	-	5	-	-	-	-	
South Carolina .....	3	6	10	(D)	500	-	6	-	-	-	-	-	
South Dakota .....	69	218	16	38	1,470	106	87	-	-	-	25	8,300	
Tennessee .....	8	11	39	34	24	11	-	-	-	-	-	-	
Texas .....	393	656	15	42	456	489	104	35	-	22	6	4,000	
Utah .....	947	1,511	23	52	408	1,116	316	16	(D)	(D)	(D)	(D)	
Vermont .....	60	86	38	30	202	61	25	-	-	-	-	-	
Virginia .....	79	103	30	73	527	71	-	32	-	-	-	-	
Washington .....	1,701	4,707	45	64	1,009	1,775	1,272	570	768	-	322	5,106	
West Virginia .....	52	72	54	61	12	72	-	-	-	-	-	-	
Wisconsin .....	38	114	7	40	3,344	57	-	-	-	-	57	6,667	
Wyoming .....	498	1,204	19	34	902	371	509	290	-	12	22	15,850	
<b>Water Resources Regions</b>													
Region 01 New England .....	271	442	19	48	1,066	335	31	52	-	-	24	15,000	
Region 02 Mid-Atlantic .....	228	311	38	47	325	232	47	32	-	-	-	-	
Region 03 South Atlantic-Gulf .....	210	611	20	64	1,845	279	9	251	-	9	63	13,171	
Region 04 Great Lakes .....	167	217	8	63	599	(D)	76	-	-	-	(D)	(D)	
Region 05 Ohio .....	206	241	11	59	249	186	46	9	-	-	-	-	
Region 06 Tennessee .....	59	65	22	17	146	55	10	-	-	-	-	-	
Region 07 Upper Mississippi .....	83	173	7	48	2,294	90	26	-	-	-	57	6,667	
Region 08 Lower Mississippi .....	139	466	23	32	1,391	(D)	148	(D)	34	(D)	(D)	3,350	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	1,874	4,696	18	39	841	1,367	2,474	515	62	70	208	4,786	
Region 11 Arkansas-White-Red .....	208	309	12	29	1,044	151	69	9	3	44	33	3,942	
Region 12 Texas-Gulf .....	280	448	18	44	451	303	104	35	-	-	6	4,000	
Region 13 Rio Grande .....	285	405	20	35	421	300	71	24	-	10	-	-	
Region 14 Upper Colorado .....	1,128	1,879	20	46	576	1,430	259	104	40	-	46	9,667	
Region 15 Lower Colorado .....	69	470	7	51	1,340	145	-	120	94	(D)	(D)	(D)	
Region 16 Great Basin .....	631	1,249	18	43	576	820	232	148	4	23	22	7,918	
Region 17 Pacific Northwest .....	4,656	10,478	34	60	1,058	4,630	3,416	865	830	212	525	9,982	
Region 18 California .....	5,712	15,987	24	44	1,130	5,392	3,315	1,677	2,844	1,921	838	4,976	
Region 19 Alaska .....	13	19	15	44	104	(D)	-	(D)	-	-	-	-	
Region 20 Hawaii .....	120	239	11	42	520	86	153	-	-	-	-	-	

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**Table 12. Irrigation Pumps Used on Farms Other Than for Wells: 2018 (continued)**

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

Geographic area	Pumps by average discharge operating pressure (see text)											
	From tailwater pits				From ponds, lakes, reservoirs rivers, canals, etc.				Relifting or boosting water within systems			
	Less than 15 psi	15 to 29 psi	30 to 59 psi	60 psi or more	Less than 15 psi	15 to 29 psi	30 to 59 psi	60 psi or more	Less than 15 psi	15 to 29 psi	30 to 59 psi	60 psi or more
United States .....	1,271	2,505	2,424	670	3,961	10,092	44,658	36,292	1,293	3,738	23,246	10,428
Alabama .....	-	-	(D)	(D)	152	15	461	345	25	-	16	11
Alaska .....	-	-	-	-	(D)	-	(D)	20	-	(D)	(D)	(D)
Arizona .....	38	28	36	-	(D)	(D)	24	80	-	(D)	(D)	241
Arkansas .....	516	372	305	51	479	901	819	161	53	43	183	-
California .....	374	899	884	244	422	1,534	6,689	3,463	497	1,749	10,782	2,892
Colorado .....	-	32	45	-	-	204	1,962	697	10	258	1,307	263
Connecticut .....	-	-	(D)	-	-	51	158	124	-	-	(D)	(D)
Delaware .....	-	-	9	-	-	(D)	(D)	74	-	-	-	(D)
Florida .....	(D)	(D)	-	-	199	221	1,363	262	254	-	54	27
Georgia .....	-	-	69	-	11	46	746	1,433	-	-	36	14
Hawaii .....	-	-	-	-	-	(D)	(D)	-	-	-	233	6
Idaho .....	-	-	83	127	156	190	5,536	6,128	60	94	1,949	1,733
Illinois .....	-	-	6	-	5	64	163	127	-	-	8	5
Indiana .....	-	-	-	34	5	61	403	139	-	(D)	-	(D)
Iowa .....	-	-	18	-	-	188	41	74	-	18	(D)	(D)
Kansas .....	27	21	37	-	10	112	558	198	-	65	26	23
Kentucky .....	-	-	(D)	-	90	204	293	87	-	(D)	(D)	-
Louisiana .....	(D)	198	(D)	-	239	391	190	91	26	(D)	(D)	-
Maine .....	-	-	-	-	-	136	228	260	-	3	108	94
Maryland .....	-	(D)	-	-	-	114	127	131	-	-	-	(D)
Massachusetts .....	-	66	(D)	22	56	112	778	351	28	-	99	-
Michigan .....	-	-	42	22	40	55	749	1,191	-	-	15	119
Minnesota .....	-	-	-	(D)	18	19	242	38	-	-	12	26
Mississippi .....	28	166	6	18	41	292	370	116	(D)	(D)	136	-
Missouri .....	-	-	8	-	40	145	483	273	(D)	(D)	100	-
Montana .....	-	80	46	-	213	1,767	4,308	2,640	-	274	721	456
Nebraska .....	163	572	191	-	525	573	1,909	308	15	61	1,160	184
Nevada .....	-	-	(D)	-	5	15	111	34	-	71	117	3
New Hampshire .....	-	-	-	-	-	-	51	119	-	-	-	41
New Jersey .....	-	-	(D)	-	-	44	305	262	-	(D)	(D)	-
New Mexico .....	-	-	-	-	68	271	654	-	47	-	269	-
New York .....	-	22	-	6	113	107	237	501	-	16	45	22
North Carolina .....	-	-	12	-	44	393	590	1,139	-	26	-	185
North Dakota .....	-	-	-	-	67	31	186	127	-	-	108	8
Ohio .....	-	-	(D)	-	23	176	249	239	-	-	10	114
Oklahoma .....	-	-	-	-	26	242	275	329	-	-	9	27
Oregon .....	54	35	156	80	140	183	3,372	4,413	10	96	892	821
Pennsylvania .....	-	-	22	-	52	218	421	385	-	67	42	25
Rhode Island .....	-	-	(D)	-	-	-	23	24	-	-	-	5
South Carolina .....	-	-	-	6	-	46	258	297	-	-	6	-
South Dakota .....	-	-	23	-	70	-	237	213	-	-	(D)	(D)
Tennessee .....	-	-	-	-	42	-	316	47	-	-	11	-
Texas .....	42	-	84	28	100	352	1,029	304	3	104	472	77
Utah .....	-	-	118	12	-	256	2,024	251	120	31	894	466
Vermont .....	-	-	-	-	25	-	165	27	32	-	(D)	(D)
Virginia .....	-	-	(D)	(D)	56	33	117	518	23	32	-	48
Washington .....	7	-	109	-	27	61	2,864	6,512	56	276	2,018	2,357
West Virginia .....	-	-	-	-	50	-	136	-	-	3	-	69
Wisconsin .....	-	-	-	-	50	39	383	939	-	-	114	-
Wyoming .....	-	(D)	(D)	-	279	213	1,841	801	20	333	802	49
<b>Water Resources Regions</b>												
Region 01 New England .....	-	66	58	22	56	299	1,308	889	33	3	262	144
Region 02 Mid-Atlantic .....	-	24	40	14	163	383	1,067	1,378	23	122	69	97
Region 03 South Atlantic-Gulf .....	13	(D)	103	(D)	389	702	3,478	3,622	254	6	114	237
Region 04 Great Lakes .....	-	-	42	39	148	233	1,276	1,616	27	-	25	165
Region 05 Ohio .....	-	-	(D)	(D)	141	409	1,018	521	-	62	38	141
Region 06 Tennessee .....	-	-	-	(D)	102	44	331	119	25	26	14	-
Region 07 Upper Mississippi .....	-	-	(D)	(D)	24	305	813	1,092	-	(D)	139	(D)
Region 08 Lower Mississippi .....	491	706	291	63	627	1,363	902	175	46	53	367	-
Region 09 Souris-Red-Rainy .....	-	-	-	-	(D)	(D)	166	23	-	-	-	-
Region 10 Missouri .....	163	662	295	-	1,044	2,446	8,663	4,115	49	698	3,265	684
Region 11 Arkansas-White-Red .....	131	51	130	-	156	574	753	525	43	74	165	27
Region 12 Texas-Gulf .....	-	-	-	28	100	345	853	301	3	82	286	77
Region 13 Rio Grande .....	-	(D)	-	-	35	265	804	-	47	30	328	-
Region 14 Upper Colorado .....	-	(D)	-	(D)	76	274	1,871	415	-	249	1,225	405
Region 15 Lower Colorado .....	38	28	36	-	(D)	(D)	24	80	-	(D)	(D)	241
Region 16 Great Basin .....	-	-	136	-	5	164	1,893	279	120	94	848	187
Region 17 Pacific Northwest .....	61	32	394	203	394	686	12,416	17,462	126	466	4,841	5,045
Region 18 California .....	374	902	884	248	422	1,557	6,822	3,660	497	1,719	10,831	2,940
Region 19 Alaska .....	-	-	-	-	(D)	-	(D)	20	-	(D)	(D)	(D)
Region 20 Hawaii .....	-	-	-	-	-	(D)	-	-	-	-	233	6

**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018**

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

Geographic area	Total energy expenses for pumping <sup>1</sup>						Expenses (\$1,000)
	Farms	Pumps powered	Acres in the open by water source		Square feet under protection by water source		
			Water from wells	Surface water	Water from wells	Surface water	
United States .....	158,236	595,775	36,901,920	13,233,726	993,579,006	303,638,769	2,419,224
Alabama .....	929	2,014	90,057	82,589	9,064,080	5,144,224	4,656
Alaska .....	242	327	1,370	125	1,808,434	154,526	80
Arizona .....	1,259	4,414	337,873	105,373	9,836,360	(D)	42,216
Arkansas .....	3,024	45,090	4,047,330	577,775	1,573,874	1,061,540	128,626
California .....	28,767	94,698	4,461,363	3,512,066	193,255,732	84,361,298	769,947
Colorado .....	4,722	14,831	1,154,063	379,151	7,448,640	828,212	86,299
Connecticut .....	556	1,164	2,559	2,354	25,738,372	813,160	1,113
Delaware .....	517	2,847	189,403	19,962	2,293,800	-	9,773
Florida .....	7,431	20,881	737,191	588,274	253,225,684	33,666,658	47,447
Georgia .....	3,793	13,449	1,006,468	173,360	14,146,250	3,377,970	46,643
Hawaii .....	317	502	2,297	15,066	824,960	2,885,772	1,079
Idaho .....	7,496	23,159	1,044,768	1,434,002	3,003,332	158,600	145,734
Illinois .....	1,715	5,462	545,504	21,749	43,928,430	890,000	12,275
Indiana .....	1,951	5,716	528,697	54,963	5,753,528	2,141,188	9,621
Iowa .....	940	2,229	158,281	9,936	2,415,586	3,378,890	2,244
Kansas .....	4,043	19,940	2,341,715	109,987	4,087,616	249,250	109,310
Kentucky .....	695	1,220	33,749	24,985	1,494,908	3,983,194	861
Louisiana .....	1,769	11,232	1,006,581	116,956	5,651,525	6,649,912	30,702
Maine .....	913	1,743	12,250	22,580	4,345,739	684,165	1,067
Maryland .....	889	2,463	109,458	23,856	9,362,253	906,340	3,922
Massachusetts .....	1,183	2,356	4,333	16,137	4,378,296	118,000	1,788
Michigan .....	3,703	11,902	713,213	151,844	59,458,501	18,327,900	21,054
Minnesota .....	2,286	6,250	529,760	23,967	14,235,622	2,677,466	11,659
Mississippi .....	1,505	15,811	1,653,354	115,290	3,336,444	195,300	42,647
Missouri .....	2,384	15,540	1,385,498	98,458	5,782,916	1,601,240	29,134
Montana .....	4,888	12,220	60,103	1,110,353	1,494,808	100,980	26,556
Nebraska .....	12,465	72,591	7,277,592	634,495	2,457,968	-	234,140
Nevada .....	824	2,556	308,365	59,734	213,380	50,500	28,230
New Hampshire .....	599	840	1,175	1,721	6,325,538	744,500	200
New Jersey .....	1,431	3,331	67,093	22,276	43,424,676	4,692,558	5,612
New Mexico .....	4,415	10,973	400,765	130,683	1,945,008	1,329,045	35,443
New York .....	1,719	2,850	19,064	23,039	32,151,291	5,644,700	1,836
North Carolina .....	2,288	3,928	23,956	114,895	10,301,998	17,535,594	4,603
North Dakota .....	622	2,684	189,046	77,691	240,712	(D)	6,381
Ohio .....	1,298	1,932	17,414	16,779	15,969,059	23,180,842	922
Oklahoma .....	1,588	6,530	511,198	68,867	1,197,066	542,621	21,496
Oregon .....	9,301	19,133	433,629	592,328	37,770,843	18,624,450	54,249
Pennsylvania .....	2,453	3,932	29,831	9,180	54,606,820	7,586,125	1,459
Rhode Island .....	194	315	1,992	1,846	1,468,969	237,000	124
South Carolina .....	1,347	3,909	220,332	42,235	4,459,916	1,253,000	10,540
South Dakota .....	908	2,711	209,540	130,467	1,161,600	31,824	7,430
Tennessee .....	988	2,173	179,228	11,652	2,702,136	3,929,200	2,531
Texas .....	9,945	75,177	3,451,914	322,658	41,975,732	23,868,044	263,656
Utah .....	3,808	6,700	238,814	413,818	3,284,912	910,960	28,447
Vermont .....	410	688	911	949	2,122,254	157,752	164
Virginia .....	1,268	2,020	10,927	39,105	12,547,674	15,113,972	1,129
Washington .....	7,648	20,880	529,088	1,126,219	15,536,597	1,930,740	92,825
West Virginia .....	283	417	516	5,543	633,640	174,872	86
Wisconsin .....	1,980	6,634	478,334	41,061	12,914,397	666,600	16,795
Wyoming .....	2,537	5,411	143,958	555,327	221,130	71,400	14,476
<b>Water Resources Regions</b>							
Region 01 New England .....	3,628	6,800	22,982	44,948	43,317,334	2,656,825	4,376
Region 02 Mid-Atlantic .....	6,695	15,229	415,445	122,400	146,130,013	28,431,258	22,748
Region 03 South Atlantic-Gulf .....	15,986	44,769	2,061,814	1,018,333	293,977,702	57,973,466	114,128
Region 04 Great Lakes .....	6,288	16,909	962,382	198,520	77,631,329	40,425,146	26,749
Region 05 Ohio .....	3,769	7,299	373,731	66,894	19,903,049	13,801,383	8,834
Region 06 Tennessee .....	887	1,336	31,400	38,959	5,447,518	6,775,152	1,739
Region 07 Upper Mississippi .....	6,213	18,457	1,542,794	107,026	66,405,104	5,945,812	39,790
Region 08 Lower Mississippi .....	6,402	77,796	7,461,692	685,908	7,508,489	7,020,552	201,381
Region 09 Souris-Red-Rainy .....	554	2,452	176,639	29,730	152,800	(D)	4,230
Region 10 Missouri .....	24,499	108,264	9,353,331	2,446,919	16,495,114	3,339,481	365,746
Region 11 Arkansas-White-Red .....	7,461	47,206	4,523,811	309,472	3,565,652	1,581,721	257,295
Region 12 Texas-Gulf .....	8,246	59,928	2,162,528	219,665	36,729,816	23,868,044	158,928
Region 13 Rio Grande .....	4,064	9,926	388,509	171,931	9,789,468	91,000	35,632
Region 14 Upper Colorado .....	2,783	4,995	20,312	371,430	195,040	1,629,705	14,022
Region 15 Lower Colorado .....	1,545	4,886	379,086	123,178	9,971,360	(D)	44,786
Region 16 Great Basin .....	3,734	8,428	608,045	401,886	3,498,292	899,060	54,854
Region 17 Pacific Northwest .....	25,781	64,956	1,936,856	3,325,692	57,106,800	18,892,490	291,190
Region 18 California .....	29,142	95,310	4,476,896	3,535,644	193,120,732	86,255,298	771,639
Region 19 Alaska .....	242	327	1,370	125	1,808,434	154,526	80
Region 20 Hawaii .....	317	502	2,297	15,066	824,960	2,885,772	1,079

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Total energy expenses for pumping <sup>1</sup> - con.					
	Expenses per irrigated acre for operations with only acres in the open (dollars)		Expenses per irrigated acre for operations with only horticulture in the open (dollars)		Expenses per 10,000 sq ft. for operations with only irrigated horticulture under protection (dollars)	
	Water from wells only	Surface water only	Water from wells only	Surface water only	Water from wells only	Surface water only
United States .....	48.18	36.45	77.20	68.90	163.86	133.27
Alabama .....	28.44	23.38	18.82	66.88	59.74	65.37
Alaska .....	37.68	7.04	60.38	22.00	61.35	266.21
Arizona .....	115.37	30.48	75.47	95.51	(D)	250.00
Arkansas .....	26.84	19.27	51.05	29.88	102.33	27.55
California .....	133.67	54.62	285.60	161.38	226.22	293.15
Colorado .....	64.79	39.38	91.02	141.46	44.04	-
Connecticut .....	39.09	22.37	(D)	(D)	70.94	70.00
Delaware .....	22.30	-	4.90	-	30.04	-
Florida .....	48.32	13.40	110.71	59.45	376.19	49.19
Georgia .....	38.97	33.76	70.70	9.99	66.93	-
Hawaii .....	10.75	65.43	75.00	129.85	(D)	207.21
Idaho .....	62.59	44.68	29.56	110.74	277.14	5.22
Illinois .....	19.63	14.74	26.12	35.43	188.03	194.00
Indiana .....	15.80	16.56	30.26	58.10	49.02	(D)
Iowa .....	12.07	16.88	26.46	25.00	210.31	(D)
Kansas .....	45.57	39.82	48.13	154.74	12.78	7.50
Kentucky .....	15.23	8.50	157.14	76.56	93.80	292.43
Louisiana .....	28.33	25.82	62.17	21.60	596.33	128.21
Maine .....	34.11	31.59	5.96	11.34	108.30	-
Maryland .....	26.17	24.15	18.91	25.61	133.06	-
Massachusetts .....	50.33	100.19	64.27	92.50	8.72	312.50
Michigan .....	22.17	31.39	27.66	46.47	42.11	64.58
Minnesota .....	20.79	12.75	32.86	(D)	53.37	11.40
Mississippi .....	22.95	16.90	(D)	14.76	194.91	-
Missouri .....	20.16	15.85	33.93	48.19	367.53	(D)
Montana .....	25.89	22.02	50.13	(D)	246.79	(D)
Nebraska .....	30.61	21.07	24.63	-	304.03	-
Nevada .....	85.88	57.91	183.45	-	197.49	320.00
New Hampshire .....	39.78	41.99	50.00	38.00	324.00	16.67
New Jersey .....	59.28	55.40	75.67	49.43	86.59	16.03
New Mexico .....	80.69	45.09	27.46	-	702.90	-
New York .....	50.32	27.55	86.62	51.20	248.16	497.41
North Carolina .....	32.90	28.70	75.01	59.12	276.96	86.20
North Dakota .....	21.50	13.91	(D)	-	(D)	-
Ohio .....	21.05	21.82	41.11	50.66	85.73	22.15
Oklahoma .....	42.31	18.21	38.37	13.84	796.97	534.76
Oregon .....	55.07	45.23	88.30	88.06	93.04	202.48
Pennsylvania .....	21.57	34.62	29.44	125.62	35.89	283.78
Rhode Island .....	25.92	16.72	(D)	(D)	150.84	-
South Carolina .....	44.07	47.93	41.98	69.40	415.58	-
South Dakota .....	17.84	27.42	36.96	98.43	-	(D)
Tennessee .....	10.33	27.64	12.75	42.98	127.62	541.60
Texas .....	72.77	44.69	56.24	93.68	96.78	173.86
Utah .....	68.36	27.85	(D)	66.39	(D)	(D)
Vermont .....	24.64	45.97	68.50	222.00	580.58	-
Virginia .....	11.48	16.50	36.43	16.58	112.80	63.82
Washington .....	63.75	45.48	35.30	70.08	213.50	190.39
West Virginia .....	42.18	18.15	-	46.52	862.93	169.20
Wisconsin .....	28.61	74.31	26.60	29.31	72.16	-
Wyoming .....	35.11	15.72	(D)	-	213.26	-
<b>Water Resources Regions</b>						
Region 01 New England .....	41.15	62.91	37.48	38.41	96.38	72.88
Region 02 Mid-Atlantic .....	29.83	30.79	57.02	45.70	60.02	139.40
Region 03 South Atlantic-Gulf .....	42.94	19.02	91.38	51.07	328.31	61.95
Region 04 Great Lakes .....	20.85	26.36	28.21	38.11	66.06	63.13
Region 05 Ohio .....	18.27	20.05	36.65	58.38	136.18	158.00
Region 06 Tennessee .....	24.41	23.32	24.41	22.45	293.12	165.52
Region 07 Upper Mississippi .....	22.08	38.00	27.42	36.97	139.12	27.44
Region 08 Lower Mississippi .....	23.68	22.04	43.97	(D)	379.73	133.47
Region 09 Souris-Red-Rainy .....	20.51	13.14	123.03	(D)	(D)	(D)
Region 10 Missouri .....	33.54	21.90	67.36	127.68	130.77	60.26
Region 11 Arkansas-White-Red .....	55.23	36.04	41.34	20.05	333.39	94.00
Region 12 Texas-Gulf .....	71.60	34.39	52.39	99.45	120.16	173.86
Region 13 Rio Grande .....	80.27	39.63	47.77	-	(D)	-
Region 14 Upper Colorado .....	65.50	40.25	155.55	92.66	128.63	16.67
Region 15 Lower Colorado .....	108.02	26.24	84.75	95.51	(D)	250.00
Region 16 Great Basin .....	76.59	19.78	159.98	39.11	263.14	(D)
Region 17 Pacific Northwest .....	61.01	43.47	63.31	85.02	164.16	79.23
Region 18 California .....	133.09	54.91	284.27	161.38	226.45	293.99
Region 19 Alaska .....	37.68	7.04	60.38	22.00	61.35	266.21
Region 20 Hawaii .....	10.75	65.43	75.00	129.85	(D)	207.21

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Total energy expenses for pumping <sup>1</sup> - con.						
	Farms with energy expenses of -						
	\$1 to \$999	\$1,000 to \$1,999	\$2,000 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 or more
United States .....	63,374	18,516	22,863	15,891	13,854	13,499	10,540
Alabama .....	547	91	95	93	55	29	19
Alaska .....	227	8	2	4	1	-	-
Arizona .....	302	249	226	142	80	96	180
Arkansas .....	385	219	295	239	369	736	781
California .....	8,147	3,309	4,789	3,559	3,423	2,827	2,918
Colorado .....	1,648	554	492	687	470	416	463
Connecticut .....	423	54	31	1	30	16	1
Delaware .....	111	71	142	73	52	46	22
Florida .....	4,308	756	981	560	384	249	193
Georgia .....	1,663	412	517	155	442	389	215
Hawaii .....	226	54	5	6	15	3	8
Idaho .....	2,541	1,044	1,330	740	649	575	617
Illinois .....	601	229	284	263	202	102	34
Indiana .....	712	225	542	274	67	101	30
Iowa .....	531	147	135	75	47	5	-
Kansas .....	391	352	706	729	605	730	530
Kentucky .....	599	41	27	7	12	6	3
Louisiana .....	417	129	263	253	257	296	154
Maine .....	785	72	31	11	7	5	2
Maryland .....	496	107	77	112	47	68	2
Massachusetts .....	910	108	116	14	24	10	1
Michigan .....	1,901	371	611	395	184	151	90
Minnesota .....	773	396	547	307	188	46	29
Mississippi .....	367	103	181	190	201	216	247
Missouri .....	1,011	225	260	248	225	273	142
Montana .....	2,081	952	803	436	260	268	88
Nebraska .....	1,372	1,024	2,257	2,266	2,130	2,294	1,122
Nevada .....	201	77	121	62	143	108	112
New Hampshire .....	542	50	4	1	2	-	-
New Jersey .....	836	98	243	134	54	78	11
New Mexico .....	2,770	417	444	267	147	166	204
New York .....	1,451	147	54	30	16	13	8
North Carolina .....	1,489	437	135	107	68	49	3
North Dakota .....	112	63	233	73	71	47	23
Ohio .....	1,089	124	53	21	6	5	-
Oklahoma .....	574	108	328	174	133	141	130
Oregon .....	5,064	1,424	1,026	659	487	482	159
Pennsylvania .....	2,170	192	57	19	5	10	-
Rhode Island .....	173	7	10	2	-	-	-
South Carolina .....	695	85	256	90	63	98	60
South Dakota .....	101	140	224	319	65	47	12
Tennessee .....	544	115	192	59	66	12	-
Texas .....	3,687	1,046	1,124	628	861	1,336	1,266
Utah .....	1,432	743	697	427	199	196	114
Vermont .....	320	87	3	-	-	-	-
Virginia .....	1,043	62	105	41	9	8	-
Washington .....	3,504	1,102	916	461	725	506	441
West Virginia .....	273	3	2	5	-	-	-
Wisconsin .....	1,034	194	321	155	114	109	72
Wyoming .....	795	493	570	318	192	135	34
<b>Water Resources Regions</b>							
Region 01 New England .....	2,963	342	194	29	65	31	4
Region 02 Mid-Atlantic .....	4,723	566	628	384	179	215	43
Region 03 South Atlantic-Gulf .....	8,934	1,697	2,014	1,037	992	819	493
Region 04 Great Lakes .....	3,705	664	857	505	230	232	95
Region 05 Ohio .....	2,646	304	435	226	72	63	23
Region 06 Tennessee .....	619	161	40	8	41	16	2
Region 07 Upper Mississippi .....	2,527	847	1,282	708	483	246	139
Region 08 Lower Mississippi .....	866	480	905	712	935	1,369	1,135
Region 09 Souris-Red-Rainy .....	195	64	64	75	120	19	17
Region 10 Missouri .....	4,836	2,892	4,535	4,129	3,203	3,217	1,687
Region 11 Arkansas-White-Red .....	1,779	529	928	850	944	1,166	1,273
Region 12 Texas-Gulf .....	3,281	917	852	625	662	1,104	808
Region 13 Rio Grande .....	2,584	442	408	220	56	124	230
Region 14 Upper Colorado .....	1,291	425	487	417	103	27	33
Region 15 Lower Colorado .....	399	249	321	169	128	108	187
Region 16 Great Basin .....	1,364	590	539	325	323	357	236
Region 17 Pacific Northwest .....	11,972	3,873	3,512	1,868	1,801	1,565	1,197
Region 18 California .....	8,237	3,412	4,855	3,594	3,501	2,818	2,930
Region 19 Alaska .....	227	8	2	4	1	-	-
Region 20 Hawaii .....	226	54	5	6	15	3	8

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Electricity								
	Farms	Pumps powered	Acres in the open by water source		Square feet under protection by water source		Expenses (\$1,000)	Expenses per irrigated acre for operations with only acres in the open (dollars)	
			Water from wells	Surface water	Water from wells	Surface water		Water from wells only	Surface water only
United States .....	135,309	443,717	24,067,681	10,011,992	889,659,055	251,733,786	1,885,547	57.26	38.82
Alabama .....	684	1,265	68,853	40,607	(D)	5,024,224	3,034	27.15	19.52
Alaska .....	226	291	(D)	26	(D)	133,246	60	48.93	(D)
Arizona .....	1,158	3,944	320,811	59,445	9,836,360	33,660	38,410	114.41	20.92
Arkansas .....	2,357	21,194	1,780,940	274,954	1,573,874	538,820	57,128	25.98	21.30
California .....	27,079	84,856	4,029,423	2,645,026	192,097,024	73,509,538	698,867	143.76	58.17
Colorado .....	4,285	13,654	1,099,327	344,361	(D)	(D)	83,049	65.89	40.34
Connecticut .....	450	867	1,036	633	25,423,372	147,120	915	51.71	20.17
Delaware .....	489	1,880	128,560	2,393	(D)	-	6,038	48.82	-
Florida .....	5,832	11,408	330,545	52,406	194,921,084	25,738,738	19,182	46.26	27.33
Georgia .....	3,459	11,420	855,562	114,691	14,146,250	(D)	39,349	39.27	28.31
Hawaii .....	299	419	(D)	8,319	824,960	2,885,772	688	54.18	63.17
Idaho .....	7,426	22,839	1,041,567	1,393,433	2,998,592	158,000	145,178	62.54	45.62
Illinois .....	1,335	3,995	388,142	8,769	43,827,230	832,500	8,111	20.21	9.59
Indiana .....	1,450	3,846	336,533	21,814	3,840,064	1,958,588	5,526	15.02	21.38
Iowa .....	798	1,731	116,901	3,487	2,353,570	(D)	1,551	11.75	(D)
Kansas .....	2,529	7,838	747,307	42,445	4,087,616	77,250	37,478	47.46	48.68
Kentucky .....	405	616	(D)	14,345	1,450,708	1,896,600	524	18.43	7.08
Louisiana .....	1,361	5,333	344,174	(D)	5,651,525	6,649,912	13,063	36.17	10.61
Maine .....	687	1,035	1,275	1,923	2,091,039	(D)	149	64.23	27.15
Maryland .....	575	1,317	48,990	3,250	7,163,533	762,340	1,532	27.52	33.53
Massachusetts .....	719	1,195	3,037	3,793	(D)	48,000	419	40.10	63.23
Michigan .....	3,238	9,339	551,153	84,420	59,328,325	17,939,500	16,902	25.10	35.54
Minnesota .....	2,050	5,817	496,143	19,585	14,225,482	2,661,032	10,746	20.55	9.95
Mississippi .....	1,190	7,567	653,421	67,773	67,773	195,300	18,749	25.89	19.79
Missouri .....	1,708	8,984	767,619	45,017	5,282,928	(D)	15,315	19.85	19.68
Montana .....	4,588	9,532	59,845	1,012,565	(D)	(D)	23,488	25.58	20.98
Nebraska .....	9,153	42,587	4,131,033	421,105	2,457,968	-	144,771	33.15	19.51
Nevada .....	795	2,441	260,213	(D)	213,380	(D)	24,553	88.16	57.91
New Hampshire .....	527	712	(D)	674	6,316,066	693,200	150	40.73	70.39
New Jersey .....	927	1,611	27,223	2,424	35,572,100	371,258	2,128	64.00	72.08
New Mexico .....	3,543	9,437	334,134	109,720	1,945,008	1,249,245	30,955	84.38	51.75
New York .....	1,117	1,529	6,047	1,862	17,838,219	5,364,178	446	35.22	33.02
North Carolina .....	1,673	2,768	15,974	70,468	10,217,998	16,321,134	3,089	29.67	29.85
North Dakota .....	555	2,544	182,148	76,094	(D)	(D)	6,137	21.18	12.96
Ohio .....	956	1,382	14,158	6,394	15,643,891	13,265,856	586	20.30	24.00
Oklahoma .....	1,076	4,099	234,030	31,334	1,197,066	(D)	8,706	37.50	15.33
Oregon .....	9,054	18,396	429,044	573,601	37,770,843	18,504,450	53,732	55.77	45.98
Pennsylvania .....	1,895	2,778	15,350	2,966	44,292,966	1,463,775	804	25.51	21.51
Rhode Island .....	159	213	930	(D)	(D)	228,000	69	29.90	-
South Carolina .....	1,208	3,546	204,640	32,727	(D)	1,253,000	9,850	46.78	35.21
South Dakota .....	825	2,428	174,886	98,042	1,161,600	31,824	6,463	19.57	29.83
Tennessee .....	716	1,301	87,088	6,117	2,518,116	3,889,600	1,657	12.96	28.46
Texas .....	8,658	65,277	2,448,894	212,995	41,534,671	23,744,444	199,862	76.95	54.80
Utah .....	3,421	6,024	225,158	359,539	3,284,912	910,960	26,583	66.54	30.20
Vermont .....	365	475	(D)	(D)	1,985,694	(D)	135	25.58	22.97
Virginia .....	849	1,267	5,351	5,921	11,504,454	(D)	457	22.90	38.57
Washington .....	7,457	20,352	521,934	1,095,147	15,536,597	1,425,060	91,600	64.18	46.02
West Virginia .....	218	352	516	5,155	633,640	(D)	74	42.18	34.15
Wisconsin .....	1,612	5,393	424,383	21,187	12,763,897	438,600	13,879	27.82	80.39
Wyoming .....	2,173	4,623	134,438	514,331	(D)	71,400	13,408	36.33	15.21
<b>Water Resources Regions</b>									
Region 01 New England .....	2,720	4,278	7,738	7,596	40,332,154	1,287,845	1,779	42.66	58.30
Region 02 Mid-Atlantic .....	4,898	9,297	227,441	20,906	110,957,751	16,216,576	11,020	44.25	26.70
Region 03 South Atlantic-Gulf .....	12,984	30,815	1,463,734	332,207	234,135,942	47,629,838	75,041	41.68	27.05
Region 04 Great Lakes .....	5,070	12,777	760,677	99,359	76,832,665	30,012,798	20,886	22.27	33.84
Region 05 Ohio .....	2,632	4,675	228,528	32,084	17,543,225	11,306,645	5,512	(D)	22.22
Region 06 Tennessee .....	719	959	24,482	11,147	5,447,518	6,567,552	1,011	24.78	(D)
Region 07 Upper Mississippi .....	5,191	14,853	1,228,421	49,628	66,011,760	5,592,272	30,316	22.23	45.82
Region 08 Lower Mississippi .....	5,060	38,791	3,349,235	354,826	(D)	6,497,832	94,436	24.46	16.01
Region 09 Souris-Red-Rainy .....	458	2,316	(D)	27,052	(D)	(D)	4,122	(D)	12.93
Region 10 Missouri .....	19,175	69,700	5,699,442	1,974,660	16,152,290	(D)	257,300	37.43	21.65
Region 11 Arkansas-White-Red .....	5,273	25,114	1,795,393	151,443	3,565,652	1,430,512	117,031	61.46	48.85
Region 12 Texas-Gulf .....	7,392	55,976	1,891,199	117,145	36,288,755	23,744,444	143,559	74.09	50.56
Region 13 Rio Grande .....	3,310	8,405	330,613	155,520	9,789,468	40,000	31,379	82.09	40.51
Region 14 Upper Colorado .....	2,475	4,363	16,392	356,027	195,040	(D)	13,398	59.31	39.90
Region 15 Lower Colorado .....	1,408	4,341	355,427	67,065	9,971,360	33,660	40,379	107.53	18.06
Region 16 Great Basin .....	3,315	7,654	545,862	342,222	3,498,292	(D)	49,295	76.21	21.11
Region 17 Pacific Northwest .....	25,247	63,183	1,921,916	3,225,971	57,080,280	18,266,210	287,505	61.30	43.70
Region 18 California .....	27,457	85,510	4,047,428	2,678,789	191,962,024	75,403,538	700,829	143.06	58.11
Region 19 Alaska .....	226	291	(D)	26	(D)	133,246	60	48.93	(D)
Region 20 Hawaii .....	299	419	(D)	8,319	824,960	2,885,772	688	54.18	63.17

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Electricity - con.						
	Farms with energy expenses of -						
	\$1 to \$999	\$1,000 to \$1,999	\$2,000 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 or more
United States .....	55,672	16,562	19,885	13,698	11,893	10,431	7,889
Alabama .....	411	67	72	89	39	17	14
Alaska .....	213	8	1	4	-	-	-
Arizona .....	289	217	209	124	83	106	149
Arkansas .....	343	227	320	249	391	529	298
California .....	7,627	3,151	4,477	3,554	3,168	2,648	2,681
Colorado .....	1,513	445	432	631	443	374	455
Connecticut .....	331	43	29	1	45	-	1
Delaware .....	156	115	72	39	72	28	7
Florida .....	3,712	775	649	343	181	112	63
Georgia .....	1,666	343	383	197	441	339	159
Hawaii .....	226	54	6	2	5	1	5
Idaho .....	2,534	981	1,330	740	658	568	615
Illinois .....	477	191	279	178	101	96	13
Indiana .....	543	213	396	156	91	48	3
Iowa .....	504	96	105	60	30	3	-
Kansas .....	326	281	445	583	498	254	142
Kentucky .....	382	9	23	1	11	3	2
Louisiana .....	470	118	290	148	164	100	71
Maine .....	674	10	5	-	-	-	-
Maryland .....	383	58	43	102	21	6	1
Massachusetts .....	638	53	22	2	1	2	1
Michigan .....	1,678	412	602	251	134	132	70
Minnesota .....	689	379	451	288	169	45	29
Mississippi .....	407	92	236	105	126	118	106
Missouri .....	812	139	169	198	148	187	55
Montana .....	1,978	912	692	403	290	254	59
Nebraska .....	991	814	2,050	1,706	1,626	1,311	655
Nevada .....	188	81	132	45	143	105	101
New Hampshire .....	476	49	6	-	-	-	-
New Jersey .....	649	74	148	27	48	17	3
New Mexico .....	2,346	309	303	168	137	142	204
New York .....	970	132	11	3	-	-	1
North Carolina .....	1,133	305	113	65	9	47	1
North Dakota .....	48	63	231	73	71	47	22
Ohio .....	789	114	37	9	4	3	-
Oklahoma .....	414	83	196	163	127	81	25
Oregon .....	4,940	1,348	1,002	636	487	495	146
Pennsylvania .....	1,744	91	43	10	3	5	-
Rhode Island .....	146	4	8	-	1	-	-
South Carolina .....	637	110	156	86	74	88	57
South Dakota .....	57	181	188	300	40	47	12
Tennessee .....	367	75	197	32	43	2	-
Texas .....	3,380	954	989	587	630	1,199	1,025
Utah .....	1,210	723	642	420	151	161	114
Vermont .....	285	81	-	-	-	-	-
Virginia .....	801	12	13	13	7	3	-
Washington .....	3,408	1,048	916	457	694	512	432
West Virginia .....	208	3	2	5	-	-	-
Wisconsin .....	864	117	268	155	95	74	58
Wyoming .....	639	402	496	290	193	122	34
<b>Water Resources Regions</b>							
Region 01 New England .....	2,391	212	70	3	47	2	2
Region 02 Mid-Atlantic .....	3,837	408	328	184	151	57	12
Region 03 South Atlantic-Gulf .....	7,696	1,542	1,365	796	749	611	297
Region 04 Great Lakes .....	2,898	646	822	306	185	179	75
Region 05 Ohio .....	1,839	277	295	137	73	32	5
Region 06 Tennessee .....	535	128	40	18	20	1	2
Region 07 Upper Mississippi .....	2,247	698	1,054	577	344	204	86
Region 08 Lower Mississippi .....	972	453	1,026	573	722	824	490
Region 09 Souris-Red-Rainy .....	119	45	64	75	120	18	17
Region 10 Missouri .....	3,896	2,428	3,757	3,303	2,632	2,011	1,148
Region 11 Arkansas-White-Red .....	1,505	367	742	737	778	647	518
Region 12 Texas-Gulf .....	3,023	880	779	530	513	1,028	745
Region 13 Rio Grande .....	2,206	295	290	154	45	123	230
Region 14 Upper Colorado .....	1,118	363	416	417	111	17	33
Region 15 Lower Colorado .....	386	250	304	151	98	115	156
Region 16 Great Basin .....	1,129	574	495	301	275	319	225
Region 17 Pacific Northwest .....	11,719	3,680	3,488	1,841	1,779	1,600	1,150
Region 18 California .....	7,717	3,254	4,543	3,589	3,246	2,642	2,693
Region 19 Alaska .....	213	8	1	4	-	-	-
Region 20 Hawaii .....	226	54	6	2	5	1	5

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Natural gas								
	Farms	Pumps powered	Acres in the open by water source		Square feet under protection by water source		Expenses (\$1,000)	Expenses per irrigated acre for operations with only acres in the open (dollars)	
			Water from wells	Surface water	Water from wells	Surface water		Water from wells only	Surface water only
United States .....	7,284	29,041	3,586,909	170,857	162,784	74,400	167,097	46.08	23.85
Alabama .....	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	47	124	8,422	-	-	-	1,554	184.49	-
Arkansas .....	203	889	97,607	11,156	-	-	2,451	24.77	-
California .....	323	809	68,445	40,936	-	-	6,300	62.60	33.54
Colorado .....	146	258	31,078	3,360	-	-	1,152	35.01	19.11
Connecticut .....	1	(D)	-	(D)	-	-	(D)	-	(D)
Delaware .....	-	-	-	-	-	-	-	-	-
Florida .....	27	54	4,860	-	-	-	802	165.00	-
Georgia .....	-	-	-	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-	-	-
Illinois .....	1	(D)	(D)	-	-	-	(D)	(D)	-
Indiana .....	10	56	6,335	-	-	-	43	6.79	-
Iowa .....	-	-	-	-	-	-	-	-	-
Kansas .....	1,718	8,392	1,252,806	13,337	-	-	55,514	44.49	49.50
Kentucky .....	-	-	-	-	-	-	-	-	-
Louisiana .....	62	106	15,601	-	-	-	631	40.45	-
Maine .....	-	-	-	-	-	-	-	-	-
Maryland .....	20	20	700	-	-	-	15	21.43	-
Massachusetts .....	28	(D)	-	(D)	-	-	(D)	-	(D)
Michigan .....	2	(D)	(D)	(D)	-	-	(D)	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-
Mississippi .....	27	63	8,228	150	-	-	164	18.77	-
Missouri .....	-	-	-	-	-	-	-	-	-
Montana .....	54	150	-	22,816	(D)	-	215	-	9.42
Nebraska .....	2,315	8,295	958,042	14,532	-	-	27,173	27.81	16.29
Nevada .....	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-
New Jersey .....	23	23	2,300	-	-	-	46	20.00	-
New Mexico .....	605	823	54,284	8,670	-	(D)	2,908	50.72	71.80
New York .....	23	(D)	(D)	-	77,004	-	(D)	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-
North Dakota .....	1	(D)	-	-	(D)	-	(D)	-	-
Ohio .....	4	(D)	128	(D)	(D)	-	(D)	(D)	-
Oklahoma .....	315	1,455	222,259	1,340	-	-	10,896	48.94	(D)
Oregon .....	-	-	-	-	-	-	-	-	-
Pennsylvania .....	2	(D)	-	(D)	-	-	(D)	-	(D)
Rhode Island .....	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-
South Dakota .....	26	26	840	3,520	-	-	16	11.43	1.84
Tennessee .....	24	(D)	(D)	-	-	-	34	(D)	-
Texas .....	1,164	7,181	835,108	47,650	-	-	56,328	67.22	34.85
Utah .....	31	31	400	108	-	-	21	30.00	83.25
Vermont .....	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-
Washington .....	3	3	-	6	-	-	1	-	(D)
West Virginia .....	20	20	-	20	-	(D)	(D)	-	-
Wisconsin .....	13	53	11,473	-	-	-	604	52.68	-
Wyoming .....	46	112	4,840	2,505	-	-	114	9.05	27.93
<b>Water Resources Regions</b>									
Region 01 New England .....	29	30	-	297	-	-	37	-	124.93
Region 02 Mid-Atlantic .....	43	43	3,000	-	-	-	61	20.33	-
Region 03 South Atlantic-Gulf .....	27	54	4,860	-	-	-	802	165.00	-
Region 04 Great Lakes .....	25	29	331	(D)	(D)	-	33	-	-
Region 05 Ohio .....	26	30	128	72	(D)	(D)	11	(D)	(D)
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	24	111	18,208	-	-	-	652	35.83	-
Region 08 Lower Mississippi .....	277	911	100,979	4,082	-	-	2,678	26.90	-
Region 09 Souris-Red-Rainy .....	1	(D)	-	-	(D)	-	(D)	-	-
Region 10 Missouri .....	3,022	10,705	1,214,239	47,363	-	-	35,384	28.47	11.82
Region 11 Arkansas-White-Red .....	2,342	13,739	1,986,401	27,321	-	-	108,120	54.62	25.64
Region 12 Texas-Gulf .....	502	1,631	135,706	41,600	-	-	8,702	65.48	43.16
Region 13 Rio Grande .....	493	715	41,665	2,953	-	-	2,264	53.64	43.10
Region 14 Upper Colorado .....	34	40	-	5,717	-	(D)	117	-	80.00
Region 15 Lower Colorado .....	82	169	15,019	-	-	-	2,046	136.21	-
Region 16 Great Basin .....	31	(D)	400	(D)	-	-	(D)	(D)	83.25
Region 17 Pacific Northwest .....	5	5	-	6	(D)	-	1	-	(D)
Region 18 California .....	321	797	65,973	40,936	-	-	6,138	62.49	33.54
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Natural gas - con.						
	Farms with energy expenses of -						
	\$1 to \$999	\$1,000 to \$1,999	\$2,000 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 or more
United States .....	791	636	1,548	1,421	1,095	1,080	759
Alabama .....	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-
Arizona .....	-	-	-	17	-	17	13
Arkansas .....	34	40	49	19	18	37	6
California .....	29	-	97	29	68	62	38
Colorado .....	-	28	52	31	9	25	1
Connecticut .....	-	-	1	-	-	-	-
Delaware .....	-	-	-	-	-	-	-
Florida .....	-	-	-	-	-	27	-
Georgia .....	-	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-
Illinois .....	-	-	-	1	-	-	-
Indiana .....	-	-	9	1	-	-	-
Iowa .....	-	-	-	-	-	-	-
Kansas .....	58	82	305	356	271	328	318
Kentucky .....	-	-	-	-	-	-	-
Louisiana .....	-	-	-	18	44	-	-
Maine .....	-	-	-	-	-	-	-
Maryland .....	20	-	-	-	-	-	-
Massachusetts .....	-	28	-	-	-	-	-
Michigan .....	-	-	-	-	2	-	-
Minnesota .....	-	-	-	-	-	-	-
Mississippi .....	-	7	6	12	2	-	-
Missouri .....	-	-	-	-	-	-	-
Montana .....	26	-	20	-	4	4	-
Nebraska .....	120	208	733	504	391	318	41
Nevada .....	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-
New Jersey .....	-	-	23	-	-	-	-
New Mexico .....	332	66	66	91	39	35	9
New York .....	23	-	-	-	-	-	-
North Carolina .....	-	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	1	-
Ohio .....	2	2	-	-	-	-	-
Oklahoma .....	4	50	58	43	44	50	79
Oregon .....	-	-	-	-	-	-	-
Pennsylvania .....	2	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-
South Dakota .....	22	-	4	-	-	-	-
Tennessee .....	-	22	1	1	-	-	-
Texas .....	69	78	99	295	203	176	244
Utah .....	27	-	4	-	-	-	-
Vermont .....	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-
Washington .....	3	-	-	-	-	-	-
West Virginia .....	20	-	-	-	-	-	-
Wisconsin .....	-	3	-	-	-	-	10
Wyoming .....	-	22	21	3	-	-	-
<b>Water Resources Regions</b>							
Region 01 New England .....	-	28	1	-	-	-	-
Region 02 Mid-Atlantic .....	20	-	23	-	-	-	-
Region 03 South Atlantic-Gulf .....	-	-	-	-	-	27	-
Region 04 Great Lakes .....	23	-	-	-	2	-	-
Region 05 Ohio .....	24	2	-	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	-	3	9	2	-	-	10
Region 08 Lower Mississippi .....	25	59	56	48	64	19	6
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	1	-
Region 10 Missouri .....	181	288	979	667	462	353	92
Region 11 Arkansas-White-Red .....	86	150	271	423	333	538	554
Region 12 Texas-Gulf .....	39	40	42	200	116	28	37
Region 13 Rio Grande .....	332	66	33	35	17	34	9
Region 14 Upper Colorado .....	-	-	33	-	-	1	-
Region 15 Lower Colorado .....	-	-	-	17	33	17	15
Region 16 Great Basin .....	27	-	4	-	-	-	-
Region 17 Pacific Northwest .....	5	-	-	-	-	-	-
Region 18 California .....	29	-	97	29	68	62	36
Region 19 Alaska .....	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	LP gas, propane, and butane								
	Farms	Pumps powered	Acres in the open by water source		Square feet under protection by water source		Expenses (\$1,000)	Expenses per irrigated acre for operations with only acres in the open (dollars)	
			Water from wells	Surface water	Water from wells	Surface water		Water from wells only	Surface water only
United States .....	4,818	11,153	792,016	152,156	5,397,330	6,024,114	24,223	25.77	25.32
Alabama .....	25	25	125	(D)	-	-	3	20.00	(D)
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	1	(D)	(D)	(D)	-	-	(D)	-	-
Arkansas .....	186	791	(D)	7,812	-	-	2,050	26.51	21.32
California .....	296	598	20,510	36,208	-	-	2,263	79.52	19.11
Colorado .....	124	148	4,520	1,772	-	-	321	58.41	32.11
Connecticut .....	4	6	48	(D)	-	-	(D)	31.25	(D)
Delaware .....	-	-	-	-	-	-	-	-	-
Florida .....	29	58	5,916	-	-	-	642	108.50	-
Georgia .....	-	-	-	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-
Idaho .....	47	47	1,001	322	2,370	-	32	-	75.71
Illinois .....	40	(D)	2,007	75	-	-	(D)	23.85	50.00
Indiana .....	171	217	12,159	5,099	(D)	-	346	17.50	25.85
Iowa .....	36	36	324	(D)	-	-	(D)	38.89	22.86
Kansas .....	219	416	33,336	7,306	-	-	2,058	59.06	11.16
Kentucky .....	1	(D)	(D)	(D)	-	-	(D)	(D)	(D)
Louisiana .....	89	242	20,759	(D)	-	-	383	17.91	-
Maine .....	-	-	-	-	-	-	-	-	-
Maryland .....	30	51	1,748	3,440	(D)	-	170	10.87	44.50
Massachusetts .....	224	494	206	6,232	-	-	677	-	(D)
Michigan .....	-	-	-	-	-	-	-	-	-
Minnesota .....	15	15	15	-	10,140	-	3	-	-
Mississippi .....	343	2,007	240,546	11,214	-	-	4,630	17.46	19.94
Missouri .....	192	673	62,457	5,760	-	-	992	14.49	15.18
Montana .....	23	23	-	1,771	-	-	23	-	12.99
Nebraska .....	2,146	3,925	262,546	51,922	-	-	7,808	25.57	17.40
Nevada .....	-	-	-	-	-	-	-	-	-
New Hampshire .....	1	(D)	(D)	(D)	-	(D)	(D)	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-
New Mexico .....	101	101	2,071	-	-	-	345	166.73	-
New York .....	2	(D)	(D)	-	-	-	(D)	(D)	-
North Carolina .....	54	54	-	1,485	-	-	14	-	9.09
North Dakota .....	-	-	-	-	-	-	-	-	-
Ohio .....	2	(D)	-	(D)	-	(D)	(D)	-	-
Oklahoma .....	11	18	1,827	20	-	(D)	93	48.53	(D)
Oregon .....	-	-	-	-	-	-	-	-	-
Pennsylvania .....	43	(D)	(D)	-	4,791,600	5,749,920	(D)	50.00	-
Rhode Island .....	18	(D)	(D)	(D)	-	9,000	8	12.56	-
South Carolina .....	-	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	-
Tennessee .....	2	(D)	(D)	-	-	-	(D)	(D)	-
Texas .....	116	694	38,295	-	-	-	866	22.62	-
Utah .....	108	108	1,080	2,133	-	-	81	74.30	29.43
Vermont .....	-	-	-	-	-	-	-	-	-
Virginia .....	23	23	468	(D)	(D)	-	21	-	-
Washington .....	-	-	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-	-	-
Wisconsin .....	44	47	1,884	456	-	-	8	3.46	3.63
Wyoming .....	52	175	(D)	5,294	-	-	256	(D)	25.73
<b>Water Resources Regions</b>									
Region 01 New England .....	247	519	652	6,502	-	(D)	689	14.75	111.71
Region 02 Mid-Atlantic .....	55	98	1,814	3,620	5,227,200	5,749,920	173	10.80	44.50
Region 03 South Atlantic-Gulf .....	130	159	6,459	1,485	143,220	-	677	106.67	9.09
Region 04 Great Lakes .....	6	6	114	(D)	-	(D)	4	15.09	-
Region 05 Ohio .....	181	232	13,189	4,179	(D)	-	336	16.28	28.80
Region 06 Tennessee .....	-	-	-	(D)	-	-	(D)	-	12.50
Region 07 Upper Mississippi .....	166	249	10,360	4,941	(D)	-	283	19.60	15.72
Region 08 Lower Mississippi .....	703	3,508	384,215	19,546	-	-	7,547	18.00	19.94
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	2,427	4,401	276,598	70,572	-	-	8,738	26.54	17.89
Region 11 Arkansas-White-Red .....	261	487	54,949	1,656	-	(D)	2,491	44.69	23.65
Region 12 Texas-Gulf .....	61	577	18,680	-	-	-	551	29.51	-
Region 13 Rio Grande .....	68	68	751	-	-	-	266	354.31	-
Region 14 Upper Colorado .....	61	94	(D)	497	-	-	88	60.00	17.10
Region 15 Lower Colorado .....	1	(D)	(D)	(D)	-	-	(D)	-	-
Region 16 Great Basin .....	108	(D)	1,080	2,133	-	-	81	74.30	29.43
Region 17 Pacific Northwest .....	47	47	1,001	322	2,370	-	32	-	75.71
Region 18 California .....	296	598	20,510	36,208	-	-	2,263	79.52	19.11
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	LP gas, propane, and butane - con.						
	Farms with energy expenses of -						
	\$1 to \$999	\$1,000 to \$1,999	\$2,000 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 or more
United States .....	1,525	910	1,321	512	327	185	65
Alabama .....	50	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-
Arizona .....	-	-	1	-	-	-	-
Arkansas .....	29	23	46	30	32	13	13
California .....	26	22	180	44	2	-	22
Colorado .....	63	24	-	37	-	-	-
Connecticut .....	3	1	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-
Florida .....	-	-	27	-	-	-	2
Georgia .....	-	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-
Idaho .....	44	-	3	-	-	-	-
Illinois .....	15	16	9	-	-	-	-
Indiana .....	48	72	53	-	-	-	-
Iowa .....	18	-	18	-	-	-	-
Kansas .....	18	58	64	33	15	15	16
Kentucky .....	-	-	1	-	-	-	-
Louisiana .....	-	-	49	39	1	-	-
Maine .....	-	-	-	-	-	-	-
Maryland .....	-	19	1	-	10	-	-
Massachusetts .....	108	30	56	24	5	-	1
Michigan .....	-	-	-	-	-	-	-
Minnesota .....	15	-	-	-	-	-	-
Mississippi .....	25	44	58	36	92	79	9
Missouri .....	46	42	39	29	25	11	-
Montana .....	-	23	-	-	-	-	-
Nebraska .....	674	455	636	197	142	42	-
Nevada .....	-	-	-	-	-	-	-
New Hampshire .....	-	1	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-
New Mexico .....	34	1	33	33	-	-	-
New York .....	2	-	-	-	-	-	-
North Carolina .....	54	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-	-
Ohio .....	-	2	-	-	-	-	-
Oklahoma .....	2	-	1	5	3	-	-
Oregon .....	-	-	-	-	-	-	-
Pennsylvania .....	43	-	-	-	-	-	-
Rhode Island .....	14	3	1	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-
Tennessee .....	-	-	2	-	-	-	-
Texas .....	19	50	20	5	-	22	-
Utah .....	108	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-
Virginia .....	22	-	1	-	-	-	-
Washington .....	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-
Wisconsin .....	44	-	-	-	-	-	-
Wyoming .....	1	24	22	-	-	3	2
<b>Water Resources Regions</b>							
Region 01 New England .....	125	35	57	24	5	-	1
Region 02 Mid-Atlantic .....	24	19	2	-	10	-	-
Region 03 South Atlantic-Gulf .....	101	-	27	-	-	-	2
Region 04 Great Lakes .....	4	2	-	-	-	-	-
Region 05 Ohio .....	59	72	52	-	-	-	-
Region 06 Tennessee .....	25	-	-	-	-	-	-
Region 07 Upper Mississippi .....	98	23	37	-	8	-	-
Region 08 Lower Mississippi .....	62	81	170	134	142	92	22
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-
Region 10 Missouri .....	738	561	703	221	157	45	2
Region 11 Arkansas-White-Red .....	51	42	56	56	3	37	16
Region 12 Texas-Gulf .....	-	50	-	-	-	11	-
Region 13 Rio Grande .....	34	1	-	33	1	-	-
Region 14 Upper Colorado .....	26	2	33	-	-	-	-
Region 15 Lower Colorado .....	-	-	1	-	-	-	-
Region 16 Great Basin .....	108	-	-	-	-	-	-
Region 17 Pacific Northwest .....	44	-	3	-	-	-	-
Region 18 California .....	26	22	180	44	2	-	22
Region 19 Alaska .....	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Diesel and biodiesel fuel							Expenses per irrigated acre for operations with only acres in the open (dollars)	
	Farms	Pumps powered	Acres in the open by water source		Square feet under protection by water source		Expenses (\$1,000)	Water from wells only	Surface water only
			Water from wells	Surface water	Water from wells	Surface water			
United States .....	27,923	102,875	8,403,653	2,846,900	96,010,759	39,990,373	338,692	30.24	30.73
Alabama .....	211	650	21,079	41,753	(D)	-	1,615	27.43	26.28
Alaska .....	6	8	(D)	72	-	-	(D)	(D)	6.00
Arizona .....	67	320	(D)	44,973	-	(D)	2,224	77.88	35.65
Arkansas .....	2,192	22,155	2,095,105	283,732	-	522,720	66,878	28.51	28.59
California .....	2,640	8,043	342,850	786,921	1,158,708	10,226,760	62,402	87.11	45.60
Colorado .....	358	544	19,066	26,878	-	-	1,699	56.95	29.47
Connecticut .....	68	182	1,475	1,139	(D)	646,840	180	(D)	111.60
Delaware .....	229	963	60,831	17,569	(D)	-	3,735	23.92	135.90
Florida .....	2,009	9,067	395,225	535,868	58,304,600	7,927,920	26,792	50.43	13.89
Georgia .....	850	1,959	150,653	58,597	-	(D)	7,270	34.60	35.73
Hawaii .....	21	83	(D)	6,747	-	-	391	(D)	57.02
Idaho .....	69	174	2,197	37,444	-	-	476	4.76	12.78
Illinois .....	500	1,300	154,901	12,581	43,200	-	2,901	17.71	16.55
Indiana .....	573	1,457	173,543	27,600	1,668,544	-	3,672	17.98	10.95
Iowa .....	187	420	41,056	4,140	-	-	596	12.64	18.48
Kansas .....	1,281	3,183	299,350	45,989	-	-	14,020	43.35	33.64
Kentucky .....	86	229	15,735	7,429	-	18,000	246	13.57	3.80
Louisiana .....	995	5,551	626,047	73,069	-	-	16,625	23.45	32.79
Maine .....	187	406	(D)	20,339	(D)	(D)	892	(D)	31.62
Maryland .....	297	907	57,370	16,227	1,583,120	-	2,173	26.28	47.43
Massachusetts .....	249	420	1,090	4,725	-	-	608	92.00	115.52
Michigan .....	866	2,306	161,406	66,342	-	330,680	4,078	13.29	28.74
Minnesota .....	257	360	33,602	4,268	-	-	901	24.30	19.78
Mississippi .....	880	6,155	750,886	31,553	(D)	-	19,097	24.58	18.60
Missouri .....	984	5,554	554,915	46,877	324,000	(D)	12,728	21.23	13.51
Montana .....	346	1,545	(D)	70,316	-	-	2,752	-	39.16
Nebraska .....	6,054	17,664	1,917,011	144,488	-	-	54,281	26.97	20.25
Nevada .....	49	101	27,512	(D)	-	(D)	3,603	130.30	-
New Hampshire .....	25	(D)	(D)	722	-	21,100	31	-	16.81
New Jersey .....	438	1,439	36,542	19,207	7,852,576	4,321,300	3,411	60.06	57.53
New Mexico .....	163	346	10,243	8,200	-	(D)	1,132	106.32	8.00
New York .....	269	631	12,385	18,551	14,139,708	55,000	1,286	55.38	33.84
North Carolina .....	581	917	7,958	39,245	84,000	924,960	1,472	32.81	30.09
North Dakota .....	50	100	(D)	1,498	-	-	210	28.01	11.45
Ohio .....	183	308	2,988	9,434	183,368	9,532,520	277	15.17	18.08
Oklahoma .....	326	782	53,082	35,947	-	(D)	1,774	21.19	19.74
Oregon .....	201	482	2,760	17,695	-	-	373	15.03	17.66
Pennsylvania .....	293	423	14,060	3,676	5,113,318	62,460	482	18.88	51.17
Rhode Island .....	26	(D)	675	1,191	217,448	-	41	(D)	16.72
South Carolina .....	144	308	15,640	9,190	(D)	-	597	14.58	50.35
South Dakota .....	146	257	33,814	28,905	-	-	950	9.61	22.76
Tennessee .....	270	701	89,410	5,310	-	39,600	820	7.66	25.77
Texas .....	771	1,636	128,955	60,397	(D)	(D)	6,480	42.00	20.20
Utah .....	274	476	11,862	51,889	-	-	1,756	94.24	12.51
Vermont .....	43	84	(D)	422	80,000	(D)	18	(D)	45.31
Virginia .....	297	436	4,927	31,821	(D)	(D)	618	(D)	17.04
Washington .....	232	367	6,619	30,052	-	240,000	1,165	31.64	26.06
West Virginia .....	6	6	-	-	-	-	(D)	-	6.23
Wisconsin .....	429	1,034	40,575	19,092	27,000	-	2,294	29.85	57.23
Wyoming .....	245	358	675	31,800	(D)	-	650	-	19.98
<b>Water Resources Regions</b>									
Region 01 New England .....	561	1,101	13,701	28,192	2,602,948	992,300	1,753	46.19	52.22
Region 02 Mid-Atlantic .....	1,572	4,373	180,646	92,534	29,447,602	6,029,360	11,232	33.51	55.78
Region 03 South Atlantic-Gulf .....	3,874	12,977	585,696	675,831	59,698,540	10,102,128	37,429	44.44	18.27
Region 04 Great Lakes .....	1,307	3,259	200,625	95,920	142,304	9,827,200	5,677	16.18	25.18
Region 05 Ohio .....	595	1,457	130,548	25,026	1,869,728	(D)	2,781	17.04	14.53
Region 06 Tennessee .....	120	267	6,894	27,555	-	39,600	716	21.71	22.83
Region 07 Upper Mississippi .....	1,292	2,982	285,757	51,353	110,200	-	7,240	20.18	30.59
Region 08 Lower Mississippi .....	4,253	34,533	3,624,990	307,409	(D)	522,720	96,603	24.61	32.49
Region 09 Souris-Red-Rainy .....	44	76	(D)	2,541	-	-	(D)	(D)	13.74
Region 10 Missouri .....	8,019	21,998	2,144,494	347,529	326,544	(D)	63,846	26.28	23.03
Region 11 Arkansas-White-Red .....	1,717	7,630	686,962	128,734	-	(D)	29,612	38.30	20.19
Region 12 Texas-Gulf .....	667	1,395	116,281	59,504	(D)	(D)	6,016	43.11	20.13
Region 13 Rio Grande .....	230	498	15,447	9,396	-	-	1,622	114.37	3.64
Region 14 Upper Colorado .....	87	134	(D)	5,205	-	(D)	280	62.50	46.90
Region 15 Lower Colorado .....	70	350	(D)	55,158	-	(D)	2,333	77.88	30.97
Region 16 Great Basin .....	326	580	40,049	57,274	-	(D)	5,383	120.34	12.51
Region 17 Pacific Northwest .....	525	1,161	11,576	94,184	-	240,000	3,394	26.50	32.73
Region 18 California .....	2,637	8,013	342,850	776,736	1,158,708	10,226,760	62,294	87.11	46.24
Region 19 Alaska .....	6	8	(D)	72	-	-	(D)	(D)	6.00
Region 20 Hawaii .....	21	83	(D)	6,747	-	-	391	(D)	57.02

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Diesel and biodiesel fuel - con.						
	Farms with energy expenses of -						
	\$1 to \$999	\$1,000 to \$1,999	\$2,000 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 or more
United States .....	5,753	3,698	6,501	4,327	3,612	2,629	1,403
Alabama .....	61	56	37	7	33	12	5
Alaska .....	5	-	-	-	1	-	-
Arizona .....	8	16	18	3	4	3	15
Arkansas .....	159	111	323	284	379	578	358
California .....	486	285	421	409	464	291	284
Colorado .....	25	75	163	61	16	18	-
Connecticut .....	45	6	1	15	-	1	-
Delaware .....	26	52	29	68	24	22	8
Florida .....	601	181	383	297	239	190	118
Georgia .....	210	134	246	51	137	8	64
Hawaii .....	1	-	1	4	10	2	3
Idaho .....	34	-	7	-	23	5	-
Illinois .....	85	74	108	138	87	6	2
Indiana .....	72	71	237	110	26	56	1
Iowa .....	34	106	21	8	18	-	-
Kansas .....	125	208	439	214	111	122	62
Kentucky .....	67	2	4	7	3	2	1
Louisiana .....	80	54	161	228	222	157	93
Maine .....	71	62	32	8	7	5	2
Maryland .....	69	48	61	36	45	37	1
Massachusetts .....	163	12	42	23	5	3	1
Michigan .....	194	200	244	95	90	40	3
Minnesota .....	72	19	138	6	20	2	-
Mississippi .....	70	63	161	196	172	134	84
Missouri .....	147	179	187	119	160	132	60
Montana .....	49	72	109	69	19	5	23
Nebraska .....	689	753	1,634	1,365	932	552	129
Nevada .....	15	-	19	2	1	1	11
New Hampshire .....	22	-	-	2	1	-	-
New Jersey .....	97	40	100	105	35	57	4
New Mexico .....	43	66	42	7	-	-	5
New York .....	140	20	59	20	10	13	7
North Carolina .....	306	90	120	1	58	6	-
North Dakota .....	31	10	7	-	1	-	1
Ohio .....	132	15	20	11	3	2	-
Oklahoma .....	94	31	120	42	4	30	5
Oregon .....	76	78	28	15	4	-	-
Pennsylvania .....	212	58	4	12	2	5	-
Rhode Island .....	21	-	2	2	1	-	-
South Carolina .....	30	25	76	4	2	3	4
South Dakota .....	45	-	52	28	20	-	1
Tennessee .....	84	69	54	31	32	-	-
Texas .....	231	101	159	122	79	43	36
Utah .....	54	20	110	35	20	35	-
Vermont .....	36	7	-	-	-	-	-
Virginia .....	103	61	98	30	1	4	-
Washington .....	61	65	56	8	33	3	6
West Virginia .....	6	-	-	-	-	-	-
Wisconsin .....	160	79	87	20	36	41	6
Wyoming .....	106	24	81	9	22	3	-
<b>Water Resources Regions</b>							
Region 01 New England .....	328	80	77	50	14	9	3
Region 02 Mid-Atlantic .....	514	234	290	266	116	132	20
Region 03 South Atlantic-Gulf .....	1,279	462	906	373	453	210	191
Region 04 Great Lakes .....	387	258	361	136	94	67	4
Region 05 Ohio .....	238	43	133	100	49	30	2
Region 06 Tennessee .....	29	52	-	-	30	9	-
Region 07 Upper Mississippi .....	263	242	390	173	152	65	7
Region 08 Lower Mississippi .....	312	332	727	699	824	856	503
Region 09 Souris-Red-Rainy .....	23	19	-	-	1	1	-
Region 10 Missouri .....	1,065	1,165	2,321	1,664	1,055	614	135
Region 11 Arkansas-White-Red .....	278	194	401	258	188	243	155
Region 12 Texas-Gulf .....	211	78	117	122	64	39	36
Region 13 Rio Grande .....	63	52	90	6	-	14	5
Region 14 Upper Colorado .....	23	23	28	1	12	-	-
Region 15 Lower Colorado .....	8	16	18	3	4	6	15
Region 16 Great Basin .....	69	20	129	40	21	36	11
Region 17 Pacific Northwest .....	171	143	91	23	60	8	29
Region 18 California .....	486	285	421	409	464	288	284
Region 19 Alaska .....	5	-	-	-	1	-	-
Region 20 Hawaii .....	1	-	1	4	10	2	3

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Gasoline, ethanol, and blends								
	Farms	Pumps powered	Acres in the open by water source		Square feet under protection by water source		Expenses (\$1,000)	Expenses per irrigated acre for operations with only acres in the open (dollars)	
			Water from wells	Surface water	Water from wells	Surface water		Water from wells only	Surface water only
United States .....	6,150	8,989	51,661	51,821	2,349,078	5,816,096	3,667	17.14	34.42
Alabama .....	62	74	-	(D)	-	120,000	5	-	28.06
Alaska .....	18	28	14	27	(D)	21,280	(D)	(D)	29.89
Arizona .....	22	(D)	10	(D)	-	-	(D)	27.50	35.44
Arkansas .....	23	61	(D)	121	-	-	118	(D)	68.35
California .....	369	392	135	2,975	-	625,000	116	204.83	23.96
Colorado .....	196	227	72	2,780	(D)	(D)	78	(D)	27.84
Connecticut .....	99	(D)	-	(D)	(D)	19,200	(D)	-	29.31
Delaware .....	4	4	12	-	-	-	(Z)	16.67	-
Florida .....	133	294	645	-	-	-	28	43.80	-
Georgia .....	70	70	253	72	-	-	24	89.09	18.33
Hawaii .....	-	-	-	-	-	-	-	-	-
Idaho .....	99	99	3	2,803	2,370	600	48	-	23.93
Illinois .....	61	(D)	(D)	324	58,000	57,500	1,206	150.00	50.00
Indiana .....	129	140	127	450	(D)	(D)	34	190.68	58.81
Iowa .....	33	42	-	(D)	62,016	(D)	(D)	-	42.95
Kansas .....	75	111	8,916	910	-	172,000	240	24.70	16.67
Kentucky .....	257	(D)	(D)	3,211	44,200	2,068,594	(D)	62.50	41.33
Louisiana .....	-	-	-	-	-	-	-	-	-
Maine .....	165	302	(D)	318	(D)	248,280	26	36.64	30.83
Maryland .....	99	168	650	939	(D)	144,000	32	22.18	74.94
Massachusetts .....	180	(D)	-	(D)	(D)	70,000	(D)	-	44.02
Michigan .....	232	(D)	(D)	(D)	130,176	57,720	(D)	58.33	23.56
Minnesota .....	58	58	-	114	-	16,434	9	-	90.67
Mississippi .....	12	19	273	4,600	-	-	7	23.08	25.00
Missouri .....	220	329	507	804	175,988	339,640	99	30.45	58.11
Montana .....	179	970	(D)	2,885	-	(D)	77	100.00	22.14
Nebraska .....	36	120	8,960	2,448	-	-	108	8.33	11.63
Nevada .....	3	14	20,640	-	-	-	74	3.56	-
New Hampshire .....	91	96	(D)	(D)	9,472	(D)	(D)	-	40.24
New Jersey .....	235	258	1,028	645	-	-	27	16.41	15.26
New Mexico .....	232	266	33	4,093	-	(D)	103	50.00	22.76
New York .....	503	665	593	2,626	96,360	225,522	91	(D)	24.64
North Carolina .....	143	189	24	3,697	-	289,500	28	7.50	44.56
North Dakota .....	35	(D)	(D)	99	-	(D)	(D)	(D)	33.33
Ohio .....	222	232	140	739	(D)	(D)	54	68.10	48.98
Oklahoma .....	76	176	-	226	-	-	27	-	117.48
Oregon .....	203	255	1,825	1,032	-	120,000	143	47.72	56.88
Pennsylvania .....	513	664	(D)	(D)	408,936	309,970	166	101.53	40.87
Rhode Island .....	21	37	(D)	(D)	(D)	-	6	(D)	-
South Carolina .....	55	55	52	318	-	-	92	10.00	287.86
South Dakota .....	-	-	-	-	-	-	-	-	-
Tennessee .....	120	141	-	225	184,020	-	(D)	-	73.17
Texas .....	232	389	662	1,616	(D)	(D)	119	40.42	60.67
Utah .....	54	61	314	149	-	-	6	16.67	7.00
Vermont .....	43	129	268	(D)	56,560	-	10	(D)	110.65
Virginia .....	169	294	181	(D)	-	-	33	42.50	21.66
Washington .....	127	158	535	1,014	-	265,680	60	10.89	38.59
West Virginia .....	39	39	-	-	-	-	(D)	-	67.24
Wisconsin .....	107	107	19	326	123,500	228,000	9	-	18.14
Wyoming .....	96	143	(D)	1,397	(D)	-	47	-	33.82
<b>Water Resources Regions</b>									
Region 01 New England .....	587	872	891	2,361	382,232	(D)	118	36.64	40.70
Region 02 Mid-Atlantic .....	1,058	1,418	2,544	5,340	497,460	435,402	261	25.44	34.44
Region 03 South Atlantic-Gulf .....	475	764	1,065	8,810	-	241,500	180	54.66	149.63
Region 04 Great Lakes .....	756	838	635	2,639	(D)	(D)	149	79.03	23.08
Region 05 Ohio .....	742	905	1,338	5,533	(D)	2,336,738	193	82.26	39.06
Region 06 Tennessee .....	78	110	24	(D)	-	168,000	(D)	7.50	11.52
Region 07 Upper Mississippi .....	189	262	48	1,104	(D)	353,540	1,298	186.04	76.12
Region 08 Lower Mississippi .....	14	53	2,273	45	-	-	117	51.17	11.11
Region 09 Souris-Red-Rainy .....	55	(D)	(D)	137	-	2,418	(D)	(D)	32.67
Region 10 Missouri .....	479	1,460	18,558	6,795	16,280	341,400	478	18.12	21.11
Region 11 Arkansas-White-Red .....	124	236	106	318	-	(D)	40	13.21	108.43
Region 12 Texas-Gulf .....	212	349	662	1,416	(D)	(D)	99	40.42	54.68
Region 13 Rio Grande .....	186	240	33	4,062	-	51,000	101	50.00	22.58
Region 14 Upper Colorado .....	296	364	(D)	3,984	-	-	139	16.67	33.75
Region 15 Lower Colorado .....	22	(D)	10	(D)	-	-	(D)	27.50	35.44
Region 16 Great Basin .....	37	(D)	20,654	(D)	-	-	(D)	3.56	7.00
Region 17 Pacific Northwest .....	453	560	2,363	5,209	2,370	386,280	257	39.37	33.81
Region 18 California .....	369	392	135	2,975	-	625,000	116	204.83	23.96
Region 19 Alaska .....	18	28	14	27	(D)	21,280	(D)	(D)	29.89
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 13. Energy Expense for All Well Pumps and Other Irrigation Pumps by Type of Energy Used: 2018 (continued)**

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

Geographic area	Gasoline, ethanol, and blends - con.						
	Farms with energy expenses of -						
	\$1 to \$999	\$1,000 to \$1,999	\$2,000 to \$4,999	\$5,000 to \$9,999	\$10,000 to \$19,999	\$20,000 to \$49,999	\$50,000 or more
United States .....	5,606	381	138	5	20	3	17
Alabama .....	62	-	-	-	-	-	-
Alaska .....	17	-	1	-	-	-	-
Arizona .....	5	16	-	1	-	-	-
Arkansas .....	16	5	-	-	-	-	2
California .....	336	33	-	-	-	-	-
Colorado .....	172	24	-	-	-	-	-
Connecticut .....	95	4	-	-	-	-	-
Delaware .....	4	-	-	-	-	-	-
Florida .....	133	-	-	-	-	-	-
Georgia .....	70	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-
Idaho .....	72	27	-	-	-	-	-
Illinois .....	46	-	-	-	-	-	15
Indiana .....	125	4	-	-	-	-	-
Iowa .....	32	-	-	-	-	1	-
Kansas .....	45	15	-	-	15	-	-
Kentucky .....	223	31	3	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-
Maine .....	165	-	-	-	-	-	-
Maryland .....	119	-	-	-	-	-	-
Massachusetts .....	170	-	10	-	-	-	-
Michigan .....	212	20	-	-	-	-	-
Minnesota .....	58	-	-	-	-	-	-
Mississippi .....	12	-	-	-	-	-	-
Missouri .....	189	19	12	-	-	-	-
Montana .....	155	24	-	-	-	-	-
Nebraska .....	16	-	16	-	4	-	-
Nevada .....	-	-	-	-	1	2	-
New Hampshire .....	89	2	-	-	1	-	-
New Jersey .....	235	-	-	-	-	-	-
New Mexico .....	199	33	-	-	-	-	-
New York .....	476	24	3	-	-	-	-
North Carolina .....	128	15	-	-	-	-	-
North Dakota .....	35	-	-	-	-	-	-
Ohio .....	218	2	2	-	-	-	-
Oklahoma .....	76	-	-	-	-	-	-
Oregon .....	157	23	23	-	-	-	-
Pennsylvania .....	482	10	21	-	-	-	-
Rhode Island .....	21	-	-	-	-	-	-
South Carolina .....	29	-	26	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-
Tennessee .....	120	-	-	-	-	-	-
Texas .....	189	23	20	-	-	-	-
Utah .....	54	-	-	-	-	-	-
Vermont .....	38	5	-	-	-	-	-
Virginia .....	169	-	-	-	-	-	-
Washington .....	122	-	1	4	-	-	-
West Virginia .....	39	-	-	-	-	-	-
Wisconsin .....	107	-	-	-	-	-	-
Wyoming .....	74	22	-	-	-	-	-
<b>Water Resources Regions</b>							
Region 01 New England .....	569	8	10	-	-	-	-
Region 02 Mid-Atlantic .....	1,042	15	21	-	-	-	-
Region 03 South Atlantic-Gulf .....	442	7	26	-	-	-	-
Region 04 Great Lakes .....	709	46	1	-	-	-	-
Region 05 Ohio .....	702	33	7	-	-	-	-
Region 06 Tennessee .....	70	8	-	-	-	-	-
Region 07 Upper Mississippi .....	165	-	8	-	-	1	15
Region 08 Lower Mississippi .....	12	-	-	-	-	-	2
Region 09 Souris-Red-Rainy .....	55	-	-	-	-	-	-
Region 10 Missouri .....	384	58	18	-	19	-	-
Region 11 Arkansas-White-Red .....	117	5	2	-	-	-	-
Region 12 Texas-Gulf .....	189	3	20	-	-	-	-
Region 13 Rio Grande .....	133	53	-	-	-	-	-
Region 14 Upper Colorado .....	250	46	-	-	-	-	-
Region 15 Lower Colorado .....	5	16	-	1	-	-	-
Region 16 Great Basin .....	34	-	-	-	1	2	-
Region 17 Pacific Northwest .....	375	50	24	4	-	-	-
Region 18 California .....	336	33	-	-	-	-	-
Region 19 Alaska .....	17	-	1	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-

<sup>1</sup> Energy expenses for solar-powered pumps are not included.

**Table 14. Solar Pumps and Other Pumps Without Direct Energy Expense: 2018**

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

Geographic area	Farms <sup>1</sup>	Pumps powered <sup>1</sup>	Total acres irrigated <sup>1</sup>	Pumped well water only			Pumped surface water only		
				Farms	Pumps powered	Acres irrigated	Farms	Pumps powered	Acres irrigated
United States .....	3,047	4,747	150,375	2,110	3,073	58,274	740	1,340	70,134
<b>Water Resources Regions</b>									
Region 01 New England .....	102	223	85	63	(D)	60	30	(D)	7
Region 02 Mid-Atlantic .....	123	123	163	99	99	91	24	24	72
Region 03 South Atlantic-Gulf .....	74	107	10,250	35	35	89	39	72	10,161
Region 04 Great Lakes .....	80	103	57	80	103	57	-	-	-
Region 05 Ohio .....	93	114	226	30	51	34	63	63	192
Region 06 Tennessee .....	67	67	135	-	-	-	67	67	135
Region 07 Upper Mississippi .....	78	140	344	39	39	218	31	85	85
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	125	345	9,801	40	206	2,462	67	121	7,283
Region 11 Arkansas-White-Red .....	80	80	663	48	48	71	8	(D)	16
Region 12 Texas-Gulf .....	81	81	253	81	81	253	-	-	-
Region 13 Rio Grande .....	173	180	249	166	166	242	7	14	7
Region 14 Upper Colorado .....	34	102	(D)	-	-	-	34	102	(D)
Region 15 Lower Colorado .....	66	146	2,112	66	146	2,112	-	-	-
Region 16 Great Basin .....	41	45	(D)	11	15	(D)	30	30	(D)
Region 17 Pacific Northwest .....	233	348	1,243	102	149	250	126	189	978
Region 18 California .....	1,590	2,536	120,237	1,244	1,754	51,982	214	535	46,995
Region 19 Alaska .....	6	(D)	11	5	5	11	-	-	-
Region 20 Hawaii .....	1	(D)	(D)	1	(D)	(D)	-	-	-

<sup>1</sup> Operations with both well water and surface water are included. The individual categories may not sum back to the total.



**Table 15. Expenses for Irrigation Water from Off-Farm Suppliers: 2018**

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

Geographic area	Farms irrigating with off-farm water	Farms reporting cost for off-farm water									
		Farms reporting cost for off-farm water	Total cost (\$1,000)	Average cost per acre in the open <sup>1</sup> (dollars)	Average cost per acre-foot <sup>1</sup> (dollars)	Average cost per 10,000 sq. ft. under protection <sup>2</sup> (dollars)	Farms by average cost per acre-foot <sup>1</sup>				
							\$1 to \$9	\$10 to \$19	\$20 to \$29	\$30 to \$59	\$60 or more
United States .....	102,010	74,012	1,103,195	96.74	42.37	742	9,185	10,402	8,200	12,906	28,247
Alabama .....	225	123	599	149.50	495.90	402	-	-	-	-	41
Alaska .....	34	34	15	154.00	165.00	738	-	-	-	-	10
Arizona .....	1,963	1,546	84,518	147.78	30.18	640	179	294	162	386	457
Arkansas .....	196	145	530	39.05	49.62	477	-	4	7	17	63
California .....	21,800	20,399	738,156	187.30	67.97	751	810	1,989	2,048	2,570	12,241
Colorado .....	10,604	7,029	15,804	23.88	14.19	3,576	1,478	1,478	740	1,524	1,648
Connecticut .....	30	19	319	(D)	(D)	970	-	-	-	-	2
Delaware .....	10	4	(Z)	-	-	-	-	-	-	-	-
Florida .....	259	116	1,093	85.23	124.12	621	-	-	-	-	92
Georgia .....	181	61	105	43.59	43.59	481	3	4	-	-	8
Hawaii .....	1,596	1,224	6,668	345.54	235.42	351	7	-	2	2	831
Idaho .....	11,185	7,970	41,858	35.09	16.78	931	1,762	1,929	1,132	1,454	1,572
Illinois .....	119	51	51	42.31	42.31	1,220	-	-	-	-	4
Indiana .....	153	63	88	150.00	150.00	161	-	-	-	-	6
Iowa .....	193	137	404	20.56	62.31	348	-	-	-	-	21
Kansas .....	444	231	799	34.13	41.55	956	15	-	15	49	57
Kentucky .....	545	518	2,492	1,234.35	2,186.57	1,047	-	-	-	-	145
Louisiana .....	145	69	128	169.44	254.17	5,593	-	-	-	-	31
Maine .....	79	41	193	283.72	2,486.17	(D)	-	-	-	-	29
Maryland .....	36	26	82	27.66	279.40	2,500	-	-	-	-	6
Massachusetts .....	198	105	61	623.12	432.72	(D)	-	-	6	-	38
Michigan .....	244	160	1,241	-	-	573	-	-	-	-	-
Minnesota .....	125	49	130	1,090.57	836.10	320	-	-	-	2	18
Mississippi .....	121	108	76	79.88	135.51	956	6	-	-	6	44
Missouri .....	307	221	412	186.79	257.02	728	-	12	-	7	95
Montana .....	6,531	3,412	14,196	18.14	14.81	1,843	1,014	773	498	733	355
Nebraska .....	2,161	1,534	15,070	29.52	32.96	1,086	84	121	191	564	537
Nevada .....	932	569	4,910	34.11	11.65	1,497	157	201	81	31	80
New Hampshire .....	119	13	62	(D)	(D)	-	-	-	-	-	1
New Jersey .....	121	85	77	632.43	632.43	-	-	-	-	-	45
New Mexico .....	6,430	3,937	9,014	45.81	32.40	(D)	436	477	489	822	1,675
New York .....	490	348	1,980	160.50	164.95	-	3	23	-	39	140
North Carolina .....	187	151	150	189.17	756.67	1,090	-	-	-	-	81
North Dakota .....	248	141	2,712	38.01	50.81	531	-	-	17	17	92
Ohio .....	328	285	882	250.14	522.74	1,413	-	-	-	-	108
Oklahoma .....	362	252	2,133	57.40	53.27	1,329	-	1	-	53	113
Oregon .....	7,444	5,102	22,388	43.15	24.22	613	641	508	434	1,061	2,281
Pennsylvania .....	312	164	90	266.54	270.41	956	-	21	-	-	40
Rhode Island .....	31	24	94	349.40	3,625.00	1,822	-	-	-	-	5
South Carolina .....	200	105	109	265.16	171.07	960	-	-	-	4	70
South Dakota .....	458	300	2,202	37.74	25.38	2,325	3	63	111	46	51
Tennessee .....	446	446	1,593	388.61	648.63	2,623	-	-	-	-	145
Texas .....	2,538	2,146	32,358	62.43	29.83	433	182	191	226	437	878
Utah .....	10,533	7,075	15,168	26.37	13.48	282	1,398	1,459	1,181	1,463	1,424
Vermont .....	108	85	41	(D)	(D)	789	-	-	-	-	2
Virginia .....	111	111	196	130.30	130.30	707	-	-	-	-	33
Washington .....	6,738	4,722	73,419	89.94	39.05	328	200	232	451	1,348	2,322
West Virginia .....	159	139	220	740.00	1,850.00	1,132	-	-	-	-	40
Wisconsin .....	129	73	288	34.90	201.29	909	-	-	-	-	55
Wyoming .....	4,102	2,344	8,020	15.43	8.64	1,526	807	622	409	249	215
<b>Water Resources Regions</b>											
Region 01 New England .....	489	228	730	304.73	1,354.36	1,004	-	-	6	-	75
Region 02 Mid-Atlantic .....	571	334	376	150.62	404.49	1,555	-	-	-	16	126
Region 03 South Atlantic-Gulf .....	1,129	667	2,188	93.87	134.17	505	9	4	-	10	326
Region 04 Great Lakes .....	847	603	3,678	162.65	166.05	658	3	44	-	23	142
Region 05 Ohio .....	1,279	1,120	4,155	1,074.39	1,882.56	1,807	-	-	-	-	341
Region 06 Tennessee .....	303	257	544	261.69	480.68	1,298	-	-	-	-	109
Region 07 Upper Mississippi .....	521	332	923	40.71	176.14	473	-	-	-	20	100
Region 08 Lower Mississippi .....	278	225	692	32.29	42.71	2,573	-	4	5	12	42
Region 09 Souris-Red-Rainy .....	82	59	25	131.87	209.95	(D)	-	-	-	-	45
Region 10 Missouri .....	14,009	8,297	44,062	23.68	18.61	1,110	1,754	1,536	1,326	1,883	1,520
Region 11 Arkansas-White-Red .....	2,288	1,539	5,503	27.96	24.66	895	197	116	141	326	566
Region 12 Texas-Gulf .....	2,125	1,821	31,287	63.91	30.64	433	153	149	188	417	682
Region 13 Rio Grande .....	5,496	3,418	8,866	40.23	28.41	(D)	331	429	383	618	1,630
Region 14 Upper Colorado .....	11,353	7,586	14,889	24.45	12.38	656	1,737	1,782	901	1,318	1,667
Region 15 Lower Colorado .....	2,341	1,765	91,807	152.20	31.09	640	194	295	192	469	537
Region 16 Great Basin .....	8,760	5,803	16,816	26.33	12.81	284	1,302	1,197	951	1,185	1,076
Region 17 Pacific Northwest .....	26,408	18,065	136,053	53.16	25.35	601	2,641	2,845	2,060	4,007	6,036
Region 18 California .....	22,101	20,635	733,918	184.98	68.09	735	857	2,001	2,045	2,596	12,386
Region 19 Alaska .....	34	34	15	154.00	165.00	738	-	-	-	-	10
Region 20 Hawaii .....	1,596	1,224	6,668	345.54	235.42	351	7	-	2	2	831

<sup>1</sup> Average cost per acre and average cost per acre-foot do not include farms with off-farm water costs for irrigating square feet under protection.

<sup>2</sup> Average cost per 10,000 square feet does not include farms with off-farm water costs for irrigating acreage in the open.

**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018**

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

Geographic area	Expenditures (all types) during survey year										
	Farms	Acres irrigated affected by expenditure	Expenditures <sup>1</sup> (\$1,000)	Average expenditure per affected acre (dollars)	Average per farm (dollars)	Farms with expenditures of -					
						\$1 to \$999	\$1,000 to \$4,999	\$5,000 to \$14,999	\$15,000 to \$39,999	\$40,000 to \$74,999	\$75,000 or more
United States .....	81,298	14,038,331	2,038,526	145	25,075	28,988	22,647	11,757	7,609	4,140	6,157
Alabama .....	421	18,705	6,995	374	16,616	152	152	5	69	5	38
Alaska .....	117	226	210	931	1,799	56	53	7	1	-	-
Arizona .....	947	221,475	32,470	147	34,287	155	291	279	94	45	83
Arkansas .....	1,176	730,424	48,157	66	40,950	174	188	184	327	187	116
California .....	14,428	2,314,339	693,045	299	48,035	4,225	3,760	2,065	1,653	934	1,791
Colorado .....	4,460	628,716	65,178	104	14,614	1,917	1,294	400	371	276	202
Connecticut .....	279	1,802	1,775	985	6,361	148	64	30	30	3	4
Delaware .....	109	15,666	3,023	193	27,733	11	50	25	2	1	20
Florida .....	3,135	319,490	70,489	221	22,484	1,220	890	416	313	148	148
Georgia .....	1,437	242,628	71,976	297	50,088	379	345	158	181	115	259
Hawaii .....	652	16,017	3,287	205	5,041	384	170	31	44	16	7
Idaho .....	4,938	1,014,631	100,871	99	20,427	2,097	1,406	641	306	166	322
Illinois .....	690	143,415	16,522	115	23,945	252	111	115	85	72	55
Indiana .....	641	109,582	11,187	102	17,453	272	123	114	56	29	47
Iowa .....	296	10,601	1,349	127	4,559	147	36	103	7	-	3
Kansas .....	1,394	749,718	70,503	94	50,576	144	376	309	193	106	266
Kentucky .....	494	8,802	1,187	135	2,402	345	131	8	3	4	3
Louisiana .....	606	264,916	20,982	79	34,624	132	87	169	91	60	67
Maine .....	473	6,844	2,744	401	5,801	335	78	45	6	-	9
Maryland .....	429	20,392	2,853	140	6,650	191	125	58	37	17	1
Massachusetts .....	361	10,149	2,386	235	6,610	160	97	67	23	13	1
Michigan .....	1,394	158,771	29,823	188	21,394	386	369	307	106	144	82
Minnesota .....	560	78,115	8,623	110	15,398	160	218	59	82	14	27
Mississippi .....	677	437,662	26,887	61	39,715	94	130	116	160	71	106
Missouri .....	893	168,103	13,276	79	14,866	324	225	125	135	28	56
Montana .....	2,784	445,984	71,318	160	25,617	1,220	754	439	96	64	211
Nebraska .....	3,001	1,146,966	77,065	67	25,680	389	894	610	449	349	310
Nevada .....	664	146,843	16,824	115	25,338	155	200	124	59	56	70
New Hampshire .....	356	678	402	592	1,128	165	187	4	-	-	-
New Jersey .....	552	29,396	17,910	609	32,446	156	169	88	44	36	59
New Mexico .....	3,205	300,426	33,404	111	10,422	1,062	1,098	573	315	111	46
New York .....	941	10,335	3,809	369	4,048	525	205	164	25	22	-
North Carolina .....	964	40,352	9,730	241	10,093	471	215	138	41	70	29
North Dakota .....	298	71,298	8,610	121	28,894	75	118	36	35	4	30
Ohio .....	594	13,007	5,248	404	8,836	258	173	135	14	-	14
Oklahoma .....	797	355,910	38,239	107	47,979	242	211	87	119	19	119
Oregon .....	5,524	396,601	58,200	142	10,174	2,433	1,743	648	430	104	166
Pennsylvania .....	826	7,338	5,822	793	7,049	471	316	22	2	1	14
Rhode Island .....	90	607	371	612	4,125	60	11	16	1	2	-
South Carolina .....	474	23,936	7,429	310	15,673	94	257	41	43	21	18
South Dakota .....	281	82,478	5,768	70	20,528	85	113	11	11	28	33
Tennessee .....	416	21,767	5,741	264	13,801	262	44	55	2	-	53
Texas .....	5,088	1,596,637	179,776	113	35,333	1,126	1,432	924	746	290	570
Utah .....	4,364	394,409	53,060	135	12,159	1,907	1,364	478	299	101	215
Vermont .....	237	1,007	780	775	3,291	126	74	33	-	2	2
Virginia .....	517	14,236	5,648	397	10,925	298	119	47	2	26	25
Washington .....	5,417	622,241	82,103	132	15,157	2,406	1,383	687	410	264	267
West Virginia .....	208	5,768	3,641	631	17,505	69	91	21	3	19	5
Wisconsin .....	812	129,313	11,644	90	14,340	394	119	179	44	37	39
Wyoming .....	1,881	489,609	32,183	66	17,109	679	588	361	44	60	149
<b>Water Resources Regions</b>											
Region 01 New England .....	1,631	20,513	7,969	388	4,886	902	443	194	60	18	14
Region 02 Mid-Atlantic .....	2,674	95,766	38,036	397	14,224	1,252	798	322	98	80	124
Region 03 South Atlantic-Gulf .....	6,457	652,193	169,914	261	26,315	2,284	1,858	802	642	359	512
Region 04 Great Lakes .....	2,604	229,210	37,567	164	14,427	1,070	666	453	138	178	99
Region 05 Ohio .....	1,877	105,125	18,354	175	9,778	894	547	258	59	57	62
Region 06 Tennessee .....	515	7,412	1,631	220	3,166	356	87	48	19	-	5
Region 07 Upper Mississippi .....	1,980	312,269	33,045	106	16,690	778	406	359	220	114	103
Region 08 Lower Mississippi .....	2,308	1,467,982	85,701	58	37,132	296	313	501	595	278	325
Region 09 Souris-Red-Rainy .....	151	27,735	7,049	254	46,683	41	53	-	16	4	37
Region 10 Missouri .....	9,030	2,444,919	202,163	83	22,388	2,406	2,790	1,633	882	588	731
Region 11 Arkansas-White-Red .....	3,435	1,595,962	171,957	108	50,060	643	884	576	547	220	565
Region 12 Texas-Gulf .....	4,329	1,141,237	118,993	104	27,487	1,121	1,298	679	630	237	364
Region 13 Rio Grande .....	2,726	309,686	48,883	158	17,932	838	881	494	260	141	112
Region 14 Upper Colorado .....	4,736	393,510	42,511	108	8,976	2,355	1,434	483	209	150	105
Region 15 Lower Colorado .....	1,136	270,994	38,020	140	33,468	270	291	306	97	79	93
Region 16 Great Basin .....	3,783	506,618	74,320	147	19,646	1,358	1,241	507	296	129	252
Region 17 Pacific Northwest .....	16,538	2,109,356	244,481	116	14,783	7,320	4,650	2,064	1,110	533	861
Region 18 California .....	14,619	2,331,601	694,435	298	47,502	4,364	3,784	2,040	1,686	959	1,786
Region 19 Alaska .....	117	226	210	931	1,799	56	53	7	1	-	7
Region 20 Hawaii .....	652	16,017	3,287	205	5,041	384	170	31	44	16	-

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Expenditures (all types) during survey year - con.							
	Primary purpose of expenditures							
	New expansion		Water conservation		Energy conservation		Scheduled replacement or maintenance	
	Acres	Dollars	Acres	Dollars	Acres	Dollars	Acres	Dollars
United States .....	1,707,313	634,328,409	2,514,490	362,623,599	665,701	88,960,424	9,150,827	952,613,963
Alabama .....	7,826	5,519,372	824	55,650	-	-	10,055	1,420,234
Alaska .....	105	122,350	6	36,000	-	-	115	52,128
Arizona .....	(D)	14,653,000	76,513	(D)	(D)	(D)	102,774	10,574,497
Arkansas .....	82,490	9,282,370	116,877	12,823,975	8,836	561,186	522,221	25,489,313
California .....	268,270	193,707,703	481,426	141,998,888	120,203	33,383,885	1,444,440	323,954,971
Colorado .....	34,612	20,495,393	192,081	14,853,249	8,974	1,328,390	393,049	28,501,169
Connecticut .....	134	(D)	(D)	(D)	(D)	191,380	1,639	893,897
Delaware .....	(D)	330,968	-	-	(D)	1,164,000	11,003	1,527,945
Florida .....	33,999	34,356,800	46,728	8,438,968	4,489	467,000	234,274	27,225,926
Georgia .....	66,592	36,777,224	23,812	268,800	2,466	3,098,600	149,758	31,831,516
Hawaii .....	1,661	1,221,600	1,116	374,813	900	48,000	12,340	1,642,116
Idaho .....	90,768	27,914,971	103,095	18,525,007	95,309	7,315,222	725,459	47,115,576
Illinois .....	16,423	5,639,250	16,337	670,800	26,400	699,000	84,255	9,512,734
Indiana .....	6,802	5,482,779	16,707	163,300	5,370	150,388	80,703	5,390,687
Iowa .....	586	(D)	51	(D)	-	-	9,964	981,530
Kansas .....	52,312	11,220,190	95,797	5,661,260	56,405	996,100	545,204	52,625,371
Kentucky .....	622	446,649	235	85,300	48	28,650	7,897	626,135
Louisiana .....	64,643	12,416,700	85,702	4,474,736	971	392,000	113,600	3,698,532
Maine .....	3,342	1,708,466	275	178,700	-	-	3,227	856,812
Maryland .....	446	518,530	821	99,000	-	-	19,125	2,235,453
Massachusetts .....	1,186	857,474	1,297	427,800	1,036	35,000	6,630	1,066,022
Michigan .....	60,822	18,240,014	25,504	2,649,475	9,290	676,380	63,155	8,257,262
Minnesota .....	4,626	4,349,425	6,630	622,700	12,555	589,180	54,304	3,061,705
Mississippi .....	45,811	9,324,396	88,376	5,415,910	1,110	33,600	302,365	12,113,378
Missouri .....	26,164	5,499,760	18,894	1,480,516	21,680	179,200	101,365	6,116,066
Montana .....	68,453	36,966,206	49,377	11,740,508	31,687	2,086,700	296,467	20,525,053
Nebraska .....	94,038	13,757,700	242,532	16,465,964	77,544	3,847,340	732,852	42,993,980
Nevada .....	10,198	1,721,800	21,288	4,100,035	1,950	274,905	113,407	10,727,649
New Hampshire .....	22	(D)	56	(D)	-	-	600	393,537
New Jersey .....	6,966	10,293,000	5,330	4,583,730	833	273,000	16,267	2,760,579
New Mexico .....	32,064	8,434,828	63,161	8,358,083	261	53,000	204,940	16,558,017
New York .....	1,337	1,989,590	1,107	100,000	168	63,000	7,723	1,656,650
North Carolina .....	1,992	2,513,389	1,675	138,400	-	-	36,685	7,078,123
North Dakota .....	(D)	(D)	-	-	(D)	(D)	45,275	4,875,880
Ohio .....	4,916	3,755,600	1,560	532,100	-	-	6,531	960,682
Oklahoma .....	128,909	13,026,750	16,978	676,750	-	-	210,023	24,535,880
Oregon .....	52,919	14,200,466	60,905	13,952,113	34,794	5,805,332	247,983	22,242,297
Pennsylvania .....	2,011	4,736,680	43	(D)	62	(D)	5,222	971,702
Rhode Island .....	152	(D)	(D)	(D)	(D)	40,500	276	130,243
South Carolina .....	6,112	4,313,800	2,298	129,840	1,505	281,700	14,021	2,703,733
South Dakota .....	8,037	1,416,000	1,561	96,725	6,650	557,500	66,230	3,698,095
Tennessee .....	5,419	3,544,550	136	86,680	-	-	16,212	2,109,820
Texas .....	202,552	49,405,001	253,984	23,530,802	42,116	11,355,430	1,097,985	95,485,144
Utah .....	45,442	9,015,858	69,134	19,621,928	16,473	3,026,600	263,360	21,395,567
Vermont .....	300	311,955	70	128,140	-	-	637	339,895
Virginia .....	5,444	3,640,800	670	130,700	-	-	8,122	1,876,632
Washington .....	39,694	18,344,107	101,868	11,927,511	22,089	4,206,250	458,590	47,625,087
West Virginia .....	350	549,400	1,177	2,132,000	-	-	4,241	959,636
Wisconsin .....	15,059	1,361,879	6,227	952,628	32,356	1,939,406	75,671	7,390,284
Wyoming .....	43,705	5,960,400	214,226	17,631,488	9,092	2,742,000	222,586	5,848,823
<b>Water Resources Regions</b>								
Region 01 New England .....	5,030	3,718,714	1,652	611,040	1,221	266,880	12,610	3,372,606
Region 02 Mid-Atlantic .....	16,912	20,045,078	8,574	5,632,530	4,289	1,482,600	65,991	10,875,853
Region 03 South Atlantic-Gulf .....	117,872	83,685,480	74,871	9,171,172	9,460	3,867,300	449,990	73,190,358
Region 04 Great Lakes .....	65,458	21,557,859	40,240	3,397,775	9,478	739,780	114,034	11,871,729
Region 05 Ohio .....	11,298	9,765,578	4,444	(D)	5,398	(D)	83,985	6,321,907
Region 06 Tennessee .....	1,136	887,525	825	44,130	-	-	5,451	698,892
Region 07 Upper Mississippi .....	33,091	8,811,854	29,399	1,865,022	65,011	2,767,586	184,768	19,600,904
Region 08 Lower Mississippi .....	187,292	33,195,146	289,743	19,549,973	25,061	1,110,986	965,886	31,844,865
Region 09 Souris-Red-Rainy .....	(D)	2,837,272	-	-	(D)	460,000	17,871	3,751,800
Region 10 Missouri .....	253,250	66,884,411	549,399	35,098,171	134,613	9,582,740	1,507,657	90,597,581
Region 11 Arkansas-White-Red ....	243,457	32,804,475	238,159	15,424,185	82,426	12,808,370	1,031,920	110,919,791
Region 12 Texas-Gulf .....	130,350	37,909,193	174,963	18,563,605	19,662	265,050	816,262	62,255,044
Region 13 Rio Grande .....	60,942	14,387,350	26,795	10,696,408	261	53,000	221,688	23,746,548
Region 14 Upper Colorado .....	52,175	14,152,689	117,295	11,294,214	10,943	2,124,300	213,097	14,939,298
Region 15 Lower Colorado .....	(D)	17,138,500	77,531	(D)	(D)	(D)	144,917	13,353,045
Region 16 Great Basin .....	52,796	31,799,522	86,987	20,682,828	27,583	1,920,865	339,252	19,916,977
Region 17 Pacific Northwest .....	144,815	38,984,610	300,232	58,548,568	135,392	16,885,444	1,528,917	130,062,378
Region 18 California .....	285,063	194,419,203	492,259	143,032,128	120,203	33,383,885	1,434,076	323,600,143
Region 19 Alaska .....	105	122,350	6	36,000	-	-	115	52,128
Region 20 Hawaii .....	1,661	1,221,600	1,116	374,813	900	48,000	12,340	1,642,116

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Expenditures (all types) during survey year - con.							
	Primary source of funding assistance							
	EQIP		Other USDA programs		Non-USDA assistance		No funding assistance	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2,513	502,040	1,874	240,081	8,520	1,933,481	90,008	11,362,729
Alabama .....	-	-	9	116	20	4,216	513	14,373
Alaska .....	1	(D)	6	(D)	-	-	128	218
Arizona .....	38	7,180	51	7,180	56	5,469	1,169	201,646
Arkansas .....	125	26,851	44	13,946	269	128,811	1,327	560,816
California .....	273	55,400	285	51,652	1,580	371,114	16,244	1,836,173
Colorado .....	257	47,854	140	24,858	214	52,051	4,687	503,953
Connecticut .....	-	-	-	-	16	(D)	352	(D)
Delaware .....	17	3,402	-	-	12	(D)	114	(D)
Florida .....	93	2,136	200	26,896	145	22,490	3,936	267,968
Georgia .....	41	(D)	72	(D)	161	17,433	1,688	215,275
Hawaii .....	-	-	1	(D)	49	(D)	773	15,395
Idaho .....	45	10,367	100	4,227	474	136,027	5,438	864,010
Illinois .....	-	-	-	-	172	31,842	735	111,573
Indiana .....	-	-	-	-	82	14,684	639	94,898
Iowa .....	-	-	-	-	3	(D)	360	(D)
Kansas .....	-	-	13	15,980	438	184,375	1,459	549,363
Kentucky .....	-	-	18	144	31	424	506	8,234
Louisiana .....	52	10,075	13	1,820	102	28,933	753	224,088
Maine .....	12	(D)	13	2,333	2	(D)	497	3,486
Maryland .....	-	-	-	-	100	2,930	413	17,462
Massachusetts .....	40	824	8	(D)	65	(D)	353	3,231
Michigan .....	20	3,400	20	200	178	18,779	1,645	136,392
Minnesota .....	18	7,455	-	-	52	4,940	593	65,720
Mississippi .....	120	81,313	28	5,730	179	27,763	722	322,856
Missouri .....	20	7,520	21	207	88	25,705	983	134,671
Montana .....	137	21,496	47	9,799	237	68,815	3,001	345,874
Nebraska .....	118	23,807	81	19,253	668	214,061	2,774	889,845
Nevada .....	65	7,790	21	6,006	128	28,705	639	104,342
New Hampshire .....	-	-	-	-	40	140	374	538
New Jersey .....	28	1,473	45	(D)	32	(D)	655	24,699
New Mexico .....	178	18,719	87	446	389	47,504	3,631	233,757
New York .....	2	(D)	23	46	68	(D)	972	9,422
North Carolina .....	26	26	-	-	206	3,724	987	36,602
North Dakota .....	17	5,100	-	-	21	6,655	305	59,543
Ohio .....	-	-	-	-	66	192	627	12,815
Oklahoma .....	-	-	13	10,400	117	29,025	950	316,485
Oregon .....	158	21,300	20	9,949	181	28,378	6,316	336,974
Pennsylvania .....	-	-	-	-	41	801	891	6,537
Rhode Island .....	6	(D)	-	-	-	-	98	(D)
South Carolina .....	14	(D)	52	(D)	47	6,708	550	15,722
South Dakota .....	-	-	-	-	9	8,230	300	74,248
Tennessee .....	-	-	-	-	45	2,429	492	19,338
Texas .....	115	39,417	135	12,510	945	292,689	5,595	1,252,021
Utah .....	248	31,024	89	1,173	370	41,361	4,611	320,851
Vermont .....	2	(D)	4	(D)	31	111	237	800
Virginia .....	-	-	-	-	34	123	592	14,113
Washington .....	69	5,362	9	6,021	261	26,314	6,128	584,544
West Virginia .....	-	-	173	185	3	3	144	5,580
Wisconsin .....	21	562	-	-	38	11,470	919	117,281
Wyoming .....	137	52,217	33	3,888	55	28,796	2,193	404,708
<b>Water Resources Regions</b>								
Region 01 New England .....	58	2,008	21	3,933	154	5,053	1,745	9,519
Region 02 Mid-Atlantic .....	47	5,145	92	(D)	246	(D)	2,840	82,981
Region 03 South Atlantic-Gulf .....	180	12,660	333	29,980	574	57,511	7,703	552,042
Region 04 Great Lakes .....	22	(D)	24	(D)	240	21,676	3,009	203,838
Region 05 Ohio .....	-	-	167	305	159	11,617	1,949	93,203
Region 06 Tennessee .....	-	-	-	-	91	470	596	6,942
Region 07 Upper Mississippi .....	39	(D)	2	(D)	222	44,703	2,170	259,545
Region 08 Lower Mississippi .....	279	120,749	87	19,396	513	159,875	2,602	1,167,962
Region 09 Souris-Red-Rainy .....	17	5,100	-	-	53	12,255	91	10,380
Region 10 Missouri .....	317	100,509	185	39,408	1,040	349,542	9,564	1,955,460
Region 11 Arkansas-White-Red .....	113	44,275	54	39,312	699	294,541	3,797	1,217,834
Region 12 Texas-Gulf .....	81	15,178	135	12,510	837	229,687	4,608	883,862
Region 13 Rio Grande .....	163	14,650	71	606	407	29,064	3,114	265,366
Region 14 Upper Colorado .....	274	18,455	96	2,802	144	20,143	5,029	352,110
Region 15 Lower Colorado .....	40	7,380	51	7,180	98	41,300	1,342	215,134
Region 16 Great Basin .....	175	33,945	190	8,459	498	81,781	3,853	382,433
Region 17 Pacific Northwest .....	436	55,311	74	23,716	938	195,525	18,619	1,834,804
Region 18 California .....	271	55,200	285	51,652	1,558	371,048	16,476	1,853,701
Region 19 Alaska .....	1	(D)	6	(D)	-	-	128	218
Region 20 Hawaii .....	-	-	1	(D)	49	(D)	773	15,395

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Purchase of new or replacement equipment and machinery during survey year								
	Farms	Acres irrigated affected by expenditure	Expenditures <sup>1</sup> (\$1,000)	Average per farm (dollars)	Farms with expenditures of -				
					\$1 to \$999	\$1,000 to \$9,999	\$10,000 to \$29,999	\$30,000 to \$74,999	\$75,000 or more
United States .....	70,323	8,655,357	1,316,415	18,720	28,430	24,972	7,902	4,700	4,319
Alabama .....	356	11,591	5,839	16,403	166	106	45	5	34
Alaska .....	104	188	137	1,318	57	44	3	-	-
Arizona .....	654	83,451	20,402	31,195	116	370	53	76	39
Arkansas .....	924	502,710	25,394	27,483	186	266	283	152	37
California .....	12,400	1,339,432	334,214	26,953	4,270	4,477	1,634	970	1,049
Colorado .....	3,574	343,311	52,133	14,587	1,770	1,066	267	284	187
Connecticut .....	278	1,402	1,324	4,762	163	63	44	4	4
Delaware .....	84	9,382	2,333	27,773	11	28	23	6	16
Florida .....	2,990	219,843	36,389	12,170	1,266	1,114	353	140	117
Georgia .....	1,222	159,453	63,309	51,808	329	379	147	146	221
Hawaii .....	648	11,771	2,451	3,782	384	225	16	17	6
Idaho .....	4,197	663,150	80,972	19,293	1,896	1,466	382	174	279
Illinois .....	632	80,960	13,618	21,547	282	170	77	48	55
Indiana .....	562	73,399	10,363	18,440	243	177	58	37	47
Iowa .....	260	6,844	897	3,451	147	82	27	1	3
Kansas .....	1,162	427,307	49,404	42,516	135	438	236	175	178
Kentucky .....	490	4,819	857	1,749	391	93	-	4	2
Louisiana .....	514	160,700	9,310	18,112	121	174	182	11	26
Maine .....	415	4,662	2,130	5,131	311	86	6	3	9
Maryland .....	323	15,885	2,280	7,060	140	119	27	36	1
Massachusetts .....	350	4,696	1,504	4,298	171	152	24	2	1
Michigan .....	1,289	95,865	23,396	18,151	406	499	151	180	53
Minnesota .....	489	45,266	7,029	14,374	183	189	42	48	27
Mississippi .....	585	343,113	13,945	23,838	100	200	142	87	56
Missouri .....	757	126,268	8,567	11,318	278	274	141	43	21
Montana .....	2,248	243,009	58,649	26,089	1,129	779	82	73	185
Nebraska .....	2,475	736,173	64,648	26,120	405	989	396	424	261
Nevada .....	422	78,314	7,841	18,580	131	115	95	52	29
New Hampshire .....	356	596	370	1,038	198	158	-	-	-
New Jersey .....	509	18,750	12,746	25,042	156	225	54	27	47
New Mexico .....	2,156	149,395	19,311	8,957	917	834	262	107	36
New York .....	891	9,116	2,396	2,689	569	240	77	5	-
North Carolina .....	868	30,021	7,474	8,610	464	263	68	47	26
North Dakota .....	293	45,200	7,733	26,393	75	154	39	1	24
Ohio .....	542	8,811	4,227	7,798	276	236	16	-	14
Oklahoma .....	761	202,463	28,563	37,534	253	216	127	52	113
Oregon .....	5,099	290,561	45,810	8,984	2,366	1,913	554	153	113
Pennsylvania .....	795	6,369	1,992	2,505	474	291	17	6	7
Rhode Island .....	85	455	216	2,544	60	23	1	1	-
South Carolina .....	427	12,848	5,166	12,098	113	235	40	21	18
South Dakota .....	272	59,486	4,989	18,341	85	115	14	29	29
Tennessee .....	390	13,442	4,327	11,096	269	65	7	22	31
Texas .....	4,385	1,007,461	131,456	29,979	1,190	1,686	74	377	388
Utah .....	3,673	253,313	40,545	11,039	1,767	1,368	231	153	154
Vermont .....	235	695	549	2,337	132	98	3	2	-
Virginia .....	482	10,811	4,911	10,188	297	133	25	3	24
Washington .....	5,229	456,173	57,786	11,051	2,569	1,590	537	343	190
West Virginia .....	208	1,849	1,753	8,426	95	89	-	19	5
Wisconsin .....	807	91,203	9,256	11,470	413	218	105	47	24
Wyoming .....	1,456	193,375	25,503	17,516	505	682	49	87	133
<b>Water Resources Regions</b>									
Region 01 New England .....	1,556	12,032	5,819	3,739	940	515	77	10	14
Region 02 Mid-Atlantic .....	2,465	65,607	25,736	10,440	1,214	898	175	78	100
Region 03 South Atlantic-Gulf .....	5,872	436,814	120,598	20,538	2,295	2,140	642	365	430
Region 04 Great Lakes .....	2,429	134,451	28,413	11,697	1,154	783	227	197	68
Region 05 Ohio .....	1,750	83,395	15,847	9,056	1,000	570	55	64	61
Region 06 Tennessee .....	467	5,945	1,108	2,373	341	97	26	-	3
Region 07 Upper Mississippi .....	1,813	181,764	26,266	14,488	791	553	246	135	88
Region 08 Lower Mississippi .....	1,895	1,043,252	41,500	21,900	274	586	642	270	123
Region 09 Souris-Red-Rainy .....	150	26,629	6,657	44,380	41	53	16	5	35
Region 10 Missouri .....	7,285	1,431,458	162,763	22,342	2,163	3,044	755	705	618
Region 11 Arkansas-White-Red .....	2,989	897,791	126,026	42,163	620	1,050	546	361	412
Region 12 Texas-Gulf .....	3,702	732,488	85,502	23,096	1,231	1,370	588	269	244
Region 13 Rio Grande .....	1,715	169,643	32,700	19,067	664	605	237	123	86
Region 14 Upper Colorado .....	3,929	206,702	32,198	8,195	2,266	1,197	210	151	105
Region 15 Lower Colorado .....	787	104,068	23,135	29,397	177	397	59	110	44
Region 16 Great Basin .....	3,023	302,143	50,837	16,817	1,194	1,234	288	157	150
Region 17 Pacific Northwest .....	15,233	1,456,332	193,912	12,730	7,285	5,135	1,417	713	683
Region 18 California .....	12,511	1,352,884	334,809	26,761	4,339	4,476	1,677	970	1,049
Region 19 Alaska .....	104	188	137	1,318	57	44	3	-	-
Region 20 Hawaii .....	648	11,771	2,451	3,782	384	225	16	17	6

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Purchase of new or replacement equipment and machinery during survey year - con.							
	Primary purpose of expenditures							
	New expansion		Water conservation		Energy conservation		Scheduled replacement or maintenance	
	Acres	Dollars	Acres	Dollars	Acres	Dollars	Acres	Dollars
United States .....	795,913	376,229,626	801,070	218,970,092	263,692	52,279,553	6,794,682	668,935,891
Alabama .....	5,765	4,936,372	774	43,150	-	-	5,052	859,894
Alaska .....	79	74,350	3	21,000	-	-	106	41,733
Arizona .....	12,841	11,880,000	11,683	2,210,037	-	-	58,927	6,311,722
Arkansas .....	38,838	4,452,100	28,282	1,173,680	2,240	149,386	433,350	19,618,913
California .....	112,256	76,860,228	173,080	84,241,533	65,376	12,551,965	988,720	160,560,055
Colorado .....	17,919	16,554,973	58,290	10,572,150	5,796	1,130,690	261,306	23,875,065
Connecticut .....	101	483,000	-	-	14	151,380	1,287	689,400
Delaware .....	(D)	321,495	-	-	(D)	744,000	6,761	1,267,445
Florida .....	9,922	11,439,000	18,670	3,783,568	3,065	256,000	188,186	20,909,989
Georgia .....	37,341	29,736,124	28	9,600	1,894	2,738,600	120,190	30,824,828
Hawaii .....	1,387	750,600	980	326,263	-	-	9,404	1,374,184
Idaho .....	35,195	19,364,228	55,316	16,261,507	51,858	5,688,165	520,781	39,658,433
Illinois .....	8,653	5,106,500	1,728	408,000	840	34,000	69,739	8,069,490
Indiana .....	5,267	4,972,779	2,212	75,500	2,810	102,388	63,110	5,212,443
Iowa .....	301	144,730	51	2,890	-	-	6,492	749,530
Kansas .....	21,778	5,732,287	13,341	4,862,500	11,520	450,600	380,668	38,358,713
Kentucky .....	460	372,092	168	22,500	33	4,650	4,158	457,835
Louisiana .....	38,121	5,455,300	32,469	1,085,040	-	-	90,110	2,769,212
Maine .....	1,509	1,185,066	55	108,700	-	-	3,098	835,803
Maryland .....	398	436,530	-	-	-	-	15,487	1,843,865
Massachusetts .....	376	400,724	428	292,000	-	-	3,892	811,522
Michigan .....	23,314	13,747,600	17,304	1,604,360	1,010	386,380	54,237	7,657,932
Minnesota .....	3,302	4,017,025	80	2,400	8,955	580,000	32,929	2,429,664
Mississippi .....	29,432	2,485,773	33,328	1,740,246	-	-	280,353	9,719,368
Missouri .....	18,601	2,690,360	6,793	895,112	16,400	172,000	84,474	4,809,906
Montana .....	30,080	31,373,256	15,982	10,318,781	5,455	1,138,700	191,492	15,818,277
Nebraska .....	58,925	10,566,500	49,198	13,123,228	13,560	2,984,280	614,490	37,973,986
Nevada .....	3,110	361,300	4,200	2,203,785	1,950	274,905	69,054	5,000,804
New Hampshire .....	22	7,300	28	400	-	-	546	361,887
New Jersey .....	3,485	7,389,000	1,485	3,066,000	763	271,500	13,017	2,019,963
New Mexico .....	19,133	2,958,857	23,129	6,398,922	-	-	107,133	9,952,946
New York .....	1,211	766,390	807	85,000	-	-	7,098	1,544,950
North Carolina .....	1,051	662,264	52	84,200	-	-	28,918	6,727,417
North Dakota .....	5,289	3,080,272	-	-	-	-	39,911	4,652,880
Ohio .....	2,154	3,075,350	1,416	242,500	-	-	5,241	908,802
Oklahoma .....	(D)	5,007,750	(D)	272,125	-	-	184,383	23,283,322
Oregon .....	34,665	11,807,166	28,218	10,390,190	22,383	4,749,532	205,295	18,862,947
Pennsylvania .....	1,180	1,010,300	(D)	2,100	(D)	45,600	5,106	933,692
Rhode Island .....	88	96,574	-	-	167	40,500	200	79,200
South Carolina .....	2,286	2,614,400	12	3,840	78	70,200	10,472	2,477,233
South Dakota .....	2,635	1,353,000	1,199	91,675	-	-	55,652	3,544,095
Tennessee .....	2,933	2,463,210	-	-	-	-	10,509	1,864,215
Texas .....	104,956	34,510,743	56,401	5,559,070	13,870	9,656,180	832,234	81,730,382
Utah .....	37,227	8,559,508	38,817	14,402,414	2,048	1,583,200	175,221	15,999,837
Vermont .....	278	297,955	47	113,250	-	-	370	137,895
Virginia .....	(D)	3,141,800	(D)	40,700	-	-	6,520	1,728,274
Washington .....	18,378	14,835,146	48,862	7,767,860	9,523	3,103,100	379,410	32,080,352
West Virginia .....	69	252,900	39	840,000	-	-	1,741	659,636
Wisconsin .....	9,748	998,349	2,685	872,428	15,936	631,652	62,834	6,753,637
Wyoming .....	22,317	5,441,100	61,948	13,349,888	4,092	2,590,000	105,018	4,122,318
<b>Water Resources Regions</b>								
Region 01 New England .....	2,290	2,431,664	511	401,100	181	191,880	9,050	2,793,907
Region 02 Mid-Atlantic .....	9,993	12,471,725	2,358	3,150,800	2,819	1,061,100	50,437	9,052,094
Region 03 South Atlantic-Gulf .....	56,770	49,299,730	18,862	3,935,848	5,037	3,064,800	356,145	64,297,842
Region 04 Great Lakes .....	25,879	15,190,195	19,311	2,043,810	1,030	386,780	88,231	10,792,219
Region 05 Ohio .....	7,088	8,921,521	1,923	1,281,800	2,823	106,638	71,561	5,537,406
Region 06 Tennessee .....	533	444,910	754	29,950	-	-	4,658	633,227
Region 07 Upper Mississippi .....	19,139	7,445,774	4,967	900,018	19,431	785,652	138,227	17,134,616
Region 08 Lower Mississippi .....	106,250	14,053,853	97,909	4,793,846	18,640	321,386	820,453	22,331,040
Region 09 Souris-Red-Rainy .....	2,662	2,520,272	-	-	6,300	460,000	17,667	3,676,800
Region 10 Missouri .....	119,184	55,179,621	126,901	23,845,051	24,182	7,132,980	1,161,191	76,604,968
Region 11 Arkansas-White-Red .....	62,234	13,949,864	51,838	8,758,449	29,996	10,812,870	753,723	92,505,190
Region 12 Texas-Gulf .....	58,624	27,976,743	46,783	3,822,740	-	-	627,081	53,702,582
Region 13 Rio Grande .....	49,301	9,253,030	11,414	6,523,208	-	-	108,928	16,923,950
Region 14 Upper Colorado .....	40,180	10,223,718	35,871	9,133,788	1,735	895,600	128,916	11,944,474
Region 15 Lower Colorado .....	14,031	13,852,000	11,751	2,330,037	-	-	78,286	6,953,383
Region 16 Great Basin .....	28,107	22,800,672	40,969	14,911,364	19,178	1,408,465	213,889	11,716,362
Region 17 Pacific Northwest .....	63,406	32,337,656	149,349	47,994,647	66,964	13,099,437	1,176,613	100,480,490
Region 18 California .....	128,776	77,051,728	178,616	84,766,373	65,376	12,551,965	980,116	160,439,424
Region 19 Alaska .....	79	74,350	3	21,000	-	-	106	41,733
Region 20 Hawaii .....	1,387	750,600	980	326,263	-	-	9,404	1,374,184

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Purchase of new or replacement equipment and machinery during survey year - con.							
	Primary source of funding assistance							
	EQIP		Other USDA programs		Non-USDA assistance		No funding assistance	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	1,408	281,024	844	111,723	5,396	1,203,032	62,675	7,059,578
Alabama .....	-	-	9	116	12	1,416	335	10,059
Alaska .....	1	(D)	3	(D)	-	-	100	183
Arizona .....	18	2,420	17	5,780	40	5,373	579	69,878
Arkansas .....	45	8,608	22	4,392	132	88,752	725	400,958
California .....	141	36,766	124	16,734	829	203,952	11,306	1,081,980
Colorado .....	150	28,217	82	8,534	166	25,292	3,176	281,268
Connecticut .....	-	-	-	-	13	20	265	1,382
Delaware .....	10	2,002	-	-	5	17	69	7,363
Florida .....	39	975	29	13,300	136	9,288	2,786	196,280
Georgia .....	40	(D)	48	(D)	115	15,938	1,019	137,153
Hawaii .....	-	-	1	(D)	49	(D)	598	11,149
Idaho .....	40	7,301	21	1,120	336	84,493	3,800	570,236
Illinois .....	-	-	-	-	121	14,912	511	66,048
Indiana .....	-	-	-	-	62	12,568	500	60,831
Iowa .....	-	-	-	-	2	(D)	258	(D)
Kansas .....	-	-	3	720	269	102,454	890	324,133
Kentucky .....	-	-	18	144	31	424	441	4,251
Louisiana .....	13	6,500	13	1,820	43	10,874	445	141,506
Maine .....	10	801	10	1,433	-	-	395	2,428
Maryland .....	-	-	-	-	65	2,709	258	13,176
Massachusetts .....	28	(D)	2	(D)	51	2,322	269	1,946
Michigan .....	20	3,400	20	200	96	7,929	1,153	84,336
Minnesota .....	3	2,655	-	-	52	4,940	434	37,671
Mississippi .....	52	45,258	20	4,450	88	22,110	425	271,295
Missouri .....	3	525	10	196	59	23,773	685	101,774
Montana .....	87	12,004	18	3,000	129	34,642	2,014	193,363
Nebraska .....	54	8,347	22	6,106	423	141,243	1,976	580,477
Nevada .....	30	1,365	18	6,003	60	12,895	314	58,051
New Hampshire .....	-	-	-	-	40	(D)	316	(D)
New Jersey .....	25	1,455	1	(D)	29	(D)	454	16,967
New Mexico .....	107	9,297	44	142	170	14,768	1,835	125,188
New York .....	2	(D)	23	(D)	47	(D)	819	8,371
North Carolina .....	-	-	-	-	129	2,677	739	27,344
North Dakota .....	17	5,100	-	-	6	4,495	270	35,605
Ohio .....	-	-	-	-	41	41	501	8,770
Oklahoma .....	-	-	13	10,400	92	19,895	656	172,168
Oregon .....	118	11,194	16	9,269	136	26,406	4,829	243,692
Pennsylvania .....	-	-	-	-	35	323	760	6,046
Rhode Island .....	1	(D)	-	-	-	-	84	(D)
South Carolina .....	14	1,246	26	130	16	2,292	371	9,180
South Dakota .....	-	-	-	-	1	(D)	271	(D)
Tennessee .....	-	-	-	-	23	1,329	367	12,113
Texas .....	43	28,459	52	4,760	652	219,862	3,638	754,380
Utah .....	149	15,667	31	568	233	25,723	3,260	211,355
Vermont .....	-	-	2	(D)	31	(D)	202	564
Virginia .....	-	-	-	-	32	62	450	10,749
Washington .....	69	5,362	9	6,021	227	26,021	4,924	418,769
West Virginia .....	-	-	86	86	3	3	119	1,760
Wisconsin .....	21	562	-	-	23	8,070	763	82,571
Wyoming .....	58	31,410	31	3,088	46	20,810	1,321	138,067
<b>Water Resources Regions</b>								
Region 01 New England .....	39	931	12	1,833	135	2,593	1,370	6,675
Region 02 Mid-Atlantic .....	37	(D)	48	(D)	194	(D)	2,186	57,991
Region 03 South Atlantic-Gulf .....	99	7,987	112	16,182	374	33,045	5,287	379,600
Region 04 Great Lakes .....	20	3,400	22	220	124	9,822	2,263	121,009
Region 05 Ohio .....	-	-	80	206	126	9,986	1,544	73,203
Region 06 Tennessee .....	-	-	-	-	83	462	384	5,483
Region 07 Upper Mississippi .....	24	(D)	2	(D)	157	24,573	1,630	153,970
Region 08 Lower Mississippi .....	95	57,096	61	8,694	254	112,704	1,485	864,758
Region 09 Souris-Red-Rainy .....	17	5,100	-	-	50	11,655	83	9,874
Region 10 Missouri .....	155	54,168	71	12,194	652	202,997	6,407	1,162,099
Region 11 Arkansas-White-Red .....	79	36,480	22	18,880	444	175,313	2,444	667,118
Region 12 Texas-Gulf .....	9	4,220	52	4,760	593	170,440	3,048	553,068
Region 13 Rio Grande .....	68	4,388	38	342	183	16,988	1,426	147,925
Region 14 Upper Colorado .....	172	14,018	84	2,734	114	16,479	3,559	173,471
Region 15 Lower Colorado .....	18	2,420	17	5,780	67	15,719	685	80,149
Region 16 Great Basin .....	110	14,125	69	6,891	241	34,165	2,603	246,962
Region 17 Pacific Northwest .....	324	32,979	26	16,090	749	157,870	14,134	1,249,393
Region 18 California .....	141	36,766	124	16,734	807	203,886	11,439	1,095,498
Region 19 Alaska .....	1	(D)	3	(D)	-	-	100	183
Region 20 Hawaii .....	-	-	1	(D)	49	(D)	598	11,149

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	New well construction or deepening of wells during survey year								
	Farms	Acres irrigated affected by expenditure	Expenditures <sup>1</sup> (\$1,000)	Average per farm (dollars)	Farms with expenditures of -				
					\$1 to \$999	\$1,000 to \$9,999	\$10,000 to \$29,999	\$30,000 to \$74,999	\$75,000 or more
United States .....	5,702	934,273	353,259	61,954	246	1,416	1,911	1,075	1,054
Alabama .....	18	636	164	9,111	-	8	10	-	-
Alaska .....	2	(D)	(D)	(D)	-	2	-	-	-
Arizona .....	56	9,744	4,352	77,714	-	-	32	-	24
Arkansas .....	252	37,511	4,533	17,986	4	42	178	25	3
California .....	1,340	254,760	204,108	152,319	29	145	295	302	569
Colorado .....	87	18,840	1,676	19,268	-	50	5	28	4
Connecticut .....	-	-	-	-	-	-	-	-	-
Delaware .....	14	1,506	571	40,750	-	3	-	11	-
Florida .....	240	11,811	8,670	36,124	26	107	63	4	40
Georgia .....	189	15,897	5,194	27,482	50	54	67	6	12
Hawaii .....	-	-	-	-	-	-	-	-	-
Idaho .....	139	48,856	9,308	66,966	-	46	42	12	39
Illinois .....	63	7,896	1,374	21,802	-	-	45	18	-
Indiana .....	18	1,394	511	28,383	-	6	1	11	-
Iowa .....	2	(D)	(D)	(D)	-	-	1	1	-
Kansas .....	299	76,663	16,503	55,193	15	48	70	94	72
Kentucky .....	5	(D)	163	32,631	-	3	-	1	1
Louisiana .....	103	7,764	3,721	36,122	-	11	48	26	18
Maine .....	39	620	368	9,428	-	35	3	-	1
Maryland .....	41	123	296	7,220	-	27	14	-	-
Massachusetts .....	62	553	494	7,960	30	22	-	10	-
Michigan .....	200	10,220	4,474	22,370	20	39	77	64	-
Minnesota .....	12	1,425	386	32,178	-	-	7	5	-
Mississippi .....	112	17,994	2,605	23,259	-	26	50	33	3
Missouri .....	120	9,738	1,435	11,962	-	38	78	4	-
Montana .....	-	-	-	-	-	-	-	-	-
Nebraska .....	257	30,741	7,638	29,719	-	22	90	144	1
Nevada .....	65	25,272	5,589	85,985	2	15	-	7	41
New Hampshire .....	33	(D)	(D)	(D)	33	-	-	-	-
New Jersey .....	88	2,896	3,629	41,234	-	25	9	28	26
New Mexico .....	215	24,317	6,668	31,014	-	42	123	40	10
New York .....	44	(D)	418	9,500	-	22	22	-	-
North Carolina .....	63	454	1,062	16,857	-	8	53	2	-
North Dakota .....	3	(D)	(D)	(D)	-	2	-	1	-
Ohio .....	38	1,669	770	20,263	-	23	1	12	2
Oklahoma .....	35	55,400	1,749	49,975	-	3	1	26	5
Oregon .....	153	13,397	2,360	15,422	-	23	120	9	1
Pennsylvania .....	33	553	927	28,102	-	25	1	-	7
Rhode Island .....	13	(D)	(D)	(D)	-	9	4	-	-
South Carolina .....	58	2,293	1,585	27,334	-	29	12	10	7
South Dakota .....	-	-	-	-	-	-	-	-	-
Tennessee .....	61	1,747	928	15,211	7	30	22	1	1
Texas .....	670	177,707	27,911	41,657	-	243	227	97	103
Utah .....	187	37,602	5,490	29,360	-	75	55	27	30
Vermont .....	-	-	-	-	-	-	-	-	-
Virginia .....	25	683	418	16,700	-	1	24	-	-
Washington .....	180	14,858	13,152	73,065	30	79	33	12	26
West Virginia .....	47	1,042	1,062	22,596	-	23	19	-	5
Wisconsin .....	13	2,286	368	28,288	-	-	9	4	-
Wyoming .....	8	3,950	373	46,563	-	5	-	-	3
<b>Water Resources Regions</b>									
Region 01 New England .....	147	1,286	981	6,673	63	66	7	10	1
Region 02 Mid-Atlantic .....	206	6,751	6,736	32,701	-	81	48	39	38
Region 03 South Atlantic-Gulf .....	596	30,886	16,783	28,159	76	231	208	22	59
Region 04 Great Lakes .....	249	11,626	5,677	22,799	20	45	99	83	2
Region 05 Ohio .....	130	7,460	1,139	8,758	7	78	39	5	1
Region 06 Tennessee .....	24	(D)	(D)	(D)	-	22	2	-	-
Region 07 Upper Mississippi .....	73	9,034	1,909	26,148	-	-	45	28	-
Region 08 Lower Mississippi .....	491	68,862	11,472	23,365	4	71	317	74	25
Region 09 Souris-Red-Rainy .....	3	(D)	(D)	(D)	-	2	-	1	-
Region 10 Missouri .....	445	62,397	11,331	25,462	15	105	127	186	12
Region 11 Arkansas-White-Red .....	455	185,836	24,512	53,874	-	74	121	158	102
Region 12 Texas-Gulf .....	573	126,451	19,395	33,848	-	185	254	65	69
Region 13 Rio Grande .....	175	8,363	6,978	39,876	-	64	66	35	10
Region 14 Upper Colorado .....	8	21	24	3,000	-	7	1	-	-
Region 15 Lower Colorado .....	61	20,024	6,082	99,703	-	-	32	-	29
Region 16 Great Basin .....	265	70,032	14,909	56,262	2	90	75	34	64
Region 17 Pacific Northwest .....	459	69,953	20,990	45,729	30	148	175	33	73
Region 18 California .....	1,340	254,760	204,108	152,319	29	145	295	302	569
Region 19 Alaska .....	2	(D)	(D)	(D)	-	2	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	New well construction or deepening of wells during survey year - con.							
	Primary purpose of expenditures							
	New expansion		Water conservation		Energy conservation		Scheduled replacement or maintenance	
	Acres	Dollars	Acres	Dollars	Acres	Dollars	Acres	Dollars
United States .....	317,756	125,712,011	77,392	20,167,229	8,823	7,014,600	530,302	200,365,407
Alabama .....	-	-	-	-	-	-	636	164,000
Alaska .....	-	-	-	-	-	-	(D)	(D)
Arizona .....	7,332	(D)	-	-	(D)	(D)	(D)	1,960,000
Arkansas .....	14,624	1,962,000	2,350	95,000	520	68,000	20,017	2,407,500
California .....	58,499	58,884,484	18,194	6,593,133	1,425	3,922,000	176,642	134,708,477
Colorado .....	7,094	970,000	-	-	-	-	11,746	706,302
Connecticut .....	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	1,400	420,000	106	150,500
Florida .....	10,564	8,174,200	540	108,000	-	-	707	387,500
Georgia .....	14,153	4,637,128	-	-	72	336,000	1,672	220,931
Hawaii .....	-	-	-	-	-	-	-	-
Idaho .....	7,350	6,310,000	-	-	2,100	280,000	39,406	2,718,240
Illinois .....	(D)	(D)	(D)	(D)	-	-	6,846	1,236,544
Indiana .....	(D)	(D)	(D)	(D)	-	-	(D)	(D)
Iowa .....	(D)	(D)	-	-	-	-	(D)	(D)
Kansas .....	12,104	4,107,488	-	-	-	-	64,559	12,395,290
Kentucky .....	(D)	(D)	(D)	(D)	-	-	(D)	(D)
Louisiana .....	5,423	2,835,600	1,820	520,000	341	275,000	180	90,000
Maine .....	596	357,500	-	-	-	-	24	10,200
Maryland .....	-	-	-	-	-	-	123	296,000
Massachusetts .....	410	451,750	33	30,800	-	-	110	11,000
Michigan .....	9,241	3,621,246	(D)	(D)	(D)	(D)	499	498,700
Minnesota .....	100	55,000	-	-	-	-	1,325	331,133
Mississippi .....	6,927	1,574,200	7,987	532,000	(D)	(D)	(D)	(D)
Missouri .....	3,087	687,000	1,501	240,000	-	-	5,150	508,400
Montana .....	-	-	-	-	-	-	-	-
Nebraska .....	7,725	2,595,000	6,353	1,351,296	2,065	400,000	14,598	3,291,504
Nevada .....	1,400	1,260,000	-	-	-	-	23,872	4,329,045
New Hampshire .....	-	-	-	-	-	-	(D)	(D)
New Jersey .....	1,081	2,489,000	198	770,000	-	-	1,617	369,616
New Mexico .....	3,724	3,398,070	-	-	-	-	20,593	3,269,875
New York .....	(D)	418,000	-	-	-	-	-	-
North Carolina .....	454	1,062,000	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-	(D)	(D)
Ohio .....	(D)	(D)	(D)	(D)	-	-	-	-
Oklahoma .....	52,200	1,265,000	2,320	320,000	-	-	880	164,136
Oregon .....	-	-	6,482	772,500	60	60,000	6,855	1,527,028
Pennsylvania .....	(D)	(D)	-	-	-	-	(D)	(D)
Rhode Island .....	8	48,000	-	-	-	-	(D)	(D)
South Carolina .....	1,399	1,306,400	-	-	150	150,000	744	129,000
South Dakota .....	-	-	-	-	-	-	-	-
Tennessee .....	1,740	926,500	-	-	-	-	7	1,400
Texas .....	81,701	11,782,708	25,928	5,604,000	-	-	70,078	10,523,800
Utah .....	189	94,500	891	1,296,000	-	-	36,522	4,099,800
Vermont .....	-	-	-	-	-	-	-	-
Virginia .....	(D)	(D)	-	-	-	-	(D)	(D)
Washington .....	653	472,000	-	-	-	-	14,205	12,679,751
West Virginia .....	23	46,000	1,019	1,016,000	-	-	-	-
Wisconsin .....	6	60,000	-	-	-	-	2,280	307,747
Wyoming .....	3,000	7,500	950	365,000	-	-	-	-
<b>Water Resources Regions</b>								
Region 01 New England .....	1,014	857,250	33	30,800	-	-	239	92,843
Region 02 Mid-Atlantic .....	2,281	3,955,380	1,198	1,520,000	1,400	420,000	1,872	841,116
Region 03 South Atlantic-Gulf .....	26,617	15,275,928	547	143,000	222	486,000	3,500	878,131
Region 04 Great Lakes .....	10,597	4,574,246	(D)	(D)	(D)	(D)	(D)	(D)
Region 05 Ohio .....	2,033	425,857	395	305,500	-	-	5,032	407,244
Region 06 Tennessee .....	22	(D)	-	-	-	-	(D)	(D)
Region 07 Upper Mississippi .....	(D)	(D)	(D)	(D)	-	-	8,366	1,656,780
Region 08 Lower Mississippi .....	26,644	6,386,600	13,635	1,332,000	971	356,600	27,612	3,396,900
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	(D)	(D)
Region 10 Missouri .....	21,386	4,611,000	7,303	1,716,296	2,065	400,000	31,643	4,603,279
Region 11 Arkansas-White-Red .....	86,398	9,621,796	2,320	320,000	-	-	97,118	14,570,651
Region 12 Texas-Gulf .....	58,551	7,800,900	25,928	5,604,000	-	-	41,972	5,989,800
Region 13 Rio Grande .....	6,124	3,438,070	-	-	-	-	2,239	3,540,302
Region 14 Upper Colorado .....	(D)	(D)	-	-	-	-	(D)	(D)
Region 15 Lower Colorado .....	7,332	(D)	-	-	(D)	(D)	(D)	3,689,875
Region 16 Great Basin .....	8,909	7,614,500	891	1,296,000	-	-	60,232	5,998,845
Region 17 Pacific Northwest .....	683	522,000	6,482	772,500	2,160	340,000	60,628	19,355,019
Region 18 California .....	58,499	58,884,484	18,194	6,593,133	1,425	3,922,000	176,642	134,708,477
Region 19 Alaska .....	-	-	-	-	-	-	(D)	(D)
Region 20 Hawaii .....	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	New well construction or deepening of wells during survey year - con.							
	Primary source of funding assistance							
	EQIP		Other USDA programs		Non-USDA assistance		No funding assistance	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	107	10,937	218	19,951	962	186,321	4,415	717,064
Alabama .....	-	-	-	-	-	-	18	636
Alaska .....	-	-	-	-	-	-	2	(D)
Arizona .....	1	(D)	-	-	-	-	55	(D)
Arkansas .....	23	(D)	2	(D)	57	9,201	170	23,317
California .....	7	2,800	5	10,800	238	63,507	1,090	177,653
Colorado .....	-	-	-	-	5	534	82	18,306
Connecticut .....	-	-	-	-	-	-	-	-
Delaware .....	7	1,400	-	-	7	106	-	-
Florida .....	-	-	26	1,300	1	(D)	213	(D)
Georgia .....	-	-	24	72	-	-	165	15,825
Hawaii .....	-	-	-	-	-	-	-	-
Idaho .....	-	-	20	320	23	9,838	96	38,698
Illinois .....	-	-	-	-	17	1,700	46	6,196
Indiana .....	-	-	-	-	1	(D)	17	(D)
Iowa .....	-	-	-	-	1	(D)	1	(D)
Kansas .....	-	-	4	560	112	34,839	183	41,264
Kentucky .....	-	-	-	-	-	-	5	(D)
Louisiana .....	26	2,860	-	-	13	260	64	4,644
Maine .....	-	-	-	-	2	(D)	37	(D)
Maryland .....	-	-	-	-	21	90	20	33
Massachusetts .....	10	400	-	-	10	(D)	42	(D)
Michigan .....	-	-	-	-	31	4,700	169	5,520
Minnesota .....	-	-	-	-	-	-	12	1,425
Mississippi .....	-	-	8	1,280	19	1,087	85	15,627
Missouri .....	-	-	3	3	12	1,400	105	8,335
Montana .....	-	-	-	-	-	-	-	-
Nebraska .....	-	-	14	1,246	89	9,680	154	19,815
Nevada .....	-	-	-	-	37	6,500	28	18,772
New Hampshire .....	-	-	-	-	-	-	33	(D)
New Jersey .....	-	-	22	(D)	1	(D)	65	2,298
New Mexico .....	-	-	-	-	43	12,245	172	12,072
New York .....	-	-	-	-	-	-	44	(D)
North Carolina .....	26	(D)	-	-	27	(D)	10	320
North Dakota .....	-	-	-	-	1	(D)	2	(D)
Ohio .....	-	-	-	-	9	135	29	1,534
Oklahoma .....	-	-	-	-	-	-	35	55,400
Oregon .....	-	-	-	-	-	-	153	13,397
Pennsylvania .....	-	-	-	-	2	(D)	31	(D)
Rhode Island .....	4	8	-	-	-	-	9	(D)
South Carolina .....	-	-	26	130	16	1,161	16	1,002
South Dakota .....	-	-	-	-	-	-	-	-
Tennessee .....	-	-	-	-	22	1,100	39	647
Texas .....	-	-	20	1,000	43	14,055	607	162,652
Utah .....	-	-	-	-	75	10,557	112	27,045
Vermont .....	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	1	(D)	24	(D)
Washington .....	-	-	-	-	26	26	154	14,832
West Virginia .....	-	-	42	42	-	-	5	1,000
Wisconsin .....	-	-	-	-	-	-	13	2,286
Wyoming .....	3	(D)	2	(D)	-	-	3	3,000
<b>Water Resources Regions</b>								
Region 01 New England .....	14	408	-	-	12	14	121	864
Region 02 Mid-Atlantic .....	7	1,400	22	198	31	826	146	4,327
Region 03 South Atlantic-Gulf .....	26	(D)	76	(D)	52	(D)	442	25,731
Region 04 Great Lakes .....	-	-	-	-	41	5,002	208	6,624
Region 05 Ohio .....	-	-	42	42	-	-	88	7,418
Region 06 Tennessee .....	-	-	-	-	-	-	24	(D)
Region 07 Upper Mississippi .....	-	-	-	-	17	1,700	56	7,334
Region 08 Lower Mississippi .....	47	5,453	10	3,480	108	11,621	326	48,308
Region 09 Souris-Red-Rainy .....	-	-	-	-	1	(D)	2	(D)
Region 10 Missouri .....	3	150	19	2,049	109	13,150	314	47,048
Region 11 Arkansas-White-Red .....	2	(D)	4	(D)	120	36,679	329	148,397
Region 12 Texas-Gulf .....	-	-	20	1,000	33	12,615	520	112,836
Region 13 Rio Grande .....	-	-	-	-	33	165	142	8,198
Region 14 Upper Colorado .....	-	-	-	-	1	(D)	7	(D)
Region 15 Lower Colorado .....	1	(D)	-	-	5	10,280	55	(D)
Region 16 Great Basin .....	-	-	20	320	105	23,895	140	45,817
Region 17 Pacific Northwest .....	-	-	-	-	56	3,026	403	66,927
Region 18 California .....	7	2,800	5	10,800	238	63,507	1,090	177,653
Region 19 Alaska .....	-	-	-	-	-	-	2	(D)
Region 20 Hawaii .....	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Construction or improvement of permanent storage and distribution systems during survey year								
	Farms	Acres irrigated affected by expenditure	Expenditures <sup>1</sup> (\$1,000)	Average per farm (dollars)	Farms with expenditures of -				
					\$1 to \$999	\$1,000 to \$9,999	\$10,000 to \$29,999	\$30,000 to \$74,999	\$75,000 or more
United States .....	7,512	1,034,744	132,137	17,590	2,284	3,464	956	463	345
Alabama .....	52	575	287	5,510	25	-	27	-	-
Alaska .....	17	17	39	2,306	3	14	-	-	-
Arizona .....	157	22,852	1,977	12,590	17	69	65	2	4
Arkansas .....	127	37,180	4,456	35,090	15	43	35	20	14
California .....	965	219,585	74,523	77,226	83	397	128	181	176
Colorado .....	900	92,486	6,241	6,935	304	398	156	26	16
Connecticut .....	1	(D)	(D)	(D)	-	-	-	-	1
Delaware .....	-	-	-	-	-	-	-	-	-
Florida .....	187	9,505	5,500	29,410	-	129	28	-	30
Georgia .....	79	2,366	1,253	15,864	9	23	23	24	-
Hawaii .....	10	2,504	189	18,900	-	7	1	1	1
Idaho .....	704	91,391	2,195	3,118	314	332	46	12	-
Illinois .....	40	(D)	(D)	(D)	20	15	5	-	-
Indiana .....	1	(D)	(D)	(D)	-	1	-	-	-
Iowa .....	39	798	163	4,169	3	36	-	-	-
Kansas .....	26	9,350	424	16,308	-	4	19	3	-
Kentucky .....	28	54	107	3,804	-	26	2	-	-
Louisiana .....	41	6,321	1,407	34,317	-	29	9	-	3
Maine .....	34	1,247	170	5,004	27	2	3	2	-
Maryland .....	33	2,503	34	1,030	24	9	-	-	-
Massachusetts .....	5	540	(D)	(D)	-	2	3	-	-
Michigan .....	74	888	562	7,595	-	54	20	-	-
Minnesota .....	2	(D)	(D)	(D)	2	-	-	-	-
Mississippi .....	43	2,078	769	17,894	13	6	13	11	-
Missouri .....	47	2,756	104	2,221	36	4	7	-	-
Montana .....	668	112,815	4,864	7,282	260	306	59	39	4
Nebraska .....	72	32,685	494	6,863	36	20	16	-	-
Nevada .....	140	20,532	617	4,409	89	30	16	5	-
New Hampshire .....	-	-	-	-	-	-	-	-	-
New Jersey .....	19	724	261	13,737	-	14	4	-	1
New Mexico .....	543	21,889	1,151	2,120	217	292	34	-	-
New York .....	96	393	802	8,354	-	74	-	22	-
North Carolina .....	87	344	632	7,263	58	-	28	1	-
North Dakota .....	4	4,640	100	25,000	-	-	4	-	-
Ohio .....	51	(D)	(D)	(D)	35	15	1	-	-
Oklahoma .....	71	7,671	3,357	47,286	-	26	18	1	26
Oregon .....	547	55,041	3,607	6,593	176	297	54	18	2
Pennsylvania .....	24	58	866	36,083	-	22	-	-	2
Rhode Island .....	5	(D)	(D)	(D)	-	4	-	1	-
South Carolina .....	36	1,088	93	2,569	25	4	7	-	-
South Dakota .....	13	(D)	122	9,346	-	5	8	-	-
Tennessee .....	9	117	87	9,667	-	8	-	1	-
Texas .....	301	21,715	3,799	12,622	84	149	24	33	11
Utah .....	361	29,643	2,256	6,249	77	218	35	27	4
Vermont .....	5	(D)	(D)	(D)	-	3	-	-	2
Virginia .....	24	(D)	151	6,271	-	22	1	-	1
Washington .....	279	25,624	2,869	10,283	112	130	3	28	6
West Virginia .....	31	148	101	3,242	5	23	3	-	-
Wisconsin .....	1	(D)	(D)	(D)	-	1	-	-	-
Wyoming .....	513	190,109	4,797	9,351	215	201	51	5	41
<b>Water Resources Regions</b>									
Region 01 New England .....	48	2,138	485	10,097	27	11	6	3	1
Region 02 Mid-Atlantic .....	86	3,502	1,223	14,215	29	49	4	-	4
Region 03 South Atlantic-Gulf .....	422	15,112	8,194	19,417	78	162	121	31	30
Region 04 Great Lakes .....	150	1,585	1,508	10,057	3	102	21	22	2
Region 05 Ohio .....	170	(D)	452	2,660	47	117	6	-	-
Region 06 Tennessee .....	52	(D)	15	279	52	-	-	-	-
Region 07 Upper Mississippi .....	64	736	215	3,358	25	34	5	-	-
Region 08 Lower Mississippi .....	155	44,043	5,681	36,650	14	64	39	26	12
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	1,177	251,972	12,411	10,545	338	524	197	65	53
Region 11 Arkansas-White-Red .....	256	38,650	6,064	23,689	66	74	70	4	42
Region 12 Texas-Gulf .....	196	15,411	666	3,398	64	110	20	2	-
Region 13 Rio Grande .....	619	40,849	2,820	4,556	228	360	-	31	-
Region 14 Upper Colorado .....	834	132,802	3,817	4,576	350	353	124	2	5
Region 15 Lower Colorado .....	162	23,172	2,172	13,409	17	69	68	2	6
Region 16 Great Basin .....	455	48,708	2,302	5,060	166	233	20	32	4
Region 17 Pacific Northwest .....	1,644	187,295	8,945	5,441	671	784	129	49	11
Region 18 California .....	995	225,725	74,939	75,315	106	397	125	193	174
Region 19 Alaska .....	17	17	39	2,306	3	14	-	-	-
Region 20 Hawaii .....	10	2,504	189	18,900	-	7	1	1	1

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Construction or improvement of permanent storage and distribution systems during survey year - con.							
	Primary purpose of expenditures							
	New expansion		Water conservation		Energy conservation		Scheduled replacement or maintenance	
	Acres	Dollars	Acres	Dollars	Acres	Dollars	Acres	Dollars
United States .....	127,081	45,977,881	280,421	49,360,504	35,852	13,521,000	591,390	23,277,584
Alabama .....	-	-	50	12,500	-	-	525	274,000
Alaska .....	12	23,250	(D)	(D)	-	-	(D)	(D)
Arizona .....	-	-	3,348	810,000	-	-	19,504	1,166,575
Arkansas .....	1,283	92,300	12,240	3,410,321	1,600	10,000	22,057	943,750
California .....	27,499	28,218,684	90,693	28,675,287	22,005	11,695,020	79,388	5,933,900
Colorado .....	360	482,400	28,209	2,766,415	92	80,500	63,825	2,912,105
Connecticut .....	-	-	-	-	-	-	(D)	(D)
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	2,366	4,165,600	1,800	300,000	104	91,000	5,235	943,100
Georgia .....	1,773	1,203,772	-	-	-	-	593	49,500
Hawaii .....	(D)	(D)	(D)	42,000	-	-	2,460	(D)
Idaho .....	(D)	(D)	10,896	594,100	(D)	(D)	55,016	1,179,947
Illinois .....	455	67,750	(D)	(D)	-	-	(D)	70,500
Indiana .....	-	-	-	-	-	-	(D)	(D)
Iowa .....	72	72,000	-	-	-	-	726	90,600
Kansas .....	3,750	180,000	2,600	94,000	-	-	3,000	150,000
Kentucky .....	18	45,000	21	37,500	15	24,000	-	-
Louisiana .....	-	-	4,180	1,262,000	341	55,000	1,800	90,000
Maine .....	(D)	(D)	(D)	(D)	-	-	(D)	(D)
Maryland .....	8	2,000	-	-	-	-	2,495	32,000
Massachusetts .....	-	-	(D)	45,000	-	-	(D)	(D)
Michigan .....	68	94,000	820	468,000	-	-	-	-
Minnesota .....	-	-	(D)	(D)	-	-	-	-
Mississippi .....	1,090	575,000	18	240	-	-	970	194,220
Missouri .....	1,750	70,000	72	8,604	-	-	934	25,760
Montana .....	22,908	821,950	15,912	873,399	-	-	73,995	3,168,936
Nebraska .....	-	-	-	-	-	-	32,685	494,156
Nevada .....	5,385	52,500	8,225	530,250	-	-	6,922	34,500
New Hampshire .....	-	-	-	-	-	-	-	-
New Jersey .....	(D)	(D)	(D)	(D)	-	-	-	-
New Mexico .....	515	20,500	1,650	468,600	30	20,000	19,694	642,176
New York .....	45	706,000	-	-	168	63,000	180	33,000
North Carolina .....	240	571,600	-	-	-	-	104	60,266
North Dakota .....	-	-	-	-	-	-	4,640	100,000
Ohio .....	-	-	(D)	39,600	-	-	293	(D)
Oklahoma .....	5,400	3,050,000	46	36,000	-	-	2,225	271,322
Oregon .....	(D)	(D)	22,007	1,084,600	(D)	(D)	30,449	1,122,237
Pennsylvania .....	(D)	(D)	(D)	(D)	-	-	-	-
Rhode Island .....	(D)	(D)	(D)	(D)	-	-	-	-
South Carolina .....	113	40,000	-	-	-	-	975	52,500
South Dakota .....	-	-	-	-	2,810	77,500	(D)	44,000
Tennessee .....	(D)	(D)	(D)	(D)	-	-	-	-
Texas .....	2,435	877,500	1,795	1,451,000	1,358	1,157,000	16,127	313,600
Utah .....	1,200	100,000	5,702	1,572,588	405	32,400	22,336	550,770
Vermont .....	-	-	-	-	-	-	(D)	(D)
Virginia .....	-	-	(D)	(D)	-	-	49	(D)
Washington .....	10,180	1,390,241	1,852	935,200	-	-	13,592	543,470
West Virginia .....	148	100,500	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	(D)	(D)
Wyoming .....	15,390	241,800	66,942	3,364,500	-	-	107,777	1,190,605
<b>Water Resources Regions</b>								
Region 01 New England .....	1,002	146,300	672	(D)	-	-	464	(D)
Region 02 Mid-Atlantic .....	577	948,500	424	236,000	-	-	2,501	38,000
Region 03 South Atlantic-Gulf .....	5,092	6,280,972	1,818	300,240	104	91,000	8,098	1,521,561
Region 04 Great Lakes .....	90	754,000	820	468,000	168	63,000	507	223,480
Region 05 Ohio .....	(D)	159,750	242	178,100	15	24,000	(D)	90,313
Region 06 Tennessee .....	-	-	(D)	12,500	-	-	(D)	2,025
Region 07 Upper Mississippi .....	512	(D)	79	(D)	-	-	145	74,500
Region 08 Lower Mississippi .....	1,715	316,900	16,120	4,217,321	1,941	65,000	24,267	1,081,550
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-
Region 10 Missouri .....	38,554	1,105,100	44,000	5,676,700	2,810	77,500	166,608	5,552,184
Region 11 Arkansas-White-Red .....	11,208	3,360,400	10,665	1,013,600	1,320	1,100,000	15,457	590,322
Region 12 Texas-Gulf .....	195	77,500	498	306,000	38	57,000	14,680	225,600
Region 13 Rio Grande .....	755	740,500	1,957	1,277,000	30	20,000	38,107	782,706
Region 14 Upper Colorado .....	2,594	607,600	58,366	1,436,615	92	80,500	71,750	1,691,888
Region 15 Lower Colorado .....	-	-	3,548	970,000	-	-	19,624	1,202,272
Region 16 Great Basin .....	5,705	82,500	14,015	1,655,938	405	32,400	28,583	531,270
Region 17 Pacific Northwest .....	31,460	2,968,925	30,645	2,309,799	6,924	215,580	118,266	3,450,914
Region 18 California .....	27,499	28,218,684	96,493	29,115,287	22,005	11,695,020	79,728	5,909,703
Region 19 Alaska .....	12	23,250	(D)	(D)	-	-	(D)	(D)
Region 20 Hawaii .....	(D)	(D)	(D)	42,000	-	-	2,460	(D)

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Construction or improvement of permanent storage and distribution systems during survey year - con.							
	Primary source of funding assistance							
	EQIP		Other USDA programs		Non-USDA assistance		No funding assistance	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	262	53,831	190	17,054	464	84,645	6,596	879,214
Alabama .....	-	-	-	-	2	(D)	50	(D)
Alaska .....	-	-	3	3	-	-	14	14
Arizona .....	3	2,660	16	288	-	-	138	19,904
Arkansas .....	23	10,380	9	2,850	5	1,680	90	22,270
California .....	15	4,443	22	6,600	120	27,613	808	180,929
Colorado .....	45	8,987	30	1,988	28	3,880	797	77,631
Connecticut .....	-	-	-	-	1	(D)	-	-
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	-	-	26	(D)	2	(D)	159	7,144
Georgia .....	-	-	-	-	23	575	56	1,791
Hawaii .....	-	-	-	-	-	-	10	2,504
Idaho .....	-	-	20	320	43	17,812	641	73,259
Illinois .....	-	-	-	-	15	(D)	25	460
Indiana .....	-	-	-	-	-	-	1	(D)
Iowa .....	-	-	-	-	-	-	39	798
Kansas .....	-	-	-	-	-	-	26	9,350
Kentucky .....	-	-	-	-	-	-	28	54
Louisiana .....	-	-	-	-	-	-	41	6,321
Maine .....	2	(D)	3	(D)	-	-	29	(D)
Maryland .....	-	-	-	-	-	-	33	2,503
Massachusetts .....	-	-	2	(D)	2	(D)	1	(D)
Michigan .....	-	-	-	-	-	-	74	888
Minnesota .....	-	-	-	-	-	-	2	(D)
Mississippi .....	5	490	-	-	6	600	32	988
Missouri .....	-	-	-	-	-	-	47	2,756
Montana .....	23	230	4	2,000	5	4,749	636	105,836
Nebraska .....	-	-	-	-	-	-	72	32,685
Nevada .....	20	5,300	-	-	16	7,960	104	7,272
New Hampshire .....	-	-	-	-	-	-	-	-
New Jersey .....	3	(D)	-	-	1	(D)	15	(D)
New Mexico .....	-	-	-	-	67	1,854	476	20,035
New York .....	-	-	-	-	21	168	75	225
North Carolina .....	-	-	-	-	26	26	61	318
North Dakota .....	-	-	-	-	-	-	4	4,640
Ohio .....	-	-	-	-	16	(D)	35	371
Oklahoma .....	-	-	-	-	1	(D)	70	(D)
Oregon .....	-	-	2	(D)	14	(D)	531	54,527
Pennsylvania .....	-	-	-	-	-	-	24	58
Rhode Island .....	1	(D)	-	-	-	-	4	15
South Carolina .....	-	-	-	-	3	105	33	983
South Dakota .....	-	-	-	-	4	2,700	9	(D)
Tennessee .....	-	-	-	-	-	-	9	117
Texas .....	-	-	-	-	2	(D)	299	(D)
Utah .....	54	837	27	27	35	4,271	245	24,508
Vermont .....	2	(D)	-	-	-	-	3	3
Virginia .....	-	-	-	-	-	-	24	(D)
Washington .....	-	-	-	-	-	-	279	25,624
West Virginia .....	-	-	26	(D)	-	-	5	(D)
Wisconsin .....	-	-	-	-	-	-	1	(D)
Wyoming .....	66	20,157	-	-	6	7,536	441	162,416
<b>Water Resources Regions</b>								
Region 01 New England .....	3	(D)	5	1,300	3	(D)	37	185
Region 02 Mid-Atlantic .....	3	(D)	-	-	1	(D)	82	3,084
Region 03 South Atlantic-Gulf .....	-	-	26	(D)	62	2,767	334	(D)
Region 04 Great Lakes .....	2	(D)	-	-	21	(D)	127	1,361
Region 05 Ohio .....	-	-	26	38	16	(D)	128	365
Region 06 Tennessee .....	-	-	-	-	-	-	52	(D)
Region 07 Upper Mississippi .....	-	-	-	-	15	105	49	631
Region 08 Lower Mississippi .....	23	10,570	9	2,850	5	1,680	118	28,943
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-
Region 10 Missouri .....	67	12,589	28	3,680	19	15,985	1,063	219,718
Region 11 Arkansas-White-Red .....	19	6,880	4	(D)	1	(D)	232	31,090
Region 12 Texas-Gulf .....	-	-	-	-	2	(D)	194	(D)
Region 13 Rio Grande .....	-	-	-	-	67	1,854	552	38,995
Region 14 Upper Colorado .....	78	3,237	2	(D)	24	(D)	730	126,657
Region 15 Lower Colorado .....	5	2,860	16	288	-	-	141	20,024
Region 16 Great Basin .....	20	5,300	47	347	70	13,561	318	29,500
Region 17 Pacific Northwest .....	29	7,805	2	(D)	38	(D)	1,575	162,494
Region 18 California .....	13	4,243	22	6,600	120	27,613	840	187,269
Region 19 Alaska .....	-	-	3	3	-	-	14	14
Region 20 Hawaii .....	-	-	-	-	-	-	10	2,504

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Computers, control panels, and computer controlled valves and hardware for irrigation water management during survey year								
	Farms	Acres irrigated affected by expenditure	Expenditures <sup>1</sup> (\$1,000)	Average per farm (dollars)	Farms with expenditures of -				
					\$1 to \$999	\$1,000 to \$9,999	\$10,000 to \$29,999	\$30,000 to \$74,999	\$75,000 or more
United States .....	10,207	2,569,167	75,910	7,437	3,128	5,145	1,346	473	115
Alabama .....	32	1,248	83	2,589	19	10	3	-	-
Alaska .....	1	(D)	(D)	(D)	1	-	-	-	-
Arizona .....	108	45,194	1,130	10,467	-	77	18	13	-
Arkansas .....	145	81,488	1,815	12,516	27	46	49	23	-
California .....	1,640	244,625	19,850	12,103	405	847	201	147	40
Colorado .....	330	151,945	1,584	4,799	100	190	31	9	-
Connecticut .....	60	81	115	1,910	57	-	2	1	-
Delaware .....	45	4,778	119	2,655	-	45	-	-	-
Florida .....	562	23,642	2,736	4,868	232	313	5	6	6
Georgia .....	374	43,168	1,291	3,451	205	140	16	7	6
Hawaii .....	90	1,475	221	2,455	72	10	6	2	-
Idaho .....	521	201,041	6,573	12,616	78	280	109	43	11
Illinois .....	170	53,824	1,373	8,076	5	129	22	14	-
Indiana .....	137	34,596	280	2,046	88	46	2	1	-
Iowa .....	44	2,795	215	4,879	4	40	-	-	-
Kansas .....	360	225,078	2,559	7,110	93	174	85	2	6
Kentucky .....	10	(D)	(D)	(D)	7	1	2	-	-
Louisiana .....	45	31,478	347	7,709	12	13	20	-	-
Maine .....	36	315	77	2,127	3	33	-	-	-
Maryland .....	96	1,841	163	1,694	79	12	5	-	-
Massachusetts .....	46	3,948	203	4,409	38	5	-	2	1
Michigan .....	193	50,716	1,020	5,286	21	132	39	-	1
Minnesota .....	139	31,062	980	7,054	50	49	25	15	-
Mississippi .....	148	40,922	1,206	8,149	35	52	58	1	2
Missouri .....	76	18,860	334	4,400	27	41	8	-	-
Montana .....	221	58,465	951	4,303	86	88	45	2	-
Nebraska .....	775	346,521	3,752	4,841	112	551	106	5	1
Nevada .....	70	7,648	1,305	18,640	18	15	22	15	-
New Hampshire .....	4	28	(Z)	100	4	-	-	-	-
New Jersey .....	81	4,919	821	10,139	42	25	10	-	4
New Mexico .....	240	60,149	786	3,277	100	101	34	5	-
New York .....	28	(D)	154	5,496	3	22	3	-	-
North Carolina .....	122	7,165	190	1,559	53	66	3	-	-
North Dakota .....	30	19,514	213	7,107	2	22	5	1	-
Ohio .....	60	2,120	74	1,228	56	3	1	-	-
Oklahoma .....	108	76,576	3,289	30,449	36	29	30	-	13
Oregon .....	549	30,706	1,844	3,359	253	244	42	10	-
Pennsylvania .....	76	320	33	434	74	-	2	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-
South Carolina .....	108	4,554	212	1,963	26	79	3	-	-
South Dakota .....	19	19,960	653	34,368	-	2	13	-	4
Tennessee .....	69	6,424	352	5,097	28	33	7	-	1
Texas .....	955	329,108	4,554	4,768	202	616	124	6	7
Utah .....	288	42,798	1,943	6,746	89	161	6	28	4
Vermont .....	29	229	27	939	27	2	-	-	-
Virginia .....	80	2,244	112	1,404	53	25	1	1	-
Washington .....	590	122,132	7,181	12,171	113	270	118	85	4
West Virginia .....	24	2,519	566	23,583	-	-	19	5	-
Wisconsin .....	126	35,111	1,778	14,111	58	30	13	21	4
Wyoming .....	147	94,446	817	5,557	35	76	33	3	-
<b>Water Resources Regions</b>									
Region 01 New England .....	173	4,581	408	2,356	129	38	2	3	1
Region 02 Mid-Atlantic .....	353	16,862	1,572	4,454	216	107	21	5	4
Region 03 South Atlantic-Gulf .....	1,240	81,190	4,689	3,782	555	617	43	13	12
Region 04 Great Lakes .....	326	80,120	1,399	4,291	98	183	42	2	1
Region 05 Ohio .....	195	13,790	838	4,300	116	45	31	2	1
Region 06 Tennessee .....	70	(D)	(D)	(D)	68	2	-	-	-
Region 07 Upper Mississippi .....	425	119,032	4,167	9,804	75	241	57	48	4
Region 08 Lower Mississippi .....	320	166,107	3,537	11,054	39	133	122	24	2
Region 09 Souris-Red-Rainy .....	3	(D)	(D)	(D)	2	-	-	1	-
Region 10 Missouri .....	1,528	654,285	7,338	4,803	377	924	210	12	5
Region 11 Arkansas-White-Red .....	559	417,140	7,057	12,625	75	308	147	7	22
Region 12 Texas-Gulf .....	750	210,096	2,994	3,993	179	485	81	1	4
Region 13 Rio Grande .....	272	60,003	986	3,624	120	97	55	-	-
Region 14 Upper Colorado .....	70	20,060	1,313	18,763	3	18	17	32	-
Region 15 Lower Colorado .....	120	56,228	1,298	10,814	4	80	18	18	-
Region 16 Great Basin .....	314	48,714	2,565	8,169	103	162	24	21	4
Region 17 Pacific Northwest .....	1,748	374,808	15,556	8,899	491	838	269	135	15
Region 18 California .....	1,650	244,005	19,909	12,066	405	857	201	147	40
Region 19 Alaska .....	1	(D)	(D)	(D)	1	-	-	-	-
Region 20 Hawaii .....	90	1,475	221	2,455	72	10	6	2	-

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Computers, control panels, and computer controlled valves and hardware for irrigation water management during survey year - con.							
	Primary purpose of expenditures							
	New expansion		Water conservation		Energy conservation		Scheduled replacement or maintenance	
	Acres	Dollars	Acres	Dollars	Acres	Dollars	Acres	Dollars
United States .....	297,548	18,102,307	1,024,603	22,904,059	343,919	12,009,385	903,097	22,894,185
Alabama .....	406	42,000	-	-	-	-	842	40,840
Alaska .....	(D)	(D)	-	-	-	-	-	-
Arizona .....	11,163	472,400	25,903	561,000	(D)	(D)	(D)	(D)
Arkansas .....	395	21,000	39,366	635,375	3,616	95,800	38,111	1,062,650
California .....	43,321	7,667,234	91,193	5,439,674	22,897	2,184,000	87,214	4,558,789
Colorado .....	4,339	177,600	98,611	881,434	2,990	50,000	46,005	474,676
Connecticut .....	(D)	(D)	-	-	(D)	(D)	(D)	9,600
Delaware .....	(D)	(D)	-	-	-	-	(D)	(D)
Florida .....	5,649	519,000	12,607	1,501,400	1,320	120,000	4,066	595,380
Georgia .....	10,823	656,300	23,784	259,200	500	24,000	8,061	351,000
Hawaii .....	(D)	(D)	(D)	(D)	900	48,000	443	164,432
Idaho .....	26,042	1,483,900	33,437	693,150	34,757	1,249,691	106,805	3,145,956
Illinois .....	6,445	340,000	14,304	233,300	25,560	665,000	7,515	134,700
Indiana .....	(D)	(D)	14,435	77,300	(D)	(D)	17,432	114,044
Iowa .....	179	83,290	-	-	-	-	2,616	131,400
Kansas .....	8,505	91,300	79,856	704,760	44,425	449,500	92,292	1,313,868
Kentucky .....	-	-	(D)	21,300	-	-	(D)	(D)
Louisiana .....	-	-	24,267	135,600	-	-	7,211	211,320
Maine .....	291	73,500	-	-	-	-	24	3,060
Maryland .....	-	-	821	99,000	-	-	1,020	63,588
Massachusetts .....	-	-	(D)	(D)	(D)	35,000	2,516	(D)
Michigan .....	27,137	426,500	6,960	293,115	8,200	200,000	8,419	100,630
Minnesota .....	(D)	85,400	6,418	585,000	(D)	9,180	20,050	300,908
Mississippi .....	(D)	(D)	35,359	1,000,106	(D)	(D)	3,775	173,110
Missouri .....	1,768	10,600	9,680	240,000	5,280	7,200	2,132	76,600
Montana .....	-	-	15,753	341,548	23,032	308,000	19,680	301,500
Nebraska .....	27,152	240,800	186,371	1,813,440	61,919	463,060	71,079	1,234,334
Nevada .....	3	3,000	3,223	804,300	-	-	4,422	497,500
New Hampshire .....	-	-	28	400	-	-	-	-
New Jersey .....	(D)	(D)	3,323	586,730	(D)	(D)	1,396	181,000
New Mexico .....	857	86,400	15,295	46,000	231	33,000	43,766	621,005
New York .....	(D)	79,200	-	-	-	-	405	74,700
North Carolina .....	27	8,700	1,475	41,100	-	-	5,663	140,440
North Dakota .....	(D)	202,200	-	-	(D)	(D)	(D)	(D)
Ohio .....	(D)	40,250	-	-	-	-	(D)	33,400
Oklahoma .....	58,170	3,104,000	3,671	48,625	-	-	14,735	135,900
Oregon .....	12,778	298,200	835	207,388	12,011	875,800	5,082	462,635
Pennsylvania .....	(D)	(D)	-	-	-	-	(D)	(D)
Rhode Island .....	-	-	-	-	-	-	-	-
South Carolina .....	1,477	120,500	-	-	1,277	61,500	1,800	30,000
South Dakota .....	5,400	(D)	(D)	(D)	(D)	480,000	10,450	110,000
Tennessee .....	707	105,840	21	1,680	-	-	5,696	244,205
Texas .....	7,543	333,000	131,559	1,364,217	26,888	542,250	163,118	2,314,362
Utah .....	21	4,150	7,694	271,926	14,020	1,411,000	21,063	255,810
Vermont .....	-	-	21	(D)	-	-	208	(D)
Virginia .....	702	49,000	-	-	-	-	1,542	63,345
Washington .....	8,960	916,620	50,745	3,096,451	12,566	1,103,150	49,861	2,064,488
West Virginia .....	-	-	19	266,000	-	-	2,500	300,000
Wisconsin .....	4,669	97,650	3,507	53,650	16,420	1,307,754	10,515	318,900
Wyoming .....	-	-	83,236	516,100	5,000	152,000	6,210	148,800
<b>Water Resources Regions</b>								
Region 01 New England .....	(D)	(D)	(D)	60,640	(D)	(D)	(D)	133,460
Region 02 Mid-Atlantic .....	1,704	(D)	(D)	685,730	(D)	(D)	(D)	754,643
Region 03 South Atlantic-Gulf .....	18,382	1,346,500	38,093	1,901,632	4,097	225,500	20,618	1,215,430
Region 04 Great Lakes .....	27,530	520,200	19,637	351,315	8,200	200,000	24,753	327,330
Region 05 Ohio .....	2,045	191,250	1,884	322,300	2,560	48,000	7,301	276,944
Region 06 Tennessee .....	7	840	21	(D)	-	-	(D)	(D)
Region 07 Upper Mississippi .....	11,860	586,750	24,172	870,050	45,580	1,981,934	37,420	727,908
Region 08 Lower Mississippi .....	1,068	27,800	108,445	1,911,149	2,360	68,000	54,234	1,530,275
Region 09 Souris-Red-Rainy .....	(D)	(D)	-	-	-	-	(D)	(D)
Region 10 Missouri .....	55,924	506,290	362,498	3,366,594	102,356	1,332,260	133,507	2,133,110
Region 11 Arkansas-White-Red .....	66,790	3,201,300	156,598	1,385,932	50,650	799,500	143,102	1,670,468
Region 12 Texas-Gulf .....	7,303	213,000	65,853	748,350	19,624	208,050	117,316	1,825,062
Region 13 Rio Grande .....	(D)	196,400	(D)	(D)	(D)	33,000	58,715	756,350
Region 14 Upper Colorado .....	(D)	160,000	(D)	900	9,020	1,081,000	1,920	71,500
Region 15 Lower Colorado .....	11,163	472,400	26,653	567,000	(D)	(D)	(D)	(D)
Region 16 Great Basin .....	7,344	1,107,150	9,792	326,226	8,000	480,000	23,578	651,550
Region 17 Pacific Northwest .....	40,460	1,598,720	107,655	4,899,337	59,334	3,228,641	167,359	5,828,979
Region 18 California .....	43,321	7,667,234	90,573	5,498,674	22,897	2,184,000	87,214	4,558,789
Region 19 Alaska .....	(D)	(D)	-	-	-	-	-	-
Region 20 Hawaii .....	(D)	(D)	(D)	(D)	900	48,000	443	164,432

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Computers, control panels, and computer controlled valves and hardware for irrigation water management during survey year - con.							
	Primary source of funding assistance							
	EQIP		Other USDA programs		Non-USDA assistance		No funding assistance	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	379	110,008	311	69,638	935	345,981	8,582	2,043,540
Alabama .....	-	-	-	-	2	(D)	30	(D)
Alaska .....	-	-	-	-	-	-	1	(D)
Arizona .....	-	-	-	-	-	-	108	45,194
Arkansas .....	18	(D)	2	(D)	12	5,250	113	71,506
California .....	54	6,240	90	15,142	148	43,939	1,348	179,304
Colorado .....	14	8,610	14	9,576	14	22,045	288	111,714
Connecticut .....	-	-	-	-	2	(D)	58	(D)
Delaware .....	-	-	-	-	-	-	45	4,778
Florida .....	-	-	33	(D)	3	(D)	526	8,465
Georgia .....	-	-	-	-	23	920	351	42,248
Hawaii .....	-	-	-	-	-	-	90	1,475
Idaho .....	5	(D)	39	(D)	40	20,250	437	175,258
Illinois .....	-	-	-	-	18	15,075	152	38,749
Indiana .....	-	-	-	-	18	1,782	119	32,814
Iowa .....	-	-	-	-	-	-	44	2,795
Kansas .....	-	-	6	14,700	42	45,207	312	165,171
Kentucky .....	-	-	-	-	-	-	10	(D)
Louisiana .....	-	-	-	-	13	6,500	32	24,978
Maine .....	-	-	-	-	-	-	36	315
Maryland .....	-	-	-	-	14	131	82	1,710
Massachusetts .....	2	(D)	2	(D)	1	(D)	41	1,102
Michigan .....	-	-	-	-	33	5,295	160	45,421
Minnesota .....	15	4,800	-	-	-	-	124	26,262
Mississippi .....	47	33,203	-	-	29	337	72	7,382
Missouri .....	8	(D)	-	-	1	(D)	67	13,168
Montana .....	27	(D)	2	(D)	41	16,374	151	28,145
Nebraska .....	64	15,460	45	11,901	137	62,804	529	256,356
Nevada .....	15	1,125	3	3	15	1,350	37	5,170
New Hampshire .....	-	-	-	-	-	-	4	28
New Jersey .....	-	-	22	198	-	-	59	4,721
New Mexico .....	-	-	10	40	5	10,280	225	49,829
New York .....	-	-	-	-	-	-	28	(D)
North Carolina .....	-	-	-	-	16	905	106	6,260
North Dakota .....	-	-	-	-	5	720	25	18,794
Ohio .....	-	-	-	-	-	-	60	2,120
Oklahoma .....	-	-	-	-	23	7,730	85	68,846
Oregon .....	40	(D)	2	(D)	24	(D)	483	(D)
Pennsylvania .....	-	-	-	-	4	(D)	72	(D)
Rhode Island .....	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	6	990	102	3,564
South Dakota .....	-	-	-	-	4	5,400	15	14,560
Tennessee .....	-	-	-	-	-	-	69	6,424
Texas .....	40	4,400	20	1,000	216	56,674	679	267,034
Utah .....	20	3,800	-	-	-	-	268	38,998
Vermont .....	-	-	2	(D)	-	-	27	(D)
Virginia .....	-	-	-	-	-	-	80	2,244
Washington .....	-	-	-	-	8	(D)	582	(D)
West Virginia .....	-	-	19	19	-	-	5	2,500
Wisconsin .....	-	-	-	-	15	3,400	111	31,711
Wyoming .....	10	500	-	-	3	450	134	93,496
<b>Water Resources Regions</b>								
Region 01 New England .....	2	(D)	2	(D)	3	(D)	166	1,731
Region 02 Mid-Atlantic .....	-	-	22	(D)	18	(D)	313	16,285
Region 03 South Atlantic-Gulf .....	-	-	33	7,776	66	10,637	1,141	62,777
Region 04 Great Lakes .....	-	-	2	(D)	35	(D)	289	74,438
Region 05 Ohio .....	-	-	19	19	17	1,615	159	12,156
Region 06 Tennessee .....	-	-	-	-	-	-	70	(D)
Region 07 Upper Mississippi .....	15	4,800	-	-	32	18,275	378	95,957
Region 08 Lower Mississippi .....	73	42,243	2	(D)	33	(D)	212	111,676
Region 09 Souris-Red-Rainy .....	-	-	-	-	1	(D)	2	(D)
Region 10 Missouri .....	92	33,602	59	21,477	171	102,986	1,206	496,220
Region 11 Arkansas-White-Red .....	-	-	6	14,700	89	63,827	464	338,613
Region 12 Texas-Gulf .....	40	4,400	20	1,000	177	44,534	513	160,162
Region 13 Rio Grande .....	-	-	-	-	25	6,625	247	53,378
Region 14 Upper Colorado .....	-	-	10	40	4	470	56	19,550
Region 15 Lower Colorado .....	-	-	-	-	5	10,280	115	45,948
Region 16 Great Basin .....	20	(D)	23	(D)	35	8,350	236	(D)
Region 17 Pacific Northwest .....	83	14,527	23	7,171	76	15,332	1,566	337,778
Region 18 California .....	54	6,240	90	15,142	148	43,939	1,358	178,684
Region 19 Alaska .....	-	-	-	-	-	-	1	(D)
Region 20 Hawaii .....	-	-	-	-	-	-	90	1,475

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Clearing or leveling non-irrigated land for new irrigation acres (new expansion) during survey year								
	Farms	Acres irrigated affected by expenditure	Expenditures <sup>1</sup> (\$1,000)	Average per farm (dollars)	Farms with expenditures of -				
					\$1 to \$999	\$1,000 to \$9,999	\$10,000 to \$29,999	\$30,000 to \$74,999	\$75,000 or more
United States .....	3,034	169,015	68,307	22,514	718	1,382	456	271	207
Alabama .....	57	1,655	541	9,491	25	25	3	2	2
Alaska .....	11	(D)	(D)	(D)	1	10	-	-	-
Arizona .....	34	3,352	909	26,724	16	-	16	-	2
Arkansas .....	83	27,350	2,755	33,192	-	25	20	28	10
California .....	487	26,695	22,077	45,333	78	187	61	80	81
Colorado .....	118	4,900	2,310	19,580	5	84	-	24	5
Connecticut .....	28	(D)	(D)	(D)	-	28	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-
Florida .....	163	5,498	10,059	61,712	-	143	-	18	2
Georgia .....	65	2,502	544	8,368	-	53	6	6	-
Hawaii .....	42	234	409	9,738	-	7	35	-	-
Idaho .....	128	3,286	431	3,370	65	54	9	-	-
Illinois .....	1	(D)	(D)	(D)	-	-	1	-	-
Indiana .....	1	(D)	(D)	(D)	-	1	-	-	-
Iowa .....	18	(D)	(D)	(D)	-	18	-	-	-
Kansas .....	37	6,175	1,109	29,976	-	-	34	-	3
Kentucky .....	20	22	20	1,010	18	2	-	-	-
Louisiana .....	86	21,099	4,126	47,974	-	15	38	18	15
Maine .....	-	-	-	-	-	-	-	-	-
Maryland .....	20	40	80	4,000	-	20	-	-	-
Massachusetts .....	2	(D)	(D)	(D)	-	2	-	-	-
Michigan .....	87	1,062	351	4,031	40	38	-	9	-
Minnesota .....	20	(D)	(D)	(D)	-	18	1	-	1
Mississippi .....	78	7,574	4,677	59,957	12	6	33	9	18
Missouri .....	41	958	2,042	49,800	8	2	8	15	8
Montana .....	74	15,465	4,771	64,473	4	23	-	-	47
Nebraska .....	40	236	355	8,885	-	18	22	-	-
Nevada .....	15	300	45	3,000	-	15	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-
New Jersey .....	56	(D)	263	4,696	40	-	15	-	1
New Mexico .....	249	7,835	1,971	7,916	133	110	-	-	6
New York .....	1	(D)	(D)	(D)	-	-	1	-	-
North Carolina .....	68	220	209	3,071	39	19	10	-	-
North Dakota .....	9	1,222	442	49,111	-	2	-	4	3
Ohio .....	2	(D)	(D)	(D)	-	-	-	2	-
Oklahoma .....	26	6,000	600	23,077	-	-	25	-	1
Oregon .....	166	3,231	815	4,911	75	69	7	15	-
Pennsylvania .....	4	38	2,004	501,000	-	2	-	-	2
Rhode Island .....	-	-	-	-	-	-	-	-	-
South Carolina .....	10	837	233	23,250	-	3	-	7	-
South Dakota .....	2	(D)	(D)	(D)	-	2	-	-	-
Tennessee .....	8	37	47	5,875	-	7	1	-	-
Texas .....	201	5,917	1,901	9,458	38	78	58	27	-
Utah .....	194	6,805	258	1,328	81	112	1	-	-
Vermont .....	4	(D)	(D)	(D)	-	4	-	-	-
Virginia .....	14	299	(D)	(D)	-	13	1	-	-
Washington .....	112	1,523	730	6,519	-	72	40	-	-
West Virginia .....	5	110	150	30,000	-	-	-	5	-
Wisconsin .....	28	(D)	206	7,353	19	-	7	2	-
Wyoming .....	119	2,998	270	2,269	21	95	3	-	-
<b>Water Resources Regions</b>									
Region 01 New England .....	30	428	(D)	(D)	-	30	-	-	-
Region 02 Mid-Atlantic .....	99	2,357	2,539	25,646	40	35	16	5	3
Region 03 South Atlantic-Gulf .....	308	11,011	11,482	37,280	18	237	16	35	2
Region 04 Great Lakes .....	114	(D)	519	4,555	59	43	1	11	-
Region 05 Ohio .....	28	(D)	(D)	(D)	18	9	1	-	-
Region 06 Tennessee .....	74	(D)	332	4,483	52	12	8	-	2
Region 07 Upper Mississippi .....	48	928	420	8,757	-	36	9	2	1
Region 08 Lower Mississippi .....	227	51,615	12,410	54,670	6	30	77	68	46
Region 09 Souris-Red-Rainy .....	5	(D)	(D)	(D)	-	2	-	-	3
Region 10 Missouri .....	214	18,202	5,482	25,619	36	102	25	4	47
Region 11 Arkansas-White-Red .....	131	16,827	2,671	20,390	35	11	76	-	9
Region 12 Texas-Gulf .....	189	5,677	1,841	9,741	38	66	58	27	-
Region 13 Rio Grande .....	246	3,705	759	3,087	100	146	-	-	-
Region 14 Upper Colorado .....	137	8,297	3,151	23,003	-	107	-	24	6
Region 15 Lower Colorado .....	93	8,520	1,422	15,291	70	-	16	-	7
Region 16 Great Basin .....	101	2,731	195	1,928	27	73	1	-	-
Region 17 Pacific Northwest .....	437	8,806	1,557	3,564	140	239	56	2	-
Region 18 California .....	500	26,968	22,597	45,194	78	187	61	93	81
Region 19 Alaska .....	11	(D)	(D)	(D)	1	10	-	-	-
Region 20 Hawaii .....	42	234	409	9,738	-	7	35	-	-

See footnote(s) at end of table.

--continued

**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Clearing or leveling non-irrigated land for new irrigation acres (new expansion) during survey year - con.							
	Primary source of funding assistance							
	EQIP		Other USDA programs		Non-USDA assistance		No funding assistance	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	84	3,811	111	6,173	286	37,330	2,553	121,701
Alabama .....	-	-	-	-	2	(D)	55	(D)
Alaska .....	-	-	-	-	-	-	11	(D)
Arizona .....	-	-	1	(D)	-	-	33	(D)
Arkansas .....	4	320	5	3,000	16	5,005	58	19,025
California .....	-	-	22	990	47	1,237	418	24,468
Colorado .....	24	840	-	-	1	(D)	93	(D)
Connecticut .....	-	-	-	-	-	-	28	(D)
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	-	-	30	960	3	(D)	130	(D)
Georgia .....	-	-	-	-	-	-	65	2,502
Hawaii .....	-	-	-	-	-	-	42	234
Idaho .....	-	-	-	-	9	2,334	119	952
Illinois .....	-	-	-	-	-	-	1	(D)
Indiana .....	-	-	-	-	1	(D)	-	-
Iowa .....	-	-	-	-	-	-	18	(D)
Kansas .....	-	-	-	-	15	1,875	22	4,300
Kentucky .....	-	-	-	-	-	-	20	22
Louisiana .....	13	715	-	-	-	-	73	20,384
Maine .....	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	20	40
Massachusetts .....	-	-	2	(D)	-	-	-	-
Michigan .....	-	-	-	-	18	855	69	207
Minnesota .....	-	-	-	-	-	-	20	(D)
Mississippi .....	10	1,540	-	-	24	2,718	44	3,316
Missouri .....	-	-	8	(D)	16	520	17	(D)
Montana .....	-	-	23	115	31	8,350	20	7,000
Nebraska .....	-	-	-	-	14	84	26	152
Nevada .....	-	-	-	-	-	-	15	300
New Hampshire .....	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	1	(D)	55	170
New Mexico .....	33	396	-	-	38	6,575	178	864
New York .....	-	-	-	-	-	-	1	(D)
North Carolina .....	-	-	-	-	8	8	60	212
North Dakota .....	-	-	-	-	5	(D)	4	(D)
Ohio .....	-	-	-	-	-	-	2	(D)
Oklahoma .....	-	-	-	-	1	(D)	25	(D)
Oregon .....	-	-	-	-	7	7	159	3,224
Pennsylvania .....	-	-	-	-	-	-	4	38
Rhode Island .....	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	3	60	7	777
South Dakota .....	-	-	-	-	-	-	2	(D)
Tennessee .....	-	-	-	-	-	-	8	37
Texas .....	-	-	20	200	26	415	155	5,302
Utah .....	-	-	-	-	-	-	194	6,805
Vermont .....	-	-	-	-	-	-	4	(D)
Virginia .....	-	-	-	-	-	-	14	299
Washington .....	-	-	-	-	-	-	112	1,523
West Virginia .....	-	-	-	-	-	-	5	110
Wisconsin .....	-	-	-	-	-	-	28	(D)
Wyoming .....	-	-	-	-	-	-	119	2,998
<b>Water Resources Regions</b>								
Region 01 New England .....	-	-	2	(D)	-	-	28	(D)
Region 02 Mid-Atlantic .....	-	-	-	-	1	(D)	98	(D)
Region 03 South Atlantic-Gulf .....	-	-	30	960	8	3,460	270	6,591
Region 04 Great Lakes .....	-	-	-	-	19	1,022	95	(D)
Region 05 Ohio .....	-	-	-	-	-	-	28	(D)
Region 06 Tennessee .....	-	-	-	-	8	8	66	(D)
Region 07 Upper Mississippi .....	-	-	-	-	-	-	48	928
Region 08 Lower Mississippi .....	14	1,860	5	3,000	51	4,793	157	41,962
Region 09 Souris-Red-Rainy .....	-	-	-	-	1	(D)	4	(D)
Region 10 Missouri .....	-	-	8	8	49	8,954	157	9,240
Region 11 Arkansas-White-Red .....	13	715	-	-	21	6,325	97	9,787
Region 12 Texas-Gulf .....	-	-	20	200	26	415	143	5,062
Region 13 Rio Grande .....	57	1,236	-	-	33	1,650	156	819
Region 14 Upper Colorado .....	-	-	-	-	1	(D)	136	(D)
Region 15 Lower Colorado .....	-	-	1	(D)	5	4,925	87	(D)
Region 16 Great Basin .....	-	-	-	-	-	-	101	2,731
Region 17 Pacific Northwest .....	-	-	23	115	16	2,341	398	6,350
Region 18 California .....	-	-	22	990	47	1,237	431	24,741
Region 19 Alaska .....	-	-	-	-	-	-	11	(D)
Region 20 Hawaii .....	-	-	-	-	-	-	42	234

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Land leveling of previously irrigated land during survey year								
	Farms	Acres irrigated affected by expenditure	Expenditures <sup>1</sup> (\$1,000)	Average per farm (dollars)	Farms with expenditures of -				
					\$1 to \$999	\$1,000 to \$9,999	\$10,000 to \$29,999	\$30,000 to \$74,999	\$75,000 or more
United States .....	6,137	675,775	92,498	15,072	1,286	2,991	1,134	504	222
Alabama .....	27	3,000	82	3,019	-	25	2	-	-
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	305	56,882	3,701	12,133	55	188	52	5	5
Arkansas .....	234	44,185	9,204	39,334	5	68	69	74	18
California .....	1,550	229,242	38,274	24,693	99	674	458	217	102
Colorado .....	289	17,234	1,233	4,268	80	161	48	-	-
Connecticut .....	1	(D)	(D)	(D)	-	1	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-
Florida .....	232	49,191	7,136	30,758	27	66	90	34	15
Georgia .....	33	19,242	385	11,674	-	25	-	7	1
Hawaii .....	33	33	17	500	33	-	-	-	-
Idaho .....	368	6,907	1,391	3,780	90	259	19	-	-
Illinois .....	1	(D)	(D)	(D)	-	1	-	-	-
Indiana .....	2	(D)	(D)	(D)	-	-	2	-	-
Iowa .....	-	-	-	-	-	-	-	-	-
Kansas .....	26	5,145	504	19,365	15	-	8	-	3
Kentucky .....	2	(D)	(D)	(D)	-	2	-	-	-
Louisiana .....	131	37,554	2,072	15,818	14	54	45	18	-
Maine .....	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-
Massachusetts .....	1	(D)	(D)	(D)	-	-	-	-	1
Michigan .....	20	20	20	1,000	-	20	-	-	-
Minnesota .....	1	(D)	(D)	(D)	-	-	-	1	-
Mississippi .....	83	25,981	3,685	44,395	12	14	18	22	17
Missouri .....	71	9,523	792	11,158	15	17	35	4	-
Montana .....	211	16,230	2,083	9,873	73	91	16	31	-
Nebraska .....	22	610	178	8,091	-	21	1	-	-
Nevada .....	141	14,777	1,428	10,124	15	87	30	4	5
New Hampshire .....	21	(D)	(D)	(D)	21	-	-	-	-
New Jersey .....	7	(D)	190	27,143	-	-	4	3	-
New Mexico .....	882	36,841	3,517	3,987	257	514	100	1	10
New York .....	5	340	(D)	(D)	-	5	-	-	-
North Carolina .....	11	2,148	163	14,827	7	1	1	-	2
North Dakota .....	4	(D)	(D)	(D)	-	-	4	-	-
Ohio .....	-	-	-	-	-	-	-	-	-
Oklahoma .....	79	7,800	681	8,623	-	51	28	-	-
Oregon .....	161	3,665	1,765	10,962	99	25	24	-	13
Pennsylvania .....	-	-	-	-	-	-	-	-	-
Rhode Island .....	1	(D)	(D)	(D)	-	1	-	-	-
South Carolina .....	24	2,316	141	5,875	6	15	3	-	-
South Dakota .....	3	(D)	(D)	(D)	1	2	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-
Texas .....	278	54,729	10,156	36,531	42	125	24	58	29
Utah .....	615	24,248	2,568	4,176	196	359	35	25	-
Vermont .....	1	(D)	(D)	(D)	1	-	-	-	-
Virginia .....	1	(D)	(D)	(D)	-	-	1	-	-
Washington .....	77	1,931	385	5,000	54	16	6	-	1
West Virginia .....	5	100	10	2,000	-	5	-	-	-
Wisconsin .....	3	(D)	(D)	(D)	-	2	1	-	-
Wyoming .....	175	4,731	423	2,418	69	96	10	-	-
<b>Water Resources Regions</b>									
Region 01 New England .....	24	48	(D)	(D)	21	2	-	-	1
Region 02 Mid-Atlantic .....	16	687	230	14,375	-	8	5	3	-
Region 03 South Atlantic-Gulf .....	352	77,180	8,168	23,204	52	138	96	48	18
Region 04 Great Lakes .....	27	(D)	51	1,876	1	24	2	-	-
Region 05 Ohio .....	2	(D)	(D)	(D)	-	2	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	10	775	69	6,865	7	1	1	1	-
Region 08 Lower Mississippi .....	393	94,103	11,101	28,246	19	121	141	83	29
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	457	26,605	2,838	6,209	143	252	31	31	-
Region 11 Arkansas-White-Red .....	273	39,718	5,625	20,606	80	94	62	28	9
Region 12 Texas-Gulf .....	251	51,114	8,595	34,241	42	102	24	58	25
Region 13 Rio Grande .....	728	27,123	4,639	6,373	223	400	91	-	14
Region 14 Upper Colorado .....	565	25,628	2,008	3,553	108	399	57	1	-
Region 15 Lower Colorado .....	308	58,982	3,911	12,696	55	188	52	8	5
Region 16 Great Basin .....	558	34,290	3,512	6,294	157	302	65	29	5
Region 17 Pacific Northwest .....	546	12,162	3,521	6,449	199	284	49	-	14
Region 18 California .....	1,594	227,259	38,073	23,885	146	674	458	214	102
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	33	33	17	500	33	-	-	-	-

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Land leveling of previously irrigated land during survey year - con.					
	Primary purpose of expenditures					
	Water conservation		Energy conservation		Scheduled replacement or maintenance	
	Acres	Dollars	Acres	Dollars	Acres	Dollars
United States .....	331,004	51,221,715	13,415	4,135,886	331,356	37,140,896
Alabama .....	-	-	-	-	3,000	81,500
Alaska .....	-	-	-	-	-	-
Arizona .....	35,579	2,646,300	-	-	21,303	1,054,200
Arkansas .....	34,639	7,509,599	860	238,000	8,686	1,456,500
California .....	108,266	17,049,261	8,500	3,030,900	112,476	18,193,750
Colorado .....	(D)	633,250	(D)	67,200	10,167	533,021
Connecticut .....	(D)	(D)	-	-	-	-
Delaware .....	-	-	-	-	-	-
Florida .....	13,111	2,746,000	-	-	36,080	4,389,957
Georgia .....	-	-	-	-	19,242	385,257
Hawaii .....	-	-	-	-	33	16,500
Idaho .....	3,446	976,250	(D)	(D)	(D)	(D)
Illinois .....	-	-	-	-	(D)	(D)
Indiana .....	-	-	-	-	(D)	(D)
Iowa .....	-	-	-	-	(D)	(D)
Kansas .....	-	-	460	96,000	4,685	407,500
Kentucky .....	-	-	-	-	(D)	(D)
Louisiana .....	22,966	1,472,096	289	(D)	14,299	(D)
Maine .....	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	(D)	(D)
Michigan .....	20	20,000	-	-	-	-
Minnesota .....	(D)	(D)	-	-	-	-
Mississippi .....	11,684	2,143,318	-	-	14,297	1,541,480
Missouri .....	848	96,800	-	-	8,675	695,400
Montana .....	1,730	206,780	3,200	640,000	11,300	1,236,340
Nebraska .....	610	178,000	-	-	-	-
Nevada .....	5,640	561,700	-	-	9,137	865,800
New Hampshire .....	-	-	-	-	(D)	(D)
New Jersey .....	-	-	-	-	(D)	190,000
New Mexico .....	23,087	1,444,561	-	-	13,754	2,072,015
New York .....	(D)	15,000	-	-	(D)	(D)
North Carolina .....	(D)	(D)	-	-	(D)	(D)
North Dakota .....	-	-	-	-	(D)	(D)
Ohio .....	-	-	-	-	-	-
Oklahoma .....	-	-	-	-	7,800	681,200
Oregon .....	3,363	1,497,435	-	-	302	267,450
Pennsylvania .....	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	(D)	(D)
South Carolina .....	2,286	126,000	-	-	30	15,000
South Dakota .....	(D)	(D)	-	-	-	-
Tennessee .....	-	-	-	-	-	-
Texas .....	38,301	9,552,515	-	-	16,428	603,000
Utah .....	16,030	2,079,000	-	-	8,218	489,350
Vermont .....	(D)	(D)	-	-	-	-
Virginia .....	(D)	(D)	-	-	-	-
Washington .....	409	128,000	-	-	1,522	257,026
West Virginia .....	100	10,000	-	-	-	-
Wisconsin .....	(D)	(D)	-	-	(D)	(D)
Wyoming .....	1,150	36,000	-	-	3,581	387,100
<b>Water Resources Regions</b>						
Region 01 New England .....	(D)	(D)	-	-	(D)	(D)
Region 02 Mid-Atlantic .....	450	40,000	-	-	237	190,000
Region 03 South Atlantic-Gulf .....	15,551	2,890,452	-	-	61,629	5,277,394
Region 04 Great Lakes .....	(D)	20,650	-	-	44	30,000
Region 05 Ohio .....	-	-	-	-	(D)	(D)
Region 06 Tennessee .....	-	-	-	-	-	-
Region 07 Upper Mississippi .....	(D)	(D)	-	-	(D)	(D)
Region 08 Lower Mississippi .....	53,634	7,295,657	1,149	300,000	39,320	3,505,100
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-
Region 10 Missouri .....	8,697	493,530	3,200	640,000	14,708	1,704,040
Region 11 Arkansas-White-Red .....	16,738	3,946,204	460	96,000	22,520	1,583,160
Region 12 Texas-Gulf .....	35,901	8,082,515	-	-	15,213	512,000
Region 13 Rio Grande .....	13,424	2,896,200	-	-	13,699	1,743,240
Region 14 Upper Colorado .....	15,028	(D)	(D)	(D)	(D)	1,217,436
Region 15 Lower Colorado .....	35,579	2,646,300	-	-	23,403	1,264,200
Region 16 Great Basin .....	21,320	2,493,300	-	-	12,970	1,018,950
Region 17 Pacific Northwest .....	6,101	2,572,285	(D)	(D)	(D)	(D)
Region 18 California .....	108,383	17,058,661	8,500	3,030,900	110,376	17,983,750
Region 19 Alaska .....	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	33	16,500

See footnote(s) at end of table.

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**Table 16. Expenditures for Irrigation Equipment, Facilities, Computer Technology, and Land Improvement: 2018 (continued)**

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

Geographic area	Land leveling of previously irrigated land during survey year - con.							
	Primary source of funding assistance							
	EQIP		Other USDA programs		Non-USDA assistance		No funding assistance	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	273	42,429	200	15,542	477	76,172	5,187	541,632
Alabama .....	-	-	-	-	2	(D)	25	(D)
Alaska .....	-	-	-	-	-	-	-	-
Arizona .....	16	1,600	17	612	16	96	256	54,574
Arkansas .....	12	1,390	4	132	47	18,923	171	23,740
California .....	56	5,151	22	1,386	198	30,866	1,274	191,839
Colorado .....	24	1,200	14	4,760	-	-	251	11,274
Connecticut .....	-	-	-	-	-	-	1	(D)
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	54	1,161	56	2,260	-	-	122	45,770
Georgia .....	1	(D)	-	-	-	-	32	(D)
Hawaii .....	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	23	1,300	345	5,607
Illinois .....	-	-	-	-	1	(D)	-	-
Indiana .....	-	-	-	-	-	-	2	(D)
Iowa .....	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	26	5,145
Kentucky .....	-	-	-	-	-	-	2	(D)
Louisiana .....	-	-	-	-	33	11,299	98	26,255
Maine .....	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	1	(D)	-	-
Michigan .....	-	-	-	-	-	-	20	20
Minnesota .....	-	-	-	-	-	-	1	(D)
Mississippi .....	6	(D)	-	-	13	(D)	64	24,248
Missouri .....	9	1,315	-	-	-	-	62	8,208
Montana .....	-	-	-	-	31	4,700	180	11,530
Nebraska .....	-	-	-	-	5	250	17	360
Nevada .....	-	-	-	-	-	-	141	14,777
New Hampshire .....	-	-	-	-	-	-	21	(D)
New Jersey .....	-	-	-	-	-	-	7	(D)
New Mexico .....	38	9,026	33	264	66	1,782	745	25,769
New York .....	-	-	-	-	-	-	5	340
North Carolina .....	-	-	-	-	-	-	11	2,148
North Dakota .....	-	-	-	-	4	(D)	-	-
Ohio .....	-	-	-	-	-	-	-	-
Oklahoma .....	-	-	-	-	-	-	79	7,800
Oregon .....	-	-	-	-	-	-	161	3,665
Pennsylvania .....	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	1	(D)
South Carolina .....	-	-	-	-	3	2,100	21	216
South Dakota .....	-	-	-	-	-	-	3	(D)
Tennessee .....	-	-	-	-	-	-	-	-
Texas .....	32	6,558	23	5,550	6	1,503	217	41,118
Utah .....	25	10,720	31	578	27	810	532	12,140
Vermont .....	-	-	-	-	-	-	1	(D)
Virginia .....	-	-	-	-	1	(D)	-	-
Washington .....	-	-	-	-	-	-	77	1,931
West Virginia .....	-	-	-	-	-	-	5	100
Wisconsin .....	-	-	-	-	-	-	3	(D)
Wyoming .....	-	-	-	-	-	-	175	4,731
<b>Water Resources Regions</b>								
Region 01 New England .....	-	-	-	-	1	(D)	23	(D)
Region 02 Mid-Atlantic .....	-	-	-	-	1	(D)	15	(D)
Region 03 South Atlantic-Gulf .....	55	4,647	56	2,260	12	3,975	229	66,298
Region 04 Great Lakes .....	-	-	-	-	-	-	27	(D)
Region 05 Ohio .....	-	-	-	-	-	-	2	(D)
Region 06 Tennessee .....	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	-	-	-	-	1	(D)	9	(D)
Region 08 Lower Mississippi .....	27	3,527	-	-	62	18,261	304	72,315
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-
Region 10 Missouri .....	-	-	-	-	40	5,470	417	21,135
Region 11 Arkansas-White-Red .....	-	-	18	4,892	24	11,997	231	22,829
Region 12 Texas-Gulf .....	32	6,558	23	5,550	6	1,503	190	37,503
Region 13 Rio Grande .....	38	9,026	33	264	66	1,782	591	16,051
Region 14 Upper Colorado .....	24	1,200	-	-	-	-	541	24,428
Region 15 Lower Colorado .....	16	1,600	17	612	16	96	259	56,674
Region 16 Great Basin .....	25	10,720	31	578	47	1,810	455	21,182
Region 17 Pacific Northwest .....	-	-	-	-	3	300	543	11,862
Region 18 California .....	56	5,151	22	1,386	198	30,866	1,318	189,856
Region 19 Alaska .....	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	33	33

<sup>1</sup> May not add due to rounding.

**Table 17. Labor Used for Irrigation: 2018**

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

Geographic area	Farms	Acres irrigated on farms with any hired or contract labor (see text)	Total irrigation hired and contract labor expenses (\$1,000)	Hired labor					Contract labor		
				Farms	Expenses (\$1,000)	Average hours of hired labor per farm	Average labor rate per hour per farm (dollars)	Average labor expense per farm (dollars)	Farms	Expenses (\$1,000)	Average per farm (dollars)
United States .....	41,786	24,449,240	1,129,469	36,493	942,241	1,822	14.17	25,820	10,628	187,228	17,616
Alabama .....	174	55,039	2,813	174	2,774	1,116	14.28	15,942	5	39	7,800
Alaska .....	38	66	158	38	158	325	12.77	4,156	-	-	-
Arizona .....	809	652,546	49,933	778	44,952	4,964	11.64	57,779	274	4,981	18,178
Arkansas .....	1,087	2,585,511	12,387	1,066	11,305	862	12.30	10,605	64	1,082	16,911
California .....	11,912	5,896,320	471,898	9,688	351,115	2,659	13.63	36,242	3,440	120,783	35,111
Colorado .....	1,586	772,635	20,145	1,403	13,951	608	16.36	9,943	683	6,195	9,070
Connecticut .....	115	2,219	5,265	115	5,260	2,726	16.78	45,741	11	5	436
Delaware .....	42	51,846	684	28	269	753	12.78	9,617	26	415	15,958
Florida .....	1,473	404,128	26,252	1,225	21,245	1,343	12.92	17,343	714	5,007	7,013
Georgia .....	563	257,694	5,452	492	4,564	693	13.38	9,276	173	889	5,137
Hawaii .....	247	16,273	8,507	199	8,150	2,560	16.00	40,955	67	357	5,332
Idaho .....	1,948	1,526,996	52,349	1,765	48,693	2,157	12.79	27,588	274	3,655	13,341
Illinois .....	314	176,680	4,924	262	4,680	1,185	15.08	17,864	57	243	4,269
Indiana .....	240	147,065	1,579	240	1,396	402	14.46	5,816	18	183	10,156
Iowa .....	153	35,162	1,991	153	(D)	906	(D)	(D)	2	(D)	(D)
Kansas .....	848	996,241	13,143	711	8,754	708	17.40	12,312	308	4,389	14,249
Kentucky .....	139	23,912	2,344	111	2,029	1,559	11.72	18,276	29	315	10,862
Louisiana .....	393	421,055	2,303	390	2,144	495	11.11	5,499	9	158	17,567
Maine .....	138	23,170	1,775	138	1,723	894	13.96	12,489	19	52	2,723
Maryland .....	141	18,382	3,123	137	2,753	1,684	11.94	20,098	34	369	10,862
Massachusetts .....	151	8,276	4,787	149	4,763	1,348	23.72	31,966	10	24	2,364
Michigan .....	785	302,524	21,584	741	21,436	1,614	17.92	28,928	66	148	2,241
Minnesota .....	272	125,804	3,417	253	3,364	927	14.34	13,295	27	54	1,981
Mississippi .....	576	1,118,596	4,316	554	3,837	646	10.72	6,925	57	479	8,402
Missouri .....	461	638,459	4,338	415	3,831	701	13.17	9,231	64	507	7,927
Montana .....	1,249	873,326	10,436	1,139	9,169	613	13.13	8,050	253	1,267	5,008
Nebraska .....	1,544	1,785,644	10,863	1,272	8,706	420	16.28	6,844	324	2,157	6,658
Nevada .....	317	270,512	4,235	312	4,144	967	13.73	13,282	14	91	6,475
New Hampshire .....	68	651	556	61	551	609	14.81	9,026	8	5	664
New Jersey .....	276	36,270	3,294	276	2,676	718	13.51	9,697	84	618	7,358
New Mexico .....	1,329	267,559	10,978	1,122	8,937	707	11.27	7,965	648	2,041	3,150
New York .....	520	26,368	28,873	520	28,542	2,914	18.84	54,888	51	331	6,494
North Carolina .....	368	23,189	5,766	306	4,579	1,042	14.36	14,965	118	1,187	10,058
North Dakota .....	158	100,263	1,178	127	1,023	433	18.62	8,055	31	155	5,000
Ohio .....	397	15,843	5,102	378	4,660	874	14.11	12,327	23	443	19,240
Oklahoma .....	328	239,963	7,846	286	5,488	1,246	15.40	19,188	157	2,358	15,022
Oregon .....	2,005	660,703	44,540	1,857	41,408	1,543	14.45	22,298	270	3,133	11,602
Pennsylvania .....	412	7,187	74,608	401	74,113	9,781	18.90	184,820	82	495	6,041
Rhode Island .....	57	1,956	200	57	197	241	14.36	3,458	4	3	720
South Carolina .....	235	78,027	4,163	196	2,822	1,190	12.10	14,399	80	1,341	16,762
South Dakota .....	131	94,956	915	126	759	453	13.30	6,023	11	156	14,182
Tennessee .....	119	40,520	2,458	98	1,829	1,417	13.18	18,666	31	629	20,292
Texas .....	2,248	1,636,752	61,334	1,938	47,006	1,909	12.71	24,255	893	14,328	16,045
Utah .....	1,461	348,083	13,139	1,128	11,853	844	12.45	10,508	554	1,286	2,321
Vermont .....	104	1,336	568	100	367	282	13.00	3,672	37	201	5,421
Virginia .....	239	19,649	10,931	239	9,204	2,740	14.05	38,512	77	1,727	22,426
Washington .....	2,461	928,800	83,295	2,348	81,847	2,308	15.10	34,858	155	1,448	9,343
West Virginia .....	22	5,552	286	22	(D)	879	(D)	(D)	4	(D)	(D)
Wisconsin .....	523	259,016	8,069	458	7,647	711	23.49	16,696	89	422	4,743
Wyoming .....	610	470,516	10,368	501	9,355	1,453	12.85	18,672	199	1,014	5,093
<b>Water Resources Regions</b>											
Region 01 New England .....	573	36,933	12,635	561	12,543	1,234	18.12	22,359	55	92	1,672
Region 02 Mid-Atlantic .....	1,250	148,356	115,400	1,221	111,760	5,035	18.18	91,532	314	3,640	11,592
Region 03 South Atlantic-Gulf .....	2,853	819,747	47,744	2,435	39,300	1,218	13.25	16,140	1,114	8,444	7,580
Region 04 Great Lakes .....	1,257	381,141	26,461	1,209	25,671	1,234	17.20	21,233	114	790	6,926
Region 05 Ohio .....	829	162,398	8,738	734	7,345	714	14.02	10,007	152	1,393	9,163
Region 06 Tennessee .....	128	40,442	705	120	670	414	13.50	5,584	10	35	3,512
Region 07 Upper Mississippi .....	1,115	532,180	17,967	1,009	17,391	995	17.32	17,236	141	576	4,089
Region 08 Lower Mississippi .....	2,064	4,326,979	22,122	2,005	19,885	837	11.85	9,918	133	2,237	16,820
Region 09 Souris-Red-Rainy .....	43	47,444	534	43	534	771	16.09	12,413	-	-	-
Region 10 Missouri .....	4,193	3,625,720	41,819	3,600	33,682	629	14.87	9,356	1,037	8,137	7,846
Region 11 Arkansas-White-Red .....	1,934	2,144,324	34,373	1,588	23,342	950	15.47	14,699	813	11,030	13,567
Region 12 Texas-Gulf .....	1,712	1,035,924	48,909	1,535	38,022	2,010	12.32	24,770	610	10,887	17,848
Region 13 Rio Grande .....	1,254	247,130	10,184	1,051	7,933	696	10.85	7,548	630	2,251	3,572
Region 14 Upper Colorado .....	1,343	478,503	10,674	1,078	8,742	513	15.80	8,109	522	1,932	3,701
Region 15 Lower Colorado .....	946	701,773	53,237	858	46,933	4,700	11.64	54,700	361	6,304	17,463
Region 16 Great Basin .....	1,395	585,735	16,167	1,288	15,333	932	12.78	11,904	317	834	2,631
Region 17 Pacific Northwest .....	6,619	3,212,583	174,051	6,161	165,320	1,881	14.27	26,833	792	8,731	11,024
Region 18 California .....	11,993	5,905,589	479,085	9,760	359,527	2,706	13.61	36,837	3,446	119,558	34,695
Region 19 Alaska .....	38	66	158	38	158	325	12.77	4,156	-	-	-
Region 20 Hawaii .....	247	16,273	8,507	199	8,150	2,560	16.00	40,955	67	357	5,332

**Table 18. Farms With Diminished Crop Yields Resulting From Irrigation Interruption by Cause: 2018**

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

Geographic area	Total <sup>1</sup>		Shortage of surface water		Shortage of ground water		Irrigation equipment failure	
	Farms	Acres affected by irrigation interruption (see text)	Farms	Acres affected by irrigation interruption (see text)	Farms	Acres affected by irrigation interruption (see text)	Farms	Acres affected by irrigation interruption (see text)
United States .....	20,214	2,147,827	11,543	1,202,348	1,884	337,013	2,855	354,483
Alabama .....	112	1,958	60	1,108	52	1,100	2	(D)
Alaska .....	7	(D)	4	7	2	(D)	1	(D)
Arizona .....	225	52,588	97	12,991	17	4,892	66	23,867
Arkansas .....	146	53,627	51	13,066	24	3,320	43	25,339
California .....	1,792	156,570	436	72,991	401	35,992	240	20,566
Colorado .....	3,650	371,589	3,249	354,678	180	18,567	97	6,404
Connecticut .....	4	94	-	-	-	-	-	-
Delaware .....	47	14,153	-	-	-	-	1	(D)
Florida .....	339	26,771	27	5,589	-	-	82	2,467
Georgia .....	109	24,372	-	-	-	-	-	-
Hawaii .....	68	249	19	39	-	-	-	-
Idaho .....	880	144,234	367	58,329	49	27,669	167	23,320
Illinois .....	57	8,373	24	4,506	-	-	33	3,867
Indiana .....	52	7,565	-	-	-	-	26	4,305
Iowa .....	8	59	-	-	-	-	-	-
Kansas .....	226	23,400	33	6,405	35	5,237	85	13,334
Kentucky .....	68	2,545	-	-	-	-	-	-
Louisiana .....	73	6,807	13	1,040	-	-	45	2,758
Maine .....	86	626	35	545	38	52	30	(D)
Maryland .....	10	806	-	-	3	3	4	800
Massachusetts .....	96	881	-	-	-	-	10	(D)
Michigan .....	204	7,117	20	20	20	760	31	2,370
Minnesota .....	67	2,017	-	-	-	-	33	1,430
Mississippi .....	43	5,178	6	132	-	-	18	1,236
Missouri .....	160	23,141	68	16,004	-	-	48	7,778
Montana .....	1,052	162,877	604	110,443	63	7,608	244	43,016
Nebraska .....	291	39,801	99	14,300	-	-	113	17,689
Nevada .....	289	77,977	142	53,090	37	6,380	55	8,495
New Hampshire .....	64	64	-	-	21	21	-	-
New Jersey .....	27	1,297	-	-	-	-	2	(D)
New Mexico .....	2,113	37,630	1,627	19,186	114	10,890	233	7,093
New York .....	107	3,048	3	300	45	91	1	(D)
North Carolina .....	92	956	12	12	-	-	-	-
North Dakota .....	70	7,374	31	2,542	-	-	5	824
Ohio .....	2	(D)	-	-	-	-	-	-
Oklahoma .....	57	11,939	-	-	3	1,464	29	5,389
Oregon .....	1,293	139,357	918	99,593	168	26,350	173	4,430
Pennsylvania .....	111	404	-	-	21	210	-	-
Rhode Island .....	35	157	13	95	13	71	14	46
South Carolina .....	41	2,343	-	-	-	-	9	1,635
South Dakota .....	60	5,785	22	1,320	-	-	38	4,465
Tennessee .....	44	243	-	-	-	-	1	(D)
Texas .....	1,099	249,672	254	32,514	335	147,695	262	55,689
Utah .....	3,079	216,747	2,666	188,684	188	25,935	199	16,071
Vermont .....	72	301	30	55	13	38	28	192
Virginia .....	18	36	-	-	-	-	-	-
Washington .....	755	52,174	232	3,104	36	8,913	222	15,486
West Virginia .....	23	32	-	-	-	-	-	-
Wisconsin .....	50	8,414	-	-	-	-	22	396
Wyoming .....	841	194,267	381	129,660	6	3,753	143	32,118
<b>Water Resources Regions</b>								
Region 01 New England .....	313	2,028	48	640	72	144	80	647
Region 02 Mid-Atlantic .....	243	18,449	-	-	47	(D)	7	(D)
Region 03 South Atlantic-Gulf .....	630	55,438	53	5,741	-	-	93	4,802
Region 04 Great Lakes .....	342	8,566	53	(D)	55	820	54	2,584
Region 05 Ohio .....	198	11,275	-	-	-	-	44	7,365
Region 06 Tennessee .....	102	(D)	52	1,100	52	1,100	-	-
Region 07 Upper Mississippi .....	137	23,727	40	11,650	-	-	44	3,479
Region 08 Lower Mississippi .....	218	70,366	62	16,804	18	3,314	100	31,890
Region 09 Souris-Red-Rainy .....	64	10,944	31	(D)	-	-	31	8,394
Region 10 Missouri .....	2,326	351,858	1,151	223,375	113	11,326	507	78,597
Region 11 Arkansas-White-Red .....	1,132	169,552	781	76,849	83	55,561	184	33,017
Region 12 Texas-Gulf .....	954	187,713	211	27,781	328	109,415	198	40,563
Region 13 Rio Grande .....	1,729	42,929	1,390	35,893	95	1,941	119	3,013
Region 14 Upper Colorado .....	4,226	357,812	3,682	344,198	123	16,977	197	6,813
Region 15 Lower Colorado .....	301	54,407	97	12,991	17	4,892	100	25,227
Region 16 Great Basin .....	2,261	245,713	1,805	188,238	245	33,815	238	22,256
Region 17 Pacific Northwest .....	3,080	366,771	1,565	170,954	186	60,012	613	63,181
Region 18 California .....	1,883	168,839	499	83,171	448	37,412	245	21,666
Region 19 Alaska .....	7	(D)	4	7	2	(D)	1	(D)
Region 20 Hawaii .....	68	249	19	39	-	-	-	-

See footnote(s) at end of table.

--continued

**Table 18. Farms With Diminished Crop Yields Resulting From Irrigation Interruption by Cause: 2018 (continued)**

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

Geographic area	Energy price increases or energy shortage		Water salinity too high		Loss of water rights		Cost of purchased water		Other	
	Farms	Acres affected by irrigation interruption (see text)	Farms	Acres affected by irrigation interruption (see text)	Farms	Acres affected by irrigation interruption (see text)	Farms	Acres affected by irrigation interruption (see text)	Farms	Acres affected by irrigation interruption (see text)
United States .....	292	28,245	214	54,748	257	24,113	901	76,466	5,713	518,795
Alabama .....	-	-	-	-	-	-	25	250	50	150
Alaska .....	-	-	-	-	-	-	-	-	1	(D)
Arizona .....	-	-	16	11,200	-	-	8	22,790	55	7,848
Arkansas .....	6	1,200	11	9,475	-	-	19	1,458	35	9,788
California .....	99	8,738	49	2,004	44	2,376	363	4,154	611	33,776
Colorado .....	-	-	23	207	54	6,116	67	13,634	552	57,198
Connecticut .....	-	-	-	-	-	-	-	-	4	94
Delaware .....	-	-	-	-	-	-	-	-	46	(D)
Florida .....	-	-	-	-	-	-	15	30	218	16,585
Georgia .....	24	600	-	-	-	-	-	-	76	24,258
Hawaii .....	-	-	-	-	-	-	4	30	49	210
Idaho .....	-	-	-	-	-	-	64	7,940	342	50,250
Illinois .....	-	-	-	-	-	-	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	17	2,720
Iowa .....	-	-	-	-	-	-	-	-	8	59
Kansas .....	-	-	-	-	-	-	19	1,046	73	4,362
Kentucky .....	6	2,208	-	-	-	-	2	(D)	60	(D)
Louisiana .....	-	-	-	-	-	-	-	-	28	4,049
Maine .....	3	3	-	-	-	-	-	-	8	(D)
Maryland .....	3	3	-	-	-	-	-	-	3	3
Massachusetts .....	-	-	-	-	-	-	-	-	96	881
Michigan .....	-	-	-	-	-	-	-	-	113	3,947
Minnesota .....	-	-	-	-	-	-	-	-	34	587
Mississippi .....	-	-	-	-	-	-	6	36	12	2,060
Missouri .....	-	-	-	-	-	-	-	-	59	1,621
Montana .....	51	4,318	58	13,508	54	6,588	52	5,808	421	41,666
Nebraska .....	31	5,080	-	-	-	-	9	9	55	6,835
Nevada .....	-	-	-	-	-	-	-	-	85	12,472
New Hampshire .....	-	-	-	-	-	-	-	-	22	(D)
New Jersey .....	-	-	-	-	-	-	-	-	27	1,297
New Mexico .....	-	-	-	-	33	363	33	33	518	4,897
New York .....	-	-	-	-	-	-	3	30	53	2,177
North Carolina .....	-	-	-	-	-	-	-	-	80	944
North Dakota .....	-	-	-	-	-	-	-	-	34	4,008
Ohio .....	-	-	-	-	-	-	-	-	2	(D)
Oklahoma .....	-	-	-	-	-	-	-	-	28	6,550
Oregon .....	24	24	-	-	-	-	23	989	158	22,913
Pennsylvania .....	-	-	-	-	-	-	-	-	90	194
Rhode Island .....	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	29	108
South Dakota .....	-	-	-	-	-	-	-	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	43	(D)
Texas .....	11	3,850	57	18,354	20	400	33	3,986	349	48,589
Utah .....	27	2,214	-	-	4	2,800	102	10,650	403	37,878
Vermont .....	-	-	-	-	-	-	-	-	32	228
Virginia .....	-	-	-	-	-	-	-	-	18	36
Washington .....	7	7	-	-	26	1,950	32	3,203	283	23,251
West Virginia .....	-	-	-	-	-	-	-	-	23	32
Wisconsin .....	-	-	-	-	-	-	-	-	30	8,032
Wyoming .....	-	-	-	-	22	3,520	22	374	380	61,142
<b>Water Resources Regions</b>										
Region 01 New England .....	3	3	-	-	-	-	-	-	158	1,576
Region 02 Mid-Atlantic .....	3	3	-	-	-	-	-	-	188	16,902
Region 03 South Atlantic-Gulf .....	24	600	-	-	-	-	15	(D)	436	42,051
Region 04 Great Lakes .....	-	-	-	-	-	-	3	30	165	4,881
Region 05 Ohio .....	-	-	-	-	-	-	2	(D)	143	3,354
Region 06 Tennessee .....	-	-	-	-	-	-	25	250	50	(D)
Region 07 Upper Mississippi .....	-	-	-	-	-	-	-	-	53	8,598
Region 08 Lower Mississippi .....	12	3,408	11	9,475	-	-	12	1,236	48	13,329
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	2	(D)
Region 10 Missouri .....	59	8,248	58	13,508	28	3,168	88	6,201	889	97,600
Region 11 Arkansas-White-Red .....	-	-	-	-	24	672	64	11,820	174	28,155
Region 12 Texas-Gulf .....	11	3,850	57	18,354	20	400	14	3,853	319	42,728
Region 13 Rio Grande .....	-	-	-	-	37	5,267	56	3,166	314	6,889
Region 14 Upper Colorado .....	-	-	23	207	52	6,860	26	108	730	36,824
Region 15 Lower Colorado .....	-	-	16	11,200	-	-	8	22,790	131	9,667
Region 16 Great Basin .....	27	2,214	-	-	-	-	142	13,450	328	49,344
Region 17 Pacific Northwest .....	54	1,181	-	-	52	5,370	56	8,343	924	122,821
Region 18 California .....	99	8,738	49	2,004	44	2,376	386	5,143	611	33,776
Region 19 Alaska .....	-	-	-	-	-	-	-	-	1	(D)
Region 20 Hawaii .....	-	-	-	-	-	-	4	30	49	210

<sup>1</sup> Detail may not add to total because respondents could check more than one cause.



**Table 19. Irrigated Farms by Size of Farm: 2018**

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

Geographic area	Total			1 to 49 acres			50 to 99 acres		
	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated
United States .....	231,474	222,028,954	55,938,795	104,018	1,646,070	947,319	21,968	1,545,452	783,385
Alabama .....	1,069	755,249	163,338	367	8,139	1,320	163	12,477	1,576
Alaska .....	308	9,374	1,721	254	2,582	442	32	2,274	(D)
Arizona .....	3,054	2,728,642	945,570	1,492	21,862	15,050	339	23,792	13,489
Arkansas .....	3,173	5,142,393	4,246,491	311	6,277	2,555	226	16,535	8,728
California .....	42,093	16,682,862	8,408,282	24,595	379,284	273,977	4,206	291,619	216,298
Colorado .....	14,529	15,008,030	2,458,742	6,545	112,132	71,430	1,598	110,906	58,227
Connecticut .....	669	71,297	6,104	410	5,853	1,138	49	3,148	(D)
Delaware .....	521	412,855	201,305	42	623	261	73	5,206	1,713
Florida .....	7,615	4,207,457	1,331,739	4,961	67,296	39,595	565	38,406	22,907
Georgia .....	3,861	2,894,113	1,163,038	841	14,729	5,773	575	44,771	12,570
Hawaii .....	1,863	859,752	26,700	1,635	14,754	6,675	87	(D)	718
Idaho .....	14,867	7,331,473	3,393,063	7,277	107,593	80,613	1,569	112,018	81,456
Illinois .....	1,807	2,181,475	566,024	383	5,286	1,353	161	12,236	2,557
Indiana .....	2,039	2,242,201	582,661	534	8,366	1,667	67	4,472	382
Iowa .....	1,061	757,055	166,193	340	7,096	1,364	86	5,919	249
Kansas .....	4,249	12,476,720	2,386,816	279	3,974	843	43	3,168	927
Kentucky .....	1,188	332,495	58,234	441	8,141	1,155	217	14,536	1,068
Louisiana .....	1,862	1,918,931	1,072,033	435	8,821	3,594	83	5,926	4,675
Maine .....	990	232,175	35,695	531	8,766	992	191	12,800	2,597
Maryland .....	959	317,376	125,024	413	6,361	1,813	169	13,019	5,282
Massachusetts .....	1,335	105,147	19,311	937	17,990	5,803	152	11,962	2,034
Michigan .....	3,886	2,232,115	827,010	1,377	30,442	5,934	406	28,543	5,848
Minnesota .....	2,367	1,836,298	554,605	441	7,287	1,858	170	13,081	3,876
Mississippi .....	1,621	2,484,250	1,667,023	268	4,910	1,242	95	6,538	1,591
Missouri .....	2,705	2,818,743	1,429,074	646	11,804	2,437	281	20,704	2,800
Montana .....	8,887	25,620,445	2,140,162	3,130	64,050	42,688	772	53,078	31,785
Nebraska .....	13,013	23,550,244	7,666,152	510	10,371	4,705	443	32,217	22,769
Nevada .....	1,857	4,437,112	693,520	638	10,605	8,137	167	11,372	7,763
New Hampshire .....	731	63,546	3,218	447	7,643	1,040	79	6,039	(D)
New Jersey .....	1,585	250,582	89,941	837	(D)	(D)	325	23,363	6,763
New Mexico .....	10,093	5,672,426	675,330	7,049	76,075	51,057	907	63,950	35,161
New York .....	2,148	344,024	47,974	1,184	18,755	4,328	305	21,923	2,050
North Carolina .....	2,451	1,198,677	132,870	1,274	18,561	3,438	344	24,918	6,837
North Dakota .....	720	2,404,884	297,001	64	1,107	291	4	(D)	(D)
Ohio .....	1,601	298,020	39,258	874	10,824	2,615	300	20,439	2,087
Oklahoma .....	1,835	3,471,123	601,492	387	6,462	2,196	186	12,083	814
Oregon .....	13,794	10,520,208	1,579,108	7,735	116,165	68,165	1,491	107,005	56,592
Pennsylvania .....	2,766	264,235	40,596	1,616	(D)	(D)	552	37,518	4,757
Rhode Island .....	227	11,444	3,231	180	3,203	504	29	2,337	(D)
South Carolina .....	1,489	985,917	252,720	589	9,906	3,089	137	10,606	942
South Dakota .....	1,219	4,546,759	378,413	134	1,694	563	22	1,540	1,034
Tennessee .....	1,452	1,400,647	190,746	621	11,414	1,282	228	16,053	1,019
Texas .....	11,997	20,053,541	4,085,754	4,007	68,809	34,348	684	47,597	12,789
Utah .....	12,575	6,480,550	1,181,700	6,873	112,686	85,304	1,361	90,155	57,608
Vermont .....	573	65,691	3,022	356	7,413	1,077	60	4,272	466
Virginia .....	1,377	389,164	48,248	562	(D)	(D)	192	14,326	1,240
Washington .....	11,259	7,444,705	1,866,110	6,615	106,859	62,672	993	69,729	53,208
West Virginia .....	482	75,438	6,525	236	5,094	412	95	6,106	132
Wisconsin .....	2,127	1,446,654	518,312	910	16,587	2,701	81	5,643	712
Wyoming .....	5,525	14,994,440	1,561,596	1,435	40,279	25,404	608	43,329	24,336
<b>Water Resources Regions</b>									
Region 01 New England .....	4,164	524,450	69,036	2,578	44,441	10,013	558	40,349	5,729
Region 02 Mid-Atlantic .....	7,317	1,601,902	524,394	3,573	59,695	15,670	1,452	102,977	20,961
Region 03 South Atlantic-Gulf .....	16,770	10,017,021	3,042,488	8,050	119,006	53,509	1,765	128,896	44,800
Region 04 Great Lakes .....	7,093	3,278,600	1,129,500	3,074	58,770	10,739	657	46,811	8,190
Region 05 Ohio .....	4,904	2,544,562	444,046	2,059	32,842	5,243	700	47,355	2,890
Region 06 Tennessee .....	1,250	410,535	71,536	726	14,182	1,972	243	17,613	1,517
Region 07 Upper Mississippi .....	6,691	5,480,324	1,627,970	1,853	31,885	6,580	478	35,098	6,554
Region 08 Lower Mississippi .....	6,595	11,235,684	7,625,812	684	13,455	6,138	277	20,205	13,092
Region 09 Souris-Red-Rainy .....	587	1,130,845	207,655	98	2,063	283	50	(D)	(D)
Region 10 Missouri .....	32,856	80,020,280	13,107,678	5,485	113,586	63,906	2,187	155,552	87,840
Region 11 Arkansas-White-Red .....	9,554	22,713,444	4,877,419	1,722	28,145	11,874	582	40,138	12,796
Region 12 Texas-Gulf .....	9,986	11,669,233	2,695,393	3,587	60,770	29,985	611	42,445	9,705
Region 13 Rio Grande .....	8,740	4,629,864	709,642	6,341	68,336	46,951	712	49,952	31,932
Region 14 Upper Colorado .....	13,188	8,285,836	1,472,632	7,000	119,966	83,762	1,586	108,569	53,929
Region 15 Lower Colorado .....	3,838	3,723,087	1,035,373	1,764	25,745	17,969	470	31,957	16,149
Region 16 Great Basin .....	11,322	9,724,114	1,763,616	5,759	94,546	70,666	1,042	69,406	43,699
Region 17 Pacific Northwest .....	41,905	27,055,051	7,014,019	23,064	360,676	230,350	4,202	300,948	201,490
Region 18 California .....	42,543	17,114,996	8,492,165	24,712	380,625	274,592	4,277	295,828	219,398
Region 19 Alaska .....	308	9,374	1,721	254	2,582	442	32	2,274	(D)
Region 20 Hawaii .....	1,863	859,752	26,700	1,635	14,754	6,675	87	(D)	718

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**Table 19. Irrigated Farms by Size of Farm: 2018 (continued)**

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

Geographic area	100 to 219 acres			220 to 499 acres			500 to 999 acres		
	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated
United States .....	23,513	3,482,482	1,811,255	22,448	7,452,127	3,862,174	18,022	12,976,618	6,286,318
Alabama .....	118	18,244	3,379	104	34,753	10,855	64	47,649	14,439
Alaska .....	18	2,345	444	2	(D)	(D)	2	(D)	(D)
Arizona .....	130	18,432	10,220	361	111,029	61,174	238	181,010	121,165
Arkansas .....	187	29,315	17,648	358	123,990	75,422	462	331,834	253,481
California .....	4,576	677,208	515,507	3,574	1,159,118	906,626	2,113	1,437,044	1,009,584
Colorado .....	1,666	246,530	126,015	1,306	444,054	219,484	1,029	752,191	317,180
Connecticut .....	79	12,195	1,071	124	42,783	2,087	3	1,830	(D)
Delaware .....	30	5,422	2,048	111	36,718	19,844	130	80,698	48,251
Florida .....	845	121,358	82,819	372	129,449	50,286	281	208,445	71,591
Georgia .....	484	73,212	21,497	466	156,774	41,826	575	384,906	172,896
Hawaii .....	35	4,754	(D)	38	12,896	506	1	(D)	(D)
Idaho .....	1,596	235,915	163,625	1,899	612,638	387,727	907	621,650	401,859
Illinois .....	104	16,037	6,832	348	114,773	56,420	226	163,752	57,506
Indiana .....	173	24,231	11,317	321	102,701	43,050	256	208,702	74,451
Iowa .....	132	19,623	5,333	129	43,902	19,367	116	82,602	23,621
Kansas .....	198	31,177	14,285	232	76,225	31,466	672	511,747	156,847
Kentucky .....	323	46,729	3,874	156	52,780	(D)	6	(D)	3,138
Louisiana .....	188	30,559	14,854	202	71,139	38,778	265	201,129	109,070
Maine .....	212	30,176	3,393	13	(D)	(D)	15	(D)	1,302
Maryland .....	116	16,417	8,010	71	28,559	10,991	93	66,373	32,565
Massachusetts .....	178	24,684	4,169	26	(D)	(D)	36	22,652	1,731
Michigan .....	452	63,910	17,027	527	168,844	71,394	490	341,322	140,131
Minnesota .....	230	39,228	15,558	496	163,204	60,811	404	288,799	89,509
Mississippi .....	131	19,182	7,495	180	55,460	28,516	221	163,967	97,162
Missouri .....	354	51,600	13,413	208	70,136	24,998	245	179,920	82,347
Montana .....	953	142,702	78,339	884	286,009	129,518	737	557,361	233,822
Nebraska .....	970	146,655	95,860	2,130	765,881	423,513	2,982	2,194,793	1,254,057
Nevada .....	218	36,530	21,345	246	86,887	57,669	149	113,156	84,295
New Hampshire .....	112	16,559	1,163	88	30,301	(D)	5	3,004	(D)
New Jersey .....	127	18,607	11,070	167	52,811	17,679	91	60,221	23,979
New Mexico .....	608	87,691	38,752	636	205,452	60,442	260	188,703	92,398
New York .....	315	46,414	5,589	210	61,628	14,849	98	64,980	8,483
North Carolina .....	256	36,597	7,641	204	68,436	11,373	200	144,184	23,250
North Dakota .....	5	773	(D)	2	(D)	(D)	66	45,810	22,460
Ohio .....	239	30,959	4,796	72	19,803	2,990	25	15,264	5,485
Oklahoma .....	99	17,271	715	121	45,770	12,036	217	147,718	32,502
Oregon .....	1,470	214,149	121,035	1,137	376,315	183,941	502	364,510	131,340
Pennsylvania .....	407	54,713	3,435	112	40,512	4,955	43	32,175	2,088
Rhode Island .....	8	1,053	442	8	(D)	1,429	1	(D)	(D)
South Carolina .....	258	39,077	5,844	125	36,538	11,143	111	77,146	14,964
South Dakota .....	30	5,241	4,367	157	58,074	16,739	190	143,924	39,603
Tennessee .....	95	11,947	282	85	32,403	8,114	90	70,448	11,070
Texas .....	966	146,701	45,888	1,115	383,986	145,933	1,358	993,053	378,029
Utah .....	1,508	216,379	122,412	1,086	355,448	185,001	515	345,198	152,122
Vermont .....	65	10,126	416	64	22,084	515	28	21,796	548
Virginia .....	279	40,376	5,240	137	42,048	2,178	88	49,649	3,598
Washington .....	916	141,059	82,532	1,035	323,103	251,865	642	458,827	285,819
West Virginia .....	97	12,378	222	5	1,100	(D)	20	13,800	(D)
Wisconsin .....	103	15,794	4,735	332	114,578	41,744	303	234,242	68,851
Wyoming .....	854	134,248	79,077	666	215,881	111,216	451	342,409	135,154
<b>Water Resources Regions</b>									
Region 01 New England .....	614	87,420	10,354	289	98,829	6,616	86	58,753	5,514
Region 02 Mid-Atlantic .....	809	114,749	29,746	622	200,760	64,085	427	276,557	114,560
Region 03 South Atlantic-Gulf .....	2,147	315,938	123,702	1,336	442,233	128,743	1,331	925,832	307,807
Region 04 Great Lakes .....	799	115,929	26,299	944	306,750	113,076	711	502,080	185,441
Region 05 Ohio .....	871	120,335	11,219	459	149,503	24,572	149	121,440	40,800
Region 06 Tennessee .....	77	9,494	734	71	27,555	2,810	-	-	-
Region 07 Upper Mississippi .....	551	86,550	34,842	1,118	369,391	158,544	1,020	759,659	224,822
Region 08 Lower Mississippi .....	476	71,731	40,065	634	222,830	138,798	975	727,689	474,677
Region 09 Souris-Red-Rainy .....	41	5,763	(D)	63	(D)	(D)	49	31,700	(D)
Region 10 Missouri .....	3,276	493,877	277,939	4,002	1,411,863	753,675	4,802	3,542,921	1,718,315
Region 11 Arkansas-White-Red .....	644	106,127	36,814	821	283,980	94,583	1,274	942,291	318,230
Region 12 Texas-Gulf .....	917	135,006	43,381	1,071	375,654	144,521	1,106	791,938	346,383
Region 13 Rio Grande .....	496	72,208	42,147	490	154,294	50,390	168	131,664	71,707
Region 14 Upper Colorado .....	1,589	242,284	121,085	1,052	323,207	155,584	714	521,488	203,229
Region 15 Lower Colorado .....	286	38,454	15,692	433	133,199	66,949	238	181,010	121,165
Region 16 Great Basin .....	1,188	171,154	104,673	1,102	373,079	218,345	661	449,440	219,088
Region 17 Pacific Northwest .....	4,008	597,389	366,862	4,280	1,376,329	825,616	2,148	1,532,234	897,599
Region 18 California .....	4,671	690,975	524,949	3,621	1,170,178	911,616	2,160	1,477,884	1,022,074
Region 19 Alaska .....	18	2,345	444	2	(D)	(D)	2	(D)	(D)
Region 20 Hawaii .....	35	4,754	(D)	38	12,896	506	1	(D)	(D)

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**Table 19. Irrigated Farms by Size of Farm: 2018 (continued)**

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

Geographic area	1,000 to 1,999 acres			2,000 to 4,999 acres			5,000 acres or more		
	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated	Farms	Land in farms (acres)	Acres irrigated
United States .....	17,088	24,282,380	10,634,755	15,301	47,213,071	15,920,466	9,116	123,430,754	15,693,123
Alabama .....	159	233,906	36,889	84	335,311	71,283	10	64,770	23,597
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	261	369,135	201,984	115	387,539	234,446	118	1,615,843	288,042
Arkansas .....	668	960,418	779,476	758	2,185,572	1,829,095	203	1,488,452	1,280,086
California .....	1,432	1,927,941	1,374,078	1,014	2,973,893	1,592,513	583	7,836,755	2,519,699
Colorado .....	840	1,214,087	352,510	878	2,821,281	625,819	667	9,306,849	688,077
Connecticut .....	4	5,488	306	-	-	-	-	-	-
Delaware .....	58	64,867	24,433	74	201,212	93,661	3	18,109	11,094
Florida .....	240	327,062	106,852	171	465,814	218,713	180	2,849,627	738,976
Georgia .....	541	759,929	275,384	321	974,910	360,535	58	484,882	272,557
Hawaii .....	7	(D)	3,093	10	35,183	8,119	50	776,194	7,337
Idaho .....	756	1,081,399	561,044	591	1,771,518	867,579	272	2,788,742	849,160
Illinois .....	296	462,621	141,936	195	622,391	159,595	94	784,379	139,825
Indiana .....	242	362,416	101,842	394	1,160,561	274,427	52	370,752	75,525
Iowa .....	162	224,954	55,203	87	267,842	43,056	9	105,117	18,000
Kansas .....	808	1,231,771	374,897	1,303	3,966,706	807,119	714	6,651,952	1,000,432
Kentucky .....	2	(D)	(D)	35	127,329	27,077	8	76,710	19,752
Louisiana .....	389	572,643	298,652	269	790,778	438,266	31	237,936	164,144
Maine .....	5	5,785	1,196	15	(D)	(D)	8	(D)	(D)
Maryland .....	66	94,508	31,498	31	92,139	34,865	-	-	-
Massachusetts .....	5	7,205	1,171	-	-	-	1	(D)	(D)
Michigan .....	367	537,419	176,368	179	491,614	222,814	88	570,021	187,494
Minnesota .....	433	555,204	153,374	151	434,383	137,294	42	335,112	92,325
Mississippi .....	295	440,494	262,954	314	963,119	623,205	117	830,580	644,858
Missouri .....	455	664,919	360,526	457	1,409,277	732,032	59	410,383	210,521
Montana .....	578	802,457	270,920	628	2,024,603	387,209	1,205	21,690,185	965,881
Nebraska .....	2,981	4,211,891	2,393,770	2,127	6,445,794	2,427,613	870	9,742,642	1,043,865
Nevada .....	231	321,803	134,045	117	362,296	111,818	91	3,494,463	268,448
New Hampshire .....	-	-	-	-	-	-	-	-	-
New Jersey .....	23	29,655	16,342	14	38,379	8,281	1	(D)	(D)
New Mexico .....	185	309,082	67,395	255	789,840	145,620	193	3,951,633	184,505
New York .....	20	27,379	4,229	7	26,588	3,261	9	76,357	5,185
North Carolina .....	26	36,425	12,684	59	191,056	12,187	88	678,500	55,460
North Dakota .....	251	377,863	103,314	200	730,831	106,637	128	1,247,380	64,275
Ohio .....	37	56,689	9,509	51	122,571	11,114	3	21,471	662
Oklahoma .....	295	397,134	84,166	335	1,070,774	190,568	195	1,773,911	278,495
Oregon .....	702	970,564	302,358	275	904,561	245,110	482	7,466,939	470,567
Pennsylvania .....	24	34,666	2,063	11	28,834	16,147	1	(D)	(D)
Rhode Island .....	-	-	-	1	(D)	(D)	-	-	-
South Carolina .....	78	112,260	54,370	159	475,134	107,963	32	225,250	54,405
South Dakota .....	205	332,204	81,952	297	1,005,143	112,850	184	2,998,939	121,305
Tennessee .....	92	143,172	17,688	173	624,143	71,901	68	491,067	79,390
Texas .....	1,303	1,879,078	624,746	1,814	5,734,352	1,492,877	750	10,799,965	1,351,144
Utah .....	494	656,900	161,956	375	1,162,535	222,178	363	3,541,249	195,119
Vermont .....	-	-	-	-	-	-	-	-	-
Virginia .....	67	84,247	16,921	50	138,241	15,193	2	(D)	(D)
Washington .....	395	562,730	324,222	287	857,807	302,533	376	4,924,591	503,259
West Virginia .....	24	25,200	(D)	5	11,760	5,395	-	-	-
Wisconsin .....	207	266,846	107,772	130	384,621	165,831	61	408,343	125,966
Wyoming .....	379	527,434	168,625	485	1,559,061	347,302	647	12,131,799	670,482
<b>Water Resources Regions</b>									
Region 01 New England .....	14	18,478	2,673	16	45,775	9,365	9	130,405	18,772
Region 02 Mid-Atlantic .....	252	319,298	90,346	175	477,257	173,495	7	50,609	15,531
Region 03 South Atlantic-Gulf .....	981	1,353,962	475,269	792	2,408,869	765,695	368	4,322,285	1,142,963
Region 04 Great Lakes .....	516	749,374	241,608	289	808,679	328,896	103	690,207	215,251
Region 05 Ohio .....	234	369,580	84,245	335	1,004,304	149,031	97	699,203	126,046
Region 06 Tennessee .....	86	142,850	17,075	38	134,797	26,196	9	64,044	21,232
Region 07 Upper Mississippi .....	982	1,349,878	421,175	533	1,606,654	486,214	156	1,241,209	289,239
Region 08 Lower Mississippi .....	1,542	2,282,763	1,529,758	1,579	4,792,163	3,190,401	428	3,104,848	2,232,883
Region 09 Souris-Red-Rainy .....	81	(D)	16,283	174	608,079	117,373	31	351,334	54,447
Region 10 Missouri .....	5,001	7,150,877	3,240,722	4,564	14,362,143	3,710,757	3,539	52,789,461	3,254,524
Region 11 Arkansas-White-Red .....	1,485	2,125,374	711,099	1,965	6,123,849	1,729,204	1,061	13,063,540	1,962,819
Region 12 Texas-Gulf .....	1,021	1,500,857	476,280	1,269	3,969,623	1,011,548	404	4,792,940	633,590
Region 13 Rio Grande .....	187	301,783	105,053	182	534,226	220,883	164	3,317,401	140,579
Region 14 Upper Colorado .....	432	589,302	151,732	508	1,553,853	319,110	307	4,827,167	384,201
Region 15 Lower Colorado .....	294	419,135	206,910	191	607,693	258,305	162	2,285,894	332,234
Region 16 Great Basin .....	703	967,546	297,974	410	1,288,411	352,384	457	6,310,532	456,787
Region 17 Pacific Northwest .....	1,814	2,561,519	1,167,688	1,233	3,793,828	1,430,966	1,156	16,532,128	1,893,448
Region 18 California .....	1,456	1,960,468	1,395,772	1,038	3,057,685	1,632,524	608	8,081,353	2,511,240
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	7	(D)	3,093	10	35,183	8,119	50	776,194	7,337

**Table 20. Irrigated Farms by North American Industrial Classification System: 2018 and 2013**

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

Geographic area	Total		Oilseed and grain farming (1111)		Other crop farming (1119)							
	Farms	Acres irrigated	Farms	Acres irrigated	Total		Tobacco farming (11191)		Cotton farming (11192)		Sugarcane farming, hay farming, and all other crop farming (11193, 11194, 11199)	
					Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States ..... 2018	231,474	55,938,795	34,625	23,306,254	39,771	10,959,691	209	7,117	3,736	3,010,025	35,826	7,942,549
..... 2013	229,237	55,319,417	42,515	26,485,980	37,501	11,233,609	262	17,061	3,829	2,903,874	33,410	8,312,674
<b>2018 DATA</b>												
Alabama .....	1,069	163,338	120	51,918	285	74,103	-	-	98	25,320	187	48,783
Alaska .....	308	1,721	-	-	21	652	-	-	-	-	21	652
Arizona .....	3,054	945,570	93	95,407	759	546,374	-	-	175	117,469	584	428,905
Arkansas .....	3,173	4,246,491	2,383	3,906,215	254	276,845	-	-	150	239,462	104	37,383
California .....	42,093	8,408,282	1,262	569,659	1,829	1,108,863	-	-	159	258,663	167	850,200
Colorado .....	14,529	2,458,742	1,539	819,211	4,910	579,276	-	-	-	-	4,910	579,276
Connecticut .....	669	6,104	-	-	39	845	8	568	-	-	31	277
Delaware .....	521	201,305	278	107,214	16	(D)	-	-	-	-	16	(D)
Florida .....	7,615	1,331,739	27	9,315	353	545,726	-	-	27	1,890	326	543,836
Georgia .....	3,861	1,163,038	80	35,071	1,358	835,031	-	-	488	273,172	870	561,859
Hawaii .....	1,863	26,700	8	4,281	39	111	-	-	-	-	39	111
Idaho .....	14,867	3,393,063	1,491	614,096	4,231	1,038,369	-	-	-	-	4,231	1,038,369
Illinois .....	1,807	566,024	1,112	528,772	70	2,760	-	-	-	-	70	2,760
Indiana .....	2,039	582,661	1,173	516,688	61	1,708	-	-	-	-	61	1,708
Iowa .....	1,061	166,193	495	153,565	51	304	-	-	-	-	51	304
Kansas .....	4,249	2,386,816	3,189	2,043,848	267	147,259	-	-	18	21,048	249	126,211
Kentucky .....	1,188	58,234	111	51,056	154	1,015	2	(D)	-	-	152	(D)
Louisiana .....	1,862	1,072,033	1,158	1,016,723	119	11,209	-	-	28	6,477	91	4,732
Maine .....	990	35,695	-	-	88	260	-	-	-	-	88	260
Maryland .....	959	125,024	182	60,038	51	2,965	-	-	-	-	51	2,965
Massachusetts .....	1,335	19,311	29	58	70	485	2	(D)	-	-	68	(D)
Michigan .....	3,886	827,010	1,004	474,507	347	35,218	-	-	-	-	347	35,218
Minnesota .....	2,367	554,605	1,151	381,314	112	23,891	-	-	-	-	112	23,891
Mississippi .....	1,621	1,667,023	899	1,384,785	229	258,607	-	-	162	256,553	67	1,514
Missouri .....	2,705	1,429,074	1,233	1,178,034	208	199,232	-	-	108	182,094	100	17,138
Montana .....	8,887	2,140,162	412	208,753	2,553	463,453	-	-	-	-	2,553	463,453
Nebraska .....	13,013	7,666,152	9,586	6,382,849	577	197,800	-	-	-	-	577	197,800
Nevada .....	1,857	693,520	12	37,690	825	328,835	-	-	-	-	825	328,835
New Hampshire .....	731	3,218	-	-	159	317	-	-	-	-	159	317
New Jersey .....	1,585	89,941	165	18,497	46	1,816	-	-	-	-	46	1,816
New Mexico .....	10,093	675,330	168	102,155	2,706	218,841	-	-	7	7,688	2,699	211,153
New York .....	2,148	47,974	5	3,812	188	2,437	-	-	-	-	188	2,437
North Carolina .....	2,451	132,870	84	7,643	331	29,702	105	4,680	20	9,750	206	15,272
North Dakota .....	720	297,001	429	192,097	80	57,197	-	-	-	-	80	57,197
Ohio .....	1,601	39,258	157	13,827	73	672	-	-	-	-	73	672
Oklahoma .....	1,835	601,492	305	239,692	281	130,852	-	-	147	99,986	134	30,866
Oregon .....	13,794	1,579,108	247	32,597	3,229	561,108	-	-	-	-	3,229	561,108
Pennsylvania .....	2,766	40,596	50	855	205	887	24	72	-	-	181	815
Rhode Island .....	227	3,231	-	-	-	-	-	-	-	-	-	-
South Carolina .....	1,489	252,720	100	43,345	247	115,881	-	-	42	21,096	205	94,785
South Dakota .....	1,219	378,413	523	220,174	115	23,226	-	-	-	-	115	23,226
Tennessee .....	1,452	190,746	379	151,283	73	21,374	-	-	17	19,554	56	1,820
Texas .....	11,997	4,085,754	1,254	1,121,743	3,615	1,942,076	-	-	2,080	1,468,513	1,535	473,563
Utah .....	12,575	1,181,700	386	43,871	4,112	371,377	-	-	-	-	4,112	371,377
Vermont .....	573	3,022	-	-	50	179	-	-	-	-	50	179
Virginia .....	1,377	48,248	90	19,129	247	4,187	68	1,705	10	1,290	169	1,192
Washington .....	11,259	1,866,110	614	195,976	2,123	474,843	-	-	-	-	2,123	474,843
West Virginia .....	482	6,525	-	-	62	(D)	-	-	-	-	62	(D)
Wisconsin .....	2,127	518,312	408	167,725	76	5,747	-	-	-	-	76	5,747
Wyoming .....	5,525	1,561,596	234	100,766	1,877	316,075	-	-	-	-	1,877	316,075
<b>Water Resources Regions</b>												
Region 01 New England .....	4,164	69,036	29	58	361	1,954	10	(D)	-	-	351	(D)
Region 02 Mid-Atlantic .....	7,317	524,394	698	203,722	471	8,001	24	72	-	-	447	7,929
Region 03 South Atlantic-Gulf .....	16,770	3,042,488	413	133,570	2,658	1,602,709	173	6,385	641	336,238	1,844	1,260,086
Region 04 Great Lakes .....	7,093	1,129,500	1,488	653,955	513	36,504	-	-	-	-	513	36,504
Region 05 Ohio .....	4,904	444,046	981	374,680	384	(D)	2	(D)	-	-	382	(D)
Region 06 Tennessee .....	1,250	71,536	75	44,803	126	16,269	-	-	52	10,740	74	5,529
Region 07 Upper Mississippi .....	6,691	1,627,970	3,002	1,143,789	325	20,741	-	-	-	-	325	20,741
Region 08 Lower Mississippi .....	6,595	7,625,812	4,980	6,769,384	663	747,466	-	-	443	687,860	220	59,606
Region 09 Souris-Red-Rainy .....	587	207,655	341	162,708	15	(D)	-	-	-	-	15	(D)
Region 10 Missouri .....	32,856	13,107,678	13,828	8,416,638	5,742	1,164,322	-	-	-	-	5,742	1,164,322
Region 11 Arkansas-White-Red .....	9,554	4,877,419	3,571	3,274,268	1,784	733,083	-	-	525	416,947	1,259	316,136
Region 12 Texas-Gulf .....	9,986	2,695,393	718	368,882	3,063	1,629,223	-	-	1,696	1,154,540	1,367	474,683
Region 13 Rio Grande .....	8,740	709,642	118	63,386	2,300	239,298	-	-	45	27,568	2,255	211,730
Region 14 Upper Colorado .....	13,188	1,472,632	211	88,238	4,421	307,385	-	-	-	-	4,421	307,385
Region 15 Lower Colorado .....	3,838	1,035,373	93	95,407	949	584,856	-	-	177	126,469	772	458,387
Region 16 Great Basin .....	11,322	1,763,616	445	95,082	3,925	698,493	-	-	-	-	3,925	698,493
Region 17 Pacific Northwest .....	41,905	7,014,019	2,364	843,744	10,091	2,059,668	-	-	-	-	10,091	2,059,668
Region 18 California .....	42,543	8,492,165	1,262	569,659	1,920	1,093,205	-	-	157	249,663	1,763	843,542
Region 19 Alaska .....	308	1,721	-	-	21	652	-	-	-	-	21	652
Region 20 Hawaii .....	1,863	26,700	8	4,281	39	111	-	-	-	-	39	111

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**Table 20. Irrigated Farms by North American Industrial Classification System: 2018 and 2013 (continued)**

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

Geographic area	Vegetable and melon farming (1112)		Fruit and tree nut farming (1113)		Greenhouse, nursery, and floriculture farming (1114)	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States .....2018	15,597	4,484,052	53,322	5,647,673	22,300	626,655
.....2013	13,859	3,872,226	53,875	4,118,335	27,398	666,106
<b>2018 DATA</b>						
Alabama .....	167	14,543	150	650	303	21,979
Alaska .....	50	558	1	(D)	178	429
Arizona .....	169	155,389	713	76,721	138	9,870
Arkansas .....	109	28,857	133	3,801	130	6,298
California .....	1,769	1,255,737	29,548	4,122,771	2,100	89,723
Colorado .....	413	91,951	744	6,435	400	16,860
Connecticut .....	93	443	151	484	316	4,206
Delaware .....	5	8,154	4	(D)	31	3,049
Florida .....	552	180,976	3,271	427,157	2,546	91,404
Georgia .....	380	86,915	1,183	133,207	449	26,272
Hawaii .....	403	6,040	588	8,578	674	2,346
Idaho .....	648	808,430	287	2,141	307	9,394
Illinois .....	237	21,406	56	116	332	12,970
Indiana .....	233	36,463	112	350	274	3,433
Iowa .....	74	4,108	57	456	261	3,387
Kansas .....	81	405	40	90	185	6,332
Kentucky .....	276	2,521	52	104	348	1,519
Louisiana .....	67	18,789	136	799	260	4,162
Maine .....	297	19,050	231	14,615	313	1,651
Maryland .....	302	25,025	26	52	263	10,639
Massachusetts .....	340	3,117	544	13,344	313	1,960
Michigan .....	487	183,630	675	34,853	959	25,332
Minnesota .....	274	50,639	82	778	325	5,241
Mississippi .....	97	7,899	123	2,489	169	5,497
Missouri .....	291	5,580	195	11,196	438	5,203
Montana .....	170	32,836	361	2,123	200	1,835
Nebraska .....	104	23,325	48	224	192	4,340
Nevada .....	8	18,887	43	2,271	48	792
New Hampshire .....	138	1,422	101	618	283	782
New Jersey .....	371	27,172	199	19,235	638	20,998
New Mexico .....	616	30,758	2,732	68,242	176	2,434
New York .....	540	15,564	358	10,170	830	13,516
North Carolina .....	447	56,650	382	13,922	839	10,350
North Dakota .....	53	34,949	-	-	34	110
Ohio .....	517	9,273	57	1,266	752	9,990
Oklahoma .....	134	10,120	102	335	180	17,817
Oregon .....	692	176,278	2,433	103,491	1,220	54,492
Pennsylvania .....	746	24,776	369	4,573	889	3,926
Rhode Island .....	100	1,403	33	232	71	1,559
South Carolina .....	425	37,654	157	9,409	270	14,508
South Dakota .....	60	392	-	-	84	1,064
Tennessee .....	317	4,030	130	635	404	8,529
Texas .....	404	190,269	1,934	74,237	764	49,333
Utah .....	361	9,330	333	20,694	188	5,732
Vermont .....	159	1,498	133	874	200	383
Virginia .....	335	12,918	228	482	392	4,590
Washington .....	620	509,834	3,644	424,454	788	19,045
West Virginia .....	77	5,774	78	157	162	(D)
Wisconsin .....	384	232,186	323	28,794	645	10,101
Wyoming .....	5	129	42	(D)	39	(D)
<b>Water Resources Regions</b>						
Region 01 New England .....	1,028	26,207	1,134	29,832	1,340	10,245
Region 02 Mid-Atlantic .....	1,802	108,366	797	27,469	2,358	52,901
Region 03 South Atlantic-Gulf .....	2,029	376,874	5,265	586,637	4,375	165,968
Region 04 Great Lakes .....	1,138	223,191	1,116	43,971	1,983	36,000
Region 05 Ohio .....	1,119	34,995	366	3,026	1,628	13,391
Region 06 Tennessee .....	340	1,578	114	744	481	7,961
Region 07 Upper Mississippi .....	882	288,191	448	27,384	1,374	31,464
Region 08 Lower Mississippi .....	208	61,689	187	11,898	335	7,250
Region 09 Souris-Red-Rainy .....	82	15,306	19	(D)	39	142
Region 10 Missouri .....	607	79,790	240	1,021	1,043	22,236
Region 11 Arkansas-White-Red .....	364	65,476	596	5,913	535	31,444
Region 12 Texas-Gulf .....	369	92,626	1,681	60,683	748	48,682
Region 13 Rio Grande .....	449	130,584	2,657	69,718	177	3,676
Region 14 Upper Colorado .....	403	6,053	785	7,723	161	4,135
Region 15 Lower Colorado .....	172	165,574	769	97,700	169	10,252
Region 16 Great Basin .....	297	57,926	264	20,965	194	5,436
Region 17 Pacific Northwest .....	2,089	1,497,476	6,769	532,205	2,410	83,256
Region 18 California .....	1,766	1,245,552	29,526	4,112,147	2,098	89,441
Region 19 Alaska .....	50	558	1	(D)	178	429
Region 20 Hawaii .....	403	6,040	588	8,578	674	2,346

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**Table 20. Irrigated Farms by North American Industrial Classification System: 2018 and 2013 (continued)**

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

Geographic area	Beef cattle ranching and farming (112111)		Cattle feedlots (112112)		Dairy cattle and milk production (11212)		All other animal specialties (1122, 1123, 1124, 1125, 1129)	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States ..... 2018	41,961	7,385,161	1,818	866,308	3,760	1,649,727	18,320	1,013,274
..... 2013	34,292	5,966,127	1,252	698,465	3,462	1,462,914	15,083	815,655
<b>2018 DATA</b>								
Alabama .....	15	15	-	-	-	-	29	130
Alaska .....	9	18	-	-	-	-	49	(D)
Arizona .....	874	28,922	-	-	2	(D)	306	(D)
Arkansas .....	64	14,772	-	-	5	775	95	8,928
California .....	3,150	593,135	91	66,300	891	547,209	1,453	54,885
Colorado .....	4,375	725,815	105	59,019	195	63,337	1,848	96,838
Connecticut .....	-	-	-	-	-	-	70	126
Delaware .....	-	-	6	18,030	1	(D)	180	62,702
Florida .....	503	57,923	-	-	39	15,369	324	3,869
Georgia .....	282	8,946	-	-	31	10,650	98	26,946
Hawaii .....	42	2,581	-	-	7	1,750	102	1,013
Idaho .....	5,251	521,643	132	33,880	473	318,144	2,047	46,966
Illinois .....	-	-	-	-	-	-	-	-
Indiana .....	73	4,402	-	-	53	10,660	60	8,957
Iowa .....	58	800	21	723	19	209	25	2,641
Kansas .....	299	92,475	92	66,105	76	29,247	20	1,055
Kentucky .....	149	1,274	2	(D)	22	(D)	74	665
Louisiana .....	53	6,132	-	-	-	-	69	14,219
Maine .....	27	54	-	-	-	-	34	65
Maryland .....	-	-	-	-	14	8,256	121	18,049
Massachusetts .....	-	-	-	-	28	336	11	11
Michigan .....	60	280	40	3,080	162	42,440	152	27,670
Minnesota .....	55	4,853	38	3,249	127	35,302	203	49,338
Mississippi .....	56	3,456	-	-	-	-	48	4,830
Missouri .....	98	8,813	-	-	56	13,641	186	7,375
Montana .....	3,784	1,321,507	94	41,804	27	10,454	1,286	57,397
Nebraska .....	1,703	493,549	522	411,230	45	17,858	236	134,977
Nevada .....	617	265,235	15	4,305	20	21,235	269	14,270
New Hampshire .....	21	21	-	-	-	-	29	58
New Jersey .....	45	221	-	-	7	1,750	114	252
New Mexico .....	2,538	150,897	22	5,280	138	76,572	997	20,151
New York .....	22	44	23	(D)	69	2,272	113	(D)
North Carolina .....	27	27	-	-	-	-	341	14,576
North Dakota .....	124	12,648	-	-	-	-	-	-
Ohio .....	-	-	6	2,235	23	(D)	16	(D)
Oklahoma .....	589	181,164	13	8,450	1	(D)	230	(D)
Oregon .....	4,277	593,543	164	8,045	116	14,914	1,416	34,640
Pennsylvania .....	76	119	25	100	135	1,279	271	4,081
Rhode Island .....	-	-	-	-	-	-	23	37
South Carolina .....	39	484	-	-	52	5,200	199	26,239
South Dakota .....	322	86,597	36	13,840	-	-	79	33,120
Tennessee .....	42	84	-	-	-	-	107	4,811
Texas .....	2,963	497,636	76	55,437	204	138,689	783	16,334
Utah .....	4,220	527,955	163	32,295	250	76,622	2,562	93,824
Vermont .....	-	-	-	-	24	78	7	10
Virginia .....	-	-	-	-	48	3,972	37	2,970
Washington .....	2,349	131,267	82	6,705	272	92,221	767	11,765
West Virginia .....	-	-	-	-	-	-	103	(D)
Wisconsin .....	37	150	18	5,202	128	50,641	108	17,766
Wyoming .....	2,673	1,045,704	32	20,941	-	-	623	77,028
<b>Water Resources Regions</b>								
Region 01 New England .....	48	75	-	-	50	358	174	307
Region 02 Mid-Atlantic .....	121	340	31	18,130	205	17,257	834	88,208
Region 03 South Atlantic-Gulf .....	900	70,171	-	-	122	31,219	1,008	75,340
Region 04 Great Lakes .....	157	2,486	84	9,175	320	77,901	294	46,317
Region 05 Ohio .....	184	3,664	5	1,395	45	(D)	192	7,742
Region 06 Tennessee .....	46	88	-	-	-	-	68	93
Region 07 Upper Mississippi .....	74	3,124	41	3,252	242	56,802	303	53,223
Region 08 Lower Mississippi .....	98	9,237	-	-	-	-	124	18,888
Region 09 Souris-Red-Rainy .....	57	9,842	-	-	15	(D)	19	(D)
Region 10 Missouri .....	8,327	2,525,286	774	532,522	186	75,970	2,109	289,893
Region 11 Arkansas-White-Red .....	1,962	517,130	103	113,502	155	118,177	484	18,426
Region 12 Texas-Gulf .....	2,494	350,273	41	8,130	218	115,870	654	21,024
Region 13 Rio Grande .....	1,994	154,944	-	-	77	35,649	968	12,387
Region 14 Upper Colorado .....	4,891	866,282	208	41,358	106	27,254	2,002	124,204
Region 15 Lower Colorado .....	1,277	47,678	-	-	2	(D)	407	(D)
Region 16 Great Basin .....	3,393	675,966	66	13,034	340	105,027	2,398	91,687
Region 17 Pacific Northwest .....	12,403	1,446,501	374	59,510	774	392,149	4,631	99,510
Region 18 California .....	3,484	699,475	91	66,300	896	559,969	1,500	56,417
Region 19 Alaska .....	9	18	-	-	-	-	49	(D)
Region 20 Hawaii .....	42	2,581	-	-	7	1,750	102	1,013

**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013**

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

Geographic area	All farms									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup>	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	231,474	222,028,954	55,938,795	51,552,851	36,182,400	6,292,234	15,932,204	41,533,499	8,278,327	33,569,129
.....2013	229,237	213,993,983	55,319,417	51,907,422	37,218,965	6,377,283	14,457,395	48,514,563	9,204,200	30,792,048
<b>2018 DATA</b>										
Alabama .....	1,069	755,249	163,338	163,210	89,962	66,156	20,117	42,526	40,614	13,091
Alaska .....	308	9,374	1,721	1,718	1,418	114	30	1,149	82	21
Arizona .....	3,054	2,728,642	945,570	914,436	340,043	61,325	658,532	1,144,722	150,643	3,115,072
Arkansas .....	3,173	5,142,393	4,246,491	4,232,633	3,866,700	586,026	18,675	4,391,568	661,345	18,817
California .....	42,093	16,682,862	8,408,282	7,508,139	4,514,986	1,054,264	4,239,157	10,607,868	2,151,072	11,746,183
Colorado .....	14,529	15,008,030	2,458,742	2,033,286	1,150,316	321,490	1,094,795	1,586,630	415,611	1,839,068
Connecticut .....	669	71,297	6,104	6,044	3,247	2,674	202	1,384	2,537	221
Delaware .....	521	412,855	201,305	198,680	181,114	8,703	12,461	70,457	3,301	6,004
Florida .....	7,615	4,207,457	1,331,739	1,285,140	727,791	292,590	333,917	692,473	170,511	496,067
Georgia .....	3,861	2,894,113	1,163,038	1,119,151	990,501	155,272	35,229	709,597	97,647	11,215
Hawaii .....	1,863	859,752	26,700	21,809	2,988	2,761	21,020	3,053	4,469	28,998
Idaho .....	14,867	7,331,473	3,393,063	2,959,683	1,047,072	472,743	1,885,438	1,859,132	920,351	3,835,465
Illinois .....	1,807	2,181,475	566,024	561,954	544,777	15,786	6,615	320,556	7,591	4,934
Indiana .....	2,039	2,242,201	582,661	582,194	523,037	50,933	8,369	221,936	22,798	3,148
Iowa .....	1,061	757,055	166,193	166,169	157,006	5,153	5,234	58,196	1,485	1,557
Kansas .....	4,249	12,476,720	2,386,816	2,355,870	2,296,260	51,323	78,375	2,382,876	25,376	50,923
Kentucky .....	1,188	332,495	58,234	58,182	33,540	24,820	2,593	11,907	8,694	1,555
Louisiana .....	1,862	1,918,931	1,072,033	1,049,731	973,442	102,253	24,809	895,971	97,866	26,285
Maine .....	990	232,175	35,695	30,892	12,152	23,216	3,098	4,702	10,075	862
Maryland .....	959	317,376	125,024	125,008	103,993	24,860	1,450	57,617	10,651	178
Massachusetts .....	1,335	105,147	19,311	18,863	4,610	13,395	2,275	1,880	20,214	697
Michigan .....	3,886	2,232,115	827,010	820,860	683,373	142,639	10,422	376,138	77,385	4,000
Minnesota .....	2,367	1,836,298	554,605	554,531	529,418	20,396	6,844	232,821	11,104	5,079
Mississippi .....	1,621	2,484,250	1,667,023	1,666,108	1,572,094	135,050	697	1,089,970	77,959	464
Missouri .....	2,705	2,818,743	1,429,074	1,412,759	1,355,604	104,818	5,218	1,059,075	48,308	2,043
Montana .....	8,887	25,620,445	2,140,162	1,634,851	67,731	578,629	1,496,485	60,774	743,718	1,744,450
Nebraska .....	13,013	23,550,244	7,666,152	7,558,916	7,009,852	134,363	653,647	4,217,434	62,526	576,199
Nevada .....	1,857	4,437,112	693,520	550,037	308,477	178,917	230,942	893,063	392,846	634,313
New Hampshire .....	731	63,546	3,218	2,967	1,362	1,098	581	1,034	814	119
New Jersey .....	1,585	250,582	89,941	89,421	66,662	25,363	946	37,837	13,328	489
New Mexico .....	10,093	5,672,426	675,330	564,195	390,502	28,844	309,917	735,447	29,715	572,645
New York .....	2,148	344,024	47,974	47,169	18,770	21,911	7,430	8,568	19,629	5,912
North Carolina .....	2,451	1,198,677	132,870	127,074	24,193	108,756	854	9,220	46,199	249
North Dakota .....	720	2,404,884	297,001	296,877	189,044	20,839	91,236	104,042	18,590	67,298
Ohio .....	1,601	298,020	39,258	39,170	17,721	18,316	2,727	8,228	7,120	1,788
Oklahoma .....	1,835	3,471,123	601,492	534,377	498,471	42,963	65,580	563,533	37,760	60,770
Oregon .....	13,794	10,520,208	1,579,108	1,234,366	436,829	332,626	815,116	691,780	489,861	1,537,782
Pennsylvania .....	2,766	264,235	40,596	40,017	30,178	10,231	1,107	36,683	1,961	491
Rhode Island .....	227	11,444	3,231	3,157	1,658	930	1,073	689	189	101
South Carolina .....	1,489	985,917	252,720	247,376	216,685	43,360	1,490	175,783	26,320	1,308
South Dakota .....	1,219	4,546,759	378,413	367,051	208,447	23,318	151,680	102,378	22,589	136,475
Tennessee .....	1,452	1,400,647	190,746	190,746	176,490	13,180	657	66,250	14,511	621
Texas .....	11,997	20,053,541	4,085,754	3,844,323	3,394,264	232,583	524,003	3,990,011	298,086	1,057,641
Utah .....	12,575	6,480,550	1,181,700	919,472	242,499	118,611	854,912	514,131	226,030	1,586,469
Vermont .....	573	65,691	3,022	2,923	913	1,065	758	798	1,090	247
Virginia .....	1,377	389,164	48,248	48,248	10,165	38,552	155	3,569	10,404	133
Washington .....	11,259	7,444,705	1,866,110	1,735,413	525,964	115,325	1,236,673	1,029,204	218,776	2,824,595
West Virginia .....	482	75,438	6,525	6,525	532	5,550	194	235	1,443	109
Wisconsin .....	2,127	1,446,654	518,312	515,906	475,401	40,847	8,441	270,130	21,339	2,439
Wyoming .....	5,525	14,994,440	1,561,596	1,105,224	164,149	417,295	1,000,031	188,475	535,791	1,544,539
<b>Water Resources Regions</b>										
Region 01 New England .....	4,164	524,450	69,036	63,400	23,726	41,616	7,638	10,257	34,080	2,084
Region 02 Mid-Atlantic .....	7,317	1,601,902	524,394	520,362	401,538	116,576	16,107	211,861	47,859	7,248
Region 03 South Atlantic-Gulf .....	16,770	10,017,021	3,042,488	2,940,335	2,032,055	692,158	379,392	1,621,660	390,993	517,657
Region 04 Great Lakes .....	7,093	3,278,600	1,129,500	1,122,429	931,674	183,767	23,791	465,900	101,048	12,649
Region 05 Ohio .....	4,904	2,544,562	444,046	441,100	373,493	62,939	9,314	179,006	26,516	4,448
Region 06 Tennessee .....	1,250	410,535	71,536	71,421	31,475	29,587	13,121	15,174	25,251	4,909
Region 07 Upper Mississippi .....	6,691	5,480,324	1,627,970	1,623,721	1,520,046	102,257	19,545	807,556	46,207	8,676
Region 08 Lower Mississippi .....	6,595	11,235,684	7,625,812	7,603,624	7,163,588	683,222	26,598	6,662,328	725,824	34,982
Region 09 Souris-Red-Rainy .....	587	1,130,845	207,655	207,218	176,847	29,186	3,703	93,803	18,602	4,549
Region 10 Missouri .....	32,856	80,020,280	13,107,678	12,255,054	9,092,843	1,048,360	3,193,450	6,243,445	1,152,623	3,870,876
Region 11 Arkansas-White-Red .....	9,554	22,713,444	4,877,419	4,646,562	4,424,113	280,650	323,605	5,160,920	222,486	330,872
Region 12 Texas-Gulf .....	9,986	11,669,233	2,695,393	2,507,337	2,135,606	129,133	477,124	2,346,267	188,670	976,322
Region 13 Rio Grande .....	8,740	4,629,864	709,642	586,682	382,103	98,041	309,778	880,357	142,471	461,272
Region 14 Upper Colorado .....	13,188	8,285,836	1,472,632	905,961	32,818	343,965	1,106,671	36,304	466,353	2,056,018
Region 15 Lower Colorado .....	3,838	3,723,087	1,035,373	995,213	377,134	66,353	706,205	1,236,715	160,510	3,329,906
Region 16 Great Basin .....	11,322	9,724,114	1,763,616	1,459,522	609,187	250,670	962,354	1,495,871	518,434	1,928,299
Region 17 Pacific Northwest .....	41,905	27,055,051	7,014,019	6,077,918	1,937,408	1,047,291	4,054,202	3,451,102	1,819,280	8,325,204
Region 18 California .....	42,543	17,114,996	8,492,165	7,501,465	4,532,541	1,083,589	4,278,555	10,610,771	2,186,568	11,664,139
Region 19 Alaska .....	308	9,374	1,721	1,718	1,418	114	30	1,149	82	21
Region 20 Hawaii .....	1,863	859,752	26,700	21,809	2,988	2,761	21,020	3,053	4,469	28,998

See footnote(s) at end of table.

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**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	Less than \$25,000									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup> (acres)	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	106,363	21,683,475	2,770,548	1,778,667	641,511	499,717	1,677,276	729,293	772,411	2,841,607
.....2013	102,923	26,670,428	2,314,442	1,612,554	733,090	348,922	1,302,287	1,064,909	498,463	2,242,315
<b>2018 DATA</b>										
Alabama .....	452	48,649	4,750	4,742	1,321	1,129	2,199	492	413	6,062
Alaska .....	204	5,148	392	392	(D)	33	15	(D)	31	(D)
Arizona .....	1,685	369,879	31,840	20,294	16,231	941	15,366	32,873	1,085	48,730
Arkansas .....	503	91,360	45,356	44,302	39,931	9,744	245	43,266	15,899	116
California .....	15,783	799,489	243,766	157,360	94,040	10,972	151,964	172,754	35,444	364,733
Colorado .....	9,989	2,258,248	398,807	239,230	20,419	71,673	310,096	19,115	88,455	489,140
Connecticut .....	341	29,655	636	636	418	63	(Z)	343	106	(Z)
Delaware .....	66	11,393	4,577	4,467	(D)	(D)	-	913	(D)	-
Florida .....	3,497	84,654	30,264	27,059	28,040	1,124	1,053	26,421	1,564	378
Georgia .....	1,462	298,124	49,227	37,318	44,448	8,119	8	40,730	5,064	8
Hawaii .....	1,186	24,509	3,459	2,366	(D)	(D)	2,552	68	526	2,455
Idaho .....	9,006	904,707	310,694	148,911	19,026	106,760	185,114	35,786	258,313	350,694
Illinois .....	240	9,599	2,006	2,006	1,636	(D)	278	1,118	120	278
Indiana .....	326	11,475	1,714	1,697	498	1,059	27	318	256	(D)
Iowa .....	278	10,314	1,019	1,019	778	74	27	454	18	5
Kansas .....	242	37,372	4,706	4,692	3,419	54	1,163	2,179	34	1,000
Kentucky .....	485	41,537	1,133	1,081	(D)	564	194	(D)	298	260
Louisiana .....	470	84,318	34,370	34,370	28,217	5,971	72	23,754	6,288	(D)
Maine .....	679	28,157	1,202	1,175	645	319	36	585	144	33
Maryland .....	259	15,197	2,238	2,222	1,951	183	6	1,260	97	6
Massachusetts .....	522	23,532	1,925	1,813	631	1,083	(D)	281	923	72
Michigan .....	992	101,800	13,157	13,057	10,965	1,870	11	2,689	642	11
Minnesota .....	447	81,614	15,943	15,943	15,602	791	31	7,704	387	16
Mississippi .....	327	32,824	8,341	7,821	5,217	2,806	332	2,287	1,608	319
Missouri .....	834	88,042	8,551	6,084	5,143	3,003	708	3,721	1,704	218
Montana .....	5,159	2,843,240	248,190	179,482	17,284	29,922	201,250	19,301	32,601	295,285
Nebraska .....	903	258,322	44,877	39,699	34,960	2,856	6,999	22,384	1,910	5,731
Nevada .....	995	116,709	50,547	30,936	14,022	20,785	19,831	29,238	41,976	47,131
New Hampshire .....	474	46,146	631	617	395	(D)	(D)	371	46	42
New Jersey .....	625	16,722	2,021	1,933	1,225	576	91	705	322	91
New Mexico .....	8,124	2,634,464	124,601	68,198	19,841	20,887	90,977	31,045	25,432	125,955
New York .....	983	29,372	2,534	2,488	628	(D)	745	632	373	1,432
North Carolina .....	988	51,427	5,640	5,640	2,514	2,706	241	740	1,303	101
North Dakota .....	51	2,558	167	167	(D)	(D)	101	(D)	(D)	70
Ohio .....	583	28,669	1,705	1,705	1,010	287	203	494	162	144
Oklahoma .....	656	385,941	18,205	11,580	9,944	5,212	2,909	6,199	1,721	2,698
Oregon .....	8,627	1,396,336	187,947	103,760	29,296	29,723	128,688	33,507	34,810	195,568
Pennsylvania .....	953	34,460	1,685	1,685	990	191	69	547	85	62
Rhode Island .....	102	2,348	234	224	178	(D)	-	139	17	-
South Carolina .....	726	110,687	7,417	6,845	6,031	498	775	4,139	256	566
South Dakota .....	104	13,076	3,980	3,320	133	29	3,794	46	(D)	3,090
Tennessee .....	615	141,341	3,981	3,981	3,038	312	369	1,008	351	235
Texas .....	5,418	2,320,482	155,003	93,562	95,835	12,452	48,206	89,669	18,216	31,202
Utah .....	9,363	1,844,972	309,667	200,878	17,729	37,479	261,948	28,927	67,636	461,638
Vermont .....	256	22,009	318	318	90	(D)	(D)	109	74	2
Virginia .....	743	81,998	2,077	2,077	970	704	57	479	269	56
Washington .....	5,478	539,786	83,613	50,761	14,813	16,597	52,636	17,165	17,442	115,265
West Virginia .....	404	60,357	589	589	(D)	159	150	80	113	92
Wisconsin .....	377	28,875	946	946	384	385	(Z)	267	109	(Z)
Wyoming .....	3,381	3,181,582	293,900	187,219	28,530	85,861	185,573	22,731	107,138	290,514
<b>Water Resources Regions</b>										
Region 01 New England .....	2,223	143,736	4,766	4,603	2,378	1,531	201	1,829	1,235	150
Region 02 Mid-Atlantic .....	2,644	143,724	11,758	11,498	7,128	3,330	285	3,868	1,312	256
Region 03 South Atlantic-Gulf .....	7,361	657,732	101,429	85,336	83,154	16,660	4,542	72,936	10,252	7,279
Region 04 Great Lakes .....	2,295	143,937	16,844	16,744	12,154	3,096	808	3,486	1,096	1,477
Region 05 Ohio .....	1,723	107,475	4,225	4,156	1,057	2,004	(D)	773	919	462
Region 06 Tennessee .....	616	37,509	2,589	2,474	(D)	(D)	381	(D)	358	227
Region 07 Upper Mississippi .....	1,228	145,996	20,241	19,918	17,963	1,554	340	9,016	1,149	(D)
Region 08 Lower Mississippi .....	839	255,555	75,359	74,917	70,577	9,070	(D)	66,353	19,745	234
Region 09 Souris-Red-Rainy .....	128	8,770	906	906	691	687	127	362	345	82
Region 10 Missouri .....	9,627	6,466,329	515,341	381,634	79,225	61,732	376,842	62,993	71,829	552,882
Region 11 Arkansas-White-Red .....	3,176	2,634,254	113,376	72,641	38,339	23,127	52,855	29,487	14,593	47,259
Region 12 Texas-Gulf .....	4,716	861,345	136,568	84,683	81,122	12,997	44,469	79,942	19,346	28,487
Region 13 Rio Grande .....	7,072	2,296,805	106,572	60,461	16,106	28,934	66,963	23,191	50,006	100,586
Region 14 Upper Colorado .....	10,444	1,579,995	480,993	255,214	19,857	109,609	361,728	20,573	128,719	609,374
Region 15 Lower Colorado .....	2,249	602,009	41,494	26,668	19,585	3,089	19,516	38,019	3,752	59,598
Region 16 Great Basin .....	7,670	1,771,523	252,628	181,380	29,625	52,563	179,282	51,829	90,684	332,304
Region 17 Pacific Northwest .....	24,939	2,948,192	620,191	333,296	56,161	152,939	411,436	83,663	318,552	731,737
Region 18 California .....	16,023	848,932	261,417	159,380	104,530	15,772	154,325	180,260	37,960	366,433
Region 19 Alaska .....	204	5,148	392	392	(D)	33	15	(D)	31	(D)
Region 20 Hawaii .....	1,186	24,509	3,459	2,366	(D)	(D)	2,552	68	526	2,455

See footnote(s) at end of table.

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**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$25,000 to \$49,999									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup> (acres)	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	18,815	7,013,890	1,072,326	814,490	392,246	121,463	582,956	407,631	150,476	973,895
.....2013	18,542	4,807,835	1,041,037	858,542	397,593	176,630	482,869	450,964	247,856	862,761
<b>2018 DATA</b>										
Alabama .....	29	960	105	105	80	25	80	80	25	80
Alaska .....	29	645	(D)	(D)	42	(D)	(D)	27	(D)	(D)
Arizona .....	212	136,301	8,145	3,068	6,213	221	1,699	19,970	221	4,022
Arkansas .....	149	30,797	17,332	17,332	16,350	2,345	13	14,417	3,326	9
California .....	4,345	355,446	100,196	70,421	40,963	14,533	52,475	74,201	39,856	124,093
Colorado .....	1,205	904,998	151,773	96,089	21,423	27,518	104,857	29,580	20,164	159,513
Connecticut .....	28	168	84	84	56	-	-	28	-	-
Delaware .....	38	2,312	1,284	1,284	1,254	-	17	35	-	4
Florida .....	628	57,204	15,579	12,092	8,624	6,286	567	6,428	3,962	378
Georgia .....	318	62,166	7,966	7,966	5,999	1,240	720	1,934	536	1,032
Hawaii .....	108	449	(D)	(D)	-	-	299	-	-	292
Idaho .....	1,389	513,880	119,498	66,239	11,049	11,786	96,657	17,009	15,923	180,449
Illinois .....	111	8,419	5,364	5,346	5,318	(D)	10	5,831	10	10
Indiana .....	163	20,254	4,411	4,411	3,740	264	(D)	1,361	163	396
Iowa .....	82	7,009	2,850	2,850	2,706	35	60	222	14	38
Kansas .....	260	657,389	22,067	22,067	21,007	-	1,050	19,469	-	495
Kentucky .....	205	16,537	1,460	1,460	(D)	737	621	9	154	169
Louisiana .....	135	33,710	5,065	3,665	2,727	2,260	(D)	1,554	927	10
Maine .....	47	7,843	114	114	(D)	(D)	-	35	25	-
Maryland .....	77	2,523	298	298	252	-	-	138	-	-
Massachusetts .....	179	7,906	1,607	1,607	431	1,148	-	79	756	-
Michigan .....	452	28,658	6,035	6,035	5,320	543	23	1,699	261	25
Minnesota .....	200	38,962	12,417	12,417	8,785	1,824	1,800	1,942	722	1,872
Mississippi .....	81	6,744	2,850	2,850	2,152	1,530	(D)	802	1,006	18
Missouri .....	194	34,086	17,554	17,126	16,846	294	336	8,885	124	165
Montana .....	763	567,651	99,712	64,601	7,446	13,846	80,471	13,525	25,622	102,007
Nebraska .....	530	299,855	61,500	58,708	55,298	1,070	6,144	30,474	710	6,816
Nevada .....	110	20,610	9,898	9,823	2,626	3,945	3,400	7,863	4,725	10,172
New Hampshire .....	21	(D)	94	94	(D)	(D)	-	8	16	5
New Jersey .....	70	5,708	2,948	2,948	1,433	1,515	(D)	297	136	-
New Mexico .....	448	133,221	18,503	13,708	12,616	7,029	7,174	17,269	3,564	16,843
New York .....	204	9,371	661	661	463	(D)	23	448	(D)	23
North Carolina .....	192	15,638	1,047	1,047	95	851	-	73	249	-
North Dakota .....	3	13	10	10	(D)	(D)	-	(D)	(D)	-
Ohio .....	250	12,369	651	651	(D)	272	(D)	55	75	20
Oklahoma .....	148	104,451	9,025	8,920	8,742	263	(D)	6,512	94	(D)
Oregon .....	887	134,579	37,632	25,024	7,248	4,150	26,148	11,951	8,545	36,009
Pennsylvania .....	284	11,070	1,969	1,969	932	918	(D)	926	247	11
Rhode Island .....	37	(D)	124	124	(D)	-	(D)	81	(Z)	(Z)
South Carolina .....	121	24,182	2,104	904	857	1,239	(D)	174	345	53
South Dakota .....	118	62,027	12,226	11,628	5,705	-	6,528	3,263	-	9,154
Tennessee .....	169	7,140	596	596	324	148	34	112	87	31
Texas .....	1,004	1,225,918	86,432	81,329	76,014	4,603	5,781	68,939	9,533	6,499
Utah .....	989	481,167	104,751	93,234	9,273	1,080	95,992	12,054	351	147,160
Vermont .....	49	1,841	186	186	24	135	8	21	121	7
Virginia .....	74	15,611	229	229	203	-	-	101	-	-
Washington .....	887	447,880	31,857	18,581	13,011	387	19,295	21,025	195	32,771
West Virginia .....	57	1,860	(D)	(D)	12	41	(D)	(D)	36	(D)
Wisconsin .....	188	9,111	3,461	3,461	3,257	126	5	1,668	36	1
Wyoming .....	548	485,236	82,170	60,677	5,041	7,080	70,043	5,052	7,599	133,218
<b>Water Resources Regions</b>										
Region 01 New England .....	315	18,026	2,029	2,029	668	1,256	6	234	797	6
Region 02 Mid-Atlantic .....	605	39,366	7,002	7,002	4,424	2,307	52	1,859	341	38
Region 03 South Atlantic-Gulf .....	1,254	158,055	27,386	22,699	15,745	10,153	1,417	8,759	5,591	1,560
Region 04 Great Lakes .....	723	39,553	7,314	7,314	6,150	839	32	2,437	414	34
Region 05 Ohio .....	614	37,937	4,335	4,335	1,389	1,521	1,106	316	524	586
Region 06 Tennessee .....	244	13,353	(D)	(D)	376	192	32	145	(D)	30
Region 07 Upper Mississippi .....	541	69,755	34,894	34,876	33,395	1,215	89	17,051	439	(D)
Region 08 Lower Mississippi .....	298	41,700	21,296	19,896	18,607	4,855	(D)	15,549	3,486	14
Region 09 Souris-Red-Rainy .....	58	18,235	2,549	2,549	-	747	1,800	-	348	1,872
Region 10 Missouri .....	2,236	1,535,196	244,839	187,489	85,285	23,945	138,649	61,779	29,946	224,586
Region 11 Arkansas-White-Red .....	656	1,178,481	71,949	69,054	56,369	2,007	13,527	55,279	1,733	17,022
Region 12 Texas-Gulf .....	904	422,331	68,939	63,204	60,521	10,873	3,781	51,043	12,668	3,159
Region 13 Rio Grande .....	443	634,299	21,274	17,178	11,074	(D)	12,579	19,855	3,075	19,667
Region 14 Upper Colorado .....	920	666,518	132,473	76,125	7,815	21,110	103,878	9,218	15,196	160,904
Region 15 Lower Colorado .....	335	189,133	13,619	8,516	10,342	221	3,044	25,974	221	5,319
Region 16 Great Basin .....	889	458,442	99,306	93,781	7,774	5,025	88,202	13,917	5,076	139,395
Region 17 Pacific Northwest .....	3,277	1,130,545	208,689	127,214	27,918	19,313	162,189	46,179	30,643	275,633
Region 18 California .....	4,366	361,871	103,322	70,153	44,353	14,533	52,211	78,008	39,856	123,719
Region 19 Alaska .....	29	645	(D)	(D)	42	(D)	(D)	27	(D)	(D)
Region 20 Hawaii .....	108	449	(D)	(D)	-	-	299	-	-	292

See footnote(s) at end of table.

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**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$50,000 to \$99,999									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup> (acres)	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	19,608	13,142,214	2,071,141	1,712,727	927,004	297,632	888,083	965,070	400,502	1,405,008
.....2013	19,564	11,605,795	1,866,346	1,527,446	829,274	268,792	825,148	1,045,698	354,278	1,471,693
<b>2018 DATA</b>										
Alabama .....	69	5,179	478	478	383	45	1	241	42	(Z)
Alaska .....	9	(D)	107	106	45	(D)	-	20	(D)	-
Arizona .....	170	77,726	8,112	5,373	2,489	-	5,622	2,530	-	32,938
Arkansas .....	276	184,857	138,766	131,266	123,969	14,005	774	148,738	10,740	946
California .....	4,191	789,624	171,358	142,024	77,057	48,062	62,066	170,329	138,358	156,879
Colorado .....	762	1,221,142	142,134	112,947	51,598	17,511	74,736	59,896	31,449	158,735
Connecticut .....	85	5,670	259	259	-	204	-	-	87	-
Delaware .....	34	13,065	5,489	5,489	5,488	-	-	1,783	-	-
Florida .....	753	149,542	31,404	20,112	19,896	653	10,818	14,687	235	32,598
Georgia .....	374	190,981	29,345	26,776	14,243	14,571	638	15,750	4,226	838
Hawaii .....	150	3,039	620	618	119	(D)	483	245	(D)	180
Idaho .....	1,194	441,151	179,673	141,589	28,671	20,690	130,726	35,272	21,437	244,879
Illinois .....	173	42,123	8,678	8,678	7,213	1,364	26	3,133	2,246	46
Indiana .....	202	37,366	13,130	13,128	10,665	2,372	35	5,581	2,024	(D)
Iowa .....	88	31,838	15,277	15,277	15,253	(D)	-	7,690	(D)	-
Kansas .....	370	302,841	38,510	36,900	37,578	-	908	32,360	-	1,131
Kentucky .....	147	21,087	1,240	1,240	796	(D)	156	391	99	147
Louisiana .....	208	108,911	45,074	41,616	38,201	10,321	-	47,646	9,537	-
Maine .....	81	9,713	754	754	55	610	(D)	42	364	33
Maryland .....	243	33,906	12,078	12,078	10,949	1,068	-	8,192	7,940	-
Massachusetts .....	173	4,726	1,154	1,154	50	1,004	(D)	15	153	67
Michigan .....	405	79,376	29,849	29,849	25,635	4,236	211	8,239	4,544	267
Minnesota .....	296	129,501	33,151	33,127	30,868	(D)	2,261	8,487	(D)	38
Mississippi .....	139	83,684	38,099	38,099	37,887	168	(D)	22,777	131	21
Missouri .....	239	46,606	16,480	15,080	13,510	2,878	159	9,440	781	65
Montana .....	710	2,629,305	237,779	173,816	11,021	51,205	175,540	15,405	55,738	146,385
Nebraska .....	1,250	1,044,135	181,147	174,143	135,461	6,032	43,614	91,487	3,199	40,800
Nevada .....	121	104,298	19,132	14,335	6,242	1,500	14,449	15,416	750	44,362
New Hampshire .....	77	5,729	862	631	355	65	407	37	(D)	56
New Jersey .....	205	23,807	3,704	3,704	1,929	1,807	-	1,645	741	-
New Mexico .....	430	681,107	39,124	35,824	25,355	-	16,074	43,077	-	32,182
New York .....	135	23,669	2,236	2,236	1,203	961	10	1,092	(D)	5
North Carolina .....	355	38,438	7,295	5,675	1,343	5,885	(D)	461	4,035	11
North Dakota .....	7	235	20	20	(D)	(D)	8	(D)	(D)	2
Ohio .....	239	21,262	2,780	2,714	951	1,607	116	413	408	23
Oklahoma .....	78	71,088	5,519	5,519	5,503	(D)	-	5,144	16	-
Oregon .....	1,066	694,101	115,570	76,898	16,047	24,345	76,278	22,211	25,469	114,628
Pennsylvania .....	494	30,080	2,934	2,394	1,219	1,335	199	852	145	149
Rhode Island .....	16	572	(D)	(D)	7	(D)	(D)	5	(D)	4
South Carolina .....	98	6,253	1,027	1,027	597	8	414	311	8	214
South Dakota .....	148	126,858	17,718	17,410	2,660	-	15,048	2,663	-	17,402
Tennessee .....	63	4,130	84	84	12	10	(D)	13	23	36
Texas .....	835	966,426	134,034	114,549	114,364	13,160	14,454	99,398	3,760	14,549
Utah .....	707	447,761	99,828	73,042	14,436	13,743	71,654	11,682	32,616	156,508
Vermont .....	59	6,251	(D)	(D)	12	(D)	4	20	(D)	4
Virginia .....	67	21,642	2,530	2,530	1,852	663	-	627	597	-
Washington .....	982	896,925	49,219	40,909	21,649	1,508	26,413	41,903	1,062	65,528
West Virginia .....	6	(D)	11	11	(D)	-	(D)	(D)	-	(D)
Wisconsin .....	250	35,850	7,484	7,484	6,903	828	-	2,183	774	-
Wyoming .....	379	1,247,572	179,793	123,663	5,250	32,941	143,582	5,523	43,633	142,313
<b>Water Resources Regions</b>										
Region 01 New England .....	436	26,422	3,061	2,830	467	1,885	531	99	626	164
Region 02 Mid-Atlantic .....	962	109,870	27,235	26,695	22,407	4,598	(D)	13,952	2,222	(D)
Region 03 South Atlantic-Gulf .....	1,643	393,732	69,666	54,185	36,450	21,269	11,915	31,453	8,648	33,682
Region 04 Great Lakes .....	742	143,237	39,287	39,287	33,450	6,023	221	12,299	5,538	272
Region 05 Ohio .....	688	86,624	8,507	8,439	5,383	2,293	494	2,826	768	377
Region 06 Tennessee .....	67	(D)	99	99	42	20	(D)	23	(D)	(D)
Region 07 Upper Mississippi .....	672	196,395	61,141	61,117	54,932	3,745	2,315	20,036	4,138	84
Region 08 Lower Mississippi .....	549	310,823	206,051	204,413	197,460	12,018	(D)	209,408	13,402	(Z)
Region 09 Souris-Red-Rainy .....	48	20,494	3,249	2,812	3,245	-	(D)	1,907	-	(D)
Region 10 Missouri .....	2,893	5,393,852	575,566	506,566	206,472	99,976	276,837	167,655	107,096	273,622
Region 11 Arkansas-White-Red .....	639	1,022,964	119,135	107,415	97,004	23,153	6,943	92,571	10,603	13,991
Region 12 Texas-Gulf .....	712	664,545	103,431	86,346	83,761	5,160	14,454	75,671	3,560	14,549
Region 13 Rio Grande .....	299	37,274	15,794	14,144	7,290	-	10,809	18,422	-	24,870
Region 14 Upper Colorado .....	635	713,055	136,389	73,221	4,555	(D)	118,035	5,573	36,307	210,314
Region 15 Lower Colorado .....	216	687,082	21,863	19,124	6,614	-	15,248	14,905	-	67,602
Region 16 Great Basin .....	763	450,505	123,237	96,967	20,978	9,033	96,290	27,438	21,216	182,398
Region 17 Pacific Northwest .....	3,232	2,062,201	377,081	269,615	68,581	44,703	265,656	99,549	47,508	444,370
Region 18 California .....	4,253	816,572	179,622	138,728	77,747	49,902	67,800	171,019	138,818	138,511
Region 19 Alaska .....	9	(D)	107	106	45	(D)	-	20	(D)	-
Region 20 Hawaii .....	150	3,039	620	618	119	(D)	483	245	(D)	180

See footnote(s) at end of table.

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**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$100,000 to \$249,999									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup> (acres)	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	25,934	24,892,896	4,509,521	3,891,124	2,496,120	530,206	1,568,451	2,575,814	673,093	2,959,584
.....2013	26,354	23,094,855	4,396,129	3,872,916	2,502,082	508,202	1,558,856	3,060,658	677,777	2,757,086
<b>2018 DATA</b>										
Alabama .....	92	24,759	9,362	9,362	5,855	3,501	1	1,445	1,279	(Z)
Alaska .....	41	782	390	390	343	21	3	320	19	(Z)
Arizona .....	335	1,190,212	62,137	53,354	14,464	608	49,404	35,467	608	280,004
Arkansas .....	359	226,602	131,319	128,915	118,852	20,351	981	123,439	16,997	2,650
California .....	5,548	1,356,988	462,385	364,683	209,327	84,177	200,057	440,300	158,678	603,747
Colorado .....	966	1,616,500	318,058	272,696	97,315	84,265	150,468	139,725	93,647	299,314
Connecticut .....	12	1,758	108	108	-	108	-	-	12	-
Delaware .....	164	70,905	35,244	35,244	(D)	(D)	-	9,694	(D)	-
Florida .....	701	902,584	77,462	75,167	68,282	3,543	5,790	73,940	3,458	20,286
Georgia .....	457	204,605	61,271	59,969	54,579	7,003	9	32,672	5,357	13
Hawaii .....	193	402,573	928	928	-	-	918	-	-	1,547
Idaho .....	1,152	842,309	296,434	246,741	88,545	31,197	180,117	130,065	41,707	326,300
Illinois .....	323	150,255	65,315	65,315	61,193	(D)	3,910	41,182	198	3,910
Indiana .....	301	115,865	35,203	35,203	31,324	(D)	3,651	10,271	106	1,269
Iowa .....	178	67,049	25,375	25,375	23,051	(D)	2,340	13,993	(D)	540
Kansas .....	727	1,009,682	137,366	129,568	123,228	5,687	10,321	105,204	3,650	7,891
Kentucky .....	188	31,398	5,705	5,705	4,048	1,402	172	1,670	667	289
Louisiana .....	272	121,618	67,468	61,358	51,081	18,437	1,824	52,472	9,866	5,467
Maine .....	53	6,870	1,210	1,207	104	1,071	12	33	537	7
Maryland .....	88	11,494	5,794	5,794	4,545	1,223	8	3,148	1,016	7
Massachusetts .....	283	8,502	2,348	2,012	367	1,037	833	396	733	33
Michigan .....	459	104,941	58,190	58,190	48,091	16,001	-	38,372	3,290	-
Minnesota .....	410	190,143	65,737	65,737	56,849	8,830	10	23,630	5,923	35
Mississippi .....	186	137,025	43,486	43,126	41,830	1,650	14	26,884	732	(D)
Missouri .....	260	86,822	28,802	28,777	24,095	3,523	1,137	15,498	1,677	385
Montana .....	877	2,937,957	337,719	280,415	14,489	82,650	240,566	3,863	82,258	256,006
Nebraska .....	2,632	2,709,697	635,170	605,246	585,409	13,608	41,985	346,753	10,113	31,008
Nevada .....	244	357,567	107,390	68,725	15,315	32,330	63,580	41,391	64,755	168,755
New Hampshire .....	58	4,218	395	395	31	309	18	40	522	6
New Jersey .....	115	17,827	2,364	2,364	893	1,438	-	404	2,570	-
New Mexico .....	557	558,881	99,681	83,373	90,426	-	9,647	164,222	-	5,844
New York .....	257	32,438	4,006	3,946	1,370	976	1,514	847	2,567	309
North Carolina .....	272	67,859	11,071	9,895	6,687	4,329	9	2,129	4,146	14
North Dakota .....	136	488,356	20,843	20,843	14,817	-	6,016	10,259	-	1,862
Ohio .....	178	9,424	781	761	(D)	194	39	295	162	(D)
Oklahoma .....	394	729,154	83,819	83,819	78,053	1	5,743	108,186	(D)	5,734
Oregon .....	1,158	1,844,770	226,202	155,715	43,401	56,548	127,864	74,934	99,255	254,895
Pennsylvania .....	399	30,924	4,679	4,679	3,044	1,346	202	846	344	113
Rhode Island .....	34	761	239	239	218	-	1	216	-	2
South Carolina .....	172	47,886	10,339	10,339	7,051	3,343	56	5,069	1,088	(D)
South Dakota .....	131	350,900	17,638	17,638	5,852	664	11,120	2,332	(D)	7,567
Tennessee .....	198	70,366	11,595	11,595	11,338	119	70	3,221	83	162
Texas .....	1,362	1,891,372	380,776	356,149	338,015	4,879	37,935	338,798	6,881	63,754
Utah .....	801	1,040,977	208,607	155,213	23,737	11,075	176,560	57,956	36,373	300,388
Vermont .....	113	8,614	899	878	195	174	483	231	100	90
Virginia .....	141	28,221	1,363	1,363	567	692	24	135	351	23
Washington .....	1,056	646,021	107,088	88,352	34,575	22	72,412	45,072	36	127,669
West Virginia .....	6	1,180	310	310	-	310	-	-	35	-
Wisconsin .....	492	143,710	41,304	41,298	33,572	5,334	2,219	12,884	1,900	1,333
Wyoming .....	403	1,991,575	198,146	112,674	24,088	15,774	158,411	35,912	9,274	180,298
<b>Water Resources Regions</b>										
Region 01 New England .....	498	26,267	4,941	4,602	889	2,561	1,268	815	1,820	126
Region 02 Mid-Atlantic .....	900	139,674	49,949	49,889	44,772	4,656	290	14,721	4,300	138
Region 03 South Atlantic-Gulf .....	1,815	1,312,153	174,094	169,321	146,148	22,575	5,892	118,092	14,989	20,364
Region 04 Great Lakes .....	856	195,863	86,135	86,114	69,116	17,638	5,133	44,607	6,055	1,565
Region 05 Ohio .....	598	127,504	25,294	25,274	22,974	1,876	276	17,512	991	397
Region 06 Tennessee .....	87	3,457	400	400	(D)	(D)	19	(D)	(D)	27
Region 07 Upper Mississippi .....	1,278	500,221	170,214	170,184	152,952	10,875	6,138	75,073	3,395	5,278
Region 08 Lower Mississippi .....	848	482,695	244,104	239,740	217,819	36,133	1,851	193,458	25,018	5,531
Region 09 Souris-Red-Rainy .....	63	21,909	7,816	7,816	1,552	6,260	1	811	5,644	1
Region 10 Missouri .....	4,906	9,438,564	1,309,905	1,164,339	765,952	120,285	436,871	547,164	88,662	510,100
Region 11 Arkansas-White-Red .....	1,382	1,951,658	318,007	291,977	288,005	18,513	21,093	320,841	9,863	21,001
Region 12 Texas-Gulf .....	1,169	1,391,430	324,047	303,460	286,456	2,749	34,795	289,865	4,791	62,454
Region 13 Rio Grande .....	349	437,937	62,119	50,366	45,830	(D)	15,784	93,787	(D)	22,985
Region 14 Upper Colorado .....	701	996,779	229,124	153,428	(D)	40,877	188,185	(D)	64,569	302,348
Region 15 Lower Colorado .....	366	1,235,284	80,975	69,622	24,744	3,488	55,075	65,987	7,808	295,579
Region 16 Great Basin .....	893	1,265,817	269,646	200,205	49,052	36,428	190,773	112,297	80,554	391,698
Region 17 Pacific Northwest .....	3,374	3,553,355	653,882	535,137	170,047	119,917	368,863	240,012	193,685	642,606
Region 18 California .....	5,617	1,408,974	497,551	367,932	209,327	84,177	235,223	440,300	158,678	675,838
Region 19 Alaska .....	41	782	390	390	343	21	3	320	19	(Z)
Region 20 Hawaii .....	193	402,573	928	928	-	-	918	-	-	1,547

See footnote(s) at end of table.

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**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$250,000 to \$499,999									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup> (acres)	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	20,450	33,338,889	6,592,987	5,936,621	4,134,372	720,408	1,953,391	4,571,022	921,586	3,382,308
.....2013	21,142	26,933,688	6,644,023	6,223,374	4,364,158	678,466	1,833,622	4,902,201	901,074	4,100,720
<b>2018 DATA</b>										
Alabama .....	74	142,376	9,858	9,858	63	9,789	3	65	3,549	1
Alaska .....	5	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Arizona .....	143	69,724	48,838	48,038	39,338	-	20,060	181,480	-	79,974
Arkansas .....	466	507,380	410,377	409,672	368,244	57,500	3,031	387,016	69,631	4,221
California .....	3,677	1,517,557	661,841	545,263	369,740	68,677	295,231	883,377	119,865	785,318
Colorado .....	794	3,660,463	395,796	321,568	179,134	61,986	174,749	260,209	114,684	261,354
Connecticut .....	67	3,434	616	556	218	346	24	(D)	97	(D)
Delaware .....	60	41,124	25,835	25,835	(D)	(D)	-	9,318	(D)	-
Florida .....	657	226,855	56,312	53,312	55,383	834	180	53,594	838	51
Georgia .....	423	336,467	110,802	110,802	88,934	26,016	1	81,626	15,690	4
Hawaii .....	79	279,611	3,194	2,996	-	154	3,029	-	(D)	3,842
Idaho .....	927	1,705,674	449,018	387,290	102,716	69,454	281,504	179,142	136,676	558,423
Illinois .....	324	183,647	58,951	57,649	56,817	534	1,895	62,297	166	564
Indiana .....	191	99,718	36,808	36,468	28,361	8,436	-	11,765	4,993	-
Iowa .....	126	95,832	22,588	22,588	21,091	1,104	1,800	6,947	312	594
Kansas .....	824	1,514,216	288,261	281,877	280,886	2,130	17,020	270,971	1,320	7,671
Kentucky .....	80	14,074	1,164	1,164	(D)	310	796	19	179	568
Louisiana .....	213	296,409	141,718	132,484	130,513	20,954	9,100	120,359	25,052	754
Maine .....	78	9,863	3,975	3,972	993	2,522	451	(D)	1,603	(D)
Maryland .....	80	45,046	13,777	13,777	10,755	3,580	-	3,067	1,630	-
Massachusetts .....	77	25,569	2,832	2,832	408	2,092	600	48	1,830	(D)
Michigan .....	415	250,694	72,199	71,599	53,722	18,363	86	46,551	7,144	97
Minnesota .....	302	180,373	47,442	47,442	45,597	(D)	1,784	14,918	(D)	2,601
Mississippi .....	173	146,978	84,141	84,111	82,442	1,692	-	57,645	894	-
Missouri .....	220	211,026	87,131	87,131	79,070	6,828	1,280	51,629	4,972	644
Montana .....	693	5,084,852	360,790	277,374	5,770	58,344	296,683	1,741	61,093	364,613
Nebraska .....	2,639	3,644,370	1,224,450	1,206,339	1,072,919	28,329	150,094	603,683	11,802	117,083
Nevada .....	178	463,048	124,455	95,065	48,315	45,290	42,610	147,225	99,255	107,806
New Hampshire .....	34	2,917	190	186	(D)	(D)	(D)	11	(D)	(D)
New Jersey .....	285	54,238	19,802	19,566	15,354	4,357	66	10,114	594	45
New Mexico .....	199	254,318	54,673	51,665	21,925	(D)	34,890	40,803	528	36,810
New York .....	231	51,309	4,694	4,694	601	2,840	1,150	1,038	5,836	154
North Carolina .....	235	93,913	4,779	4,779	1,871	3,891	(D)	284	2,297	88
North Dakota .....	198	351,474	46,926	46,926	26,884	2,542	17,500	14,994	1,271	9,600
Ohio .....	136	18,937	4,154	4,154	910	3,170	59	622	586	(D)
Oklahoma .....	125	368,164	55,226	50,566	54,582	(D)	(D)	67,244	(D)	(D)
Oregon .....	710	2,349,202	188,980	127,520	53,668	26,596	108,670	74,198	27,510	152,777
Pennsylvania .....	290	49,908	2,287	2,287	833	1,417	(D)	354	506	21
Rhode Island .....	22	1,241	295	231	(D)	(D)	32	22	(D)	17
South Carolina .....	104	63,651	24,115	22,763	22,543	2,924	-	19,428	1,454	-
South Dakota .....	223	517,438	68,356	68,302	65,608	692	2,743	36,589	692	2,683
Tennessee .....	74	110,871	7,074	7,074	7,032	(D)	(D)	1,649	(D)	8
Texas .....	1,332	3,210,702	612,615	566,545	541,255	26,807	50,230	630,012	44,983	100,115
Utah .....	277	846,893	121,477	92,542	27,128	7,120	88,184	87,688	4,940	159,531
Vermont .....	46	2,582	500	440	208	206	(D)	104	122	102
Virginia .....	148	54,666	10,374	10,374	1,825	9,523	-	516	2,063	-
Washington .....	953	516,987	214,339	200,299	58,955	18,821	136,923	111,118	38,742	269,414
West Virginia .....	1	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Wisconsin .....	348	188,227	65,041	64,642	60,175	4,392	703	16,909	2,015	190
Wyoming .....	494	3,474,417	343,808	253,891	25,442	109,026	209,318	22,314	103,645	354,080
<b>Water Resources Regions</b>										
Region 01 New England .....	287	43,539	8,029	7,898	1,881	5,177	1,167	337	3,620	71
Region 02 Mid-Atlantic .....	818	218,249	71,873	71,637	53,875	18,272	(D)	24,038	8,620	(D)
Region 03 South Atlantic-Gulf .....	1,536	878,895	209,237	204,885	169,874	46,742	339	155,345	25,054	145
Region 04 Great Lakes .....	830	418,466	127,569	126,569	101,168	25,033	1,225	58,302	10,761	327
Region 05 Ohio .....	346	90,655	11,538	11,538	4,820	3,945	2,718	3,068	2,593	1,158
Region 06 Tennessee .....	32	(D)	(D)	(D)	(D)	512	(D)	(D)	(D)	(D)
Region 07 Upper Mississippi .....	1,045	592,471	172,770	171,069	158,135	14,001	2,532	96,951	6,295	811
Region 08 Lower Mississippi .....	883	1,032,320	643,452	633,483	600,396	65,855	2,526	568,365	81,946	3,715
Region 09 Souris-Red-Rainy .....	108	386,302	22,762	22,762	11,660	9,342	1,760	8,713	5,799	2,580
Region 10 Missouri .....	4,861	13,657,379	2,059,983	1,943,681	1,383,518	83,748	634,273	881,319	101,054	758,868
Region 11 Arkansas-White-Red .....	1,169	2,642,741	574,943	558,778	504,604	25,439	76,063	552,071	20,195	75,974
Region 12 Texas-Gulf .....	985	2,180,843	432,741	386,306	375,992	21,107	35,619	386,432	43,615	85,504
Region 13 Rio Grande .....	226	255,156	115,498	92,938	68,325	1,000	53,223	171,606	(D)	51,365
Region 14 Upper Colorado .....	321	2,778,451	254,329	143,169	201	120,691	133,415	200	137,038	229,307
Region 15 Lower Colorado .....	143	69,724	48,838	48,038	39,338	-	20,060	181,480	-	79,974
Region 16 Great Basin .....	444	1,331,834	273,911	215,718	107,838	55,910	125,038	335,133	111,125	259,964
Region 17 Pacific Northwest .....	2,623	4,685,201	888,529	751,546	178,086	148,028	565,240	285,240	232,572	1,044,386
Region 18 California .....	3,709	1,795,455	673,210	543,029	374,598	75,452	294,963	862,375	130,215	784,214
Region 19 Alaska .....	5	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Region 20 Hawaii .....	79	279,611	3,194	2,996	-	154	3,029	-	(D)	3,842

See footnote(s) at end of table.

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**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$500,000 to \$999,999									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup> (acres)	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	17,545	41,857,868	9,882,727	9,298,942	7,170,228	960,667	2,085,837	7,207,350	1,179,797	4,452,304
.....2013	18,652	38,871,270	9,918,317	9,578,884	7,321,629	1,022,930	1,980,898	8,749,323	1,312,602	3,945,919
<b>2018 DATA</b>										
Alabama .....	158	138,032	21,474	21,474	14,722	3,907	3,032	5,900	2,062	758
Alaska .....	17	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Arizona .....	149	108,729	91,360	91,258	11,070	6,590	75,648	47,527	29,328	353,630
Arkansas .....	525	901,942	728,487	728,487	657,846	110,586	5,694	715,794	101,166	6,068
California .....	3,273	3,339,311	1,030,085	836,477	542,068	127,096	531,531	1,225,011	237,101	1,599,477
Colorado .....	420	1,706,600	421,951	391,925	285,668	32,636	151,159	408,037	41,096	270,693
Connecticut .....	15	2,618	345	345	202	159	(D)	(D)	137	(D)
Delaware .....	104	130,139	44,050	41,630	(D)	(D)	(D)	18,092	(D)	(D)
Florida .....	470	756,236	83,428	72,808	71,309	3,157	11,310	50,488	1,273	3,759
Georgia .....	282	310,482	180,772	170,857	163,442	17,330	-	110,691	12,521	-
Hawaii .....	57	57,390	(D)	(D)	-	(D)	488	-	(D)	831
Idaho .....	579	902,091	457,230	430,942	156,512	53,543	248,335	242,689	98,697	550,156
Illinois .....	181	332,723	100,834	100,834	100,240	555	-	41,465	53	-
Indiana .....	259	406,894	107,765	107,657	89,932	16,908	925	48,756	4,738	315
Iowa .....	127	207,088	34,637	34,637	32,699	1,890	41	11,588	90	15
Kansas .....	845	2,797,962	580,627	574,912	563,420	4,145	13,378	609,789	1,784	11,566
Kentucky .....	38	6,355	2,270	2,270	(D)	(D)	(D)	(D)	14	104
Louisiana .....	303	576,887	305,039	302,939	288,474	3,853	13,762	337,777	2,893	19,989
Maine .....	15	3,276	864	794	(D)	(D)	(D)	41	65	(D)
Maryland .....	96	83,730	36,939	36,939	30,388	9,220	330	25,233	2,883	69
Massachusetts .....	45	8,704	2,496	2,496	1,049	966	480	65	414	480
Michigan .....	435	384,185	143,513	143,263	120,195	18,823	4,789	65,037	8,486	1,478
Minnesota .....	368	423,078	118,977	118,977	115,622	3,687	136	51,546	1,314	46
Mississippi .....	309	486,631	303,214	303,214	289,666	16,301	-	185,032	10,649	-
Missouri .....	390	660,663	325,142	325,222	307,346	18,552	1,544	219,020	8,720	448
Montana .....	465	5,305,687	411,183	332,142	8,786	146,304	256,490	5,040	178,131	302,686
Nebraska .....	2,834	6,108,963	2,088,133	2,074,085	1,926,418	42,620	144,333	1,057,826	18,056	133,894
Nevada .....	119	910,992	95,557	89,482	64,312	15,475	15,770	209,555	32,953	49,410
New Hampshire .....	48	1,978	350	350	245	(D)	(D)	142	(D)	(D)
New Jersey .....	159	54,017	18,315	18,315	13,316	5,048	789	4,833	3,253	353
New Mexico .....	194	1,027,903	117,167	101,067	78,659	-	39,678	115,009	-	60,444
New York .....	92	26,649	7,822	7,772	4,339	2,840	636	1,267	4,000	654
North Carolina .....	162	62,925	12,720	12,720	1,227	11,461	(D)	497	3,963	16
North Dakota .....	104	178,241	77,633	77,633	27,673	-	49,960	16,224	-	43,780
Ohio .....	120	78,488	8,188	8,186	2,614	3,795	1,791	877	593	1,380
Oklahoma .....	195	676,080	69,158	54,523	50,148	5,658	13,350	60,418	3,522	12,700
Oregon .....	633	2,129,931	238,396	221,559	91,849	83,226	63,377	157,653	102,936	112,005
Pennsylvania .....	127	20,840	2,714	2,705	956	1,695	(D)	105	170	16
Rhode Island .....	15	4,687	1,815	1,815	(D)	(D)	1,031	(D)	96	77
South Carolina .....	99	190,948	51,160	49,960	39,870	11,290	-	32,158	5,643	-
South Dakota .....	122	292,578	43,709	42,550	37,658	6,026	16	15,317	5,980	45
Tennessee .....	138	273,557	30,945	30,945	30,763	(D)	101	7,691	(D)	111
Texas .....	970	3,482,795	832,126	783,737	703,538	64,711	72,490	765,095	97,235	113,240
Utah .....	251	1,289,332	166,397	139,022	53,464	18,224	104,175	118,452	23,414	267,007
Vermont .....	17	2,061	244	226	31	(D)	183	15	(D)	(D)
Virginia .....	80	49,131	7,203	7,203	634	6,550	-	254	1,347	-
Washington .....	769	2,667,761	203,739	173,556	60,157	19,809	124,198	146,238	47,149	317,902
West Virginia .....	1	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Wisconsin .....	151	142,880	54,916	54,910	45,696	9,218	-	24,651	6,551	-
Wyoming .....	220	2,146,300	218,612	172,896	38,947	54,986	133,878	46,987	77,532	216,604
<b>Water Resources Regions</b>										
Region 01 New England .....	141	21,756	5,896	5,826	2,234	2,002	1,683	456	807	619
Region 02 Mid-Atlantic .....	624	343,202	112,642	110,204	92,019	23,268	1,212	49,418	7,389	(D)
Region 03 South Atlantic-Gulf .....	1,127	1,422,486	350,847	329,112	288,825	52,991	11,422	198,635	29,456	3,783
Region 04 Great Lakes .....	663	589,496	198,083	197,777	167,680	23,412	7,274	86,817	14,936	3,377
Region 05 Ohio .....	291	457,442	86,772	86,761	72,649	13,370	(D)	38,620	3,044	280
Region 06 Tennessee .....	120	(D)	9,759	9,759	(D)	(D)	3,101	3,043	(D)	861
Region 07 Upper Mississippi .....	723	809,077	236,949	236,841	213,861	22,068	1,102	92,463	8,340	376
Region 08 Lower Mississippi .....	1,305	2,357,797	1,438,931	1,436,831	1,350,538	94,695	14,414	1,248,208	93,504	21,292
Region 09 Souris-Red-Rainy .....	53	145,187	43,893	43,893	43,880	480	(D)	28,384	200	(D)
Region 10 Missouri .....	4,300	15,580,984	3,133,283	3,013,911	2,394,566	231,464	571,005	1,522,497	218,166	713,360
Region 11 Arkansas-White-Red .....	1,269	4,767,847	1,105,395	1,045,001	1,013,102	64,275	57,724	1,150,879	64,256	66,635
Region 12 Texas-Gulf .....	723	2,299,482	576,489	550,964	476,876	35,036	72,490	479,047	53,260	113,240
Region 13 Rio Grande .....	172	397,270	102,264	91,736	64,779	11,156	47,290	159,270	15,162	60,719
Region 14 Upper Colorado .....	118	783,742	119,524	91,204	(D)	(D)	95,873	(D)	46,716	240,662
Region 15 Lower Colorado .....	159	117,159	96,266	93,014	15,973	6,590	75,648	55,935	29,328	353,630
Region 16 Great Basin .....	391	2,216,435	289,814	263,814	146,198	33,699	119,383	355,715	56,367	268,997
Region 17 Pacific Northwest .....	2,003	6,039,850	935,085	849,984	282,725	188,558	465,446	520,119	288,885	1,001,678
Region 18 California .....	3,289	3,364,980	1,038,812	841,087	537,165	132,776	539,479	1,216,603	248,021	1,601,519
Region 19 Alaska .....	17	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Region 20 Hawaii .....	57	57,390	(D)	(D)	(D)	(D)	488	(D)	(D)	831

See footnote(s) at end of table.

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**Table 21. Irrigated Farms by Market Value of Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$1,000,000 or more									
	Farms with irrigation				Water source <sup>1</sup>			Quantity of water applied <sup>1</sup>		
	Farms	Land in farms <sup>2</sup> (acres)	Acres irrigated <sup>2</sup>	Irrigated cropland harvested <sup>2</sup> (acres)	Ground water used (acres)	On-farm surface water used (acres)	Off-farm water used (acres)	Ground water used (acre-feet)	On-farm surface water used (acre-feet)	Off-farm water used (acre-feet)
United States .....2018	22,759	80,099,722	29,039,545	28,120,280	20,420,918	3,162,142	7,176,210	25,077,319	4,180,461	17,554,424
.....2013	22,060	82,010,112	29,139,123	28,233,706	21,071,139	3,373,341	6,473,714	29,240,811	5,212,149	15,411,554
<b>2018 DATA</b>										
Alabama .....	195	395,294	117,311	117,191	67,537	47,760	14,801	34,303	33,244	6,189
Alaska .....	3	(D)	12	12	10	-	(D)	16	-	(D)
Arizona .....	360	776,071	695,138	693,051	250,237	52,965	490,732	824,876	119,401	2,315,773
Arkansas .....	895	3,199,455	2,774,854	2,772,659	2,541,507	371,495	7,936	2,958,898	443,586	4,807
California .....	5,276	8,524,447	5,738,651	5,391,911	3,181,792	700,746	2,945,833	7,641,896	1,421,770	8,111,936
Colorado .....	393	3,640,079	630,223	598,831	494,758	25,900	128,730	670,068	26,116	200,318
Connecticut .....	121	27,994	4,056	4,056	2,353	1,794	(D)	885	2,098	207
Delaware .....	55	143,917	84,826	84,731	66,862	6,519	12,444	30,620	2,617	6,000
Florida .....	909	2,030,382	1,037,290	1,024,590	476,257	276,994	304,199	466,914	159,181	438,617
Georgia .....	545	1,491,288	723,655	705,463	618,856	80,993	33,853	426,194	54,253	9,321
Hawaii .....	90	92,181	16,877	14,112	(D)	1,244	13,251	2,740	2,076	19,851
Idaho .....	620	2,021,661	1,580,516	1,537,971	640,555	179,313	762,985	1,219,169	347,598	1,624,562
Illinois .....	455	1,454,709	324,876	322,126	312,360	13,056	496	165,530	4,798	126
Indiana .....	597	1,550,629	383,630	383,630	358,518	(D)	(D)	143,884	10,518	(D)
Iowa .....	182	337,925	64,447	64,447	61,465	2,042	967	17,302	1,047	365
Kansas .....	981	6,157,258	1,315,279	1,305,854	1,266,723	39,307	34,534	1,342,904	18,588	21,169
Kentucky .....	45	201,507	45,262	45,262	26,886	21,570	(D)	9,052	7,284	17
Louisiana .....	261	697,078	473,299	473,299	434,230	40,457	(D)	312,408	43,302	(D)
Maine .....	37	166,453	27,576	22,876	(D)	18,115	2,424	(D)	7,337	707
Maryland .....	116	125,480	53,900	53,900	45,154	9,586	1,106	16,580	4,255	96
Massachusetts .....	56	26,208	6,949	6,949	1,673	6,066	(D)	996	15,405	(D)
Michigan .....	728	1,282,461	504,067	498,867	419,446	82,803	5,303	213,550	53,018	2,122
Minnesota .....	344	792,627	260,938	260,888	256,094	5,245	823	124,594	2,686	470
Mississippi .....	406	1,590,364	1,186,892	1,186,887	1,112,899	110,903	(D)	794,542	62,939	(D)
Missouri .....	568	1,691,498	944,414	933,339	909,595	69,739	55	750,883	30,330	119
Montana .....	220	6,251,753	444,789	327,021	2,935	196,357	245,485	1,899	308,275	277,468
Nebraska .....	2,225	9,484,902	3,430,875	3,400,696	3,199,387	39,848	260,478	2,064,828	16,736	240,868
Nevada .....	90	2,463,888	286,541	241,671	157,645	59,592	71,302	442,375	148,432	206,677
New Hampshire .....	19	(D)	696	694	243	546	-	425	(D)	-
New Jersey .....	126	78,263	40,787	40,591	32,513	10,624	-	19,840	5,701	-
New Mexico .....	141	382,532	221,581	210,360	141,680	(D)	111,476	324,022	200	294,567
New York .....	246	171,216	26,021	25,372	10,167	13,341	3,351	3,243	6,617	3,336
North Carolina .....	247	868,477	90,318	87,318	10,455	79,632	360	5,036	30,206	18
North Dakota .....	221	1,384,007	151,402	151,278	119,653	18,239	17,650	62,546	17,287	11,984
Ohio .....	95	128,871	20,999	20,999	11,645	8,991	(D)	5,472	5,135	(D)
Oklahoma .....	239	1,136,245	360,540	319,450	291,500	31,782	42,960	309,830	32,392	39,222
Oregon .....	713	1,971,289	584,381	523,890	195,320	108,039	284,092	317,326	191,338	671,900
Pennsylvania .....	219	86,953	24,328	24,298	22,204	3,328	466	33,052	463	119
Rhode Island .....	1	(D)	(D)	(D)	(D)	(D)	-	(D)	(D)	-
South Carolina .....	169	542,310	156,558	155,538	139,736	24,058	(D)	114,504	17,526	(D)
South Dakota .....	373	3,183,882	214,786	206,203	90,831	15,907	112,431	42,168	15,826	96,534
Tennessee .....	195	793,242	136,471	136,471	123,982	12,487	39	52,557	13,788	37
Texas .....	1,076	6,955,846	1,884,768	1,848,452	1,525,242	105,971	294,907	1,998,100	117,478	728,283
Utah .....	187	529,448	170,973	165,541	96,731	29,890	56,399	197,372	60,700	94,237
Vermont .....	33	22,333	(D)	(D)	352	(D)	(D)	298	581	(D)
Virginia .....	124	137,895	24,472	24,472	4,115	20,421	74	1,458	5,778	54
Washington .....	1,134	1,729,345	1,176,255	1,162,955	322,804	58,181	804,795	646,684	114,149	1,896,047
West Virginia .....	7	(D)	5,432	5,432	(D)	5,040	(D)	75	1,260	(D)
Wisconsin .....	321	898,001	345,160	343,165	325,414	20,564	5,514	211,567	9,954	916
Wyoming .....	100	2,467,758	245,167	194,204	36,851	111,627	99,227	49,956	186,969	227,512
<b>Water Resources Regions</b>										
Region 01 New England .....	264	244,704	40,314	35,612	15,209	27,204	2,782	6,486	25,175	948
Region 02 Mid-Atlantic .....	764	607,817	243,935	243,437	176,912	60,145	14,025	104,004	23,675	6,263
Region 03 South Atlantic-Gulf .....	2,034	5,193,968	2,109,829	2,074,797	1,291,859	521,768	343,865	1,036,440	297,003	450,843
Region 04 Great Lakes .....	984	1,748,048	654,268	648,624	541,957	107,726	9,098	257,951	62,248	5,597
Region 05 Ohio .....	644	1,636,925	303,375	300,597	265,221	37,930	(D)	115,892	17,677	1,187
Region 06 Tennessee .....	84	(D)	57,416	57,416	(D)	27,474	9,583	11,385	23,222	3,762
Region 07 Upper Mississippi .....	1,204	3,166,409	931,761	929,716	888,807	48,799	7,029	496,966	22,450	(D)
Region 08 Lower Mississippi .....	1,873	6,754,794	4,996,619	4,994,344	4,708,190	460,596	(D)	4,360,987	488,723	4,195
Region 09 Souris-Red-Rainy .....	129	529,948	126,480	126,480	115,618	11,670	-	53,626	6,266	-
Region 10 Missouri .....	4,033	27,947,976	5,268,761	5,057,434	4,177,824	427,209	758,973	3,000,038	535,869	837,458
Region 11 Arkansas-White-Red .....	1,263	8,515,499	2,574,614	2,501,696	2,426,689	124,135	95,398	2,959,792	101,243	88,990
Region 12 Texas-Gulf .....	777	3,849,257	1,053,178	1,032,374	770,878	41,211	271,517	984,267	51,430	668,930
Region 13 Rio Grande .....	179	571,123	286,121	259,859	168,699	54,704	103,130	394,226	72,328	181,080
Region 14 Upper Colorado .....	49	767,296	119,800	113,600	-	14,540	105,556	-	37,807	303,109
Region 15 Lower Colorado .....	370	822,696	732,318	730,231	260,537	52,965	517,612	854,416	119,401	2,468,203
Region 16 Great Basin .....	272	2,229,558	455,074	407,657	247,721	58,012	163,387	599,542	153,412	353,542
Region 17 Pacific Northwest .....	2,457	6,635,707	3,330,562	3,211,126	1,153,890	373,833	1,815,372	2,176,340	707,435	4,184,793
Region 18 California .....	5,286	8,518,212	5,738,231	5,381,156	3,184,822	710,976	2,934,553	7,662,206	1,433,020	7,973,906
Region 19 Alaska .....	3	(D)	12	12	10	-	(D)	16	-	(D)
Region 20 Hawaii .....	90	92,181	16,877	14,112	(D)	1,244	13,251	2,740	2,076	19,851

<sup>1</sup> May not add due to rounding.

<sup>2</sup> Area consists of harvested cropland in the open and rounded square footage to the nearest acre.

**Table 22. Irrigated Farms by Percent of Total Sales from Irrigated Crops and Livestock: 2018 and 2013**

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

Geographic area	Farms by percent of total sales from -									
	Irrigated crops						Non-irrigated crops and livestock			
	None	1 to 24 percent	25 to 49 percent	50 to 74 percent	75 to 99 percent	100 percent	None	1 to 49 percent	50 to 99 percent	100 percent
United States ..... 2018	26,169	29,227	22,309	30,666	40,969	82,134	82,134	61,093	62,078	26,169
..... 2013	19,009	28,253	18,970	29,242	40,442	93,321	93,321	59,448	57,459	19,009
<b>2018 DATA</b>										
Alabama .....	4	200	147	308	92	318	318	283	464	4
Alaska .....	-	27	43	31	15	192	192	26	90	-
Arizona .....	857	229	81	107	334	1,446	1,446	408	343	857
Arkansas .....	28	184	168	353	968	1,472	1,472	1,174	499	28
California .....	3,476	1,193	911	2,067	3,644	30,802	30,802	4,887	2,928	3,476
Colorado .....	1,953	1,632	1,657	2,067	3,255	3,965	3,965	4,589	4,022	1,953
Connecticut .....	-	209	119	94	101	146	146	195	328	-
Delaware .....	22	116	38	150	159	36	36	293	170	22
Florida .....	527	463	532	767	1,165	4,161	4,161	1,707	1,220	527
Georgia .....	117	473	481	751	895	1,144	1,144	1,348	1,252	117
Hawaii .....	42	140	96	284	264	1,037	1,037	397	387	42
Idaho .....	4,416	984	810	1,473	3,231	3,953	3,953	4,245	2,253	4,416
Illinois .....	-	527	288	369	308	315	315	530	962	-
Indiana .....	-	566	498	517	208	250	250	577	1,212	-
Iowa .....	4	355	187	247	70	198	198	170	689	4
Kansas .....	28	1,416	878	898	791	238	238	1,478	2,505	28
Kentucky .....	-	368	190	251	242	137	137	319	732	-
Louisiana .....	41	87	269	314	471	680	680	699	442	41
Maine .....	-	210	191	297	77	215	215	144	631	-
Maryland .....	-	186	111	234	174	254	254	310	395	-
Massachusetts .....	28	100	203	122	295	587	587	383	337	28
Michigan .....	20	1,051	529	713	813	760	760	1,366	1,740	20
Minnesota .....	-	508	506	533	468	352	352	890	1,125	-
Mississippi .....	13	180	155	365	588	320	320	847	441	13
Missouri .....	75	694	391	408	614	523	523	825	1,282	75
Montana .....	1,574	1,794	1,149	1,268	1,821	1,281	1,281	2,811	3,221	1,574
Nebraska .....	236	1,996	1,781	2,686	4,853	1,461	1,461	6,906	4,410	236
Nevada .....	399	166	169	164	345	614	614	483	361	399
New Hampshire .....	7	194	79	92	110	249	249	124	351	7
New Jersey .....	-	326	141	280	192	646	646	324	615	-
New Mexico .....	1,874	607	866	1,050	1,013	4,683	4,683	1,915	1,621	1,874
New York .....	23	372	262	450	429	612	612	632	881	23
North Carolina .....	82	511	444	297	302	815	815	398	1,156	82
North Dakota .....	-	428	74	44	91	83	83	94	543	-
Ohio .....	-	280	316	202	171	632	632	269	700	-
Oklahoma .....	115	472	378	383	286	201	201	453	1,066	115
Oregon .....	3,060	1,600	1,218	1,985	2,372	3,559	3,559	3,461	3,714	3,060
Pennsylvania .....	-	819	247	547	447	706	706	698	1,362	-
Rhode Island .....	-	14	29	69	34	81	81	60	86	-
South Carolina .....	77	265	209	384	112	442	442	376	594	77
South Dakota .....	22	524	333	134	152	54	54	240	903	22
Tennessee .....	-	581	304	262	130	175	175	284	993	-
Texas .....	1,413	2,168	1,763	1,619	2,333	2,701	2,701	3,345	4,538	1,413
Utah .....	2,618	1,046	1,174	1,747	3,141	2,849	2,849	4,504	2,604	2,618
Vermont .....	2	193	49	133	72	124	124	128	319	2
Virginia .....	-	446	289	246	125	271	271	269	837	-
Washington .....	2,098	977	599	1,181	1,697	4,707	4,707	2,405	2,049	2,098
West Virginia .....	-	104	34	190	78	76	76	123	283	-
Wisconsin .....	-	480	142	407	369	729	729	645	753	-
Wyoming .....	918	766	781	1,126	1,052	882	882	2,056	1,669	918
<b>Water Resources Regions</b>										
Region 01 New England .....	35	804	631	733	646	1,315	1,315	969	1,845	35
Region 02 Mid-Atlantic .....	45	1,806	793	1,447	1,181	2,045	2,045	1,888	3,339	45
Region 03 South Atlantic-Gulf .....	820	1,926	1,836	2,589	2,667	6,932	6,932	4,306	4,712	820
Region 04 Great Lakes .....	22	1,746	1,010	1,389	1,399	1,527	1,527	2,310	3,234	22
Region 05 Ohio .....	-	1,417	922	988	524	1,053	1,053	1,017	2,834	-
Region 06 Tennessee .....	-	349	200	377	133	191	191	304	755	-
Region 07 Upper Mississippi .....	12	1,705	1,042	1,435	1,022	1,475	1,475	1,953	3,251	12
Region 08 Lower Mississippi .....	41	554	642	955	2,187	2,216	2,216	2,864	1,474	41
Region 09 Souris-Red-Rainy .....	-	199	84	90	111	103	103	179	305	-
Region 10 Missouri .....	2,440	6,942	4,757	5,872	8,436	4,409	4,409	12,827	13,180	2,440
Region 11 Arkansas-White-Red .....	656	2,120	1,784	1,580	1,917	1,497	1,497	2,969	4,432	656
Region 12 Texas-Gulf .....	1,275	1,598	1,427	1,484	1,842	2,360	2,360	2,765	3,586	1,275
Region 13 Rio Grande .....	1,449	451	488	949	806	4,597	4,597	1,518	1,176	1,449
Region 14 Upper Colorado .....	2,375	1,071	1,425	1,995	3,300	3,022	3,022	4,949	2,842	2,375
Region 15 Lower Colorado .....	1,074	384	183	183	405	1,609	1,609	521	634	1,074
Region 16 Great Basin .....	2,252	1,079	1,088	1,207	2,697	2,999	2,999	3,590	2,481	2,252
Region 17 Pacific Northwest .....	9,873	3,696	2,920	4,989	7,698	12,729	12,729	10,750	8,553	9,873
Region 18 California .....	3,758	1,213	938	2,089	3,719	30,826	30,826	4,991	2,968	3,758
Region 19 Alaska .....	-	27	43	31	15	192	192	26	90	-
Region 20 Hawaii .....	42	140	96	284	264	1,037	1,037	397	387	42

**Table 23. Methods Used in Deciding When to Irrigate: 2018**

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

Geographic area	Farms reporting any method	Farms reporting method used <sup>1</sup>									
		Condition of crop	Feel of soil	Soil moisture sensing device	Plant moisture sensing device	Commercial or government scheduling service	Reports on daily crop-water evapo-transpiration (ET)	Scheduled by water supplier (see text)	Personal calendar schedule	Computer simulation models	When neighbors begin to irrigate
United States .....	231,474	180,560	93,052	27,629	5,199	18,773	16,701	38,566	46,477	1,928	12,765
Alabama .....	1,069	991	452	82	2	11	7	27	100	-	11
Alaska .....	308	260	197	29	13	-	3	-	69	-	-
Arizona .....	3,054	2,164	931	211	61	275	87	563	836	19	179
Arkansas .....	3,173	2,901	1,374	339	46	241	210	40	739	81	256
California .....	42,093	32,756	16,977	9,650	3,091	4,421	5,872	4,934	12,448	610	1,511
Colorado .....	14,529	9,243	4,287	577	76	1,049	657	6,248	2,742	49	1,704
Connecticut .....	669	627	386	6	-	-	9	-	66	-	10
Delaware .....	521	484	236	87	6	23	21	-	29	35	83
Florida .....	7,615	6,292	2,761	1,185	90	389	412	90	1,154	85	165
Georgia .....	3,861	3,371	1,051	417	18	171	300	6	580	57	98
Hawaii .....	1,863	1,618	795	21	36	41	69	46	381	3	3
Idaho .....	14,867	10,261	5,263	587	83	1,185	599	4,837	3,065	91	1,369
Illinois .....	1,807	1,708	874	153	36	65	257	-	253	42	115
Indiana .....	2,039	1,815	1,071	340	68	124	222	51	397	87	169
Iowa .....	1,061	909	504	114	-	4	45	-	163	25	21
Kansas .....	4,249	3,536	1,769	801	73	994	711	80	400	8	144
Kentucky .....	1,188	1,054	627	97	1	40	27	27	177	-	41
Louisiana .....	1,862	1,695	701	205	23	47	48	2	257	15	15
Maine .....	990	870	684	77	3	4	3	29	250	-	-
Maryland .....	959	856	502	63	-	17	16	-	157	4	11
Massachusetts .....	1,335	1,164	735	183	32	6	88	-	150	-	28
Michigan .....	3,886	3,512	2,588	285	5	251	447	30	802	24	257
Minnesota .....	2,367	2,086	1,504	258	28	132	313	56	291	3	245
Mississippi .....	1,621	1,396	668	435	33	62	67	32	235	9	89
Missouri .....	2,705	2,452	1,357	150	18	151	184	16	442	38	58
Montana .....	8,887	6,371	2,833	502	46	359	200	2,492	1,754	33	762
Nebraska .....	13,013	10,712	6,310	3,973	279	2,193	2,760	676	834	134	869
Nevada .....	1,857	1,317	551	73	15	203	36	591	633	-	220
New Hampshire .....	731	672	472	25	2	7	-	-	92	2	-
New Jersey .....	1,585	1,488	858	208	-	49	33	-	235	6	-
New Mexico .....	10,093	6,669	3,359	499	56	1,429	59	4,256	2,572	1	968
New York .....	2,148	2,031	1,224	247	27	23	108	3	368	1	32
North Carolina .....	2,451	2,220	893	71	1	80	1	44	284	36	1
North Dakota .....	720	682	477	120	5	95	58	23	133	5	49
Ohio .....	1,601	1,464	1,081	98	17	2	12	1	168	8	-
Oklahoma .....	1,835	1,542	653	89	28	71	62	89	191	13	70
Oregon .....	13,794	10,472	5,278	865	200	799	469	2,996	3,049	41	992
Pennsylvania .....	2,766	2,419	1,590	171	24	26	2	22	347	-	24
Rhode Island .....	227	223	134	51	-	-	11	5	14	-	9
South Carolina .....	1,489	1,325	334	174	-	47	7	1	156	12	25
South Dakota .....	1,219	1,109	585	194	26	44	98	-	147	-	71
Tennessee .....	1,452	1,289	454	197	42	66	30	1	147	34	-
Texas .....	11,997	10,170	4,384	927	188	388	592	764	1,938	163	325
Utah .....	12,575	7,686	3,082	228	90	1,811	119	6,095	2,385	41	651
Vermont .....	573	537	355	27	24	51	24	51	130	22	31
Virginia .....	1,377	1,242	721	67	22	30	15	-	269	1	22
Washington .....	11,259	8,927	5,602	1,920	208	711	963	1,380	2,992	46	468
West Virginia .....	482	385	266	54	5	-	-	-	5	23	-
Wisconsin .....	2,127	1,825	1,207	385	29	117	295	3	259	18	58
Wyoming .....	5,525	3,762	2,055	112	23	469	96	1,959	1,192	3	536
<b>Water Resources Regions</b>											
Region 01 New England .....	4,164	3,739	2,540	368	59	67	156	82	636	24	71
Region 02 Mid-Atlantic .....	7,317	6,562	3,957	681	38	144	107	22	1,035	69	121
Region 03 South Atlantic-Gulf .....	16,770	14,420	5,684	1,955	131	692	759	190	2,321	190	342
Region 04 Great Lakes .....	7,093	6,369	4,429	525	75	283	601	36	1,385	58	372
Region 05 Ohio .....	4,904	4,498	2,790	567	73	177	211	79	626	86	134
Region 06 Tennessee .....	1,250	1,126	476	74	2	29	2	2	158	-	-
Region 07 Upper Mississippi .....	6,691	6,023	3,659	764	83	295	773	41	885	68	429
Region 08 Lower Mississippi .....	6,595	5,977	2,826	1,068	129	409	389	47	1,218	157	261
Region 09 Souris-Red-Rainy .....	587	545	313	68	1	54	69	18	80	3	14
Region 10 Missouri .....	32,856	25,779	13,998	5,541	459	3,776	3,886	5,557	4,509	229	2,318
Region 11 Arkansas-White-Red .....	9,554	7,367	3,031	972	131	1,183	927	1,485	1,092	81	521
Region 12 Texas-Gulf .....	9,986	8,578	3,825	658	159	199	361	488	1,578	105	266
Region 13 Rio Grande .....	8,740	5,550	2,921	367	34	1,243	105	4,053	2,339	7	911
Region 14 Upper Colorado .....	13,188	8,155	3,663	218	30	976	129	5,611	2,881	4	1,329
Region 15 Lower Colorado .....	3,838	2,588	1,126	307	61	430	110	798	1,052	19	206
Region 16 Great Basin .....	11,322	7,406	2,907	259	101	1,599	168	5,224	2,165	44	785
Region 17 Pacific Northwest .....	41,905	30,869	16,755	3,545	493	2,776	2,015	9,789	9,542	171	3,118
Region 18 California .....	42,543	33,131	17,160	9,642	3,091	4,400	5,861	4,998	12,525	610	1,564
Region 19 Alaska .....	308	260	197	29	13	-	3	-	69	-	-
Region 20 Hawaii .....	1,863	1,618	795	21	36	41	69	46	381	3	3

<sup>1</sup> Respondents could choose more than one method.



**Table 24. Technical and Financial Assistance Received During the Past Five Years for Irrigation or Drainage Improvements: 2018**

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

Geographic area	Total <sup>1</sup>			USDA programs for water conservation and environmental improvements (CTA, EQIP, RCPP, WHIP, CIG) (see text)			Other USDA programs for stewardship (CSP) or easements (CRP, WRP, GRP, FRPP)		
	Farms	Farms receiving technical assistance	Farms receiving financial assistance	Farms	Farms receiving technical assistance	Farms receiving financial assistance	Farms	Farms receiving technical assistance	Farms receiving financial assistance
United States .....	23,714	16,979	16,079	12,427	8,909	10,020	3,020	1,868	2,290
Alabama .....	93	75	89	66	57	66	37	25	37
Alaska .....	13	13	9	10	10	9	-	-	-
Arizona .....	212	145	171	153	110	147	23	17	23
Arkansas .....	667	502	590	526	396	463	357	301	291
California .....	4,431	3,185	2,675	2,020	1,388	1,571	291	137	219
Colorado .....	1,554	1,313	1,162	1,047	962	887	160	132	128
Connecticut .....	39	39	35	34	34	32	2	2	-
Delaware .....	75	64	67	65	60	54	32	32	26
Florida .....	791	517	617	480	282	325	90	61	61
Georgia .....	469	260	314	237	147	189	81	49	57
Hawaii .....	87	77	49	46	43	42	2	2	-
Idaho .....	1,152	890	929	529	454	487	102	63	72
Illinois .....	172	52	157	1	1	-	17	-	17
Indiana .....	178	132	91	44	43	26	18	18	-
Iowa .....	87	69	28	17	-	17	17	-	17
Kansas .....	464	225	409	170	93	121	89	37	89
Kentucky .....	28	23	24	18	18	18	-	-	-
Louisiana .....	403	278	331	266	194	239	129	52	116
Maine .....	84	68	71	76	64	67	-	-	-
Maryland .....	112	96	60	67	64	43	-	-	-
Massachusetts .....	171	128	125	124	82	124	2	2	-
Michigan .....	373	236	182	49	20	29	43	23	23
Minnesota .....	248	174	135	80	76	47	1	-	1
Mississippi .....	369	197	337	298	160	277	115	84	101
Missouri .....	309	205	253	202	125	174	107	73	88
Montana .....	831	699	453	378	320	280	65	27	61
Nebraska .....	1,339	848	987	618	409	475	243	148	218
Nevada .....	362	284	260	264	232	199	98	47	52
New Hampshire .....	52	52	15	15	15	15	-	-	-
New Jersey .....	149	92	133	111	54	109	26	3	26
New Mexico .....	1,009	735	704	739	596	529	62	61	29
New York .....	258	169	219	176	153	150	54	31	26
North Carolina .....	197	95	159	46	13	33	-	-	-
North Dakota .....	143	128	126	85	62	54	18	18	-
Ohio .....	88	78	35	2	2	2	-	-	-
Oklahoma .....	74	57	21	14	14	-	-	-	-
Oregon .....	1,429	1,139	619	412	242	335	81	74	67
Pennsylvania .....	150	137	23	11	9	9	26	24	2
Rhode Island .....	57	48	33	52	43	33	5	5	5
South Carolina .....	154	58	111	124	41	98	26	26	-
South Dakota .....	97	52	68	30	22	30	5	1	5
Tennessee .....	118	52	108	63	41	63	28	6	28
Texas .....	1,110	595	865	718	383	579	207	78	176
Utah .....	1,202	908	867	826	603	706	73	70	38
Vermont .....	51	21	46	16	16	14	2	2	-
Virginia .....	58	35	24	-	-	-	-	-	-
Washington .....	1,211	1,058	502	402	284	284	190	134	95
West Virginia .....	122	33	122	122	33	122	45	-	45
Wisconsin .....	208	109	138	75	23	75	20	-	20
Wyoming .....	664	534	511	503	416	372	31	3	31
<b>Water Resources Regions</b>									
Region 01 New England .....	446	348	319	311	248	281	11	11	5
Region 02 Mid-Atlantic .....	696	515	468	402	288	363	112	64	80
Region 03 South Atlantic-Gulf .....	1,701	1,012	1,282	966	553	720	236	166	157
Region 04 Great Lakes .....	610	400	319	141	102	74	69	49	23
Region 05 Ohio .....	391	244	248	187	100	169	63	18	45
Region 06 Tennessee .....	102	51	89	24	24	24	25	-	25
Region 07 Upper Mississippi .....	636	348	452	144	80	136	65	8	65
Region 08 Lower Mississippi .....	1,403	984	1,250	1,089	769	974	635	452	535
Region 09 Souris-Red-Rainy .....	78	63	64	32	14	18	18	18	-
Region 10 Missouri .....	3,246	2,279	2,292	1,626	1,249	1,222	415	216	372
Region 11 Arkansas-White-Red .....	1,169	750	946	744	526	617	206	124	180
Region 12 Texas-Gulf .....	857	408	660	526	239	407	147	62	116
Region 13 Rio Grande .....	782	494	607	541	385	437	80	61	47
Region 14 Upper Colorado .....	1,423	1,241	1,058	1,053	960	864	59	56	55
Region 15 Lower Colorado .....	344	270	267	225	175	216	26	20	23
Region 16 Great Basin .....	1,421	1,085	964	886	686	688	187	113	106
Region 17 Pacific Northwest .....	3,887	3,214	2,080	1,466	1,075	1,197	376	294	237
Region 18 California .....	4,422	3,183	2,656	2,008	1,383	1,562	288	134	219
Region 19 Alaska .....	13	13	9	10	10	9	-	-	-
Region 20 Hawaii .....	87	77	49	46	43	42	2	2	-

See footnote(s) at end of table.

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**Table 24. Technical and Financial Assistance Received During the Past Five Years for Irrigation or Drainage Improvements: 2018 (continued)**

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

Geographic area	Non-USDA Federal programs (Bureau of Reclamation, EPA, or other)			State programs (including CREP), local water management, or water supply districts			Private businesses (equipment dealers, bankers, lenders)		
	Farms	Farms receiving technical assistance	Farms receiving financial assistance	Farms	Farms receiving technical assistance	Farms receiving financial assistance	Farms	Farms receiving technical assistance	Farms receiving financial assistance
United States .....	2,429	833	1,761	4,153	2,200	2,695	11,081	7,954	4,553
Alabama .....	34	25	9	34	25	9	54	45	20
Alaska .....	-	-	-	1	1	-	3	3	-
Arizona .....	16	-	16	-	-	-	75	51	24
Arkansas .....	55	22	40	83	31	59	170	90	119
California .....	299	140	189	835	433	522	2,155	1,749	642
Colorado .....	192	69	123	343	215	184	410	189	242
Connecticut .....	3	-	3	3	-	3	35	5	31
Delaware .....	4	-	4	4	-	4	10	4	9
Florida .....	23	3	20	399	262	292	160	133	67
Georgia .....	123	-	123	121	-	121	212	113	99
Hawaii .....	1	1	-	1	1	-	41	34	7
Idaho .....	149	19	149	136	44	92	569	372	376
Illinois .....	17	5	12	12	-	12	155	52	140
Indiana .....	-	-	-	-	-	-	150	105	65
Iowa .....	-	-	-	1	-	1	69	69	10
Kansas .....	1	1	-	21	20	16	356	162	272
Kentucky .....	-	-	-	6	2	4	4	3	2
Louisiana .....	41	-	41	54	39	41	125	84	67
Maine .....	2	-	2	2	-	2	23	16	7
Maryland .....	17	-	17	17	-	17	65	52	18
Massachusetts .....	11	-	11	45	2	45	59	46	13
Michigan .....	-	-	-	-	-	-	310	213	139
Minnesota .....	38	19	19	19	19	177	177	112	83
Mississippi .....	23	11	23	39	21	25	73	25	56
Missouri .....	9	-	9	41	37	26	88	46	44
Montana .....	24	24	1	112	80	36	441	364	167
Nebraska .....	78	50	33	204	154	153	754	436	418
Nevada .....	16	16	2	31	31	-	128	84	46
New Hampshire .....	-	-	-	4	4	-	33	33	-
New Jersey .....	30	-	30	35	4	35	69	36	54
New Mexico .....	166	67	133	99	-	99	317	251	94
New York .....	46	23	23	46	23	23	114	45	72
North Carolina .....	80	12	68	59	32	57	65	65	27
North Dakota .....	31	31	-	17	17	-	120	79	72
Ohio .....	-	-	-	-	-	-	86	76	33
Oklahoma .....	4	-	4	4	-	4	60	43	21
Oregon .....	112	49	65	357	154	257	858	823	84
Pennsylvania .....	15	4	13	15	4	11	117	104	14
Rhode Island .....	-	-	-	-	-	-	5	5	-
South Carolina .....	13	-	13	40	27	13	57	44	13
South Dakota .....	-	-	-	-	-	-	68	30	39
Tennessee .....	1	-	1	-	-	-	33	11	22
Texas .....	261	18	243	390	161	253	455	166	336
Utah .....	92	31	61	97	66	62	447	386	127
Vermont .....	32	2	30	35	3	32	35	5	30
Virginia .....	23	-	23	10	10	-	34	34	1
Washington .....	247	162	112	262	182	129	864	803	194
West Virginia .....	3	-	3	-	-	-	-	-	-
Wisconsin .....	-	-	-	5	3	2	135	86	63
Wyoming .....	97	29	93	114	93	54	238	172	74
<b>Water Resources Regions</b>									
Region 01 New England .....	48	2	46	86	8	80	188	108	81
Region 02 Mid-Atlantic .....	103	4	101	94	17	81	303	221	112
Region 03 South Atlantic-Gulf .....	261	51	221	668	352	501	532	380	220
Region 04 Great Lakes .....	42	42	-	45	43	2	484	324	229
Region 05 Ohio .....	12	-	12	16	3	13	213	157	75
Region 06 Tennessee .....	29	-	29	3	-	3	32	29	14
Region 07 Upper Mississippi .....	37	5	32	18	3	15	469	261	290
Region 08 Lower Mississippi .....	83	22	68	150	102	102	374	195	246
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	60	45	46
Region 10 Missouri .....	260	134	157	506	375	291	1,735	1,078	901
Region 11 Arkansas-White-Red .....	71	15	56	96	30	70	520	261	337
Region 12 Texas-Gulf .....	232	18	214	352	152	220	376	120	284
Region 13 Rio Grande .....	189	66	156	128	5	123	255	165	113
Region 14 Upper Colorado .....	142	56	87	277	177	156	240	160	84
Region 15 Lower Colorado .....	16	-	16	22	-	22	135	111	29
Region 16 Great Basin .....	113	47	68	94	70	55	639	525	198
Region 17 Pacific Northwest .....	491	230	309	771	416	449	2,336	2,037	645
Region 18 California .....	299	140	189	825	445	512	2,146	1,740	642
Region 19 Alaska .....	-	-	-	1	1	-	3	3	-
Region 20 Hawaii .....	1	1	-	1	1	-	41	34	7

<sup>1</sup> Respondents could choose more than one program.

**Table 25. Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2018**

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

Geographic area	Total <sup>1</sup>				Investigating improvements not a priority		
	Farms	Land in farms (acres)	Acres irrigated	Acre-feet applied <sup>2,3</sup>	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>
United States .....	123,565	116,761,572	29,511,478	43,081,007	40,513	5,936,080	8,215,677
Alabama .....	544	255,410	66,281	47,024	144	9,704	3,422
Alaska .....	201	4,827	1,081	954	92	206	248
Arizona .....	1,517	1,392,162	462,885	2,278,822	497	108,158	621,451
Arkansas .....	1,938	3,322,673	2,801,203	3,341,310	450	582,342	756,386
California .....	20,922	7,348,985	3,606,534	10,545,987	6,653	621,884	1,636,019
Colorado .....	8,086	9,104,203	1,524,544	2,313,796	2,243	223,230	378,614
Connecticut .....	195	26,414	2,504	2,536	29	400	162
Delaware .....	227	203,211	89,233	29,717	87	21,849	6,613
Florida .....	3,660	1,531,134	351,281	398,159	1,724	97,675	115,457
Georgia .....	1,722	907,161	350,880	217,274	586	110,115	68,374
Hawaii .....	1,002	411,528	17,243	26,064	344	2,490	3,309
Idaho .....	8,524	4,213,824	2,032,569	3,923,200	2,872	295,485	556,049
Illinois .....	970	1,122,428	301,867	192,639	419	79,065	47,123
Indiana .....	1,022	1,028,423	255,530	113,312	416	54,448	17,502
Iowa .....	496	384,528	88,744	30,512	207	32,784	10,160
Kansas .....	2,433	7,432,640	1,410,047	1,500,832	544	236,000	252,821
Kentucky .....	522	138,925	28,033	11,025	278	9,404	3,910
Louisiana .....	1,048	956,953	525,688	451,801	321	115,149	70,530
Maine .....	612	129,412	17,575	5,865	244	2,008	1,012
Maryland .....	633	221,121	77,582	46,140	325	36,460	19,228
Massachusetts .....	703	54,193	6,662	2,228	364	2,686	801
Michigan .....	2,026	1,198,862	408,231	227,469	665	89,522	50,602
Minnesota .....	1,122	800,039	248,112	119,301	392	53,242	17,041
Mississippi .....	946	1,398,445	910,736	629,499	343	304,378	208,080
Missouri .....	1,269	1,356,267	701,540	578,601	552	148,102	108,051
Montana .....	4,685	13,218,741	1,151,252	1,296,561	1,247	258,479	310,756
Nebraska .....	6,691	11,782,909	4,084,690	2,603,587	1,879	869,243	542,935
Nevada .....	1,070	1,878,004	388,010	1,072,309	269	67,776	203,598
New Hampshire .....	349	30,416	1,138	898	126	306	462
New Jersey .....	857	122,697	43,869	25,442	276	5,599	2,431
New Mexico .....	5,451	1,713,522	290,047	551,711	1,509	68,300	94,873
New York .....	1,124	174,611	22,028	12,464	466	5,199	6,921
North Carolina .....	1,028	853,995	73,574	20,916	430	14,001	5,049
North Dakota .....	442	1,070,372	169,228	87,724	201	31,843	12,517
Ohio .....	780	110,529	17,946	8,910	475	8,679	3,190
Oklahoma .....	898	1,588,253	236,192	277,600	337	37,319	40,039
Oregon .....	8,007	6,077,118	914,710	1,575,943	2,639	157,924	271,091
Pennsylvania .....	1,400	153,300	27,367	34,335	828	22,728	33,143
Rhode Island .....	133	5,824	1,431	379	45	266	154
South Carolina .....	698	573,193	151,865	119,588	240	19,407	15,642
South Dakota .....	531	1,236,052	173,227	157,777	116	33,183	29,368
Tennessee .....	530	342,798	54,006	30,387	214	17,902	6,652
Texas .....	6,759	11,320,139	2,348,698	2,953,044	2,348	440,900	562,951
Utah .....	7,588	4,715,049	790,579	1,547,429	2,205	190,606	335,038
Vermont .....	274	46,559	1,545	903	151	436	245
Virginia .....	860	271,677	31,718	8,218	360	9,731	2,972
Washington .....	6,272	4,098,453	1,023,460	2,141,512	1,963	179,274	410,327
West Virginia .....	213	33,968	379	165	73	115	46
Wisconsin .....	1,254	896,253	303,772	171,029	538	53,318	19,971
Wyoming .....	3,331	9,503,372	924,162	1,348,111	787	206,760	352,341
<b>Water Resources Regions</b>							
Region 01 New England .....	2,057	277,886	30,047	12,400	841	5,822	2,636
Region 02 Mid-Atlantic .....	3,950	921,991	272,577	149,875	1,922	96,822	69,546
Region 03 South Atlantic-Gulf .....	7,900	4,193,680	1,017,784	816,726	3,186	253,274	209,710
Region 04 Great Lakes .....	3,793	1,735,014	553,435	285,013	1,471	121,210	59,400
Region 05 Ohio .....	2,424	1,418,627	271,584	135,814	1,122	46,696	15,506
Region 06 Tennessee .....	625	183,808	24,890	21,048	216	6,281	2,786
Region 07 Upper Mississippi .....	3,316	2,485,453	750,532	423,800	1,438	200,924	95,600
Region 08 Lower Mississippi .....	3,668	6,061,228	4,423,858	4,368,132	1,003	1,022,772	1,022,735
Region 09 Souris-Red-Rainy .....	295	679,662	135,091	75,119	61	13,417	4,624
Region 10 Missouri .....	17,665	42,987,386	7,142,676	6,220,427	4,920	1,483,314	1,267,257
Region 11 Arkansas-White-Red .....	5,290	13,317,940	2,770,889	3,391,255	1,302	494,075	622,928
Region 12 Texas-Gulf .....	5,644	5,946,454	1,551,049	1,907,740	2,066	286,739	329,936
Region 13 Rio Grande .....	4,547	1,645,320	350,482	794,609	1,277	55,851	123,826
Region 14 Upper Colorado .....	7,566	3,996,111	830,874	1,205,703	2,230	191,998	302,573
Region 15 Lower Colorado .....	1,797	1,558,204	485,097	2,365,299	674	111,515	628,232
Region 16 Great Basin .....	6,936	5,909,515	1,157,152	2,553,112	1,860	214,403	448,755
Region 17 Pacific Northwest .....	23,661	15,293,359	4,051,109	7,764,386	7,816	702,406	1,362,196
Region 18 California .....	21,228	7,733,579	3,674,028	10,563,532	6,672	625,865	1,643,874
Region 19 Alaska .....	201	4,827	1,081	954	92	206	248
Region 20 Hawaii .....	1,002	411,528	17,243	26,064	344	2,490	3,309

See footnote(s) at end of table.

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**Table 25. Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2018 (continued)**

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

Geographic area	Risk of reduced yield or poorer crop quality			Physical field/crop condition limit system improvements			Improvements will not reduce costs enough to cover installation costs		
	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>
United States .....	17,011	5,698,594	8,667,051	16,325	5,355,008	8,334,493	29,618	10,354,755	15,284,759
Alabama .....	36	10,906	5,614	64	7,292	1,893	29	8,098	5,000
Alaska .....	8	21	28	3	21	(D)	11	(D)	(D)
Arizona .....	171	128,561	620,585	198	123,034	488,325	311	122,949	596,652
Arkansas .....	257	368,362	480,543	349	643,738	789,224	501	833,050	1,017,684
California .....	3,707	847,470	2,447,995	2,901	748,430	2,189,666	4,955	1,285,025	3,843,615
Colorado .....	1,296	327,632	568,004	1,284	310,119	443,712	1,816	523,403	666,077
Connecticut .....	10	10	10	43	(D)	(D)	135	1,670	1,177
Delaware .....	75	28,722	11,126	31	18,030	6,185	74	32,140	11,532
Florida .....	502	50,068	45,897	439	44,770	44,424	783	114,684	133,411
Georgia .....	300	62,000	33,129	60	15,215	10,573	386	69,392	50,750
Hawaii .....	86	638	1,187	31	1,075	1,173	113	5,450	12,381
Idaho .....	543	352,127	670,923	1,114	368,514	681,848	2,372	848,767	1,697,252
Illinois .....	192	80,785	66,684	91	59,853	28,649	236	126,883	84,458
Indiana .....	190	71,562	37,430	86	36,843	27,043	230	107,809	45,198
Iowa .....	120	25,096	10,606	61	157	56	116	31,473	8,568
Kansas .....	406	342,471	396,702	202	161,019	167,807	757	540,676	582,732
Kentucky .....	84	5,746	2,126	77	8,751	3,090	84	9,128	3,781
Louisiana .....	182	118,483	79,245	196	129,372	147,835	274	178,780	191,037
Maine .....	41	1,774	352	44	1,568	284	80	1,120	222
Maryland .....	110	7,444	3,768	131	19,614	14,897	162	26,170	14,837
Massachusetts .....	6	12	(D)	7	(D)	53	95	458	184
Michigan .....	381	87,584	61,759	167	58,430	40,747	577	205,233	116,273
Minnesota .....	188	57,787	26,384	140	26,863	11,646	373	133,485	75,293
Mississippi .....	136	145,758	111,763	122	153,532	106,502	208	342,886	237,244
Missouri .....	226	151,576	112,647	100	133,301	96,957	193	169,110	170,011
Montana .....	469	175,482	193,585	879	289,889	320,326	1,345	408,968	469,447
Nebraska .....	800	634,274	406,448	934	542,629	394,729	2,346	1,635,962	1,066,297
Nevada .....	85	59,683	165,889	197	88,682	231,093	214	128,801	374,244
New Hampshire .....	32	252	(D)	57	617	(D)	84	159	59
New Jersey .....	114	6,493	3,143	118	4,911	2,959	234	12,362	6,658
New Mexico .....	979	102,208	183,898	855	105,838	167,202	810	81,664	145,201
New York .....	268	5,934	1,615	165	7,143	2,396	247	8,947	4,451
North Carolina .....	117	43,593	11,215	118	43,884	11,221	98	2,290	1,006
North Dakota .....	118	58,868	33,436	50	22,368	13,886	131	62,901	32,151
Ohio .....	73	332	137	42	384	271	154	4,352	2,027
Oklahoma .....	90	44,531	51,142	106	30,449	37,810	223	57,965	64,678
Oregon .....	712	144,824	258,726	1,088	174,415	306,788	2,078	363,037	660,777
Pennsylvania .....	125	1,092	200	61	891	60	210	2,132	(D)
Rhode Island .....	5	800	60	10	855	86	53	168	106
South Carolina .....	61	12,898	13,949	73	14,983	15,095	141	42,441	31,683
South Dakota .....	32	34,735	21,368	92	31,982	51,649	144	29,533	29,009
Tennessee .....	57	11,440	11,094	44	2,596	2,342	121	23,968	12,706
Texas .....	1,078	404,366	444,601	772	266,393	311,769	1,515	695,289	817,175
Utah .....	833	158,779	288,637	770	160,925	320,007	1,496	221,167	433,299
Vermont .....	37	120	61	4	74	47	40	651	484
Virginia .....	56	1,188	142	68	2,565	924	222	9,069	1,956
Washington .....	951	238,878	443,317	968	252,922	541,581	1,670	452,737	1,008,022
West Virginia .....	63	95	60	5	8	(D)	3	(D)	3
Wisconsin .....	198	70,188	45,842	146	53,093	26,726	284	114,889	66,693
Wyoming .....	405	214,946	293,434	762	186,689	272,471	884	276,943	489,889
<b>Water Resources Regions</b>									
Region 01 New England .....	123	2,932	1,012	165	3,326	908	478	4,172	2,195
Region 02 Mid-Atlantic .....	568	45,987	18,901	482	47,339	26,097	885	85,259	37,335
Region 03 South Atlantic-Gulf .....	1,032	176,077	107,645	798	126,558	83,211	1,550	253,373	233,142
Region 04 Great Lakes .....	661	110,672	69,881	320	72,060	47,398	895	265,069	137,015
Region 05 Ohio .....	407	84,550	51,279	193	47,580	30,872	514	123,140	58,177
Region 06 Tennessee .....	73	12,235	13,159	32	2,692	(D)	71	(D)	(D)
Region 07 Upper Mississippi .....	600	184,526	122,943	353	111,146	54,563	767	273,756	170,919
Region 08 Lower Mississippi .....	632	738,278	735,031	628	990,622	1,068,588	983	1,391,507	1,457,005
Region 09 Souris-Red-Rainy .....	56	46,746	24,606	36	23,458	11,304	152	91,774	52,057
Region 10 Missouri .....	2,223	1,251,187	1,094,369	2,735	1,151,454	1,157,893	5,209	2,706,306	2,415,077
Region 11 Arkansas-White-Red .....	897	550,797	676,388	768	419,583	472,677	1,296	894,828	1,078,538
Region 12 Texas-Gulf .....	908	286,647	293,289	691	192,620	214,857	1,221	471,078	534,846
Region 13 Rio Grande .....	874	94,617	254,849	658	35,057	116,031	709	100,782	198,532
Region 14 Upper Colorado .....	899	164,638	287,476	1,006	143,229	208,678	1,499	155,426	212,410
Region 15 Lower Colorado .....	174	136,256	679,340	198	123,034	488,325	375	135,156	663,561
Region 16 Great Basin .....	727	204,556	435,872	866	256,314	585,124	1,389	347,703	777,064
Region 17 Pacific Northwest .....	2,300	741,799	1,361,404	3,433	844,925	1,567,284	6,502	1,758,955	3,450,757
Region 18 California .....	3,763	865,435	2,438,392	2,929	762,915	2,198,226	4,999	1,283,040	3,789,038
Region 19 Alaska .....	8	21	28	3	21	(D)	11	(D)	(D)
Region 20 Hawaii .....	86	638	1,187	31	1,075	1,173	113	5,450	12,381

See footnote(s) at end of table.

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**Table 25. Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2018 (continued)**

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

Geographic area	Cannot finance improvements			Landlord will not share in cost			Uncertainty about future availability of water		
	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>
United States .....	35,736	8,834,795	13,659,417	9,412	7,211,889	10,371,656	19,364	5,339,121	9,453,613
Alabama .....	172	9,425	4,458	33	29,564	25,551	14	8,379	5,600
Alaska .....	35	574	561	1	(D)	(D)	25	30	17
Arizona .....	425	201,683	1,050,702	141	207,399	1,128,373	371	145,693	660,483
Arkansas .....	592	683,527	823,892	582	1,187,550	1,374,327	114	144,112	161,742
California .....	5,705	1,206,203	3,641,365	1,239	646,780	2,118,926	4,887	1,131,834	3,451,656
Colorado .....	2,486	325,459	564,493	467	253,138	358,164	2,538	579,588	844,970
Connecticut .....	49	360	(D)	5	370	(D)	1	(D)	(D)
Delaware .....	44	30,730	8,373	32	21,940	8,238	25	13,040	4,724
Florida .....	753	72,457	78,171	136	24,508	35,573	213	40,074	35,355
Georgia .....	554	78,343	39,502	133	77,011	45,908	201	88,243	45,523
Hawaii .....	251	4,773	4,997	37	3,584	9,966	106	5,034	6,181
Idaho .....	2,774	759,430	1,493,174	717	527,285	1,048,833	734	291,643	537,373
Illinois .....	194	82,095	55,217	141	83,080	61,484	3	3	3
Indiana .....	172	59,984	22,422	95	35,736	24,859	23	103	23
Iowa .....	105	6,956	2,110	26	16,277	4,277	-	-	-
Kansas .....	872	449,825	476,631	429	509,294	534,439	585	365,865	386,784
Kentucky .....	72	4,929	2,075	4	234	(D)	31	136	(D)
Louisiana .....	281	168,573	175,919	230	163,759	160,424	32	26,226	8,144
Maine .....	216	8,619	3,269	37	5,614	1,268	8	(D)	105
Maryland .....	119	18,109	9,980	30	5,370	4,020	20	660	600
Massachusetts .....	215	3,557	1,287	6	(D)	7	50	790	299
Michigan .....	527	99,279	76,112	101	87,325	54,593	38	36,861	31,818
Minnesota .....	312	66,826	26,658	151	57,526	21,049	54	42,704	21,964
Mississippi .....	291	280,701	206,880	185	367,047	236,011	39	74,446	57,824
Missouri .....	375	231,397	195,151	151	192,309	163,228	15	891	267
Montana .....	1,555	372,969	356,733	323	168,689	210,723	701	297,114	333,016
Nebraska .....	2,037	1,300,347	897,530	1,305	1,096,828	740,671	343	248,710	169,766
Nevada .....	315	94,029	251,308	54	10,640	30,044	310	137,371	391,258
New Hampshire .....	79	131	120	1	(D)	(D)	24	(D)	27
New Jersey .....	318	26,404	17,549	35	8,106	6,034	5	1,625	697
New Mexico .....	1,701	111,182	158,272	102	30,247	73,228	2,184	154,704	257,434
New York .....	292	8,536	3,539	33	4,281	1,350	45	1,284	486
North Carolina .....	237	5,252	1,459	48	917	335	55	175	241
North Dakota .....	104	55,399	29,564	91	81,783	45,604	50	39,840	20,830
Ohio .....	221	5,629	1,612	62	528	337	53	121	154
Oklahoma .....	175	82,403	86,564	56	62,237	72,346	78	959	232
Oregon .....	2,637	297,045	513,968	343	131,685	209,942	1,085	207,550	351,035
Pennsylvania .....	239	2,013	446	26	(D)	16	47	248	58
Rhode Island .....	41	279	(D)	9	36	16	4	4	(D)
South Carolina .....	215	45,178	34,169	43	47,422	34,948	1	(D)	(D)
South Dakota .....	125	30,775	27,623	88	21,802	12,034	-	-	-
Tennessee .....	143	12,745	11,959	1	(D)	(D)	37	(D)	(D)
Texas .....	1,616	539,250	667,237	551	564,761	751,095	1,164	657,838	681,380
Utah .....	2,697	249,852	456,808	470	107,244	197,459	1,905	306,745	590,467
Vermont .....	80	614	248	7	62	(D)	17	82	57
Virginia .....	147	9,620	2,712	33	3,490	473	37	3,606	1,035
Washington .....	1,823	301,123	621,329	327	144,581	304,474	626	115,262	242,183
West Virginia .....	45	62	27	3	15	6	39	(D)	20
Wisconsin .....	260	94,055	47,963	66	87,721	61,537	21	8,001	5,317
Wyoming .....	1,043	336,089	506,013	226	134,198	195,909	406	154,377	143,051
<b>Water Resources Regions</b>									
Region 01 New England .....	607	13,074	6,017	60	6,114	2,441	89	1,964	477
Region 02 Mid-Atlantic .....	826	89,357	40,579	170	39,549	19,219	154	19,917	7,566
Region 03 South Atlantic-Gulf .....	1,977	220,174	161,837	382	186,737	146,783	498	133,013	84,301
Region 04 Great Lakes .....	894	144,945	98,673	160	97,162	58,898	55	37,391	31,844
Region 05 Ohio .....	582	66,605	24,339	141	50,452	31,324	161	429	307
Region 06 Tennessee .....	202	9,206	11,651	41	(D)	(D)	30	6,367	4,865
Region 07 Upper Mississippi .....	789	200,079	116,613	396	225,390	147,766	60	23,168	12,924
Region 08 Lower Mississippi .....	1,085	1,195,170	1,253,891	961	1,736,086	1,771,241	147	223,764	221,282
Region 09 Souris-Red-Rainy .....	121	48,703	21,456	63	62,790	29,966	34	34,340	18,888
Region 10 Missouri .....	5,308	2,175,814	1,953,907	2,224	1,694,761	1,445,603	2,136	855,079	797,923
Region 11 Arkansas-White-Red .....	1,624	783,488	886,354	616	807,013	927,381	1,599	714,900	824,696
Region 12 Texas-Gulf .....	1,476	417,674	471,231	429	375,138	490,337	998	466,728	428,370
Region 13 Rio Grande .....	1,264	89,877	211,931	98	26,352	99,715	1,658	113,555	268,110
Region 14 Upper Colorado .....	2,538	218,688	321,358	339	94,850	120,518	2,035	323,295	486,952
Region 15 Lower Colorado .....	462	210,888	1,069,602	141	207,399	1,128,373	373	145,701	660,491
Region 16 Great Basin .....	2,387	330,242	710,620	488	137,311	261,991	1,683	424,599	938,041
Region 17 Pacific Northwest .....	7,507	1,393,325	2,673,479	1,397	777,253	1,526,020	2,416	631,808	1,156,279
Region 18 California .....	5,801	1,222,139	3,620,321	1,268	675,977	2,149,874	5,107	1,178,039	3,504,097
Region 19 Alaska .....	35	574	561	1	(D)	(D)	25	30	17
Region 20 Hawaii .....	251	4,773	4,997	37	3,584	9,966	106	5,034	6,181

See footnote(s) at end of table.

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**Table 25. Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2018 (continued)**

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

Geographic area	Will not be farming this operation long enough to justify improvements			Improvements will increase management time or cost		
	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>	Farms	Acres irrigated <sup>3</sup>	Acre-feet applied <sup>3</sup>
United States .....	16,669	2,869,704	4,506,778	12,960	3,955,556	6,122,443
Alabama .....	96	2,417	6,110	57	3,283	596
Alaska .....	32	243	123	19	19	17
Arizona .....	282	115,332	630,885	178	94,935	513,987
Arkansas .....	230	234,898	286,597	264	515,492	616,728
California .....	3,519	332,425	973,175	2,650	510,353	1,608,138
Colorado .....	892	112,311	149,826	652	103,053	151,575
Connecticut .....	28	133	61	-	-	-
Delaware .....	41	17,632	7,381	26	12,479	5,135
Florida .....	717	33,383	20,859	363	41,142	40,439
Georgia .....	132	5,999	5,350	178	21,873	8,370
Hawaii .....	263	2,669	2,812	160	1,049	778
Idaho .....	1,185	328,346	593,567	815	250,757	486,577
Illinois .....	80	8,884	7,236	121	41,975	39,773
Indiana .....	110	13,550	6,578	112	40,510	22,000
Iowa .....	33	4,048	2,270	52	4,676	1,491
Kansas .....	226	73,315	74,974	210	173,047	210,546
Kentucky .....	109	1,027	794	117	2,034	1,079
Louisiana .....	157	88,545	58,231	131	77,807	54,733
Maine .....	131	169	143	62	692	185
Maryland .....	98	2,324	1,629	51	9,035	6,656
Massachusetts .....	76	82	31	52	698	162
Michigan .....	331	32,136	13,977	299	91,372	62,441
Minnesota .....	200	60,732	34,452	173	72,479	35,414
Mississippi .....	106	130,289	88,963	121	122,372	88,092
Missouri .....	185	125,260	99,305	96	40,733	29,742
Montana .....	708	117,385	133,098	543	204,609	227,006
Nebraska .....	662	355,988	219,468	558	405,514	263,669
Nevada .....	45	10,800	21,765	72	81,117	213,380
New Hampshire .....	59	59	56	22	143	(D)
New Jersey .....	153	3,614	2,070	149	1,488	246
New Mexico .....	454	12,641	33,837	519	16,192	30,593
New York .....	104	3,939	1,390	148	3,086	881
North Carolina .....	159	2,024	1,090	115	7,209	1,961
North Dakota .....	6	2,884	2,994	33	6,320	2,567
Ohio .....	127	970	523	90	1,740	2,525
Oklahoma .....	104	32,147	48,614	107	34,772	48,311
Oregon .....	1,006	63,016	101,427	629	66,583	121,472
Pennsylvania .....	253	1,148	503	31	223	87
Rhode Island .....	26	852	81	37	73	49
South Carolina .....	125	45,843	37,443	58	21,194	12,885
South Dakota .....	43	13,247	11,966	26	13,708	5,208
Tennessee .....	42	4,997	948	59	(D)	2,679
Texas .....	712	187,584	272,838	1,040	438,723	574,960
Utah .....	1,087	82,313	160,736	613	93,516	144,465
Vermont .....	14	151	69	31	92	(D)
Virginia .....	151	2,714	963	88	2,686	388
Washington .....	842	136,879	305,594	496	126,419	262,863
West Virginia .....	67	130	45	45	(D)	21
Wisconsin .....	148	27,289	13,206	70	41,118	31,913
Wyoming .....	313	34,941	70,727	422	152,083	189,257
<b>Water Resources Regions</b>						
Region 01 New England .....	322	1,327	380	179	1,671	797
Region 02 Mid-Atlantic .....	692	28,614	12,971	353	26,635	12,918
Region 03 South Atlantic-Gulf .....	1,269	90,115	70,928	746	94,743	64,289
Region 04 Great Lakes .....	551	48,047	20,410	463	107,896	69,634
Region 05 Ohio .....	329	8,604	3,715	313	31,865	23,249
Region 06 Tennessee .....	57	316	114	145	554	344
Region 07 Upper Mississippi .....	346	60,640	37,085	407	124,038	87,038
Region 08 Lower Mississippi .....	468	473,979	401,290	449	636,922	638,155
Region 09 Souris-Red-Rainy .....	58	33,731	18,854	36	36,487	17,648
Region 10 Missouri .....	1,904	549,224	494,208	1,618	735,051	676,340
Region 11 Arkansas-White-Red .....	564	290,492	361,940	595	391,901	483,150
Region 12 Texas-Gulf .....	610	128,614	189,199	890	370,558	504,319
Region 13 Rio Grande .....	408	11,203	29,719	338	13,889	24,088
Region 14 Upper Colorado .....	642	32,788	51,613	668	136,529	142,828
Region 15 Lower Colorado .....	309	116,385	631,776	223	103,998	574,713
Region 16 Great Basin .....	1,083	107,336	194,570	577	165,124	341,618
Region 17 Pacific Northwest .....	3,243	552,952	1,011,896	2,111	472,819	909,986
Region 18 California .....	3,519	332,425	973,175	2,670	503,808	1,550,533
Region 19 Alaska .....	32	243	123	19	19	17
Region 20 Hawaii .....	263	2,669	2,812	160	1,049	778

<sup>1</sup> Data include only positive responses and respondents could choose more than one source of information.

<sup>2</sup> Total may not add due to rounding.

<sup>3</sup> Acres irrigated and acre-feet applied are totals for all irrigation on these farms.

**Table 26. Sources of Information Relied on for Reducing Irrigation Costs and Conserving Water: 2018**

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

Geographic area	Total <sup>1</sup>		Extension agents or university specialists		Private irrigation specialists or consultants		Irrigation equipment dealers		Irrigation district or water supplier	
	Farms	Acres irrigated <sup>2</sup>	Farms	Acres irrigated <sup>2</sup>	Farms	Acres irrigated <sup>2</sup>	Farms	Acres irrigated <sup>2</sup>	Farms	Acres irrigated <sup>2</sup>
United States .....	125,556	38,080,875	53,833	18,381,006	40,311	22,195,658	34,718	15,406,415	23,449	5,499,623
Alabama .....	628	110,351	260	50,046	94	37,468	249	72,916	38	12,560
Alaska .....	78	892	32	765	8	(D)	29	74	3	33
Arizona .....	1,566	554,661	567	310,666	401	259,799	145	107,046	478	165,944
Arkansas .....	2,248	3,546,357	1,510	2,600,778	1,080	2,116,533	469	1,110,635	110	240,264
California .....	24,550	5,509,211	9,320	2,821,309	11,573	3,527,349	6,045	2,285,158	4,946	1,388,368
Colorado .....	7,686	1,720,765	2,636	496,326	1,640	975,787	1,421	477,646	1,936	274,065
Connecticut .....	271	3,093	145	2,049	91	1,742	101	2,583	1	2,583
Delaware .....	353	159,563	192	88,826	118	87,158	142	69,046	14	12,036
Florida .....	3,893	616,521	2,353	503,010	1,139	409,038	968	291,134	174	47,831
Georgia .....	1,816	662,325	1,435	522,505	295	238,929	441	257,204	61	83,700
Hawaii .....	680	16,350	300	4,433	98	7,822	101	10,502	50	356
Idaho .....	7,099	2,177,916	2,033	797,754	1,746	1,299,151	2,165	1,273,322	2,232	431,620
Illinois .....	922	369,230	241	80,155	261	171,799	587	280,008	64	15,737
Indiana .....	1,119	418,614	546	200,930	281	163,692	656	277,193	23	953
Iowa .....	494	87,938	221	30,619	134	25,641	160	38,508	16	4,640
Kansas .....	3,219	2,061,908	1,187	590,478	2,260	1,828,834	924	682,318	192	152,964
Kentucky .....	538	43,563	345	20,733	28	14,313	193	20,921	2	(D)
Louisiana .....	1,164	803,366	624	431,459	510	418,652	297	222,208	72	45,046
Maine .....	332	27,501	249	23,179	125	9,553	125	18,947	29	970
Maryland .....	425	75,437	253	36,694	125	25,217	228	54,498	-	-
Massachusetts .....	737	13,423	501	11,790	86	4,404	195	6,266	34	(D)
Michigan .....	2,277	563,154	1,370	277,243	571	227,383	1,089	426,916	36	2,455
Minnesota .....	1,339	365,020	615	165,687	510	176,306	385	142,982	48	31,479
Mississippi .....	1,181	1,410,703	673	819,774	565	923,937	373	670,752	64	113,362
Missouri .....	1,218	840,020	576	408,261	319	420,330	490	439,677	31	22,803
Montana .....	4,203	1,233,954	1,334	436,008	674	413,518	1,312	586,103	1,196	252,914
Nebraska .....	8,916	5,817,012	3,892	2,583,543	5,072	4,082,597	2,451	1,850,994	838	635,724
Nevada .....	945	394,008	465	154,894	239	158,019	202	158,914	271	48,667
New Hampshire .....	305	1,797	232	1,387	10	(D)	73	1,301	-	-
New Jersey .....	763	58,311	338	33,834	143	14,349	365	32,254	22	176
New Mexico .....	5,775	424,217	2,715	221,729	733	240,436	809	228,617	1,810	112,638
New York .....	993	30,856	706	19,940	108	(D)	404	12,574	46	115
North Carolina .....	951	95,449	723	81,767	146	13,867	424	74,442	1	(D)
North Dakota .....	430	191,856	232	79,853	256	102,079	122	48,195	90	47,877
Ohio .....	646	24,626	362	8,612	187	6,411	233	18,297	39	111
Oklahoma .....	759	331,106	352	140,028	208	117,365	268	178,994	14	(D)
Oregon .....	7,576	982,220	2,787	429,356	1,776	451,895	2,638	538,161	2,444	228,507
Pennsylvania .....	870	24,060	511	4,787	104	17,424	393	6,158	24	24
Rhode Island .....	120	2,055	81	748	1	(D)	36	712	-	-
South Carolina .....	670	187,733	457	119,198	177	95,539	170	66,141	13	4,932
South Dakota .....	722	262,218	247	87,453	225	87,717	291	119,803	66	16,412
Tennessee .....	637	143,979	399	81,638	170	88,836	224	78,224	-	-
Texas .....	6,078	2,457,146	2,580	1,048,128	2,041	1,388,867	1,603	714,274	1,115	418,636
Utah .....	6,972	769,509	2,406	339,464	964	284,157	1,162	301,312	2,547	245,045
Vermont .....	238	2,231	195	1,894	41	474	69	776	-	-
Virginia .....	624	27,307	382	15,610	59	13,367	226	10,962	-	-
Washington .....	6,381	1,185,488	2,279	535,048	2,024	803,607	2,233	575,887	1,319	159,702
West Virginia .....	203	5,759	127	239	29	5,448	46	80	-	-
Wisconsin .....	1,127	395,410	521	198,616	394	219,348	446	266,475	7	14,097
Wyoming .....	2,819	874,686	1,326	461,763	472	212,995	540	298,305	933	258,476
<b>Water Resources Regions</b>										
Region 01 New England .....	1,915	49,246	1,351	40,441	346	16,346	573	30,045	64	1,340
Region 02 Mid-Atlantic .....	3,282	358,564	1,869	183,748	630	164,538	1,445	173,460	83	12,282
Region 03 South Atlantic-Gulf .....	8,158	1,679,365	5,369	1,291,200	1,832	792,006	2,295	762,583	291	146,983
Region 04 Great Lakes .....	3,599	770,104	2,119	388,038	810	316,826	1,657	562,088	63	8,253
Region 05 Ohio .....	2,108	337,828	1,135	116,160	506	168,640	1,007	223,461	63	(D)
Region 06 Tennessee .....	526	51,917	331	24,808	86	(D)	167	29,864	2	(D)
Region 07 Upper Mississippi .....	3,625	1,087,650	1,479	432,754	1,017	470,766	1,500	698,594	106	45,832
Region 08 Lower Mississippi .....	4,473	6,049,537	2,659	3,947,100	2,167	3,545,908	1,259	2,334,212	227	393,796
Region 09 Souris-Red-Rainy .....	328	126,350	244	80,059	133	64,212	98	28,666	26	14,427
Region 10 Missouri .....	19,413	9,434,624	7,774	3,844,994	8,194	5,841,974	5,080	3,194,658	3,100	1,281,185
Region 11 Arkansas-White-Red .....	5,746	3,637,039	2,449	1,327,901	3,028	2,859,250	1,411	1,135,522	777	395,770
Region 12 Texas-Gulf .....	4,932	1,547,635	2,107	718,573	1,396	664,907	1,424	502,772	749	215,898
Region 13 Rio Grande .....	4,928	383,344	2,215	127,144	591	212,883	462	121,528	1,750	59,417
Region 14 Upper Colorado .....	6,897	796,842	2,654	349,122	638	154,976	1,254	207,677	2,235	254,600
Region 15 Lower Colorado .....	2,000	622,030	766	337,634	486	293,869	211	132,103	550	173,111
Region 16 Great Basin .....	6,055	1,146,361	2,283	470,567	1,089	461,567	1,289	514,457	2,071	261,607
Region 17 Pacific Northwest .....	22,074	4,452,876	7,366	1,867,665	5,658	2,589,436	7,307	2,413,916	6,201	824,316
Region 18 California .....	24,739	5,532,321	9,331	2,827,900	11,598	3,546,931	6,149	2,330,433	5,038	1,407,154
Region 19 Alaska .....	78	892	32	765	8	(D)	29	74	3	33
Region 20 Hawaii .....	680	16,350	300	4,433	98	7,822	101	10,502	50	356

See footnote(s) at end of table.

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**Table 26. Sources of Information Relied on for Reducing Irrigation Costs and Conserving Water: 2018 (continued)**

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

Geographic area	NRCS, local Conservation district, other Federal or State agencies		Media reports or information in the press		Neighboring farmers		Electronic information services (DTN and other Internet links)	
	Farms	Acres irrigated <sup>2</sup>	Farms	Acres irrigated <sup>2</sup>	Farms	Acres irrigated <sup>2</sup>	Farms	Acres irrigated <sup>2</sup>
United States .....	21,872	9,126,823	15,031	4,577,249	47,136	11,370,987	23,376	10,102,887
Alabama .....	95	11,735	95	13,658	283	29,027	99	25,087
Alaska .....	19	79	-	-	31	62	11	33
Arizona .....	336	185,284	222	78,010	689	152,199	287	205,061
Arkansas .....	593	985,567	245	434,899	765	1,210,353	422	749,484
California .....	3,435	1,317,165	3,350	712,957	7,782	1,581,171	5,676	1,746,931
Colorado .....	2,010	420,646	839	97,342	4,116	572,077	842	351,423
Connecticut .....	74	665	85	815	31	514	32	315
Delaware .....	46	31,345	47	27,656	134	61,924	61	54,677
Florida .....	856	315,260	489	86,865	839	95,172	838	150,956
Georgia .....	348	225,766	212	101,233	510	224,498	392	171,764
Hawaii .....	101	7,422	61	1,857	302	2,329	119	4,630
Idaho .....	897	346,313	518	182,743	3,626	770,350	810	457,187
Illinois .....	66	15,801	107	28,191	339	107,021	341	116,969
Indiana .....	121	46,659	183	66,430	311	138,062	311	143,011
Iowa .....	22	(D)	59	17,256	138	37,432	183	38,070
Kansas .....	258	215,823	359	154,713	768	377,998	568	470,538
Kentucky .....	50	(D)	63	8,035	244	10,289	50	11,567
Louisiana .....	296	208,172	149	103,560	324	274,603	132	166,883
Maine .....	118	5,178	45	3,712	124	3,961	61	13,817
Maryland .....	27	5,303	54	14,103	86	24,291	61	14,377
Massachusetts .....	114	3,020	128	592	212	3,421	145	3,436
Michigan .....	294	91,154	332	92,411	820	243,206	594	211,653
Minnesota .....	232	85,569	215	39,418	338	82,289	376	100,574
Mississippi .....	280	438,881	118	116,392	330	401,295	215	350,474
Missouri .....	264	293,634	170	91,090	457	232,287	238	146,845
Montana .....	1,038	415,946	319	163,593	1,920	456,899	411	222,143
Nebraska .....	1,653	1,188,990	1,391	862,135	2,058	1,189,775	2,494	1,964,079
Nevada .....	309	100,857	102	78,002	578	242,086	98	102,935
New Hampshire .....	72	848	7	247	76	367	165	629
New Jersey .....	173	20,001	156	4,168	189	19,822	145	11,044
New Mexico .....	1,344	175,107	682	96,163	3,309	274,130	762	144,536
New York .....	160	9,418	251	4,114	360	6,914	306	7,979
North Carolina .....	152	6,973	94	2,333	231	12,603	156	9,378
North Dakota .....	122	76,600	43	38,214	122	72,812	99	66,872
Ohio .....	76	137	86	420	201	2,738	179	6,810
Oklahoma .....	118	63,554	103	92,767	247	64,650	161	38,956
Oregon .....	842	221,049	879	95,241	3,110	394,224	1,020	199,899
Pennsylvania .....	39	15,368	105	15,726	385	2,497	131	1,759
Rhode Island .....	50	248	5	800	45	559	40	668
South Carolina .....	129	70,480	40	9,871	162	46,204	185	58,484
South Dakota .....	89	37,267	83	33,965	280	78,090	159	78,598
Tennessee .....	50	15,587	43	64	165	21,375	201	29,404
Texas .....	913	648,299	729	245,306	1,836	632,713	991	525,063
Utah .....	1,511	290,102	384	96,105	3,689	354,210	494	135,364
Vermont .....	26	210	11	66	90	383	37	270
Virginia .....	33	1,867	1	(D)	257	5,008	111	634
Washington .....	1,124	150,227	999	152,603	2,415	354,785	1,476	458,777
West Virginia .....	72	187	44	(D)	3	15	32	5,454
Wisconsin .....	74	43,143	120	33,279	445	104,756	334	195,202
Wyoming .....	751	314,171	209	77,784	1,364	397,541	325	132,188
<b>Water Resources Regions</b>								
Region 01 New England .....	439	10,095	278	6,224	527	8,989	443	18,865
Region 02 Mid-Atlantic .....	428	81,875	542	63,589	1,073	116,718	624	91,771
Region 03 South Atlantic-Gulf .....	1,625	633,710	904	214,573	2,048	414,220	1,690	419,009
Region 04 Great Lakes .....	385	92,804	479	100,358	1,386	293,693	987	288,707
Region 05 Ohio .....	302	38,295	369	61,609	772	107,931	464	98,469
Region 06 Tennessee .....	34	8,527	52	134	123	9,139	110	10,206
Region 07 Upper Mississippi .....	346	118,068	480	113,499	1,134	315,489	1,169	406,648
Region 08 Lower Mississippi .....	1,178	1,793,183	463	696,631	1,397	1,975,916	758	1,339,875
Region 09 Souris-Red-Rainy .....	69	40,233	68	18,751	52	27,575	60	43,295
Region 10 Missouri .....	3,666	2,086,333	2,278	1,216,758	6,495	2,274,276	3,980	2,801,808
Region 11 Arkansas-White-Red .....	1,018	656,091	678	388,776	1,846	864,432	1,223	795,486
Region 12 Texas-Gulf .....	754	460,736	617	138,957	1,673	450,985	770	286,209
Region 13 Rio Grande .....	1,001	87,235	542	25,125	2,621	147,025	578	75,527
Region 14 Upper Colorado .....	2,274	348,614	685	104,788	3,668	407,022	423	86,099
Region 15 Lower Colorado .....	373	198,417	226	78,022	931	184,967	344	209,458
Region 16 Great Basin .....	1,276	359,405	476	173,105	3,564	619,862	540	227,611
Region 17 Pacific Northwest .....	3,147	791,856	2,460	461,444	9,654	1,555,449	3,405	1,149,442
Region 18 California .....	3,437	1,313,845	3,373	713,049	7,839	1,594,908	5,678	1,749,739
Region 19 Alaska .....	19	79	-	-	31	62	11	33
Region 20 Hawaii .....	101	7,422	61	1,857	302	2,329	119	4,630

<sup>1</sup> Respondents could choose more than one source of information.

<sup>2</sup> Acres irrigated are totals for all irrigation on these farms.



**Table 27. Reasons for Discontinuing Irrigation: 2018 and 2013**

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

Geographic area	Discontinued irrigation since previous census year					Reason for discontinuance <sup>1</sup>					
	Farms	Acres irrigated in previous census year <sup>2</sup>	Square feet under protection in previous census year <sup>2</sup>	Farms reporting discontinuance to be permanent		Sufficient soil moisture		Shortage of surface water		Shortage of ground water	
				Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>
United States .....2018	24,175	1,310,593	10,726,594	4,603	133,977	14,553	783,478	3,103	147,215	1,309	101,038
.....2013	41,455	2,519,094	11,759,756	3,711	125,540	9,559	504,584	2,903	318,768	1,284	157,862
<b>2018 DATA</b>											
Alabama .....	408	9,023	163,200	126	277	308	3,298	-	-	50	5,625
Alaska .....	8	122	(D)	2	(D)	5	22	-	-	-	-
Arizona .....	48	192	-	-	-	16	160	32	32	-	-
Arkansas .....	353	34,300	19,160	67	4,309	259	23,865	9	60	6	(D)
California .....	1,493	111,645	62,052	343	4,063	638	43,458	150	32,549	123	40,060
Colorado .....	1,273	77,420	273,320	149	12,793	154	14,298	767	43,906	206	15,287
Connecticut .....	201	731	-	43	43	154	688	47	43	-	-
Delaware .....	58	5,362	3,870	22	44	31	5,312	22	44	22	(D)
Florida .....	867	28,525	66,000	84	6,201	583	25,540	54	108	-	-
Georgia .....	905	98,386	166,730	163	18,450	737	77,744	-	-	-	-
Hawaii .....	331	5,097	711,280	50	84	248	5,014	-	-	41	216
Idaho .....	282	9,653	34,416	7	7	181	8,320	28	68	2	(D)
Illinois .....	340	25,971	77,400	89	5,166	235	22,388	17	-	-	-
Indiana .....	283	19,279	36,864	51	16	230	9,324	-	-	-	-
Iowa .....	164	6,528	14,100	41	(D)	110	6,402	-	-	-	-
Kansas .....	264	24,715	-	28	980	104	4,470	-	-	-	-
Kentucky .....	565	12,571	821,384	125	51	466	12,409	6	6	-	-
Louisiana .....	404	18,526	51,070	78	317	254	17,201	13	78	-	-
Maine .....	65	83	137,530	-	-	35	(D)	-	-	-	-
Maryland .....	201	5,596	23,296	33	53	182	5,577	-	-	-	-
Massachusetts .....	118	1,562	168,000	-	-	108	1,562	-	-	-	-
Michigan .....	852	20,568	1,185,760	223	7,659	568	12,182	-	-	-	-
Minnesota .....	216	18,304	61,140	50	96	163	(D)	-	-	-	-
Mississippi .....	260	19,281	29,000	62	654	178	16,973	13	298	-	-
Missouri .....	369	25,796	41,728	164	13,162	228	22,721	36	316	26	304
Montana .....	523	81,379	50,360	165	8,350	202	48,472	143	4,943	24	480
Nebraska .....	1,271	267,554	2,160	98	9,217	884	180,149	-	-	-	-
Nevada .....	66	501	600	18	33	-	-	33	423	15	30
New Hampshire .....	29	10	2,400	3	6	29	10	-	-	-	-
New Jersey .....	168	2,272	-	23	-	161	907	-	-	-	-
New Mexico .....	1,043	41,006	1,200	84	366	105	(D)	547	10,132	266	8,605
New York .....	528	4,557	1,146,600	108	110	413	4,440	23	1,035	-	-
North Carolina .....	656	29,275	684,462	81	-	526	22,150	-	-	-	-
North Dakota .....	4	4	12,000	-	-	-	-	-	-	-	-
Ohio .....	733	5,758	871,220	190	601	509	5,362	-	-	-	-
Oklahoma .....	284	7,830	360	77	1,807	203	4,525	-	-	-	-
Oregon .....	1,499	34,542	90,200	220	467	615	1,868	375	17,434	175	10,907
Pennsylvania .....	844	6,772	1,641,136	188	520	755	6,684	-	-	22	-
Rhode Island .....	20	20	197,800	-	-	20	20	20	20	20	20
South Carolina .....	463	2,204	1,380,960	131	249	362	1,389	25	25	-	-
South Dakota .....	422	102,771	-	44	132	356	99,559	-	-	-	-
Tennessee .....	475	3,556	82,380	113	100	475	3,556	21	-	21	-
Texas .....	2,517	73,244	38,640	615	24,725	1,633	28,345	161	8,761	124	14,663
Utah .....	659	21,137	(D)	54	108	61	1,627	443	19,571	108	4,779
Vermont .....	39	245	3,200	10	124	38	(D)	-	-	-	-
Virginia .....	420	12,458	89,584	133	153	286	11,354	-	-	23	-
Washington .....	659	20,298	96,155	166	11,969	372	6,273	109	163	35	(D)
West Virginia .....	104	214	66,780	27	27	37	166	-	-	-	-
Wisconsin .....	390	6,462	94,200	55	379	336	5,184	-	-	-	-
Wyoming .....	31	7,288	-	-	-	-	-	9	7,200	-	-
<b>Water Resources Regions</b>											
Region 01 New England .....	437	2,488	505,730	48	131	350	2,442	67	63	20	20
Region 02 Mid-Atlantic .....	1,668	29,610	2,713,886	320	363	1,451	27,059	45	1,079	67	44
Region 03 South Atlantic-Gulf .....	3,382	172,139	2,207,562	640	25,432	2,543	134,436	92	431	25	5,500
Region 04 Great Lakes .....	1,412	26,319	1,413,760	377	7,860	995	17,678	-	-	-	-
Region 05 Ohio .....	1,794	35,070	2,152,184	394	1,038	1,399	28,158	6	6	-	-
Region 06 Tennessee .....	442	4,709	(D)	113	117	411	4,578	21	-	46	125
Region 07 Upper Mississippi .....	1,078	66,485	147,504	268	13,943	768	51,334	17	-	-	-
Region 08 Lower Mississippi .....	815	66,417	47,490	163	4,867	555	54,430	18	78	5	-
Region 09 Souris-Red-Rainy .....	14	14	42,000	14	(D)	-	-	-	-	-	-
Region 10 Missouri .....	2,889	492,471	351,568	473	28,175	1,754	346,080	292	17,412	90	2,240
Region 11 Arkansas-White-Red ....	1,361	92,339	82,800	209	7,148	508	14,798	286	17,081	113	9,302
Region 12 Texas-Gulf .....	2,302	60,328	18,640	598	20,618	1,558	28,316	161	8,737	85	10,523
Region 13 Rio Grande .....	922	32,815	-	51	333	73	227	494	19,235	262	16,529
Region 14 Upper Colorado .....	735	36,553	-	51	6,863	52	7,200	579	23,348	151	4,208
Region 15 Lower Colorado .....	48	192	-	-	-	16	160	32	32	-	-
Region 16 Great Basin .....	535	10,906	3,007	75	144	61	1,627	286	9,262	69	1,353
Region 17 Pacific Northwest .....	2,439	63,671	218,371	414	12,680	1,168	16,461	487	16,699	212	10,918
Region 18 California .....	1,563	112,848	62,052	343	4,063	638	43,458	220	33,752	123	40,060
Region 19 Alaska .....	8	122	(D)	2	(D)	5	22	-	-	-	-
Region 20 Hawaii .....	331	5,097	711,280	50	84	248	5,014	-	-	41	216

See footnote(s) at end of table.

--continued

**Table 27. Reasons for Discontinuing Irrigation: 2018 and 2013 (continued)**

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

Geographic area	Reason for discontinuance <sup>1</sup> - con.									
	Irrigation is uneconomical		Loss of water rights		Sold or leased water rights or annual water allocation		Sold or leased irrigated land or irrigated area under protection		Restrictions on water use	
	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>
United States .....	2,075	124,044	165	2,574	90	4,368	781	84,185	686	11,913
.....2018	2,254	104,143	277	9,852	614	31,017	1,951	161,367	2,094	93,881
.....2013										
<b>2018 DATA</b>										
Alabama .....	100	5,700	-	-	-	-	-	-	-	-
Alaska .....	3	-	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-	-	-
Arkansas .....	36	3,734	-	-	-	-	4	212	-	-
California .....	189	30,972	23	460	-	-	3	7,800	27	119
Colorado .....	-	-	75	1,926	-	-	-	-	270	8,652
Connecticut .....	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-
Florida .....	27	-	-	-	-	-	-	-	-	-
Georgia .....	99	24,497	-	-	-	-	46	1,840	-	-
Hawaii .....	16	(D)	-	-	-	-	-	-	-	-
Idaho .....	19	114	-	-	22	746	21	44	-	-
Illinois .....	17	-	-	-	-	-	-	-	-	-
Indiana .....	36	72	-	-	-	-	36	9,360	-	-
Iowa .....	-	-	-	-	-	-	18	126	-	-
Kansas .....	14	980	-	-	14	3,500	15	1,950	-	-
Kentucky .....	18	18	-	-	-	-	-	-	-	-
Louisiana .....	14	-	-	-	-	-	-	-	-	-
Maine .....	27	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-
Michigan .....	40	1,600	-	-	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-	-
Mississippi .....	31	4,020	-	-	-	-	18	180	6	120
Missouri .....	79	2,336	-	-	-	-	8	-	8	8
Montana .....	78	23,613	-	-	-	-	72	7,176	-	-
Nebraska .....	32	1,440	-	-	-	-	185	34,163	-	-
Nevada .....	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	7	1,365	-	-
New Mexico .....	34	170	-	-	34	102	90	9,071	100	1,754
New York .....	91	274	-	-	-	-	-	-	-	-
North Carolina .....	10	90	-	-	-	-	27	810	-	-
North Dakota .....	-	-	-	-	-	-	-	-	-	-
Ohio .....	-	-	-	-	-	-	38	15	-	-
Oklahoma .....	103	1,507	-	-	-	-	-	-	-	-
Oregon .....	111	2,445	47	168	-	-	31	669	149	477
Pennsylvania .....	43	417	-	-	-	-	-	-	-	-
Rhode Island .....	20	20	20	20	20	20	20	20	20	20
South Carolina .....	204	996	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	22	132
Tennessee .....	22	-	-	-	-	-	-	-	-	-
Texas .....	370	14,144	-	-	-	-	79	1,320	20	-
Utah .....	-	-	-	-	-	-	-	-	54	621
Vermont .....	2	(D)	-	-	-	-	-	-	-	-
Virginia .....	55	52	-	-	-	-	-	-	-	-
Washington .....	81	4,617	-	-	-	-	27	7,020	10	10
West Virginia .....	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	54	198	-	-	-	-	36	1,044	-	-
Wyoming .....	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>										
Region 01 New England .....	47	(D)	20	20	20	20	20	20	20	20
Region 02 Mid-Atlantic .....	68	626	-	-	-	-	7	1,365	-	-
Region 03 South Atlantic-Gulf .....	477	31,327	-	-	-	-	85	2,830	-	-
Region 04 Great Lakes .....	123	1,646	-	-	-	-	-	-	-	-
Region 05 Ohio .....	79	111	-	-	-	-	56	6,315	-	-
Region 06 Tennessee .....	25	50	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	53	198	-	-	-	-	72	4,230	-	-
Region 08 Lower Mississippi .....	69	7,074	-	-	-	-	10	212	14	128
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	157	27,109	27	126	-	-	257	41,339	101	1,684
Region 11 Arkansas-White-Red .....	169	12,075	24	1,080	14	3,500	23	1,950	72	1,632
Region 12 Texas-Gulf .....	311	5,454	-	-	-	-	79	1,320	20	-
Region 13 Rio Grande .....	54	190	-	-	34	102	90	9,071	100	1,754
Region 14 Upper Colorado .....	-	-	24	720	-	-	-	-	173	6,089
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	-	-
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....	235	7,176	23	-	22	746	79	7,733	135	319
Region 18 California .....	189	30,972	47	628	-	-	3	7,800	51	287
Region 19 Alaska .....	3	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	16	(D)	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

--continued

**Table 27. Reasons for Discontinuing Irrigation: 2018 and 2013 (continued)**

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

Geographic area	Reason for discontinuance <sup>1</sup> - con.							
	Converted to non-agricultural uses		Converted to agricultural enterprise not requiring irrigation		Available surface water too salty		Other or unspecified	
	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>	Farms	Acres irrigated in previous census year <sup>2</sup>
United States .....	703	6,600	1,563	106,777	218	1,215	4,005	166,542
2013 .....	559	7,539	1,188	80,521	540	36,435	24,655	1,456,494
<b>2018 DATA</b>								
Alabama .....	-	-	-	-	-	-	25	-
Alaska .....	-	-	-	-	-	-	3	(D)
Arizona .....	-	-	-	-	-	-	16	-
Arkansas .....	19	480	1	(D)	-	-	66	6,185
California .....	49	228	201	2,326	44	198	403	14,816
Colorado .....	23	46	7	7	-	-	266	14,619
Connecticut .....	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	5	6
Florida .....	-	-	133	2,695	-	-	230	3,011
Georgia .....	27	142	25	17,875	-	-	116	(D)
Hawaii .....	16	16	-	-	-	-	33	33
Idaho .....	6	6	5	9	-	-	83	952
Illinois .....	17	-	3	12	-	-	68	3,571
Indiana .....	-	-	17	595	-	-	-	-
Iowa .....	-	-	-	-	-	-	52	4,576
Kansas .....	29	1,085	73	11,240	-	-	73	5,890
Kentucky .....	38	23	70	(D)	-	-	30	104
Louisiana .....	27	520	-	-	-	-	107	738
Maine .....	-	-	-	-	-	-	3	(D)
Maryland .....	-	-	-	-	-	-	19	19
Massachusetts .....	-	-	-	-	-	-	10	-
Michigan .....	81	700	82	208	21	21	122	7,278
Minnesota .....	2	(D)	29	29	-	-	22	(D)
Mississippi .....	7	-	6	6	-	-	38	640
Missouri .....	8	24	16	31	-	-	64	880
Montana .....	24	216	48	144	29	490	117	4,747
Nebraska .....	-	-	143	51,088	-	-	151	17,000
Nevada .....	-	-	-	-	-	-	18	48
New Hampshire .....	-	-	22	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	22	132
New Mexico .....	52	70	65	11,551	-	-	365	8,980
New York .....	-	-	46	184	-	-	69	117
North Carolina .....	27	27	73	47	-	-	94	6,382
North Dakota .....	-	-	-	-	-	-	4	4
Ohio .....	23	46	108	235	-	-	55	100
Oklahoma .....	-	-	-	-	-	-	29	1,823
Oregon .....	29	-	91	54	-	-	281	23,533
Pennsylvania .....	21	42	65	43	-	-	49	49
Rhode Island .....	20	20	20	20	20	20	-	-
South Carolina .....	-	-	-	-	77	351	25	-
South Dakota .....	-	-	22	3,080	-	-	22	-
Tennessee .....	-	-	-	-	-	-	7	7
Texas .....	39	589	58	649	-	-	409	21,926
Utah .....	-	-	54	-	27	135	108	648
Vermont .....	-	-	-	-	-	-	3	(D)
Virginia .....	56	2,253	-	-	-	-	33	1,029
Washington .....	60	60	44	73	-	-	180	9,406
West Virginia .....	3	(D)	-	-	-	-	70	51
Wisconsin .....	-	-	36	954	-	-	18	90
Wyoming .....	-	-	-	-	-	-	22	88
<b>Water Resources Regions</b>								
Region 01 New England .....	20	20	42	20	20	20	13	(D)
Region 02 Mid-Atlantic .....	77	2,295	65	43	-	-	145	1,233
Region 03 South Atlantic-Gulf .....	54	169	231	20,617	77	351	503	10,228
Region 04 Great Lakes .....	104	746	162	1,362	21	21	172	7,473
Region 05 Ohio .....	41	(D)	162	(D)	-	-	160	302
Region 06 Tennessee .....	-	-	6	6	-	-	7	7
Region 07 Upper Mississippi .....	19	(D)	68	637	-	-	168	14,712
Region 08 Lower Mississippi .....	38	620	1	(D)	-	-	174	5,857
Region 09 Souris-Red-Rainy .....	-	-	14	14	-	-	-	-
Region 10 Missouri .....	55	286	212	54,566	29	490	462	31,665
Region 11 Arkansas-White-Red .....	44	1,465	81	22,365	-	-	380	22,261
Region 12 Texas-Gulf .....	39	589	58	649	-	-	346	17,786
Region 13 Rio Grande .....	52	70	42	51	-	-	270	4,426
Region 14 Upper Colorado .....	-	-	-	-	-	-	107	1,307
Region 15 Lower Colorado .....	-	-	-	-	-	-	16	-
Region 16 Great Basin .....	-	-	54	-	27	135	99	426
Region 17 Pacific Northwest .....	95	66	164	280	-	-	544	33,891
Region 18 California .....	49	228	201	2,326	44	198	403	14,816
Region 19 Alaska .....	-	-	-	-	-	-	3	(D)
Region 20 Hawaii .....	16	16	-	-	-	-	33	33

<sup>1</sup> Respondents could choose more than one reason for not irrigating.

<sup>2</sup> Acres and square feet irrigated are totals for all irrigation on these farms. Data were acquired from the 2017 and 2012 Censuses of Agriculture results.

**Table 28. Method of Water Distribution in Fields in the Open: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Farms	Acres irrigated	Gravity systems		Sprinkler systems		Drip, trickle, or low-flow micro sprinklers		
			Farms	Acres irrigated <sup>1</sup>	Farms	Acres irrigated <sup>1</sup>	Farms	Acres irrigated <sup>1</sup>	
United States .....	2018 2013	220,566 (NA)	55,886,470 55,283,340	85,888 85,159	20,187,048 21,504,684	109,184 121,655	31,656,895 34,894,109	62,158 59,435	5,860,921 4,889,912
<b>2018 DATA</b>									
Alabama .....	910	162,612	94	12,046	509	159,871	380	21,001	
Alaska .....	157	(D)	23	89	42	1,167	104	253	
Arizona .....	3,004	945,236	2,347	837,762	476	155,477	442	78,470	
Arkansas .....	3,088	4,246,295	2,667	3,891,251	737	372,849	204	2,787	
California .....	41,431	8,399,881	13,717	3,888,723	7,853	952,038	26,918	4,061,340	
Colorado .....	14,413	2,458,120	11,185	1,098,563	4,738	1,425,738	782	3,861	
Connecticut .....	500	4,936	115	246	321	4,772	252	1,079	
Delaware .....	506	201,224	12	(D)	463	206,381	57	1,863	
Florida .....	7,027	1,324,471	455	532,796	3,393	339,515	4,048	523,820	
Georgia .....	3,764	1,162,380	210	2,143	2,411	1,098,413	1,656	162,416	
Hawaii .....	1,528	(D)	416	2,449	682	7,640	987	17,909	
Idaho .....	14,741	3,392,674	8,759	836,989	8,038	2,577,358	654	9,684	
Illinois .....	1,690	564,575	27	(D)	1,381	603,828	402	7,131	
Indiana .....	1,886	582,102	25	1,188	1,619	601,888	473	22,351	
Iowa .....	876	165,621	29	50	630	171,062	306	2,837	
Kansas .....	4,176	2,386,483	777	66,053	3,669	2,310,388	430	28,102	
Kentucky .....	812	57,506	63	2,992	285	56,154	576	7,604	
Louisiana .....	1,756	1,071,564	1,318	975,326	431	96,703	201	1,569	
Maine .....	784	(D)	55	145	626	35,473	420	1,839	
Maryland .....	798	124,486	92	268	592	129,180	318	4,351	
Massachusetts .....	1,129	18,834	238	6,593	664	11,124	427	2,965	
Michigan .....	3,308	824,218	61	81	2,296	801,075	1,491	39,821	
Minnesota .....	2,155	553,858	35	2,829	1,998	601,354	270	3,360	
Mississippi .....	1,517	(D)	1,019	1,373,391	561	290,049	242	5,581	
Missouri .....	2,470	1,428,310	825	810,544	1,394	694,803	792	10,778	
Montana .....	8,743	2,139,878	5,415	1,226,780	4,670	953,595	448	1,511	
Nebraska .....	12,937	7,665,880	5,064	661,385	11,647	7,002,568	748	58,714	
Nevada .....	1,825	693,466	1,464	449,388	607	247,051	56	4,418	
New Hampshire .....	555	(D)	82	117	179	882	383	2,018	
New Jersey .....	1,423	88,604	97	3,140	999	72,647	718	21,767	
New Mexico .....	10,046	675,092	7,861	266,460	1,916	396,325	949	20,465	
New York .....	1,586	45,847	236	3,225	777	33,858	1,079	14,595	
North Carolina .....	2,024	131,631	133	1,534	1,342	125,567	817	15,047	
North Dakota .....	703	(D)	152	45,395	610	252,703	18	154	
Ohio .....	1,111	37,740	83	817	625	32,184	668	8,413	
Oklahoma .....	1,704	(D)	239	69,649	1,210	544,199	387	11,492	
Oregon .....	13,505	1,577,008	3,727	514,953	9,209	1,004,474	2,471	68,252	
Pennsylvania .....	1,899	37,849	108	9,919	658	10,018	1,487	19,589	
Rhode Island .....	176	(D)	9	44	67	2,687	130	385	
South Carolina .....	1,440	252,409	120	2,856	871	258,963	652	31,169	
South Dakota .....	1,186	378,309	318	37,027	883	339,964	88	1,673	
Tennessee .....	1,067	190,003	99	11,906	642	180,908	395	2,468	
Texas .....	11,644	4,083,451	3,092	768,512	6,943	3,266,687	3,188	271,329	
Utah .....	12,487	1,181,301	6,953	519,157	6,877	666,144	368	9,464	
Vermont .....	375	2,613	39	121	212	1,784	234	1,023	
Virginia .....	1,116	47,136	35	1,355	613	41,216	572	4,996	
Washington .....	11,014	1,864,760	1,420	109,225	8,495	1,502,132	2,734	265,147	
West Virginia .....	286	6,188	43	64	148	5,908	168	345	
Wisconsin .....	1,790	517,394	59	244	1,467	536,698	499	3,476	
Wyoming .....	5,498	1,561,506	4,476	1,140,460	1,708	473,433	69	239	
<b>Water Resources Regions</b>									
Region 01 New England .....	3,334	66,062	502	7,168	1,956	55,645	1,743	9,057	
Region 02 Mid-Atlantic .....	5,822	518,002	398	15,197	3,414	474,601	3,235	57,171	
Region 03 South Atlantic-Gulf .....	15,502	3,032,227	1,018	552,869	8,590	1,978,462	7,815	754,519	
Region 04 Great Lakes .....	5,752	1,124,241	329	3,739	3,859	1,125,599	2,703	53,100	
Region 05 Ohio .....	3,536	441,080	222	4,363	2,031	445,717	1,836	28,564	
Region 06 Tennessee .....	857	(D)	112	1,173	474	65,679	388	3,974	
Region 07 Upper Mississippi .....	5,953	1,624,769	160	17,178	4,959	1,689,675	1,398	22,278	
Region 08 Lower Mississippi .....	6,368	(D)	5,017	6,394,647	2,223	1,300,360	339	13,589	
Region 09 Souris-Red-Rainy .....	571	207,595	20	2,812	527	221,981	40	134	
Region 10 Missouri .....	32,378	13,105,909	16,620	2,796,501	21,633	10,429,967	1,893	70,815	
Region 11 Arkansas-White-Red .....	9,289	4,876,728	3,252	977,653	5,692	3,963,617	1,564	64,980	
Region 12 Texas-Gulf .....	9,635	2,693,245	2,599	648,791	5,660	1,950,510	2,677	240,029	
Region 13 Rio Grande .....	8,690	709,230	7,010	377,496	1,299	322,956	956	13,344	
Region 14 Upper Colorado .....	13,125	1,472,320	9,795	1,075,608	4,760	442,761	487	2,764	
Region 15 Lower Colorado .....	3,785	1,035,023	2,786	893,052	851	180,635	523	99,404	
Region 16 Great Basin .....	11,259	1,763,271	6,938	910,097	5,569	856,169	378	14,172	
Region 17 Pacific Northwest .....	41,158	7,010,052	14,792	1,599,329	26,752	5,125,660	6,193	344,043	
Region 18 California .....	41,867	8,483,718	13,879	3,906,837	8,211	1,018,094	26,899	4,050,822	
Region 19 Alaska .....	157	(D)	23	89	42	1,167	104	253	
Region 20 Hawaii .....	1,528	(D)	416	2,449	682	7,640	987	17,909	

<sup>1</sup> Multiple systems covering the same acreage are counted each time they cover the acres. This includes multiple systems of the same type.

**Table 29. Gravity Irrigation in Fields in the Open: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Farms	Acres irrigated <sup>1</sup>	Down rows or furrows											
			Farms	Acres irrigated	Above ground pipe (except poly pipe)		Poly pipe (or other single-year use, lay-flat tubing) (see text)		Lined open ditch		Unlined open ditch		Underground pipe	
					Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States .....2018	85,888	20,187,048	40,394	10,083,296	10,591	1,065,083	11,759	5,650,870	4,599	1,001,984	14,779	1,907,292	3,449	458,067
.....2013	85,159	21,504,684	42,955	10,485,453	14,011	1,889,948	11,441	4,690,174	5,573	1,113,705	15,115	2,235,011	5,577	556,615
<b>2018 DATA</b>														
Alabama .....	94	12,046	44	2,921	11	(D)	8	2,838	-	-	25	50	11	(D)
Alaska .....	23	89	23	89	1	(D)	9	(D)	-	-	13	22	-	-
Arizona .....	2,347	837,762	892	406,113	67	6,434	134	34,123	531	320,641	229	40,595	32	4,320
Arkansas .....	2,667	3,891,251	2,403	2,633,836	56	54,490	2,297	2,504,906	11	4,050	45	23,486	109	46,904
California .....	13,717	3,888,723	4,661	1,365,238	602	107,919	521	31,918	336	192,896	2,203	784,177	1,493	248,328
Colorado .....	11,185	1,098,563	6,330	398,672	1,814	73,298	1,548	81,580	895	85,651	2,376	132,230	489	25,913
Connecticut .....	115	246	87	134	1	(D)	43	(D)	-	-	43	43	-	-
Delaware .....	12	(D)	12	(D)	-	-	12	(D)	-	-	-	-	-	-
Florida .....	455	532,796	356	52,652	108	2,484	84	1,989	-	-	164	32,437	39	15,742
Georgia .....	210	2,143	187	1,982	48	144	93	366	-	-	-	-	46	1,472
Hawaii .....	416	2,449	278	1,508	33	132	212	716	-	-	33	99	33	561
Idaho .....	8,759	836,989	4,356	453,457	1,152	47,835	691	39,868	1,049	202,752	2,162	154,331	167	8,671
Illinois .....	27	(D)	22	(D)	-	-	21	21	-	-	1	(D)	-	-
Indiana .....	25	1,188	25	1,188	1	(D)	24	(D)	-	-	18	882	-	-
Iowa .....	29	50	29	50	-	-	24	(D)	-	-	5	(D)	-	-
Kansas .....	777	66,053	726	60,817	567	49,340	104	5,690	4	80	111	5,152	30	555
Kentucky .....	63	2,992	8	(D)	-	-	8	(D)	-	-	-	-	-	-
Louisiana .....	1,318	975,326	817	681,411	13	9,100	763	655,446	-	-	41	15,669	26	1,196
Maine .....	55	145	43	52	-	-	16	25	-	-	-	-	27	27
Maryland .....	92	268	65	213	40	80	25	133	-	-	-	-	-	-
Massachusetts .....	238	6,593	68	264	-	-	40	208	-	-	28	56	-	-
Michigan .....	61	81	41	41	-	-	21	21	20	20	-	-	-	-
Minnesota .....	35	2,829	21	29	4	(D)	15	15	-	-	-	-	2	(D)
Mississippi .....	1,019	1,373,391	981	1,274,372	16	11,120	934	1,236,828	-	-	38	18,872	29	7,552
Missouri .....	825	810,544	746	667,171	35	27,678	670	578,773	-	-	81	36,980	71	23,740
Montana .....	5,415	1,226,780	955	165,408	245	36,874	98	16,050	44	2,076	755	110,408	-	-
Nebraska .....	5,064	661,385	4,744	610,146	3,557	429,302	534	64,561	132	14,783	767	89,155	113	12,345
Nevada .....	1,464	449,388	286	45,807	30	2,550	32	(D)	15	(D)	179	41,493	45	1,260
New Hampshire .....	82	117	29	(D)	21	(D)	8	8	-	-	-	-	-	-
New Jersey .....	97	3,140	74	3,094	26	728	71	2,366	-	-	-	-	-	-
New Mexico .....	7,861	266,460	2,261	75,598	143	2,261	157	1,335	570	40,606	1,399	25,406	171	5,990
New York .....	236	3,225	187	1,827	47	555	140	1,272	-	-	-	-	-	-
North Carolina .....	133	1,534	106	292	-	-	80	266	-	-	26	26	-	-
North Dakota .....	152	45,395	90	32,731	32	6,075	-	-	4	4	76	26,652	-	-
Ohio .....	83	817	52	(D)	48	177	4	(D)	-	-	-	-	-	-
Oklahoma .....	239	69,649	174	55,909	72	14,155	64	9,569	39	21,440	29	4,930	41	5,815
Oregon .....	3,727	514,953	1,189	92,347	294	17,053	248	8,375	121	8,873	602	55,080	37	2,966
Pennsylvania .....	108	9,919	92	9,887	22	22	64	215	-	-	5	7,750	6	1,900
Rhode Island .....	9	44	4	4	-	-	4	4	-	-	-	-	-	-
South Carolina .....	120	2,856	95	1,604	-	-	43	777	-	-	52	827	-	-
South Dakota .....	318	37,027	119	7,090	97	6,538	2	(D)	-	-	22	(D)	-	-
Tennessee .....	99	11,906	77	11,532	-	-	53	(D)	1	(D)	23	(D)	-	-
Texas .....	3,092	768,512	1,439	449,255	203	22,249	605	264,053	160	43,493	485	95,771	157	23,689
Utah .....	6,953	519,157	2,446	141,334	408	16,795	347	22,270	201	16,758	1,700	84,546	101	965
Vermont .....	39	121	7	(D)	-	-	7	(D)	-	-	-	-	-	-
Virginia .....	35	1,355	13	1,333	4	1,324	9	9	-	-	-	-	-	-
Washington .....	1,420	109,225	886	64,387	162	3,523	276	13,673	106	11,095	352	31,893	90	4,203
West Virginia .....	43	64	41	(D)	3	(D)	38	57	-	-	-	-	-	-
Wisconsin .....	59	244	59	244	19	76	40	168	-	-	-	-	-	-
Wyoming .....	4,476	1,140,460	1,748	307,239	589	114,663	518	59,265	360	32,802	691	86,577	84	13,932
<b>Water Resources Regions</b>														
Region 01 New England .....	502	7,168	232	486	22	24	112	336	-	-	71	99	27	27
Region 02 Mid-Atlantic .....	398	15,197	309	15,018	117	2,577	209	2,791	-	-	5	7,750	6	1,900
Region 03 South Atlantic-Gulf .....	1,018	552,869	775	60,539	162	2,748	298	7,161	-	-	264	33,406	90	17,224
Region 04 Great Lakes .....	329	3,739	244	1,754	47	(D)	177	1,448	20	(D)	-	-	-	-
Region 05 Ohio .....	222	4,363	121	4,156	27	(D)	72	(D)	-	-	40	904	-	-
Region 06 Tennessee .....	112	1,173	90	799	11	22	54	716	-	-	25	50	11	11
Region 07 Upper Mississippi .....	160	17,178	155	17,173	23	80	100	8,860	-	-	14	6,615	18	1,618
Region 08 Lower Mississippi .....	5,017	6,394,647	4,263	4,889,887	83	92,940	4,121	4,657,275	5	6,814	132	73,825	182	59,033
Region 09 Souris-Red-Rainy .....	20	2,812	6	12	2	(D)	-	-	4	(D)	-	-	-	-
Region 10 Missouri .....	16,620	2,796,501	8,926	1,210,249	4,985	621,935	1,402	155,674	819	84,476	2,693	321,887	197	26,277
Region 11 Arkansas-White-Red .....	3,252	977,653	2,393	615,421	673	89,338	755	364,410	304	54,055	802	76,852	245	30,766
Region 12 Texas-Gulf .....	2,599	648,791	1,171	340,984	164	11,338	522	237,215	141	35,195	388	45,965	108	11,271
Region 13 Rio Grande .....	7,010	377,496	1,444	124,708	19	1,520	128	9,517	383	44,280	886	57,867	57	11,524
Region 14 Upper Colorado .....	9,795	1,075,608	5,882	257,999	1,714	50,988	1,401	53,058	564	23,975	2,392	102,836	510	27,142
Region 15 Lower Colorado .....	2,786	893,052	989	427,621	94	7,487	150	34,335	554	340,306	260	40,993	47	4,500
Region 16 Great Basin .....	6,938	910,097	1,995	160,996	171	7,225	295	22,405	201	16,758	1,434	112,563	131	2,045
Region 17 Pacific Northwest .....	14,792	1,599,329	6,467	608,306	1,631	68,434	1,221	59,798	1,276	222,720	3,146	241,514	294	15,840
Region 18 California .....	13,879	3,906,837	4,631	1,345,591	602	107,919	521	31,918	328	173,381	2,181	784,045	1,493	248,328
Region 19 Alaska .....	23	89	23	89	1	(D)	9	(D)	-	-	13	22	-	-
Region 20 Hawaii .....	416	2,449	278	1,508	33	132	212	716	-	-	33	99	33	561

See footnote(s) at end of table.

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**Table 29. Gravity Irrigation in Fields in the Open: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Controlled flooding (between borders or within rows)											
	Farms	Acres irrigated	Above ground pipe (except poly pipe)		Poly pipe (or other single-year use, lay-flat tubing) (see text)		Lined open ditch		Unlined open ditch		Underground pipe	
			Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States ..... 2018	36,020	8,052,277	2,314	230,089	3,234	724,723	5,258	890,721	21,702	4,787,688	5,795	1,419,056
..... 2013	36,603	8,487,054	3,272	635,226	2,682	486,874	4,985	979,114	21,959	4,675,830	8,654	1,710,010
<b>2018 DATA</b>												
Alabama .....	25	2,000	-	-	-	-	-	-	25	2,000	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	1,466	428,465	50	1,061	64	2,288	795	321,457	339	91,976	283	11,683
Arkansas .....	1,673	1,249,300	47	20,803	636	450,408	72	36,778	313	277,275	669	464,036
California .....	7,352	2,128,406	222	37,031	227	15,392	704	245,572	3,619	1,209,311	3,070	621,100
Colorado .....	3,652	450,157	512	20,726	457	11,330	175	37,059	2,629	378,053	96	2,989
Connecticut .....	28	28	-	-	28	28	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	95	445,444	-	-	30	5,925	3	4,500	62	435,019	-	-
Georgia .....	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii .....	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Idaho .....	2,949	233,774	87	585	217	11,384	233	8,494	2,462	212,741	22	570
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	82	5,236	60	4,378	-	-	-	-	22	858	-	-
Kentucky .....	26	(D)	-	-	26	(D)	-	-	-	-	-	-
Louisiana .....	537	283,569	45	17,212	99	22,606	-	-	158	82,669	275	161,082
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	170	6,329	-	-	-	-	100	2,238	70	4,091	-	-
Michigan .....	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota .....	14	2,800	-	-	-	-	-	-	14	2,800	-	-
Mississippi .....	156	98,720	19	1,462	71	64,254	6	2,400	30	16,499	42	14,105
Missouri .....	179	135,433	31	26,336	88	52,297	-	-	40	18,880	30	37,920
Montana .....	3,274	739,806	201	12,287	225	9,365	127	26,401	2,956	684,255	18	7,498
Nebraska .....	302	33,174	111	17,145	-	-	62	3,020	129	11,009	4	2,000
Nevada .....	960	292,454	37	2,660	22	4,700	197	32,053	712	228,421	128	24,620
New Hampshire .....	49	84	49	84	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	5,053	155,149	165	6,292	147	8,157	1,901	67,358	2,614	61,178	572	12,164
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	27	1,242	-	-	-	-	-	-	27	1,242	-	-
North Dakota .....	85	12,664	31	5,735	-	-	-	-	54	6,929	-	-
Ohio .....	1	(D)	-	-	-	-	-	-	-	-	1	(D)
Oklahoma .....	48	7,500	7	2,045	29	(D)	-	-	3	(D)	16	(D)
Oregon .....	1,221	251,933	47	4,400	162	8,378	35	24,046	1,007	201,854	63	13,255
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	199	26,923	67	8,553	22	264	-	-	154	18,106	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	1,253	274,590	104	17,793	214	21,795	210	17,097	654	184,822	184	33,083
Utah .....	3,048	263,136	54	1,539	156	4,737	420	29,691	2,203	218,770	290	8,399
Vermont .....	25	25	25	25	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	109	27,410	52	182	-	-	-	-	57	27,228	-	-
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming .....	1,960	495,884	291	21,755	314	28,067	218	32,557	1,347	410,383	32	3,122
<b>Water Resources Regions</b>												
Region 01 New England .....	247	6,441	49	84	28	28	100	2,238	70	4,091	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....	154	448,798	7	112	30	5,925	3	4,500	114	438,261	-	-
Region 04 Great Lakes .....	26	(D)	25	(D)	-	-	-	-	-	-	1	(D)
Region 05 Ohio .....	26	(D)	-	-	26	(D)	-	-	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 08 Lower Mississippi .....	2,153	1,495,364	117	58,981	749	500,471	68	29,744	449	305,393	891	600,775
Region 09 Souris-Red-Rainy .....	14	2,800	-	-	-	-	-	-	14	2,800	-	-
Region 10 Missouri .....	6,021	1,094,193	856	72,161	750	35,775	480	57,795	4,498	915,844	52	12,618
Region 11 Arkansas-White-Red .....	964	313,158	129	12,988	180	92,274	34	14,474	466	111,624	230	81,798
Region 12 Texas-Gulf .....	1,005	263,140	85	16,653	194	19,795	51	10,526	603	184,824	145	31,342
Region 13 Rio Grande .....	5,136	186,795	151	(D)	133	(D)	1,931	72,611	2,675	(D)	524	9,425
Region 14 Upper Colorado .....	2,741	516,898	295	12,539	326	(D)	186	33,320	2,006	456,377	94	(D)
Region 15 Lower Colorado .....	1,649	454,369	98	2,426	64	2,288	829	343,806	353	92,074	370	13,775
Region 16 Great Basin .....	3,617	539,880	56	2,510	110	8,018	610	63,742	2,726	434,483	333	31,127
Region 17 Pacific Northwest .....	4,804	575,176	224	7,312	417	22,813	257	10,580	4,004	529,067	61	5,404
Region 18 California .....	7,461	2,154,598	222	37,031	227	15,392	709	247,385	3,722	1,225,467	3,094	629,323
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	2	(D)	-	-	-	-	-	-	2	(D)	-	-

See footnote(s) at end of table.

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**Table 29. Gravity Irrigation in Fields in the Open: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Uncontrolled flooding		Other gravity systems	
	Farms	Acres irrigated	Farms	Acres irrigated
United States .....	15,298	1,881,732	3,752	169,743
2018				
2013	11,765	1,801,259	5,926	730,918
<b>2018 DATA</b>				
Alabama .....	25	7,125	-	-
Alaska .....	-	-	-	-
Arizona .....	224	2,864	16	320
Arkansas .....	57	8,115	-	-
California .....	2,858	387,077	526	8,002
Colorado .....	2,088	229,662	314	20,072
Connecticut .....	-	-	42	84
Delaware .....	-	-	-	-
Florida .....	6	19,800	4	14,900
Georgia .....	-	-	23	161
Hawaii .....	66	495	70	(D)
Idaho .....	1,470	114,047	620	35,711
Illinois .....	-	-	5	5
Indiana .....	-	-	-	-
Iowa .....	-	-	-	-
Kansas .....	-	-	-	-
Kentucky .....	26	52	29	29
Louisiana .....	81	10,346	-	-
Maine .....	-	-	12	93
Maryland .....	-	-	27	55
Massachusetts .....	-	-	-	-
Michigan .....	-	-	20	40
Minnesota .....	-	-	-	-
Mississippi .....	13	299	-	-
Missouri .....	-	-	19	7,940
Montana .....	1,553	312,157	238	9,409
Nebraska .....	204	14,315	33	3,750
Nevada .....	369	110,842	33	285
New Hampshire .....	-	-	4	(D)
New Jersey .....	-	-	23	46
New Mexico .....	962	31,706	188	4,007
New York .....	23	46	26	1,352
North Carolina .....	-	-	-	-
North Dakota .....	-	-	-	-
Ohio .....	8	8	22	22
Oklahoma .....	39	6,240	-	-
Oregon .....	1,141	159,549	436	11,124
Pennsylvania .....	-	-	16	32
Rhode Island .....	5	40	-	-
South Carolina .....	51	1,252	-	-
South Dakota .....	66	3,014	-	-
Tennessee .....	-	-	22	374
Texas .....	386	24,582	105	20,085
Utah .....	2,048	100,428	485	14,259
Vermont .....	5	10	2	(D)
Virginia .....	-	-	22	22
Washington .....	235	11,843	276	5,585
West Virginia .....	-	-	2	(D)
Wisconsin .....	-	-	-	-
Wyoming .....	1,289	325,818	92	11,519
<b>Water Resources Regions</b>				
Region 01 New England .....	5	40	60	201
Region 02 Mid-Atlantic .....	23	46	66	133
Region 03 South Atlantic-Gulf .....	94	28,471	27	15,061
Region 04 Great Lakes .....	13	(D)	46	1,392
Region 05 Ohio .....	26	(D)	75	(D)
Region 06 Tennessee .....	-	-	22	374
Region 07 Upper Mississippi .....	-	-	5	5
Region 08 Lower Mississippi .....	101	9,396	-	-
Region 09 Souris-Red-Rainy .....	-	-	-	-
Region 10 Missouri .....	3,115	466,040	232	26,019
Region 11 Arkansas-White-Red .....	350	38,924	94	10,150
Region 12 Texas-Gulf .....	386	24,582	105	20,085
Region 13 Rio Grande .....	986	65,993	-	-
Region 14 Upper Colorado .....	1,739	280,021	482	20,690
Region 15 Lower Colorado .....	401	10,612	42	450
Region 16 Great Basin .....	1,950	186,246	470	22,975
Region 17 Pacific Northwest .....	3,135	373,139	1,407	42,708
Region 18 California .....	2,908	397,657	549	8,991
Region 19 Alaska .....	-	-	-	-
Region 20 Hawaii .....	66	495	70	(D)

<sup>1</sup> Multiple systems covering the same acreage are counted each time they cover the acres. This includes multiple systems of the same type.

**Table 30. Sprinkler Irrigation in Fields in the Open: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Farms	Acres irrigated <sup>1</sup>	Center pivot system							
			Farms	Acres irrigated <sup>1</sup>	Low pressure under 30 psi		Medium pressure 30 to 59 psi		High pressure 60 psi or more	
					Farms	Acres irrigated <sup>1</sup>	Farms	Acres irrigated	Farms	Acres irrigated
United States .....2018	109,184	31,656,895	49,923	26,800,613	20,553	10,536,214	27,174	14,679,988	4,891	1,584,411
.....2013	121,655	34,894,109	57,410	27,879,177	27,685	12,770,489	28,890	13,396,454	5,498	1,712,234
<b>2018 DATA</b>										
Alabama .....	509	159,871	280	127,325	138	47,567	145	76,726	6	3,032
Alaska .....	42	1,167	2	(D)	-	-	2	(D)	-	-
Arizona .....	476	155,477	128	56,455	127	(D)	1	(D)	-	-
Arkansas .....	737	372,849	568	359,923	218	101,067	336	243,179	37	15,677
California .....	7,853	952,038	343	108,386	156	41,162	172	53,144	41	14,080
Colorado .....	4,738	1,425,738	2,497	1,302,189	935	428,509	1,508	842,592	157	31,088
Connecticut .....	321	4,772	9	(D)	7	584	1	(D)	1	(D)
Delaware .....	463	206,381	364	164,264	56	(D)	308	118,608	1	(D)
Florida .....	3,393	339,515	624	212,029	299	59,075	321	148,688	33	4,266
Georgia .....	2,411	1,098,413	1,659	993,050	683	355,215	870	594,163	219	43,672
Hawaii .....	682	7,640	4	(D)	1	(D)	-	-	3	36
Idaho .....	8,038	2,577,358	2,926	1,951,957	1,074	602,365	1,504	1,107,863	451	241,729
Illinois .....	1,381	603,828	1,150	548,566	304	110,871	802	401,653	99	36,042
Indiana .....	1,619	601,888	1,278	549,887	328	144,418	896	383,960	162	21,509
Iowa .....	630	171,062	507	162,259	111	44,517	383	110,089	36	7,653
Kansas .....	3,669	2,310,388	3,538	2,286,740	2,002	1,541,641	1,627	724,917	90	20,182
Kentucky .....	285	56,154	66	48,785	28	(D)	37	25,057	1	(D)
Louisiana .....	431	96,703	209	91,988	107	23,143	66	59,761	36	9,084
Maine .....	626	35,473	34	13,667	6	1,569	18	8,462	12	3,636
Maryland .....	592	129,180	362	112,634	109	31,881	257	72,384	47	8,369
Massachusetts .....	664	11,124	33	1,425	-	-	3	(D)	30	(D)
Michigan .....	2,296	801,075	1,348	700,585	326	95,667	883	532,123	273	72,795
Minnesota .....	1,998	601,354	1,684	558,902	548	171,297	991	342,638	244	44,967
Mississippi .....	561	290,049	440	267,698	161	82,928	234	152,328	71	32,442
Missouri .....	1,394	694,803	1,028	635,464	429	247,611	557	368,469	106	19,384
Montana .....	4,670	953,595	1,925	693,761	722	254,146	1,080	363,940	178	75,675
Nebraska .....	11,647	7,002,568	11,408	6,952,211	3,071	1,417,163	7,936	5,070,035	1,378	465,013
Nevada .....	607	247,051	362	231,460	145	59,646	219	171,814	-	-
New Hampshire .....	179	882	-	-	-	-	-	-	-	-
New Jersey .....	999	72,647	131	22,402	89	14,372	40	5,168	4	2,862
New Mexico .....	1,916	396,325	686	371,464	579	272,466	112	(D)	2	(D)
New York .....	777	33,858	18	4,953	5	2,312	9	(D)	4	(D)
North Carolina .....	1,342	125,567	252	82,981	66	11,450	160	70,991	27	540
North Dakota .....	610	252,703	565	250,053	282	118,260	252	130,739	31	1,054
Ohio .....	625	32,184	69	15,059	11	1,353	52	10,841	6	2,865
Oklahoma .....	1,210	544,199	883	507,507	633	334,108	281	163,875	29	9,524
Oregon .....	9,209	1,004,474	1,124	424,481	409	233,259	608	168,408	113	22,814
Pennsylvania .....	658	10,018	63	3,111	23	(D)	39	(D)	1	(D)
Rhode Island .....	67	2,687	-	-	-	-	-	-	-	-
South Carolina .....	871	258,963	395	205,016	153	77,927	188	110,430	61	16,659
South Dakota .....	883	339,964	836	339,318	281	74,194	519	213,997	91	51,127
Tennessee .....	642	180,908	405	169,702	174	47,896	252	114,926	19	6,880
Texas .....	6,943	3,266,687	4,433	3,003,468	3,711	2,577,132	770	398,461	44	27,875
Utah .....	6,877	666,144	1,563	338,260	615	112,986	812	198,388	148	26,886
Vermont .....	212	1,784	2	(D)	-	-	2	(D)	-	-
Virginia .....	613	41,216	148	21,985	40	6,740	85	12,002	23	3,243
Washington .....	8,495	1,502,132	1,773	1,035,897	677	388,262	909	557,776	224	89,859
West Virginia .....	148	5,908	1	(D)	-	-	1	(D)	-	-
Wisconsin .....	1,467	536,698	773	477,228	117	75,576	485	292,832	256	108,820
Wyoming .....	1,708	473,433	1,027	394,155	597	209,013	441	153,461	96	31,681
<b>Water Resources Regions</b>										
Region 01 New England .....	1,956	55,645	76	15,706	13	2,153	22	8,907	43	4,646
Region 02 Mid-Atlantic .....	3,414	474,601	1,021	323,132	290	96,588	708	210,080	77	16,464
Region 03 South Atlantic-Gulf .....	8,590	1,978,462	3,254	1,616,282	1,349	537,795	1,699	1,008,703	365	69,784
Region 04 Great Lakes .....	3,859	1,125,599	1,912	956,108	471	156,519	1,197	674,135	427	125,454
Region 05 Ohio .....	2,031	445,717	939	396,078	203	81,065	682	276,559	154	38,454
Region 06 Tennessee .....	474	65,679	121	59,252	63	(D)	57	28,580	1	(D)
Region 07 Upper Mississippi .....	4,959	1,689,675	3,747	1,556,101	1,037	380,371	2,459	1,043,386	470	132,344
Region 08 Lower Mississippi .....	2,223	1,300,360	1,878	1,237,635	749	384,130	1,074	787,543	169	65,962
Region 09 Souris-Red-Rainy .....	527	221,981	415	203,159	177	(D)	242	132,999	18	(D)
Region 10 Missouri .....	21,633	10,429,967	18,736	10,139,976	6,096	2,728,779	12,010	6,762,441	1,932	648,756
Region 11 Arkansas-White-Red .....	5,692	3,963,617	4,946	3,814,285	3,498	2,851,212	1,555	913,927	130	49,146
Region 12 Texas-Gulf .....	5,660	1,950,510	3,232	1,761,596	2,708	1,501,127	580	251,154	29	9,315
Region 13 Rio Grande .....	1,299	322,956	448	308,648	311	143,362	93	152,996	53	12,290
Region 14 Upper Colorado .....	4,760	442,761	833	229,401	368	68,400	474	151,529	12	9,472
Region 15 Lower Colorado .....	851	180,635	305	67,343	236	(D)	42	(D)	27	2,700
Region 16 Great Basin .....	5,569	856,169	1,514	565,408	536	177,215	852	361,717	136	26,476
Region 17 Pacific Northwest .....	26,752	5,125,660	6,171	3,415,577	2,287	1,226,625	3,232	1,833,720	804	355,232
Region 18 California .....	8,211	1,018,094	369	133,589	160	45,962	194	73,547	41	14,080
Region 19 Alaska .....	42	1,167	2	(D)	-	-	2	(D)	-	-
Region 20 Hawaii .....	682	7,640	4	(D)	1	(D)	-	-	3	36

See footnote(s) at end of table.

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**Table 30. Sprinkler Irrigation in Fields in the Open: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Linear move tower sprinklers						Solid set and permanent sprinklers					
	Farms	Acres irrigated <sup>1</sup>	Low pressure under 30 psi		Medium to high pressure 30 psi or more		Farms	Acres irrigated <sup>1</sup>	Low pressure under 30 psi		Medium to high pressure 30 psi or more	
			Farms	Acres irrigated <sup>1</sup>	Farms	Acres irrigated <sup>1</sup>			Farms	Acres irrigated <sup>1</sup>	Farms	Acres irrigated <sup>1</sup>
United States .....2018	3,669	469,408	1,195	141,356	2,499	328,052	18,216	1,206,860	5,203	321,635	13,643	885,225
.....2013	4,717	625,566	1,718	257,237	3,089	368,329	20,797	1,486,739	5,447	341,288	16,052	1,145,451
<b>2018 DATA</b>												
Alabama .....	14	224	11	44	3	180	72	1,914	5	770	71	1,144
Alaska .....	1	(D)	-	-	1	(D)	3	(D)	1	(D)	2	(D)
Arizona .....	29	23,595	6	(D)	23	(D)	189	58,051	69	901	120	57,150
Arkansas .....	9	805	9	805	-	-	35	4,503	14	1,340	25	3,163
California .....	142	74,154	15	2,846	127	71,308	4,858	454,924	1,871	123,443	3,231	331,481
Colorado .....	104	8,151	1	(D)	103	(D)	262	1,657	31	38	231	1,619
Connecticut .....	5	(D)	-	-	5	(D)	99	1,765	50	393	83	1,372
Delaware .....	59	1,862	-	-	59	1,862	23	11,820	-	-	23	11,820
Florida .....	37	11,141	8	8,248	32	2,893	1,639	42,564	494	13,360	1,194	29,204
Georgia .....	25	2,500	25	2,500	-	-	358	29,471	150	3,118	231	26,353
Hawaii .....	4	40	-	-	4	40	146	766	101	241	45	525
Idaho .....	456	52,040	18	6,450	438	45,590	1,288	46,463	183	14,395	1,125	32,068
Illinois .....	50	3,489	22	818	28	2,671	103	6,460	18	105	100	6,355
Indiana .....	52	1,124	16	224	36	900	52	10,938	3	(D)	49	(D)
Iowa .....	-	-	-	-	-	-	28	730	18	720	10	10
Kansas .....	-	-	-	-	-	-	33	3,082	-	-	33	3,082
Kentucky .....	-	-	-	-	-	-	12	12	-	-	12	12
Louisiana .....	13	78	13	78	-	-	85	1,269	29	162	56	1,107
Maine .....	63	1,403	30	60	33	1,343	110	(D)	13	(D)	97	(D)
Maryland .....	1	(D)	1	(D)	-	-	71	2,500	22	259	49	2,241
Massachusetts .....	1	(D)	-	-	1	(D)	377	7,663	93	679	286	6,984
Michigan .....	25	1,430	-	-	25	1,430	166	18,995	24	5,302	142	13,693
Minnesota .....	45	7,438	42	7,108	3	330	52	6,196	37	5,864	17	332
Mississippi .....	12	10,200	-	-	12	10,200	16	193	11	93	5	100
Missouri .....	15	5,408	5	(D)	11	(D)	23	6,297	4	4	19	6,293
Montana .....	234	18,046	59	3,650	175	14,396	151	1,527	95	971	79	556
Nebraska .....	132	22,984	73	10,127	74	12,857	55	1,184	-	-	55	1,184
Nevada .....	15	1,200	-	-	15	1,200	71	2,805	30	660	41	2,145
New Hampshire .....	3	(D)	-	-	3	(D)	21	(D)	4	8	17	(D)
New Jersey .....	31	1,420	17	340	14	1,080	245	17,759	23	1,660	222	16,099
New Mexico .....	56	6,619	55	(D)	1	(D)	340	1,198	265	992	75	206
New York .....	61	1,420	4	295	60	1,125	234	3,336	117	293	143	3,043
North Carolina .....	1	(D)	-	-	1	(D)	199	12,058	36	819	163	11,239
North Dakota .....	26	2,420	22	2,340	4	80	1	(D)	-	-	1	(D)
Ohio .....	63	3,393	-	-	63	3,393	22	146	8	8	14	138
Oklahoma .....	31	9,558	-	-	31	9,558	26	722	-	-	26	722
Oregon .....	484	57,307	98	27,168	386	30,139	1,961	88,463	274	23,613	1,687	64,850
Pennsylvania .....	24	(D)	-	-	24	(D)	164	2,774	10	40	154	2,734
Rhode Island .....	4	(D)	-	-	4	(D)	18	(D)	8	(D)	10	174
South Carolina .....	35	(D)	26	52	9	(D)	114	4,258	29	1,043	85	3,215
South Dakota .....	-	-	-	-	-	-	5	332	-	-	5	332
Tennessee .....	22	1,914	1	(D)	21	(D)	7	140	-	-	7	140
Texas .....	317	46,764	224	14,997	93	31,767	423	38,368	223	20,726	233	17,642
Utah .....	545	25,851	179	12,215	366	13,636	437	6,030	125	2,379	348	3,651
Vermont .....	10	199	5	7	5	192	96	851	8	28	88	823
Virginia .....	5	245	5	245	-	-	80	656	22	66	58	590
Washington .....	198	15,348	88	7,918	113	7,430	3,052	253,939	568	79,849	2,578	174,090
West Virginia .....	-	-	-	-	-	-	26	5,435	7	5,397	19	38
Wisconsin .....	38	924	2	(D)	36	(D)	303	34,903	88	10,342	236	24,561
Wyoming .....	172	27,391	115	15,254	57	12,137	65	395	22	154	43	241
<b>Water Resources Regions</b>												
Region 01 New England .....	78	2,433	30	60	48	2,373	685	21,205	172	2,451	549	18,754
Region 02 Mid-Atlantic .....	151	4,781	26	1,070	128	3,711	667	42,360	130	7,598	540	34,762
Region 03 South Atlantic-Gulf .....	112	33,611	70	10,844	45	22,767	2,367	90,395	725	19,203	1,718	71,192
Region 04 Great Lakes .....	89	3,136	5	7	84	3,129	428	31,204	166	15,169	285	16,035
Region 05 Ohio .....	71	2,959	17	(D)	54	(D)	152	11,600	11	36	141	11,564
Region 06 Tennessee .....	-	-	-	-	-	-	38	(D)	-	-	38	(D)
Region 07 Upper Mississippi .....	133	6,895	48	2,440	86	4,455	341	31,454	57	811	322	30,643
Region 08 Lower Mississippi .....	59	18,112	18	2,078	41	16,034	109	11,584	38	1,377	75	10,207
Region 09 Souris-Red-Rainy .....	19	(D)	19	(D)	-	-	20	5,786	19	(D)	1	(D)
Region 10 Missouri .....	389	56,518	182	21,779	222	34,739	279	6,356	68	902	211	5,454
Region 11 Arkansas-White-Red .....	56	11,883	25	2,325	31	9,558	116	21,692	43	17,368	73	4,324
Region 12 Texas-Gulf .....	319	49,724	226	17,957	93	31,767	372	17,996	198	3,529	207	14,467
Region 13 Rio Grande .....	-	-	-	-	-	-	254	1,000	159	(D)	95	(D)
Region 14 Upper Colorado .....	318	17,267	110	8,308	208	8,959	340	3,257	127	671	213	2,586
Region 15 Lower Colorado .....	71	25,065	6	(D)	65	(D)	220	58,086	73	909	147	57,177
Region 16 Great Basin .....	349	25,149	125	11,567	224	13,582	456	7,254	124	2,626	368	4,628
Region 17 Pacific Northwest .....	1,285	131,171	250	44,191	1,038	86,980	6,365	389,732	1,120	118,828	5,382	270,904
Region 18 California .....	165	74,844	38	3,536	127	71,308	4,858	454,924	1,871	123,443	3,231	331,481
Region 19 Alaska .....	1	(D)	-	-	1	(D)	3	(D)	1	(D)	2	(D)
Region 20 Hawaii .....	4	40	-	-	4	40	146	766	101	241	45	525

See footnote(s) at end of table.

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**Table 30. Sprinkler Irrigation in Fields in the Open: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Side roll, wheel move, or other mechanical move		Big gun or traveler		Hand move		Other sprinkler system	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States .....	16,130	1,788,443	7,518	596,059	22,266	394,194	8,673	401,318
2018								
2013	16,806	1,859,017	8,446	558,308	29,936	820,806	11,973	1,664,496
<b>2018 DATA</b>								
Alabama .....	39	24,680	51	4,615	91	1,056	27	57
Alaska .....	4	351	-	-	33	(D)	3	(D)
Arizona .....	49	7,648	17	2,040	48	2,396	65	5,292
Arkansas .....	11	2,028	58	2,668	63	589	48	2,333
California .....	377	83,396	240	24,433	1,126	50,262	1,519	156,483
Colorado .....	1,159	79,972	562	18,085	622	6,973	208	8,711
Connecticut .....	-	-	7	252	134	590	95	1,266
Delaware .....	76	27,088	10	1,325	12	(D)	1	(D)
Florida .....	1	(D)	75	31,256	793	(D)	513	34,528
Georgia .....	126	27,220	357	43,631	215	1,164	96	1,377
Hawaii .....	2	(D)	42	2,697	252	704	314	2,621
Idaho .....	3,100	406,429	336	21,094	2,774	73,733	674	25,642
Illinois .....	107	42,338	46	2,590	105	344	31	41
Indiana .....	63	30,733	149	8,646	147	432	91	128
Iowa .....	41	6,920	19	960	86	135	23	58
Kansas .....	3	9,900	15	105	74	721	41	9,840
Kentucky .....	7	6,307	32	512	77	297	126	241
Louisiana .....	13	2,080	-	-	101	1,082	23	206
Maine .....	-	-	83	7,997	443	1,175	78	(D)
Maryland .....	67	10,509	39	2,850	108	385	66	(D)
Massachusetts .....	5	(D)	86	997	172	611	43	(D)
Michigan .....	97	14,496	588	61,636	316	3,060	363	873
Minnesota .....	123	24,596	84	3,819	192	303	42	100
Mississippi .....	8	5,850	46	5,948	33	86	25	74
Missouri .....	90	21,338	148	24,766	153	303	73	1,227
Montana .....	1,931	198,603	223	4,114	1,467	33,825	223	3,719
Nebraska .....	148	15,337	103	5,234	107	966	35	4,652
Nevada .....	162	9,999	32	690	46	241	51	656
New Hampshire .....	2	(D)	3	498	126	169	57	(D)
New Jersey .....	25	1,176	236	22,336	390	5,106	180	2,448
New Mexico .....	380	13,367	67	507	151	364	341	2,806
New York .....	21	4,170	191	16,158	398	3,245	137	576
North Carolina .....	54	(D)	280	21,305	394	(D)	279	4,707
North Dakota .....	4	72	2	(D)	42	104	-	-
Ohio .....	28	2,861	111	8,866	316	1,690	67	1,679
Oklahoma .....	38	6,613	76	4,625	163	296	32	14,878
Oregon .....	1,989	196,155	923	112,182	3,930	115,405	560	10,481
Pennsylvania .....	2	(D)	113	2,105	336	1,164	67	446
Rhode Island .....	-	-	11	1,790	37	154	4	4
South Carolina .....	7	(D)	151	9,046	225	(D)	31	930
South Dakota .....	-	-	-	-	45	(D)	2	(D)
Tennessee .....	15	5,200	36	3,440	128	179	59	333
Texas .....	457	86,163	642	36,217	749	6,714	422	48,993
Utah .....	3,511	258,816	143	1,731	1,198	13,745	571	21,711
Vermont .....	2	(D)	9	342	79	269	46	(D)
Virginia .....	5	1,710	168	9,674	249	1,521	77	5,425
Washington .....	1,461	82,373	637	48,632	2,858	44,429	643	21,514
West Virginia .....	-	-	5	(D)	96	105	39	(D)
Wisconsin .....	49	10,897	205	9,209	319	2,805	66	732
Wyoming .....	271	36,645	61	4,092	247	6,548	96	4,207
<b>Water Resources Regions</b>								
Region 01 New England .....	9	76	194	11,578	946	2,789	283	1,858
Region 02 Mid-Atlantic .....	185	41,991	583	45,564	1,170	8,079	434	8,694
Region 03 South Atlantic-Gulf .....	202	73,541	974	111,330	1,711	11,639	974	41,664
Region 04 Great Lakes .....	191	44,811	833	81,940	829	6,990	550	1,410
Region 05 Ohio .....	61	23,058	242	9,812	504	1,459	305	751
Region 06 Tennessee .....	25	(D)	46	3,285	226	(D)	41	(D)
Region 07 Upper Mississippi .....	259	65,935	302	25,433	633	2,896	136	961
Region 08 Lower Mississippi .....	57	19,754	51	11,015	131	1,307	29	953
Region 09 Souris-Red-Rainy .....	42	6,581	2	(D)	67	573	42	(D)
Region 10 Missouri .....	1,604	157,098	404	27,187	1,351	24,184	374	18,648
Region 11 Arkansas-White-Red .....	102	45,177	168	15,948	370	1,268	155	53,364
Region 12 Texas-Gulf .....	427	64,807	636	28,259	680	5,935	387	22,193
Region 13 Rio Grande .....	130	9,618	19	(D)	141	(D)	328	2,841
Region 14 Upper Colorado .....	2,877	170,957	577	9,349	634	9,537	300	2,993
Region 15 Lower Colorado .....	91	9,478	58	2,439	48	2,396	107	15,828
Region 16 Great Basin .....	2,307	214,521	116	2,623	1,276	18,205	508	23,009
Region 17 Pacific Northwest .....	6,993	707,353	2,004	182,266	10,022	242,307	1,899	57,254
Region 18 California .....	562	130,716	267	25,271	1,242	52,668	1,504	146,082
Region 19 Alaska .....	4	351	-	-	33	(D)	3	(D)
Region 20 Hawaii .....	2	(D)	42	2,697	252	704	314	2,621

<sup>1</sup> Multiple systems covering the same acreage are counted each time they cover the acres. This includes multiple systems of the same type.

**Table 31. Drip, Trickle, or Low-Flow Micro Irrigation in Fields in the Open: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Farms	Acres irrigated <sup>1</sup>	Surface drip		Sub-surface drip		Low-flow micro sprinklers		Other drip, trickle, or low-flow micro systems	
			Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States .....	2018 2013	5,860,921 4,889,912	41,058 41,135	2,900,438 2,583,201	8,490 6,412	1,082,033 766,901	17,676 15,050	1,661,438 1,269,483	3,311 3,947	217,012 270,327
<b>2018 DATA</b>										
Alabama .....	380	21,001	211	4,516	103	8,675	43	111	56	7,699
Alaska .....	104	253	91	228	-	-	10	11	3	14
Arizona .....	442	78,470	279	12,069	49	42,598	112	21,830	27	1,973
Arkansas .....	204	2,787	132	1,652	43	261	39	868	6	6
California .....	26,918	4,061,340	17,148	2,126,624	3,327	592,250	11,187	1,226,231	1,311	116,235
Colorado .....	782	3,861	545	1,719	74	1,404	188	559	76	179
Connecticut .....	252	1,079	185	552	7	125	23	120	86	282
Delaware .....	57	1,863	48	1,019	3	(D)	4	(D)	5	27
Florida .....	4,048	523,820	2,053	225,668	178	35,190	1,674	208,441	336	54,521
Georgia .....	1,656	162,416	1,021	57,432	176	31,769	484	68,840	106	4,375
Hawaii .....	987	17,909	896	11,967	81	4,875	100	972	47	95
Idaho .....	654	9,684	433	6,321	92	2,966	148	391	6	6
Illinois .....	402	7,131	355	5,962	30	969	38	135	11	65
Indiana .....	473	22,351	384	7,818	109	6,658	12	4,466	20	3,409
Iowa .....	306	2,837	143	1,231	105	1,418	49	104	25	84
Kansas .....	430	28,102	163	3,400	242	23,600	11	32	24	1,070
Kentucky .....	576	7,604	454	5,878	64	1,058	6	10	85	658
Louisiana .....	201	1,569	105	957	37	123	59	489	-	-
Maine .....	420	1,839	392	1,439	3	(D)	18	234	21	(D)
Maryland .....	318	4,351	231	1,450	21	1,467	69	1,319	39	115
Massachusetts .....	427	2,965	256	1,449	1	(D)	201	(D)	-	-
Michigan .....	1,491	39,821	1,225	23,847	234	15,822	35	133	19	19
Minnesota .....	270	3,360	175	2,939	39	(D)	34	34	38	(D)
Mississippi .....	242	5,581	190	2,849	20	2,160	39	542	6	30
Missouri .....	792	10,778	702	7,472	64	577	32	54	34	2,675
Montana .....	448	1,511	218	518	27	50	201	745	31	198
Nebraska .....	748	58,714	202	1,707	497	52,088	-	-	50	4,919
Nevada .....	56	4,418	38	(D)	2	(D)	14	28	3	(D)
New Hampshire .....	383	2,018	196	718	107	331	126	878	83	91
New Jersey .....	718	21,767	499	16,820	137	4,142	101	500	8	305
New Mexico .....	949	20,465	725	6,863	147	2,822	120	10,681	33	99
New York .....	1,079	14,595	823	11,044	201	2,070	170	1,338	26	143
North Carolina .....	817	15,047	672	13,125	48	865	66	975	58	82
North Dakota .....	18	154	14	(D)	4	120	2	(D)	-	-
Ohio .....	668	8,413	572	6,862	110	1,480	11	23	25	48
Oklahoma .....	387	11,492	162	1,927	93	5,994	132	3,571	-	-
Oregon .....	2,471	68,252	1,812	39,581	132	12,734	498	15,790	75	147
Pennsylvania .....	1,487	19,589	993	15,259	333	2,683	240	1,163	179	484
Rhode Island .....	130	385	98	296	12	(D)	19	(D)	1	(D)
South Carolina .....	652	31,169	413	14,077	119	8,914	149	8,000	53	178
South Dakota .....	88	1,673	60	164	5	60	23	1,449	-	-
Tennessee .....	395	2,468	351	1,819	22	(D)	1	(D)	21	105
Texas .....	3,188	271,329	1,909	30,703	1,057	200,350	270	31,580	59	8,696
Utah .....	368	9,464	203	1,654	-	-	171	4,410	4	3,400
Vermont .....	234	1,023	170	374	45	157	33	487	5	5
Virginia .....	572	4,996	409	4,564	144	299	-	-	60	133
Washington .....	2,734	265,147	2,122	210,292	124	10,960	631	40,439	76	3,456
West Virginia .....	168	345	118	251	3	12	20	40	27	42
Wisconsin .....	499	3,476	437	2,128	19	19	63	1,303	3	26
Wyoming .....	69	239	25	(D)	-	-	-	-	44	(D)
<b>Water Resources Regions</b>										
Region 01 New England .....	1,743	9,057	1,200	4,618	163	845	439	3,126	191	468
Region 02 Mid-Atlantic .....	3,235	57,171	2,285	43,194	555	8,837	470	4,039	328	1,101
Region 03 South Atlantic-Gulf .....	7,815	754,519	4,546	315,987	682	84,817	2,432	286,830	615	66,885
Region 04 Great Lakes .....	2,703	53,100	2,205	33,165	485	18,143	120	1,612	34	180
Region 05 Ohio .....	1,836	28,564	1,408	15,112	289	3,897	93	5,317	160	4,238
Region 06 Tennessee .....	388	3,974	362	(D)	22	1,018	23	(D)	-	-
Region 07 Upper Mississippi .....	1,398	22,278	1,074	13,742	190	7,884	148	300	78	352
Region 08 Lower Mississippi .....	339	13,589	219	8,351	64	2,219	52	459	8	2,560
Region 09 Souris-Red-Rainy .....	40	134	40	(D)	-	-	2	(D)	-	-
Region 10 Missouri .....	1,893	70,815	1,033	4,903	658	58,217	99	1,553	140	6,142
Region 11 Arkansas-White-Red .....	1,564	64,980	895	13,700	514	46,400	234	4,850	8	30
Region 12 Texas-Gulf .....	2,677	240,029	1,604	22,769	856	178,894	262	29,670	59	8,696
Region 13 Rio Grande .....	956	13,344	710	7,598	145	3,542	110	2,081	57	123
Region 14 Upper Colorado .....	487	2,764	285	2,072	35	89	170	448	52	155
Region 15 Lower Colorado .....	523	99,404	324	22,611	49	42,598	147	32,218	31	1,977
Region 16 Great Basin .....	378	14,172	211	4,797	22	820	149	4,595	7	3,960
Region 17 Pacific Northwest .....	6,193	344,043	4,537	256,451	353	26,688	1,432	57,099	186	3,805
Region 18 California .....	26,899	4,050,822	17,133	2,116,164	3,327	592,250	11,184	1,226,177	1,307	116,231
Region 19 Alaska .....	104	253	91	228	-	-	10	11	3	14
Region 20 Hawaii .....	987	17,909	896	11,967	81	4,875	100	972	47	95

<sup>1</sup> Multiple systems covering the same acreage are counted each time they cover the acres. This includes multiple systems of the same type.

**Table 32. Estimated Quantity of Water Applied in the Open Using Only One Method of Distribution: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Water applied by all methods			Only sprinkler systems			Only gravity flow systems			Only drip, trickle, or low-flow micro sprinkler systems		
	Acres irrigated <sup>1</sup>	Acre-feet applied	Average acre-feet per acre	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre
United States ..... 2018	55,886,470	83,332,760	1.5	79,830	22,877,786	1.1	61,091	13,649,228	1.8	44,753	3,776,584	2.1
..... 2013	55,283,340	88,455,968	1.6	81,745	24,068,728	1.2	53,824	13,296,785	1.9	37,877	2,489,767	1.9
<b>2018 DATA</b>												
Alabama .....	162,612	95,915	0.6	436	128,847	0.6	75	9,175	0.9	326	10,467	0.3
Alaska .....	(D)	1,207	0.8	34	870	0.9	19	85	0.7	92	189	0.7
Arizona .....	945,236	4,409,708	4.7	301	68,215	3.1	2,150	593,775	4.9	293	56,868	4.2
Arkansas .....	4,246,295	5,071,653	1.2	228	46,182	0.8	2,171	3,152,019	1.3	170	2,591	1.3
California .....	8,399,881	24,490,687	2.9	4,399	357,544	2.9	9,040	1,888,221	3.5	21,468	2,712,682	2.4
Colorado .....	2,458,120	3,840,763	1.6	2,822	1,061,275	1.5	9,114	891,277	1.7	280	717	1.0
Connecticut .....	4,936	2,906	0.6	204	2,492	0.5	43	43	2.0	107	344	0.7
Delaware .....	201,224	79,744	0.4	447	189,107	0.4	2	(D)	(D)	31	632	0.5
Florida .....	1,324,471	1,352,233	1.0	2,735	240,449	1.0	178	413,173	0.9	3,276	410,469	1.0
Georgia .....	1,162,380	817,940	0.7	2,034	935,625	0.7	70	1,225	0.9	1,174	110,674	1.0
Hawaii .....	(D)	35,530	1.4	366	3,610	1.3	40	146	1.1	606	13,874	1.6
Idaho .....	3,392,674	6,614,755	1.9	5,485	2,077,384	1.9	6,362	548,565	2.2	278	1,913	1.5
Illinois .....	564,575	332,220	0.6	1,266	552,543	0.6	21	21	1.0	288	5,362	1.0
Indiana .....	582,102	247,555	0.4	1,389	530,952	0.4	6	12	0.5	261	8,764	0.5
Iowa .....	165,621	60,983	0.4	565	160,728	0.4	5	25	0.4	217	1,340	0.7
Kansas .....	2,386,483	2,458,994	1.0	3,068	1,867,899	1.1	296	23,725	0.7	183	576	0.4
Kentucky .....	57,506	21,991	0.4	177	46,687	0.4	57	121	0.6	466	6,657	0.4
Louisiana .....	1,071,564	1,019,977	1.0	237	27,547	0.5	1,140	810,334	1.0	185	1,162	0.4
Maine .....	(D)	15,535	0.4	350	31,063	0.4	5	8	0.6	121	299	0.9
Maryland .....	124,486	68,096	0.5	453	109,678	0.5	-	-	-	161	1,935	0.4
Massachusetts .....	18,834	22,588	1.2	464	7,700	0.6	180	5,240	1.8	285	2,436	0.2
Michigan .....	824,218	454,261	0.6	1,777	750,056	0.5	-	-	-	991	23,119	1.2
Minnesota .....	553,858	248,126	0.4	1,867	536,179	0.4	4	(D)	1.0	151	1,188	0.3
Mississippi .....	(D)	1,168,359	0.7	282	104,296	0.5	725	955,807	0.8	205	5,197	0.7
Missouri .....	1,428,310	1,109,102	0.8	940	372,585	0.6	400	513,483	0.9	615	2,793	0.6
Montana .....	2,139,878	2,548,878	1.2	2,933	468,484	1.1	3,840	841,857	1.1	200	516	1.3
Nebraska .....	7,665,880	4,856,075	0.6	7,425	4,201,316	0.6	976	98,757	0.8	231	3,839	0.4
Nevada .....	693,466	1,920,216	2.8	336	157,200	3.0	1,186	321,341	2.5	21	55	2.5
New Hampshire .....	(D)	1,688	0.6	119	256	0.5	49	84	0.6	298	988	0.8
New Jersey .....	88,604	50,318	0.6	666	50,498	0.5	13	26	0.5	398	10,182	0.5
New Mexico .....	675,092	1,337,721	2.0	1,439	269,418	1.5	7,265	210,984	2.2	695	16,465	3.0
New York .....	45,847	33,011	0.7	434	19,460	0.7	73	1,392	1.2	645	10,837	0.8
North Carolina .....	131,631	54,315	0.4	1,101	101,237	0.4	80	1,322	0.1	575	5,868	0.8
North Dakota .....	(D)	189,921	0.6	537	218,065	0.6	86	16,576	0.8	7	17	0.8
Ohio .....	37,740	15,877	0.4	409	25,929	0.4	26	718	(D)	411	5,526	0.4
Oklahoma .....	(D)	661,996	1.1	1,122	501,116	1.1	176	45,174	1.2	315	1,346	0.8
Oregon .....	1,577,008	2,716,564	1.7	7,481	812,108	1.7	2,607	372,779	1.7	1,564	37,066	1.7
Pennsylvania .....	37,849	38,272	1.0	375	7,057	0.3	37	53	0.7	1,133	11,620	0.4
Rhode Island .....	(D)	936	0.3	41	2,512	0.2	5	40	0.1	100	244	0.9
South Carolina .....	252,409	203,351	0.8	723	198,296	0.8	14	70	0.2	500	19,856	0.8
South Dakota .....	378,309	261,342	0.7	787	303,518	0.5	243	28,969	1.0	60	1,576	1.4
Tennessee .....	190,003	80,824	0.4	573	158,059	0.4	66	4,252	(D)	359	1,610	0.5
Texas .....	4,083,451	5,343,356	1.3	5,800	2,603,403	1.2	2,334	664,410	1.9	2,117	101,966	1.4
Utah .....	1,181,301	2,326,069	2.0	5,219	482,414	2.0	5,345	329,835	2.0	212	5,603	3.3
Vermont .....	2,613	2,025	0.8	111	851	1.0	25	25	1.0	131	683	0.9
Virginia .....	47,136	13,542	0.3	518	40,279	0.3	4	1,324	0.2	490	4,346	0.4
Washington .....	1,864,760	4,071,696	2.2	7,009	1,255,061	2.2	792	39,081	1.7	1,639	152,903	1.8
West Virginia .....	6,188	1,740	0.3	96	5,790	0.3	-	-	-	117	283	0.7
Wisconsin .....	517,394	293,431	0.6	1,272	504,261	0.6	-	-	-	283	919	0.5
Wyoming .....	1,561,506	2,268,768	1.5	978	281,585	1.4	3,746	863,671	1.4	22	22	1.0
<b>Water Resources Regions</b>												
Region 01 New England .....	66,062	44,532	0.7	1,237	44,133	0.5	282	5,415	1.8	1,001	4,929	0.5
Region 02 Mid-Atlantic .....	518,002	263,819	0.5	2,451	406,035	0.4	83	1,855	0.6	2,174	32,122	0.5
Region 03 South Atlantic-Gulf .....	3,032,227	2,521,236	0.8	7,117	1,601,722	0.7	409	425,527	0.9	6,113	558,825	1.0
Region 04 Great Lakes .....	1,124,241	574,437	0.5	2,901	1,020,481	0.5	95	1,657	1.0	1,643	31,407	1.0
Region 05 Ohio .....	441,080	208,453	0.5	1,549	383,265	0.5	87	185	0.6	1,348	18,120	0.5
Region 06 Tennessee .....	(D)	45,012	0.6	357	58,394	0.6	95	520	0.2	288	2,825	0.9
Region 07 Upper Mississippi .....	1,624,769	860,160	0.5	4,447	1,543,762	0.5	45	5,984	0.2	917	8,930	0.8
Region 08 Lower Mississippi .....	(D)	7,422,885	1.0	1,048	465,824	0.5	3,856	4,881,127	1.1	261	6,368	0.5
Region 09 Souris-Red-Rainy .....	207,595	116,902	0.6	511	201,851	0.6	6	12	1.2	38	130	0.3
Region 10 Missouri .....	13,105,909	11,265,893	0.9	14,374	6,587,130	0.7	9,604	1,637,838	1.3	951	7,989	0.7
Region 11 Arkansas-White-Red .....	4,876,728	5,714,078	1.2	4,741	3,361,825	1.2	2,492	745,070	1.2	966	6,678	1.4
Region 12 Texas-Gulf .....	2,693,245	3,509,476	1.3	4,736	1,458,449	1.1	1,949	581,955	2.0	1,815	96,072	1.3
Region 13 Rio Grande .....	709,230	1,483,424	2.1	913	237,124	2.1	6,518	314,670	2.0	717	9,787	3.2
Region 14 Upper Colorado .....	1,472,320	2,558,532	1.7	3,104	266,505	2.1	7,984	868,044	1.6	166	501	1.8
Region 15 Lower Colorado .....	1,035,023	4,726,392	4.6	567	79,588	3.0	2,487	627,311	4.8	357	67,480	4.0
Region 16 Great Basin .....	1,763,271	3,942,124	2.2	4,004	595,129	2.2	5,462	614,853	2.2	190	5,584	3.3
Region 17 Pacific Northwest .....	7,010,052	13,591,647	1.9	20,686	4,146,629	2.0	10,453	1,032,785	1.9	3,644	192,288	1.8
Region 18 California .....	8,483,718	24,447,021	2.9	4,687	415,360	2.6	9,125	1,904,189	3.4	21,466	2,712,486	2.4
Region 19 Alaska .....	(D)	1,207	0.8	34	970	0.9	19	85	0.7	92	189	0.7
Region 20 Hawaii .....	(D)	35,530	1.4	366	3,610	1.3	40	146	1.1	606	13,874	1.6

<sup>1</sup> Acres represent the acres of land with coverage by at least one of the systems. Acres are not double counted if multiple systems exist on the same acreage.

**Table 33. Estimated Quantity of Water Applied in the Open Using Only Gravity Flow Systems: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Total			Only down rows or furrows			Only controlled flooding (between borders or within basins)		
	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
United States .....2018	61,091	13,649,228	1.8	20,314	3,959,882	1.6	23,482	3,930,302	2.3
.....2013	53,824	13,296,785	1.9	18,380	3,394,577	1.7	19,564	3,511,942	2.5
<b>2018 DATA</b>									
Alabama .....	75	9,175	0.9	25	50	0.5	25	2,000	3.0
Alaska .....	19	85	0.7	19	85	0.7	-	-	-
Arizona .....	2,150	593,775	4.9	598	191,712	4.5	1,173	142,171	4.5
Arkansas .....	2,171	3,152,019	1.3	713	718,590	1.0	184	112,251	1.8
California .....	9,040	1,888,221	3.5	1,898	365,496	3.1	4,322	844,514	4.0
Colorado .....	9,114	891,277	1.7	4,617	256,346	1.9	2,491	345,408	1.7
Connecticut .....	43	43	2.0	43	43	2.0	-	-	-
Delaware .....	2	(D)	(D)	2	(D)	(D)	-	-	-
Florida .....	178	413,173	0.9	117	18,279	1.1	51	358,994	0.9
Georgia .....	70	1,225	0.9	70	1,225	0.9	-	-	-
Hawaii .....	40	146	1.1	39	(D)	0.9	-	-	-
Idaho .....	6,362	548,565	2.2	2,704	260,726	2.6	1,915	146,985	1.8
Illinois .....	21	21	1.0	21	21	1.0	-	-	-
Indiana .....	6	12	0.5	6	12	0.5	-	-	-
Iowa .....	5	25	0.4	5	25	0.4	-	-	-
Kansas .....	296	23,725	0.7	251	16,225	0.8	30	(D)	0.9
Kentucky .....	57	121	0.6	4	16	1.0	-	-	-
Louisiana .....	1,140	810,334	1.0	528	423,557	0.6	433	220,583	2.0
Maine .....	5	8	0.6	2	(D)	(D)	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-
Massachusetts .....	180	5,240	1.8	68	264	(D)	112	4,976	1.9
Michigan .....	-	-	-	-	-	-	-	-	-
Minnesota .....	4	(D)	1.0	4	(D)	1.0	-	-	-
Mississippi .....	725	955,807	0.8	584	561,769	0.7	19	1,744	1.6
Missouri .....	400	513,483	0.9	266	234,705	0.8	37	28,971	0.6
Montana .....	3,840	841,857	1.1	345	36,996	1.1	2,096	443,226	1.1
Nebraska .....	976	98,757	0.8	725	86,541	0.8	126	3,704	1.1
Nevada .....	1,186	321,341	2.5	151	20,668	2.8	716	202,489	2.0
New Hampshire .....	49	84	0.6	-	-	-	49	84	0.6
New Jersey .....	13	26	0.5	13	26	0.5	-	-	-
New Mexico .....	7,265	210,984	2.2	1,699	45,210	1.4	4,192	129,754	2.3
New York .....	73	1,392	1.2	27	1,323	1.2	-	-	-
North Carolina .....	80	1,322	0.1	53	80	0.7	27	1,242	(D)
North Dakota .....	86	16,576	0.8	6	12	1.2	62	7,564	1.1
Ohio .....	26	718	(D)	25	(D)	0.3	1	(D)	(D)
Oklahoma .....	176	45,174	1.2	107	31,684	1.2	26	1,950	1.0
Oregon .....	2,607	372,779	1.7	646	53,279	2.2	881	176,680	1.7
Pennsylvania .....	37	53	0.7	21	21	1.0	-	-	-
Rhode Island .....	5	40	0.1	-	-	-	-	-	-
South Carolina .....	14	70	0.2	14	70	(D)	-	-	-
South Dakota .....	243	28,969	1.0	22	(D)	1.0	111	13,767	1.1
Tennessee .....	66	4,252	(D)	44	(D)	(D)	-	-	-
Texas .....	2,334	664,410	1.9	772	333,639	1.6	1,162	262,922	2.3
Utah .....	5,345	329,835	2.0	1,510	79,633	2.1	1,871	118,169	2.1
Vermont .....	25	25	1.0	-	-	-	25	25	1.0
Virginia .....	4	1,324	0.2	4	1,324	0.2	-	-	-
Washington .....	792	39,081	1.7	440	28,488	1.9	26	156	2.0
West Virginia .....	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	-
Wyoming .....	3,746	863,671	1.4	1,106	187,333	2.0	1,319	357,923	1.2
<b>Water Resources Regions</b>									
Region 01 New England .....	282	5,415	1.8	113	(D)	0.5	161	5,060	1.9
Region 02 Mid-Atlantic .....	83	1,855	0.6	44	1,777	0.6	-	-	-
Region 03 South Atlantic-Gulf .....	409	425,527	0.9	252	19,860	1.1	110	362,348	0.9
Region 04 Great Lakes .....	95	1,657	1.0	46	1,059	0.7	26	(D)	(D)
Region 05 Ohio .....	87	185	0.6	34	80	0.7	-	-	-
Region 06 Tennessee .....	95	520	0.2	73	146	0.5	-	-	-
Region 07 Upper Mississippi .....	45	5,984	0.2	45	5,984	0.2	-	-	-
Region 08 Lower Mississippi .....	3,856	4,881,127	1.1	1,893	1,872,098	0.8	621	331,080	1.8
Region 09 Souris-Red-Rainy .....	6	12	1.2	6	12	1.2	-	-	-
Region 10 Missouri .....	9,604	1,637,838	1.3	2,733	337,625	1.5	3,779	666,575	1.2
Region 11 Arkansas-White-Red .....	2,492	745,070	1.2	1,317	196,202	1.0	454	(D)	(D)
Region 12 Texas-Gulf .....	1,949	581,955	2.0	635	284,636	1.7	937	254,849	2.4
Region 13 Rio Grande .....	6,518	314,670	2.0	1,044	66,808	1.3	4,328	160,059	2.2
Region 14 Upper Colorado .....	7,984	868,044	1.6	4,412	179,153	2.2	1,799	397,589	1.6
Region 15 Lower Colorado .....	2,487	627,311	4.8	656	202,145	4.5	1,307	153,530	4.4
Region 16 Great Basin .....	5,462	614,853	2.2	1,262	93,064	2.1	2,300	316,744	2.4
Region 17 Pacific Northwest .....	10,453	1,032,785	1.9	3,817	342,364	2.5	3,250	358,389	1.6
Region 18 California .....	9,125	1,904,189	3.4	1,874	356,364	3.1	4,410	874,424	3.9
Region 19 Alaska .....	19	85	0.7	19	85	0.7	-	-	-
Region 20 Hawaii .....	40	146	1.1	39	(D)	0.9	-	-	-

See footnote(s) at end of table.

--continued

**Table 33. Estimated Quantity of Water Applied in the Open Using Only Gravity Flow Systems: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Only uncontrolled flooding (rangeland, pastureland, etc.)			Only other gravity		
	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
United States .....2018	9,144	913,507	1.5	1,418	85,804	2.0
.....2013	6,896	787,224	1.5	1,054	155,793	2.3
<b>2018 DATA</b>						
Alabama .....	25	7,125	0.3	-	-	-
Alaska .....	-	-	-	-	-	-
Arizona .....	176	2,304	5.1	-	-	-
Arkansas .....	38	1,990	0.5	-	-	-
California .....	1,884	183,591	2.6	101	1,875	1.0
Colorado .....	1,036	95,515	0.9	142	15,233	3.8
Connecticut .....	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-
Florida .....	3	18,000	0.3	4	14,900	(D)
Georgia .....	-	-	-	-	-	-
Hawaii .....	-	-	-	1	(D)	(D)
Idaho .....	923	73,954	1.8	328	16,767	0.7
Illinois .....	-	-	-	-	-	-
Indiana .....	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-
Kentucky .....	-	-	-	27	27	1.0
Louisiana .....	68	7,096	0.3	-	-	-
Maine .....	-	-	-	3	(D)	0.5
Maryland .....	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-
Mississippi .....	12	294	0.6	-	-	-
Missouri .....	-	-	-	-	-	-
Montana .....	903	116,905	1.0	86	2,616	1.1
Nebraska .....	63	747	1.1	-	-	-
Nevada .....	199	39,022	2.0	15	165	2.7
New Hampshire .....	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-
New Mexico .....	738	15,835	1.9	89	1,433	2.5
New York .....	23	46	0.5	23	23	3.0
North Carolina .....	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-
Ohio .....	-	-	-	-	-	-
Oklahoma .....	39	6,240	0.7	-	-	-
Oregon .....	758	101,183	1.5	172	3,147	0.8
Pennsylvania .....	-	-	-	16	32	0.5
Rhode Island .....	5	40	0.1	-	-	-
South Carolina .....	-	-	-	-	-	-
South Dakota .....	44	2,684	0.4	-	-	-
Tennessee .....	-	-	-	22	(D)	0.1
Texas .....	270	15,759	0.8	40	19,000	2.5
Utah .....	930	23,995	2.5	242	4,346	1.3
Vermont .....	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-
Washington .....	189	7,774	0.7	83	1,421	3.4
West Virginia .....	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-
Wyoming .....	818	193,408	1.1	24	4,404	2.5
<b>Water Resources Regions</b>						
Region 01 New England .....	5	40	0.1	3	(D)	0.5
Region 02 Mid-Atlantic .....	23	46	0.5	16	32	0.5
Region 03 South Atlantic-Gulf .....	40	25,419	0.3	4	14,900	(D)
Region 04 Great Lakes .....	-	-	-	23	(D)	(D)
Region 05 Ohio .....	-	-	-	27	(D)	1.0
Region 06 Tennessee .....	-	-	-	22	374	0.1
Region 07 Upper Mississippi .....	-	-	-	-	-	-
Region 08 Lower Mississippi .....	78	6,016	0.3	-	-	-
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-
Region 10 Missouri .....	1,889	221,650	1.0	87	14,886	3.1
Region 11 Arkansas-White-Red .....	209	22,055	0.8	80	2,447	1.7
Region 12 Texas-Gulf .....	270	15,759	0.8	40	19,000	2.5
Region 13 Rio Grande .....	659	25,392	1.7	-	-	-
Region 14 Upper Colorado .....	793	126,280	0.9	158	6,868	3.9
Region 15 Lower Colorado .....	277	3,083	4.3	-	-	-
Region 16 Great Basin .....	925	54,466	2.1	237	15,594	0.7
Region 17 Pacific Northwest .....	2,061	216,850	1.6	619	9,737	1.4
Region 18 California .....	1,915	196,451	2.5	101	1,875	1.0
Region 19 Alaska .....	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	1	(D)	(D)

<sup>1</sup> Acres represent the acres of land with coverage by at least one of the systems. Acres are not double counted if multiple systems exist on the same acreage.

**Table 34. Estimated Quantity of Water Applied in the Open Using Only Sprinkler Systems: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Only center pivot systems											
	All pressures			Only low pressure under 30 psi			Only medium pressure 30 to 59 psi			Only high pressure 60 psi or more		
	Farms	Acres irrigated †	Average acre-feet per acre	Farms	Acres irrigated †	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
United States .....	2018 31,890	17,675,276	1.0	12,298	6,749,595	1.1	15,785	8,730,614	0.9	2,342	782,944	1.0
.....2013	32,837	17,440,235	1.1	14,601	7,822,856	1.2	13,743	6,535,074	1.1	2,203	712,392	0.9
<b>2018 DATA</b>												
Alabama .....	233	83,079	0.4	128	38,825	0.4	102	37,254	0.5	1	(D)	(D)
Alaska .....	1	(D)	(D)	-	-	-	1	(D)	(D)	-	-	-
Arizona .....	105	46,991	3.8	105	46,991	3.8	-	-	-	-	-	-
Arkansas .....	83	34,305	0.7	26	7,430	0.6	57	26,875	0.8	-	-	-
California .....	69	10,337	1.9	22	198	0.7	47	10,139	1.9	-	-	-
Colorado .....	1,540	914,437	1.4	511	298,115	1.3	867	533,672	1.4	127	15,144	1.7
Connecticut .....	7	(D)	(D)	6	(D)	(D)	-	-	-	1	(D)	(D)
Delaware .....	290	129,899	0.4	44	33,768	0.5	245	93,412	0.3	-	-	-
Florida .....	444	144,543	1.1	202	50,348	1.2	186	78,861	1.0	27	(D)	(D)
Georgia .....	1,331	799,130	0.7	522	249,745	0.7	633	432,942	0.7	111	29,847	0.8
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	732	863,561	1.9	200	182,854	2.1	377	545,862	1.9	141	92,991	1.3
Illinois .....	1,028	500,548	0.6	241	76,976	0.9	684	345,622	0.6	53	18,470	0.7
Indiana .....	1,094	475,792	0.4	219	110,623	0.4	678	304,507	0.4	98	12,459	0.5
Iowa .....	447	152,007	0.4	71	38,297	0.3	318	92,897	0.4	35	7,475	0.3
Kansas .....	2,934	1,845,987	1.1	1,638	1,236,012	1.1	1,112	485,421	0.9	71	15,432	1.1
Kentucky .....	57	39,673	0.3	19	(D)	(D)	37	25,057	0.3	1	(D)	(D)
Louisiana .....	47	25,820	0.5	15	2,400	0.3	32	23,420	0.6	-	-	-
Maine .....	15	9,262	0.5	1	(D)	(D)	9	(D)	(D)	3	(D)	(D)
Maryland .....	296	93,097	0.6	40	21,280	0.4	210	55,623	0.6	6	4,025	1.0
Massachusetts .....	2	(D)	(D)	-	-	-	2	(D)	(D)	-	-	-
Michigan .....	892	477,645	0.5	144	51,173	0.3	561	343,178	0.5	105	36,494	0.5
Minnesota .....	1,492	499,254	0.4	411	120,772	0.5	845	299,092	0.5	169	35,428	0.4
Mississippi .....	172	100,031	0.5	49	22,675	0.5	84	59,915	0.5	32	8,859	0.6
Missouri .....	632	340,502	0.6	241	115,811	0.7	296	185,101	0.6	31	6,566	0.5
Montana .....	613	141,598	1.1	220	58,362	1.2	318	73,542	0.9	71	8,734	0.9
Nebraska .....	7,104	4,109,859	0.6	1,573	667,650	0.6	4,427	2,723,506	0.6	625	232,880	0.5
Nevada .....	135	104,426	2.8	95	45,256	2.7	40	59,170	2.8	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	41	11,655	0.2	33	(D)	0.2	6	2,284	(D)	2	(D)	(D)
New Mexico .....	588	256,885	1.5	477	189,110	1.4	106	62,775	1.8	-	-	-
New York .....	6	1,961	(D)	3	1,256	(D)	-	-	-	3	705	(D)
North Carolina .....	166	64,066	0.3	63	8,526	0.5	76	55,000	0.3	27	5,400	0.5
North Dakota .....	499	217,914	0.6	230	93,110	0.6	238	123,750	0.5	31	1,054	1.0
Ohio .....	56	11,108	0.5	11	1,353	0.2	39	6,890	0.6	6	2,865	0.3
Oklahoma .....	786	463,405	1.1	513	286,577	1.2	210	143,146	0.9	3	6,924	0.7
Oregon .....	472	277,660	2.2	165	166,175	2.4	221	90,641	2.1	86	20,844	1.7
Pennsylvania .....	17	(D)	0.4	-	-	-	17	(D)	0.4	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	256	137,156	0.9	109	54,647	0.9	128	73,425	0.8	12	2,784	2.0
South Dakota .....	760	302,844	0.5	208	54,274	0.5	453	192,070	0.5	49	33,979	0.6
Tennessee .....	351	148,382	0.4	109	35,503	0.3	197	94,064	0.4	6	4,410	0.3
Texas .....	3,399	2,378,017	1.2	2,827	1,986,596	1.1	506	272,931	1.4	12	20,105	0.6
Utah .....	712	177,431	2.2	177	36,118	2.3	466	115,881	2.2	61	17,800	1.7
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	78	17,375	0.3	25	5,850	0.4	30	8,282	0.3	23	3,243	(Z)
Washington .....	800	660,795	2.3	256	176,124	1.9	412	392,083	2.3	130	68,543	3.1
West Virginia .....	1	(D)	(D)	-	-	-	1	(D)	(D)	-	-	-
Wisconsin .....	595	404,373	0.6	84	55,946	0.5	329	169,529	0.6	140	61,449	0.4
Wyoming .....	512	199,510	1.3	265	103,169	1.2	182	84,935	1.5	43	2,650	0.9
<b>Water Resources Regions</b>												
Region 01 New England .....	24	10,002	0.5	7	(D)	(D)	11	5,644	0.7	4	2,420	0.3
Region 02 Mid-Atlantic .....	703	252,820	0.4	124	67,636	0.5	507	161,281	0.4	31	9,015	0.5
Region 03 South Atlantic-Gulf .....	2,439	1,230,322	0.7	1,017	389,244	0.8	1,122	691,062	0.7	197	37,650	0.8
Region 04 Great Lakes .....	1,299	665,114	0.4	209	83,729	0.3	748	444,917	0.5	224	74,507	0.4
Region 05 Ohio .....	782	333,740	0.5	124	47,618	0.7	486	194,593	0.4	86	21,064	0.4
Region 06 Tennessee .....	101	(D)	(D)	58	(D)	(D)	42	(D)	(D)	1	(D)	(D)
Region 07 Upper Mississippi .....	3,316	1,395,733	0.5	831	291,858	0.5	2,056	832,239	0.5	272	80,848	0.5
Region 08 Lower Mississippi .....	732	444,914	0.5	228	103,733	0.5	408	283,244	0.5	18	9,654	0.5
Region 09 Souris-Red-Rainy .....	382	194,583	0.6	122	59,410	0.6	220	131,833	0.5	18	(D)	(D)
Region 10 Missouri .....	12,005	6,151,815	0.7	3,397	1,470,802	0.8	7,020	3,780,734	0.7	968	301,527	0.6
Region 11 Arkansas-White-Red .....	4,026	3,225,798	1.2	2,752	2,358,529	1.2	1,067	628,860	1.0	49	31,376	0.9
Region 12 Texas-Gulf .....	2,458	1,295,318	1.1	2,030	1,075,981	1.0	373	195,780	1.5	8	6,825	0.4
Region 13 Rio Grande .....	334	208,229	2.1	220	88,950	2.4	57	100,679	1.8	48	4,080	1.7
Region 14 Upper Colorado .....	257	95,763	2.4	80	25,940	2.0	169	59,423	2.6	4	6,400	3.0
Region 15 Lower Colorado .....	275	56,129	3.5	214	53,259	3.7	34	170	0.8	27	2,700	1.0
Region 16 Great Basin .....	636	265,459	2.3	203	74,111	2.7	399	179,016	2.2	30	8,700	0.9
Region 17 Pacific Northwest .....	2,027	1,782,212	2.1	660	536,133	2.1	994	997,802	2.1	357	182,378	2.1
Region 18 California .....	93	21,665	1.4	22	198	0.7	71	21,467	1.4	-	-	-
Region 19 Alaska .....	1	(D)	(D)	-	-	-	1	(D)	(D)	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 34. Estimated Quantity of Water Applied in the Open Using Only Sprinkler Systems: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Only linear move tower systems								
	All pressures			Only low pressure under 30 psi			Only medium to high pressure 30 psi or more		
	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre
United States .....2018	1,528	123,161	2.3	584	46,486	1.5	941	76,054	2.8
.....2013	653	61,385	1.7	181	24,340	2.1	466	37,009	1.4
<b>2018 DATA</b>									
Alabama .....	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-	-
Arkansas .....	5	5	1.0	5	5	1.0	-	-	-
California .....	26	21,858	6.0	-	-	-	26	21,858	6.0
Colorado .....	1	(D)	(D)	1	(D)	(D)	-	-	-
Connecticut .....	-	-	-	-	-	-	-	-	-
Delaware .....	22	110	0.4	-	-	-	22	110	0.4
Florida .....	3	621	0.5	-	-	-	-	-	-
Georgia .....	-	-	-	-	-	-	-	-	-
Hawaii .....	2	(D)	(D)	-	-	-	2	(D)	(D)
Idaho .....	123	12,387	1.7	-	-	-	123	12,387	1.7
Illinois .....	-	-	-	-	-	-	-	-	-
Indiana .....	34	404	0.8	16	224	0.6	18	180	0.9
Iowa .....	-	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-
Louisiana .....	13	78	0.3	13	78	0.3	-	-	-
Maine .....	27	(D)	0.5	27	(D)	0.5	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-
Michigan .....	20	800	0.2	-	-	-	20	800	0.2
Minnesota .....	-	-	-	-	-	-	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-
Montana .....	120	9,140	1.8	23	230	0.5	97	8,910	1.8
Nebraska .....	16	4,320	0.3	16	4,320	0.3	-	-	-
Nevada .....	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-
New Mexico .....	22	5,280	1.0	22	5,280	1.0	-	-	-
New York .....	1	(D)	(D)	-	-	-	1	(D)	(D)
North Carolina .....	1	(D)	(D)	-	-	-	1	(D)	(D)
North Dakota .....	-	-	-	-	-	-	-	-	-
Ohio .....	59	2,963	0.1	-	-	-	59	2,963	0.1
Oklahoma .....	-	-	-	-	-	-	-	-	-
Oregon .....	233	16,805	1.6	35	14,008	1.8	198	2,797	1.0
Pennsylvania .....	-	-	-	-	-	-	-	-	-
Rhode Island .....	1	(D)	(D)	-	-	-	1	(D)	(D)
South Carolina .....	34	(D)	(D)	26	26	1.0	8	(D)	(D)
South Dakota .....	-	-	-	-	-	-	-	-	-
Tennessee .....	21	714	0.2	-	-	-	21	714	0.2
Texas .....	266	21,467	1.6	198	9,047	1.7	68	12,420	1.5
Utah .....	297	7,047	2.1	81	756	1.5	216	6,291	2.2
Vermont .....	8	(D)	(D)	5	7	(D)	3	132	(D)
Virginia .....	1	(D)	(D)	1	(D)	(D)	-	-	-
Washington .....	83	4,624	2.7	26	442	1.4	57	4,182	2.8
West Virginia .....	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	-
Wyoming .....	89	11,949	1.7	89	11,949	1.7	-	-	-
<b>Water Resources Regions</b>									
Region 01 New England .....	28	554	0.3	27	(D)	(D)	1	(D)	(D)
Region 02 Mid-Atlantic .....	22	110	0.4	-	-	-	22	110	0.4
Region 03 South Atlantic-Gulf .....	38	(D)	0.6	26	(D)	(D)	9	(D)	(D)
Region 04 Great Lakes .....	55	1,602	0.3	5	7	1.0	50	1,595	0.3
Region 05 Ohio .....	68	2,829	0.2	17	249	0.6	51	2,580	0.1
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	-	-	-	-	-	-	-	-	-
Region 08 Lower Mississippi .....	34	792	(D)	13	78	(D)	21	714	0.2
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	84	7,902	1.2	61	7,764	1.2	23	138	2.0
Region 11 Arkansas-White-Red .....	5	(D)	1.0	5	(D)	1.0	-	-	-
Region 12 Texas-Gulf .....	288	26,747	1.5	220	14,327	1.5	68	12,420	1.5
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	-
Region 14 Upper Colorado .....	158	9,877	1.8	50	6,583	1.5	108	3,294	2.2
Region 15 Lower Colorado .....	27	270	5.0	-	-	-	27	270	5.0
Region 16 Great Basin .....	135	3,240	1.6	54	513	0.8	81	2,727	1.8
Region 17 Pacific Northwest .....	558	45,018	1.8	106	16,880	1.6	452	28,138	1.8
Region 18 California .....	26	21,858	6.0	-	-	-	26	21,858	6.0
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	2	(D)	(D)	-	-	-	2	(D)	(D)

See footnote(s) at end of table.

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**Table 34. Estimated Quantity of Water Applied in the Open Using Only Sprinkler Systems: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Only solid set and permanent systems									
	All pressures			Only low pressure under 30 psi			Only medium to high pressure 30 psi or more			
	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	Farms	Acres irrigated <sup>1</sup>	Average acre-feet per acre	
United States .....	2018 2013	10,016 9,610	614,055 463,717	2.0 2.1	2,466 2,466	176,676 110,916	1.9 2.0	7,218 6,831	400,866 298,699	2.0 2.3
<b>2018 DATA</b>										
Alabama .....		41	1,295	0.4	-	-	-	37	495	0.3
Alaska .....		1	(D)	(D)	-	-	-	1	(D)	(D)
Arizona .....		100	14,260	0.9	34	98	0.7	66	14,162	0.9
Arkansas .....		16	799	0.8	5	15	0.3	11	784	0.8
California .....		2,661	207,154	2.7	735	57,326	1.8	1,755	138,305	2.9
Colorado .....		59	250	2.6	-	-	-	59	250	2.6
Connecticut .....		59	(D)	(D)	15	15	1.0	44	(D)	(D)
Delaware .....		23	11,820	0.4	-	-	-	23	11,820	0.4
Florida .....		1,186	18,289	1.0	334	6,810	0.7	803	10,132	1.2
Georgia .....		79	1,057	0.6	31	488	0.4	48	569	0.9
Hawaii .....		47	93	1.0	33	(D)	1.0	14	(D)	1.0
Idaho .....		488	8,847	2.2	90	6,113	2.4	398	2,734	1.9
Illinois .....		15	75	1.0	-	-	-	15	75	1.0
Indiana .....		-	-	-	-	-	-	-	-	-
Iowa .....		-	-	-	-	-	-	-	-	-
Kansas .....		11	11	1.0	-	-	-	11	11	1.0
Kentucky .....		6	6	1.0	-	-	-	6	6	1.0
Louisiana .....		75	559	0.3	29	162	0.3	46	397	0.4
Maine .....		31	(D)	(D)	3	(D)	(D)	28	(D)	(D)
Maryland .....		33	1,999	(Z)	14	251	0.2	19	1,748	(Z)
Massachusetts .....		301	5,882	0.7	57	171	1.5	242	5,551	0.7
Michigan .....		43	10,885	0.2	1	(D)	(D)	42	(D)	(D)
Minnesota .....		22	118	2.2	14	70	2.4	8	48	2.0
Mississippi .....		16	193	0.6	11	93	0.8	5	100	0.5
Missouri .....		8	48	0.2	-	-	-	8	48	0.2
Montana .....		50	399	3.2	23	46	4.5	27	353	3.0
Nebraska .....		15	330	0.3	-	-	-	15	330	0.3
Nevada .....		33	509	3.3	15	60	1.0	18	449	3.6
New Hampshire .....		11	22	1.0	4	8	1.0	7	14	1.0
New Jersey .....		117	10,259	0.8	22	1,540	(Z)	95	8,719	0.9
New Mexico .....		233	435	2.0	166	266	2.1	67	169	1.8
New York .....		77	2,388	1.6	46	92	0.5	31	2,296	1.7
North Carolina .....		181	11,702	0.8	36	819	0.2	145	10,883	0.8
North Dakota .....		1	(D)	(D)	-	-	-	1	(D)	(D)
Ohio .....		8	8	1.0	8	8	1.0	-	-	-
Oklahoma .....		26	722	1.1	-	-	-	26	722	1.1
Oregon .....		1,118	51,687	1.8	118	14,488	2.0	1,000	37,199	1.7
Pennsylvania .....		81	2,295	0.1	10	40	0.3	71	2,255	0.1
Rhode Island .....		9	(D)	0.3	8	53	(D)	1	(D)	(D)
South Carolina .....		99	2,032	1.0	29	1,043	0.6	70	989	1.5
South Dakota .....		-	-	-	-	-	-	-	-	-
Tennessee .....		-	-	-	-	-	-	-	-	-
Texas .....		223	16,400	1.5	106	13,386	1.1	97	1,914	1.7
Utah .....		185	1,026	1.5	27	54	2.0	149	891	1.3
Vermont .....		37	263	(D)	2	(D)	(D)	35	(D)	(D)
Virginia .....		23	206	(D)	22	(D)	(D)	1	(D)	(D)
Washington .....		1,946	191,176	2.4	356	64,905	2.5	1,513	104,769	2.3
West Virginia .....		7	5,397	0.2	7	5,397	0.2	-	-	-
Wisconsin .....		215	23,502	0.6	55	2,706	1.0	160	20,796	0.5
Wyoming .....		-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>										
Region 01 New England .....		434	15,595	0.5	87	250	1.2	345	15,185	0.5
Region 02 Mid-Atlantic .....		307	33,272	0.4	96	7,315	0.2	211	25,957	0.5
Region 03 South Atlantic-Gulf .....		1,579	34,521	0.9	441	9,253	0.6	1,085	23,121	1.0
Region 04 Great Lakes .....		191	15,157	0.6	81	2,826	1.0	110	12,331	0.5
Region 05 Ohio .....		18	66	(D)	10	10	1.0	8	56	(D)
Region 06 Tennessee .....		23	(D)	0.5	-	-	-	23	(D)	0.5
Region 07 Upper Mississippi .....		176	20,728	0.5	14	70	2.4	162	20,658	0.5
Region 08 Lower Mississippi .....		82	1,312	0.6	34	177	0.3	48	1,135	0.7
Region 09 Souris-Red-Rainy .....		1	(D)	(D)	-	-	-	1	(D)	(D)
Region 10 Missouri .....		55	403	0.4	-	-	-	55	403	0.4
Region 11 Arkansas-White-Red .....		39	12,770	1.1	7	12,003	1.1	32	767	1.1
Region 12 Texas-Gulf .....		214	4,348	2.5	112	1,429	1.7	82	1,819	1.7
Region 13 Rio Grande .....		173	355	1.9	86	(D)	2.5	87	(D)	1.7
Region 14 Upper Colorado .....		126	407	2.4	67	134	1.2	59	273	2.9
Region 15 Lower Colorado .....		100	14,260	0.9	34	98	0.7	66	14,162	0.9
Region 16 Great Basin .....		231	1,774	2.1	42	114	1.5	180	1,579	2.1
Region 17 Pacific Northwest .....		3,558	251,781	2.3	587	85,552	2.4	2,894	144,727	2.2
Region 18 California .....		2,661	207,154	2.7	735	57,326	1.8	1,755	138,305	2.9
Region 19 Alaska .....		1	(D)	(D)	-	-	-	1	(D)	(D)
Region 20 Hawaii .....		47	93	1.0	33	(D)	1.0	14	(D)	1.0

See footnote(s) at end of table.

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**Table 34. Estimated Quantity of Water Applied in the Open Using Only Sprinkler Systems: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Only hand move systems			Only big gun or traveler systems			Only side roll, wheel move, or other mechanical move systems			Only other sprinkler systems		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
United States .....2018	13,234	183,221	1.4	3,456	269,030	0.9	6,234	499,268	1.5	3,704	131,549	1.6
.....2013	13,317	165,971	1.5	2,870	182,221	0.7	4,973	428,008	1.7	2,702	398,859	1.3
<b>2018 DATA</b>												
Alabama .....	56	786	0.8	29	1,515	0.6	25	2,500	0.3	9	36	1.0
Alaska .....	26	45	0.7	-	-	-	2	(D)	(D)	2	(D)	(D)
Arizona .....	26	(D)	(D)	17	2,040	1.0	32	2,240	4.4	16	160	0.5
Arkansas .....	40	534	0.2	25	1,148	1.5	5	208	0.5	15	27	1.0
California .....	470	6,183	2.0	135	11,857	2.0	70	10,953	4.6	642	31,760	2.9
Colorado .....	249	1,653	1.8	121	1,789	2.2	499	24,857	1.7	83	7,823	1.4
Connecticut .....	130	350	0.7	-	-	-	-	-	-	2	(D)	(D)
Delaware .....	2	(D)	(D)	2	(D)	(D)	39	21,179	0.4	-	-	-
Florida .....	659	3,690	1.4	6	23,025	0.3	-	-	-	218	10,075	0.9
Georgia .....	151	816	2.6	128	31,754	0.4	23	2,300	0.3	47	47	1.0
Hawaii .....	74	135	1.2	-	-	-	-	-	-	171	690	0.9
Idaho .....	1,213	14,162	1.9	107	6,570	1.8	755	59,388	1.3	253	8,327	2.1
Illinois .....	57	111	0.8	3	120	1.0	12	1,984	0.4	18	18	2.0
Indiana .....	49	156	0.4	64	4,561	0.5	-	-	-	-	-	-
Iowa .....	35	81	(D)	1	(D)	(D)	36	2,970	0.8	-	-	-
Kansas .....	70	641	1.0	15	105	0.9	3	9,900	1.2	5	5	2.0
Kentucky .....	26	74	0.9	28	486	0.6	-	-	-	25	51	0.9
Louisiana .....	79	810	0.3	-	-	-	-	-	-	10	132	0.7
Maine .....	217	848	0.7	5	2,509	0.4	-	-	-	4	15	0.9
Maryland .....	49	265	1.0	7	1,070	0.5	12	2,400	0.7	16	16	1.0
Massachusetts .....	80	152	2.5	64	719	(D)	5	50	0.3	-	-	-
Michigan .....	86	192	0.9	140	18,051	0.5	42	1,866	1.1	19	19	1.0
Minnesota .....	98	201	0.7	45	2,025	0.2	3	30	(D)	42	100	1.3
Mississippi .....	33	86	2.2	37	2,614	0.5	5	50	0.5	7	14	0.5
Missouri .....	77	156	0.9	102	5,730	0.5	8	200	0.4	34	1,044	0.6
Montana .....	859	10,946	1.3	47	236	1.6	406	33,695	1.0	92	1,196	1.2
Nebraska .....	47	574	0.5	16	432	0.1	52	8,548	0.5	5	15	1.0
Nevada .....	30	135	2.4	-	-	-	46	3,116	3.1	19	383	4.0
New Hampshire .....	55	77	0.7	-	-	-	-	-	-	29	57	0.5
New Jersey .....	218	3,230	0.8	60	6,609	0.3	1	(D)	(D)	63	1,090	0.6
New Mexico .....	31	(D)	2.3	67	507	1.4	233	3,575	2.3	232	1,377	2.3
New York .....	216	471	0.8	41	4,483	0.4	6	720	0.3	21	21	1.0
North Carolina .....	287	604	0.6	166	11,415	0.7	54	2,295	0.1	179	3,533	0.2
North Dakota .....	35	97	0.7	2	(D)	(D)	-	-	-	-	-	-
Ohio .....	168	870	0.4	57	2,951	0.5	7	1,031	0.3	24	43	0.6
Oklahoma .....	159	290	0.7	51	2,625	0.9	31	1,844	0.4	31	14,778	1.1
Oregon .....	2,677	80,893	1.3	651	56,331	1.4	880	91,506	1.3	349	9,658	0.9
Pennsylvania .....	179	313	0.6	7	260	0.3	-	-	-	-	-	-
Rhode Island .....	17	134	0.6	10	1,715	0.2	-	-	-	-	-	-
South Carolina .....	174	822	0.4	79	3,505	0.4	-	-	-	14	14	1.0
South Dakota .....	20	287	0.3	-	-	-	-	-	-	2	(D)	(D)
Tennessee .....	121	172	1.0	29	2,740	0.4	-	-	-	23	94	1.1
Texas .....	603	3,443	0.8	527	11,310	0.6	246	30,635	1.4	232	3,826	0.4
Utah .....	840	10,557	1.2	31	815	1.6	2,092	135,583	1.6	367	12,519	2.0
Vermont .....	49	182	0.4	3	230	(D)	-	-	-	4	4	(D)
Virginia .....	177	1,439	0.6	84	5,419	0.3	1	(D)	(D)	49	5,397	0.2
Washington .....	1,837	29,070	1.8	406	37,463	1.6	487	23,574	1.5	237	12,919	1.0
West Virginia .....	63	63	1.0	5	300	0.1	-	-	-	20	(D)	1.0
Wisconsin .....	177	1,652	0.5	36	1,502	0.6	22	160	0.9	10	80	0.6
Wyoming .....	143	3,801	1.2	-	-	-	94	19,680	3.2	64	3,277	0.9
<b>Water Resources Regions</b>												
Region 01 New England .....	530	1,620	0.9	79	4,943	0.3	5	50	0.3	39	(D)	0.1
Region 02 Mid-Atlantic .....	632	4,308	0.8	148	15,223	0.3	59	24,339	0.5	106	6,481	0.2
Region 03 South Atlantic-Gulf .....	1,335	7,849	1.2	468	73,918	0.4	77	4,595	0.2	489	13,734	0.7
Region 04 Great Lakes .....	318	1,166	0.4	193	22,992	0.5	67	2,053	1.1	41	60	0.7
Region 05 Ohio .....	292	573	0.9	128	5,144	0.3	4	1,004	0.3	91	188	1.0
Region 06 Tennessee .....	170	284	0.6	8	1,060	0.5	25	2,500	0.3	7	7	(D)
Region 07 Upper Mississippi .....	355	2,006	0.5	103	5,366	0.7	51	4,984	0.6	36	114	0.8
Region 08 Lower Mississippi .....	99	879	0.5	27	1,910	0.5	9	(D)	(D)	19	153	0.8
Region 09 Souris-Red-Rainy .....	42	(D)	(D)	2	(D)	(D)	-	-	-	42	100	1.3
Region 10 Missouri .....	724	6,082	0.9	169	6,288	0.7	413	45,921	1.9	200	11,573	1.2
Region 11 Arkansas-White-Red .....	303	1,127	0.5	95	4,469	0.9	43	11,952	1.0	63	15,812	1.1
Region 12 Texas-Gulf .....	534	2,664	1.0	541	11,352	0.7	246	30,635	1.4	212	3,626	0.5
Region 13 Rio Grande .....	88	666	0.4	19	(D)	(D)	66	1,485	1.8	219	1,412	1.8
Region 14 Upper Colorado .....	232	3,524	1.3	133	1,258	2.0	1,536	67,706	1.7	99	746	2.5
Region 15 Lower Colorado .....	26	(D)	(D)	17	2,040	1.0	74	4,070	3.4	43	295	1.8
Region 16 Great Basin .....	862	10,084	1.2	27	783	1.6	1,218	100,410	1.5	317	13,352	2.0
Region 17 Pacific Northwest .....	6,029	130,719	1.5	1,141	100,226	1.5	2,125	147,745	1.4	866	30,483	1.3
Region 18 California .....	563	8,428	1.7	158	11,995	1.9	214	49,378	1.7	642	31,760	2.9
Region 19 Alaska .....	26	45	0.7	-	-	-	2	(D)	(D)	2	(D)	(D)
Region 20 Hawaii .....	74	135	1.2	-	-	-	-	-	-	171	690	0.9

<sup>1</sup> Acres represent the acres of land with coverage by at least one of the systems. Acres are not double counted if multiple systems exist on the same acreage.

**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Corn for grain or seed								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Farms by irrigated acres harvested					
				1 to 99 acres	100 to 249 acres	250 to 499 acres	500 to 999 acres	1,000 acres or more	
United States .....2018	31,828	11,610,238	210	8,764	9,519	6,583	4,522	2,440	
.....2013	37,247	13,289,247	196	10,286	12,289	6,877	4,956	2,839	
<b>2018 DATA</b>									
Alabama .....	124	32,857	216	50	16	48	3	7	
Alaska .....	-	-	-	-	-	-	-	-	
Arizona .....	41	13,340	231	17	1	16	6	1	
Arkansas .....	1,089	447,403	184	220	250	344	155	120	
California .....	337	134,945	183	135	74	71	27	30	
Colorado .....	1,646	642,494	198	544	495	240	238	129	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	417	111,849	171	116	135	108	35	23	
Florida .....	79	33,481	185	-	57	3	3	16	
Georgia .....	662	135,101	209	342	182	86	32	20	
Hawaii .....	15	4,720	59	-	7	7	1	-	
Idaho .....	862	112,975	218	584	173	68	25	12	
Illinois .....	996	313,408	214	270	376	204	84	62	
Indiana .....	1,098	317,229	209	251	455	214	132	46	
Iowa .....	461	109,131	203	141	180	81	52	7	
Kansas .....	3,065	1,275,781	204	665	1,153	503	484	260	
Kentucky .....	59	29,337	207	12	6	28	6	7	
Louisiana .....	534	285,780	195	111	97	123	99	104	
Maine .....	33	2,283	175	30	-	-	3	-	
Maryland .....	287	51,602	193	138	82	32	33	2	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	1,157	378,664	196	325	411	261	91	69	
Minnesota .....	1,421	280,391	206	578	536	182	98	27	
Mississippi .....	454	283,200	199	46	118	91	101	98	
Missouri .....	934	351,031	196	200	285	214	163	72	
Montana .....	139	24,055	173	56	54	20	9	-	
Nebraska .....	10,581	4,522,575	222	2,209	2,841	2,473	2,027	1,031	
Nevada .....	26	1,828	167	15	10	-	1	-	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	88	8,895	194	52	25	11	-	-	
New Mexico .....	231	48,130	160	166	5	34	23	3	
New York .....	5	1,446	182	1	-	3	1	-	
North Carolina .....	145	12,127	194	129	-	9	7	-	
North Dakota .....	336	104,053	209	31	152	102	42	9	
Ohio .....	60	8,045	214	31	19	9	1	-	
Oklahoma .....	197	130,878	202	46	32	42	40	37	
Oregon .....	211	47,757	261	132	28	41	5	5	
Pennsylvania .....	37	1,621	275	21	16	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	281	94,386	191	78	66	37	94	6	
South Dakota .....	656	179,472	199	85	300	208	25	38	
Tennessee .....	291	70,957	222	59	169	19	39	5	
Texas .....	1,218	672,323	206	131	325	388	226	148	
Utah .....	199	13,215	213	159	28	12	-	-	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	78	11,466	200	53	10	12	2	1	
Washington .....	493	119,019	256	199	128	115	35	16	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	484	142,895	213	170	157	66	65	26	
Wyoming .....	301	48,093	179	166	65	58	9	3	
<b>Water Resources Regions</b>									
Region 01 New England .....	33	2,283	175	30	-	-	3	-	
Region 02 Mid-Atlantic .....	877	183,223	181	360	258	163	70	26	
Region 03 South Atlantic-Gulf .....	1,337	307,666	199	639	332	170	151	45	
Region 04 Great Lakes .....	1,612	514,095	199	469	554	350	147	92	
Region 05 Ohio .....	788	207,304	209	154	357	168	98	11	
Region 06 Tennessee .....	43	23,014	227	-	11	19	7	6	
Region 07 Upper Mississippi .....	3,069	760,729	211	1,067	1,152	509	214	127	
Region 08 Lower Mississippi .....	2,630	1,254,247	194	467	695	614	464	390	
Region 09 Souris-Red-Rainy .....	255	94,411	213	52	75	56	59	13	
Region 10 Missouri .....	14,922	5,915,979	216	3,307	4,563	3,261	2,522	1,269	
Region 11 Arkansas-White-Red .....	3,046	1,648,999	210	529	847	699	612	359	
Region 12 Texas-Gulf .....	605	203,779	168	100	189	230	51	35	
Region 13 Rio Grande .....	87	18,593	126	43	20	-	23	1	
Region 14 Upper Colorado .....	399	30,782	195	358	21	18	-	2	
Region 15 Lower Colorado .....	41	13,340	231	17	1	16	6	1	
Region 16 Great Basin .....	190	13,511	215	140	41	8	1	-	
Region 17 Pacific Northwest .....	1,542	278,618	241	897	322	224	66	33	
Region 18 California .....	337	134,945	183	135	74	71	27	30	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	15	4,720	59	-	7	7	1	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Corn for silage or greenchop								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (tons)	Farms by irrigated acres harvested					
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more	
United States ..... 2018	7,930	1,648,789	26	974	1,191	1,762	2,142	1,861	
..... 2013	8,382	1,729,358	25	1,320	1,789	1,468	1,881	1,924	
<b>2018 DATA</b>									
Alabama .....	-	-	-	-	-	-	-	-	
Alaska .....	-	-	-	-	-	-	-	-	
Arizona .....	159	65,219	31	-	-	23	66	70	
Arkansas .....	5	400	15	-	-	5	-	-	
California .....	1,515	454,607	27	114	145	282	376	598	
Colorado .....	730	133,455	25	75	120	150	221	164	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	9	780	21	-	-	6	3	-	
Florida .....	12	13,130	23	-	3	-	-	9	
Georgia .....	37	2,888	24	-	7	23	7	-	
Hawaii .....	-	-	-	-	-	-	-	-	
Idaho .....	985	235,357	30	82	153	253	313	184	
Illinois .....	-	-	-	-	-	-	-	-	
Indiana .....	98	8,504	25	27	-	54	-	17	
Iowa .....	18	720	25	-	18	-	-	-	
Kansas .....	301	72,418	25	-	58	44	89	110	
Kentucky .....	2	(D)	(D)	2	-	-	-	-	
Louisiana .....	-	-	-	-	-	-	-	-	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	14	2,800	29	-	-	-	9	5	
Massachusetts .....	29	58	29	29	-	-	-	-	
Michigan .....	170	14,790	20	29	-	80	61	-	
Minnesota .....	174	17,807	25	19	38	74	39	4	
Mississippi .....	7	665	18	-	-	7	-	-	
Missouri .....	16	2,720	23	8	-	-	-	8	
Montana .....	216	31,210	30	2	-	55	79	48	
Nebraska .....	825	109,372	25	259	159	114	198	95	
Nevada .....	98	9,501	25	-	44	15	31	8	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	
New Mexico .....	316	80,893	25	66	33	39	48	130	
New York .....	2	(D)	(D)	-	-	-	1	1	
North Carolina .....	-	-	-	-	-	-	-	-	
North Dakota .....	45	3,279	19	-	-	35	10	-	
Ohio .....	10	750	17	-	-	10	-	-	
Oklahoma .....	14	7,124	16	-	-	13	-	1	
Oregon .....	205	17,515	26	31	55	71	41	7	
Pennsylvania .....	24	(D)	(D)	22	-	-	1	1	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	52	5,200	13	-	-	26	26	-	
South Dakota .....	46	5,250	20	-	22	20	-	4	
Tennessee .....	-	-	-	-	-	-	-	-	
Texas .....	378	166,040	24	-	-	43	117	218	
Utah .....	653	61,833	26	158	162	157	119	57	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	71	5,122	23	-	24	23	23	1	
Washington .....	318	62,858	29	32	30	53	134	69	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	146	24,703	26	19	57	10	28	32	
Wyoming .....	230	30,802	25	-	31	77	102	20	
<b>Water Resources Regions</b>									
Region 01 New England .....	29	58	29	29	-	-	-	-	
Region 02 Mid-Atlantic .....	118	9,174	25	22	24	29	36	7	
Region 03 South Atlantic-Gulf .....	101	21,218	21	-	10	49	33	9	
Region 04 Great Lakes .....	299	34,097	23	29	18	154	62	36	
Region 05 Ohio .....	19	139	25	19	-	-	-	-	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	269	29,865	25	48	77	74	52	18	
Region 08 Lower Mississippi .....	7	665	18	-	-	7	-	-	
Region 09 Souris-Red-Rainy .....	15	3,000	27	-	-	-	15	-	
Region 10 Missouri .....	1,998	293,910	26	291	388	424	588	307	
Region 11 Arkansas-White-Red .....	553	159,271	24	51	29	84	179	210	
Region 12 Texas-Gulf .....	402	138,842	23	33	33	54	79	203	
Region 13 Rio Grande .....	101	34,101	29	33	-	5	-	63	
Region 14 Upper Colorado .....	140	24,419	23	-	23	68	26	23	
Region 15 Lower Colorado .....	191	66,440	31	27	-	25	66	73	
Region 16 Great Basin .....	731	73,315	25	133	206	159	169	64	
Region 17 Pacific Northwest .....	1,447	306,538	30	145	238	350	461	253	
Region 18 California .....	1,510	453,737	27	114	145	280	376	595	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Sorghum for grain or seed								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Farms by irrigated acres harvested					
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more	
United States .....	1,594	286,851	98	417	239	688	154	96	
2013 .....	3,923	809,579	97	647	850	1,494	545	387	
<b>2018 DATA</b>									
Alabama .....	-	-	-	-	-	-	-	-	
Alaska .....	-	-	-	-	-	-	-	-	
Arizona .....	41	22,346	96	16	-	17	-	8	
Arkansas .....	38	2,865	70	15	6	17	-	-	
California .....	7	1,750	70	-	-	-	7	-	
Colorado .....	174	15,935	84	98	12	43	20	1	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	
Florida .....	-	-	-	-	-	-	-	-	
Georgia .....	30	3,419	99	-	6	24	-	-	
Hawaii .....	-	-	-	-	-	-	-	-	
Idaho .....	-	-	-	-	-	-	-	-	
Illinois .....	5	250	110	-	5	-	-	-	
Indiana .....	-	-	-	-	-	-	-	-	
Iowa .....	-	-	-	-	-	-	-	-	
Kansas .....	490	86,970	116	60	126	241	32	31	
Kentucky .....	-	-	-	-	-	-	-	-	
Louisiana .....	-	-	-	-	-	-	-	-	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	-	-	-	-	-	-	-	-	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	24	3,681	128	10	-	10	3	1	
Minnesota .....	-	-	-	-	-	-	-	-	
Mississippi .....	-	-	-	-	-	-	-	-	
Missouri .....	-	-	-	-	-	-	-	-	
Montana .....	16	1,824	60	-	-	16	-	-	
Nebraska .....	110	5,077	117	80	5	25	-	-	
Nevada .....	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	
New Mexico .....	73	5,982	100	40	-	33	-	-	
New York .....	-	-	-	-	-	-	-	-	
North Carolina .....	-	-	-	-	-	-	-	-	
North Dakota .....	-	-	-	-	-	-	-	-	
Ohio .....	-	-	-	-	-	-	-	-	
Oklahoma .....	92	12,353	108	63	-	4	19	6	
Oregon .....	-	-	-	-	-	-	-	-	
Pennsylvania .....	-	-	-	-	-	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	-	-	-	-	-	-	-	-	
South Dakota .....	-	-	-	-	-	-	-	-	
Tennessee .....	-	-	-	-	-	-	-	-	
Texas .....	484	123,669	87	35	69	258	73	49	
Utah .....	-	-	-	-	-	-	-	-	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	
Washington .....	-	-	-	-	-	-	-	-	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	-	-	-	-	-	-	-	-	
Wyoming .....	10	730	70	-	10	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	
Region 03 South Atlantic-Gulf .....	30	3,419	99	-	6	24	-	-	
Region 04 Great Lakes .....	24	3,681	128	10	-	10	3	1	
Region 05 Ohio .....	-	-	-	-	-	-	-	-	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	5	250	110	-	5	-	-	-	
Region 08 Lower Mississippi .....	16	955	87	5	6	5	-	-	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	243	22,975	107	95	45	88	15	-	
Region 11 Arkansas-White-Red .....	911	181,709	101	169	166	428	74	74	
Region 12 Texas-Gulf .....	225	48,474	83	35	11	111	55	13	
Region 13 Rio Grande .....	45	1,127	100	40	-	5	-	-	
Region 14 Upper Colorado .....	47	165	85	47	-	-	-	-	
Region 15 Lower Colorado .....	41	22,346	96	16	-	17	-	8	
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	
Region 18 California .....	7	1,750	70	-	-	-	7	-	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Wheat for grain or seed								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Farms by irrigated acres harvested					
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more	
United States .....	8,760	2,311,703	89	1,742	1,619	2,724	1,641	1,034	
2013 .....	12,974	3,197,501	78	2,525	3,071	4,029	1,799	1,550	
<b>2018 DATA</b>									
Alabama .....	26	2,915	78	-	25	-	-	1	
Alaska .....	1	(D)	(D)	1	-	-	-	-	
Arizona .....	170	76,229	105	18	-	26	82	44	
Arkansas .....	5	5,000	55	-	-	-	-	5	
California .....	674	207,599	97	65	100	195	216	98	
Colorado .....	521	75,935	74	99	126	238	36	22	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	101	10,572	78	22	42	27	9	1	
Florida .....	-	-	-	-	-	-	-	-	
Georgia .....	102	22,020	68	-	24	47	25	6	
Hawaii .....	-	-	-	-	-	-	-	-	
Idaho .....	1,906	597,386	117	535	287	500	331	253	
Illinois .....	65	5,904	77	-	36	29	-	-	
Indiana .....	25	5,150	74	-	9	-	16	-	
Iowa .....	-	-	-	-	-	-	-	-	
Kansas .....	976	261,493	60	89	166	425	155	141	
Kentucky .....	-	-	-	-	-	-	-	-	
Louisiana .....	-	-	-	-	-	-	-	-	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	29	4,719	71	20	-	-	6	3	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	125	17,673	91	32	43	34	11	5	
Minnesota .....	51	10,040	50	34	-	14	-	3	
Mississippi .....	-	-	-	-	-	-	-	-	
Missouri .....	122	40,257	69	-	24	40	26	32	
Montana .....	555	145,394	84	44	116	162	160	73	
Nebraska .....	370	64,530	76	81	111	102	60	16	
Nevada .....	28	19,698	109	15	-	1	1	11	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	12	2,217	54	-	-	12	-	-	
New Mexico .....	177	41,372	82	67	-	62	40	8	
New York .....	-	-	-	-	-	-	-	-	
North Carolina .....	28	1,850	77	-	27	-	-	1	
North Dakota .....	167	41,094	75	31	5	55	70	6	
Ohio .....	14	1,370	71	-	10	4	-	-	
Oklahoma .....	325	103,858	46	-	94	119	87	25	
Oregon .....	269	53,972	117	34	56	122	32	25	
Pennsylvania .....	-	-	-	-	-	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	19	3,650	75	-	-	12	7	-	
South Dakota .....	47	7,434	63	-	1	41	5	-	
Tennessee .....	14	700	70	-	14	-	-	-	
Texas .....	832	260,803	57	99	132	311	145	145	
Utah .....	434	30,674	97	296	51	58	25	4	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	4	1,324	80	-	-	-	4	-	
Washington .....	445	166,293	111	140	86	72	41	106	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	21	1,189	70	19	-	-	2	-	
Wyoming .....	100	21,380	95	1	34	16	49	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	146	18,832	73	42	42	39	19	4	
Region 03 South Atlantic-Gulf .....	149	27,520	70	-	51	59	32	7	
Region 04 Great Lakes .....	143	20,543	88	32	53	34	19	5	
Region 05 Ohio .....	31	3,122	81	-	9	22	-	-	
Region 06 Tennessee .....	26	2,915	78	-	25	-	-	1	
Region 07 Upper Mississippi .....	120	13,253	64	53	44	11	10	2	
Region 08 Lower Mississippi .....	117	40,997	67	-	30	32	18	37	
Region 09 Souris-Red-Rainy .....	17	6,070	57	-	-	14	1	2	
Region 10 Missouri .....	1,593	342,703	77	210	376	490	403	114	
Region 11 Arkansas-White-Red .....	1,778	570,204	58	88	274	787	359	270	
Region 12 Texas-Gulf .....	431	56,317	51	132	107	150	18	24	
Region 13 Rio Grande .....	120	21,022	89	34	5	42	34	5	
Region 14 Upper Colorado .....	83	(D)	(D)	47	-	35	-	1	
Region 15 Lower Colorado .....	173	79,858	104	18	-	26	82	47	
Region 16 Great Basin .....	581	86,093	95	331	91	55	63	41	
Region 17 Pacific Northwest .....	2,580	804,426	116	689	412	733	367	379	
Region 18 California .....	671	203,970	97	65	100	195	216	95	
Region 19 Alaska .....	1	(D)	(D)	1	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Soybeans for beans								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Farms by irrigated acres harvested					
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more	
United States .....2018	21,316	8,215,031	61	2,040	3,666	6,677	4,356	4,577	
.....2013	21,755	7,413,276	54	2,544	3,924	6,966	4,128	4,193	
<b>2018 DATA</b>									
Alabama .....	119	21,199	66	5	64	29	13	8	
Alaska .....	-	-	-	-	-	-	-	-	
Arizona .....	-	-	-	-	-	-	-	-	
Arkansas .....	2,367	2,154,112	56	156	103	358	424	1,326	
California .....	-	-	-	-	-	-	-	-	
Colorado .....	84	13,428	51	14	14	45	6	5	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	314	62,087	50	66	46	125	52	25	
Florida .....	30	3,060	46	-	-	30	-	-	
Georgia .....	153	26,770	40	24	27	74	24	4	
Hawaii .....	7	250	50	4	3	-	-	-	
Idaho .....	2	(D)	(D)	2	-	-	-	-	
Illinois .....	618	184,406	66	36	119	241	120	102	
Indiana .....	848	175,327	65	71	266	272	159	80	
Iowa .....	201	45,974	58	-	52	85	48	16	
Kansas .....	1,683	390,288	68	190	222	809	315	147	
Kentucky .....	54	21,848	62	-	6	19	17	12	
Louisiana .....	638	418,548	62	40	39	152	156	251	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	247	44,447	52	5	137	46	37	22	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	809	192,450	60	124	151	308	151	75	
Minnesota .....	891	104,194	57	212	254	319	94	12	
Mississippi .....	993	1,053,930	65	12	52	161	198	570	
Missouri .....	1,139	640,311	54	69	112	298	233	427	
Montana .....	23	4,078	41	-	4	8	11	-	
Nebraska .....	7,821	2,202,453	67	632	1,471	2,369	2,064	1,285	
Nevada .....	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	143	12,269	45	46	59	23	15	-	
New Mexico .....	10	(D)	(D)	10	-	-	-	-	
New York .....	-	-	-	-	-	-	-	-	
North Carolina .....	103	6,614	51	27	70	2	2	2	
North Dakota .....	248	58,653	55	-	36	154	32	26	
Ohio .....	42	4,745	67	22	4	9	7	-	
Oklahoma .....	166	62,313	55	-	13	119	6	28	
Oregon .....	-	-	-	-	-	-	-	-	
Pennsylvania .....	16	80	80	16	-	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	148	18,156	52	50	41	41	14	2	
South Dakota .....	420	97,467	58	44	89	173	79	35	
Tennessee .....	312	80,717	55	21	58	163	21	49	
Texas .....	133	29,032	58	38	24	25	19	27	
Utah .....	-	-	-	-	-	-	-	-	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	67	9,749	61	-	10	50	4	3	
Washington .....	-	-	-	-	-	-	-	-	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	445	73,832	59	104	120	148	35	38	
Wyoming .....	22	2,200	15	-	-	22	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	787	128,632	51	133	252	244	108	50	
Region 03 South Atlantic-Gulf .....	536	71,995	51	106	170	185	67	8	
Region 04 Great Lakes .....	1,138	255,751	61	216	200	418	199	105	
Region 05 Ohio .....	568	142,249	65	57	133	195	128	55	
Region 06 Tennessee .....	67	17,009	67	-	39	3	16	9	
Region 07 Upper Mississippi .....	2,089	385,280	61	285	607	796	227	174	
Region 08 Lower Mississippi .....	4,595	3,951,114	59	237	284	842	829	2,403	
Region 09 Souris-Red-Rainy .....	230	42,570	57	41	53	83	49	4	
Region 10 Missouri .....	9,518	2,564,114	66	820	1,798	3,147	2,323	1,430	
Region 11 Arkansas-White-Red .....	1,701	651,431	59	91	108	764	399	339	
Region 12 Texas-Gulf .....	68	4,592	48	38	19	-	11	-	
Region 13 Rio Grande .....	10	(D)	(D)	10	-	-	-	-	
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	2	(D)	(D)	2	-	-	-	-	
Region 18 California .....	-	-	-	-	-	-	-	-	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	7	250	50	4	3	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Beans, dry edible								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Farms by irrigated acres harvested					
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more	
United States .....	2,275	416,608	27	304	362	464	602	543	
2013	2,793	433,590	25	963	161	376	797	496	
<b>2018 DATA</b>									
Alabama .....	-	-	-	-	-	-	-	-	
Alaska .....	-	-	-	-	-	-	-	-	
Arizona .....	9	7,274	17	-	-	1	6	2	
Arkansas .....	-	-	-	-	-	-	-	-	
California .....	244	40,176	28	37	45	37	64	61	
Colorado .....	141	18,913	29	8	27	23	64	19	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	
Florida .....	27	270	10	27	-	-	-	-	
Georgia .....	-	-	-	-	-	-	-	-	
Hawaii .....	-	-	-	-	-	-	-	-	
Idaho .....	641	77,397	27	99	176	187	93	86	
Illinois .....	-	-	-	-	-	-	-	-	
Indiana .....	-	-	-	-	-	-	-	-	
Iowa .....	-	-	-	-	-	-	-	-	
Kansas .....	13	8,210	28	-	1	-	-	12	
Kentucky .....	-	-	-	-	-	-	-	-	
Louisiana .....	-	-	-	-	-	-	-	-	
Maine .....	32	32	25	32	-	-	-	-	
Maryland .....	4	420	30	-	-	-	4	-	
Massachusetts .....	28	28	20	28	-	-	-	-	
Michigan .....	111	18,223	22	-	20	20	41	30	
Minnesota .....	130	49,311	29	-	14	18	40	58	
Mississippi .....	-	-	-	-	-	-	-	-	
Missouri .....	-	-	-	-	-	-	-	-	
Montana .....	24	3,089	35	-	-	3	20	1	
Nebraska .....	414	103,771	26	-	47	71	139	157	
Nevada .....	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	
New Mexico .....	2	(D)	(D)	-	-	-	-	2	
New York .....	-	-	-	-	-	-	-	-	
North Carolina .....	-	-	-	-	-	-	-	-	
North Dakota .....	63	21,260	28	-	-	-	22	41	
Ohio .....	-	-	-	-	-	-	-	-	
Oklahoma .....	-	-	-	-	-	-	-	-	
Oregon .....	35	4,827	27	7	-	24	-	4	
Pennsylvania .....	24	24	16	24	-	-	-	-	
Rhode Island .....	9	9	20	9	-	-	-	-	
South Carolina .....	-	-	-	-	-	-	-	-	
South Dakota .....	1	(D)	(D)	-	-	-	-	1	
Tennessee .....	-	-	-	-	-	-	-	-	
Texas .....	11	1,110	15	-	-	5	6	-	
Utah .....	4	208	28	-	-	4	-	-	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	
Washington .....	202	27,673	31	33	32	27	79	31	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	11	8,548	23	-	-	-	1	10	
Wyoming .....	95	19,440	24	-	-	44	23	28	
<b>Water Resources Regions</b>									
Region 01 New England .....	69	69	22	69	-	-	-	-	
Region 02 Mid-Atlantic .....	6	422	30	2	-	-	4	-	
Region 03 South Atlantic-Gulf .....	27	270	10	27	-	-	-	-	
Region 04 Great Lakes .....	133	18,245	22	22	20	20	41	30	
Region 05 Ohio .....	-	-	-	-	-	-	-	-	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	129	51,899	27	-	14	18	41	56	
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	
Region 09 Souris-Red-Rainy .....	71	26,500	29	-	-	-	18	53	
Region 10 Missouri .....	675	154,416	26	8	61	138	250	218	
Region 11 Arkansas-White-Red .....	2	(D)	(D)	-	1	-	1	-	
Region 12 Texas-Gulf .....	10	920	(D)	-	-	5	5	-	
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	
Region 14 Upper Colorado .....	15	(D)	21	-	13	-	-	2	
Region 15 Lower Colorado .....	9	7,274	17	-	-	1	6	2	
Region 16 Great Basin .....	4	208	28	-	-	4	-	-	
Region 17 Pacific Northwest .....	881	110,047	28	139	208	241	172	121	
Region 18 California .....	244	40,176	28	37	45	37	64	61	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Rice								Other small grains (barley, oats, rye, etc.)	
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Farms by irrigated acres harvested					Farms	Irrigated acres harvested
				1 to 99 acres	100 to 249 acres	250 to 499 acres	500 to 999 acres	1,000 acres or more		
United States .....2018	3,813	2,370,113	79	484	880	896	789	764	5,767	1,026,289
.....2013	5,613	3,132,894	80	383	1,219	1,534	1,787	690	6,258	1,209,527
<b>2018 DATA</b>										
Alabama .....	-	-	-	-	-	-	-	-	4	8
Alaska .....	-	-	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-	130	13,912
Arkansas .....	1,715	1,190,434	79	217	366	335	389	408	-	-
California .....	837	393,275	88	92	246	274	121	104	551	127,718
Colorado .....	-	-	-	-	-	-	-	-	366	81,378
Connecticut .....	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	10	1,300
Florida .....	16	(D)	(D)	-	-	4	8	4	56	9,630
Georgia .....	-	-	-	-	-	-	-	-	25	732
Hawaii .....	-	-	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-	-	1,580	388,697
Illinois .....	1	(D)	(D)	-	-	1	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	35	2,342
Iowa .....	-	-	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	-	-	10	4,135
Kentucky .....	-	-	-	-	-	-	-	-	-	-
Louisiana .....	561	282,375	72	94	118	151	126	72	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	31	1,351
Massachusetts .....	-	-	-	-	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-	-	-	11	507
Minnesota .....	-	-	-	-	-	-	-	-	27	2,020
Mississippi .....	148	99,888	78	8	27	43	45	25	-	-
Missouri .....	257	173,652	79	43	46	48	49	71	-	-
Montana .....	-	-	-	-	-	-	-	-	537	141,966
Nebraska .....	-	-	-	-	-	-	-	-	84	7,930
Nevada .....	-	-	-	-	-	-	-	-	137	13,163
New Hampshire .....	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-
New Mexico .....	-	-	-	-	-	-	-	-	79	9,507
New York .....	-	-	-	-	-	-	-	-	3	9
North Carolina .....	-	-	-	-	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-	-	-	15	4,100
Ohio .....	-	-	-	-	-	-	-	-	23	690
Oklahoma .....	-	-	-	-	-	-	-	-	22	22,590
Oregon .....	-	-	-	-	-	-	-	-	181	18,081
Pennsylvania .....	-	-	-	-	-	-	-	-	22	176
Rhode Island .....	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	28	4,091
Tennessee .....	1	(D)	(D)	-	-	1	-	-	-	-
Texas .....	277	206,790	78	30	77	39	51	80	168	46,444
Utah .....	-	-	-	-	-	-	-	-	947	45,301
Vermont .....	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-
Washington .....	-	-	-	-	-	-	-	-	210	22,136
West Virginia .....	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	33	1,777
Wyoming .....	-	-	-	-	-	-	-	-	442	54,598
<b>Water Resources Regions</b>										
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	66	2,836
Region 03 South Atlantic-Gulf .....	16	(D)	(D)	-	-	4	8	4	85	10,370
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	21	(D)
Region 05 Ohio .....	-	-	-	-	-	-	-	-	58	3,032
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	1	(D)	(D)	-	-	1	-	-	49	2,697
Region 08 Lower Mississippi .....	2,279	1,456,107	78	280	495	530	515	459	-	-
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	1	(D)
Region 10 Missouri .....	-	-	-	-	-	-	-	-	1,156	213,627
Region 11 Arkansas-White-Red .....	403	290,592	79	82	62	48	94	117	137	42,669
Region 12 Texas-Gulf .....	277	206,790	78	30	77	39	51	80	94	32,755
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	153	67,629
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	377	17,247
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	159	14,980
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	941	80,846
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	1,893	406,196
Region 18 California .....	837	393,275	88	92	246	274	121	104	577	129,798
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage)								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (tons, dry)	Farms by irrigated acres harvested					
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more	
United States ..... 2018	48,697	6,165,406	5.1	26,651	7,400	8,654	3,284	2,708	
..... 2013	46,181	5,512,871	5.1	26,206	7,079	7,662	3,037	2,197	
<b>2018 DATA</b>									
Alabama .....	25	2,000	2.0	-	25	-	-	-	
Alaska .....	1	(D)	(D)	-	1	-	-	-	
Arizona .....	824	304,152	8.3	451	65	88	34	186	
Arkansas .....	10	360	5.3	5	5	-	-	-	
California .....	2,544	701,813	6.3	742	433	553	408	408	
Colorado .....	6,749	592,838	4.1	4,303	922	1,062	206	256	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	28	162	6.0	28	-	-	-	-	
Florida .....	-	-	-	-	-	-	-	-	
Georgia .....	57	1,145	7.0	57	-	-	-	-	
Hawaii .....	3	27	6.6	3	-	-	-	-	
Idaho .....	7,361	856,511	5.2	4,077	1,295	1,132	514	343	
Illinois .....	-	-	-	-	-	-	-	-	
Indiana .....	55	2,966	7.4	18	36	-	1	-	
Iowa .....	-	-	-	-	-	-	-	-	
Kansas .....	646	156,569	6.0	195	124	166	93	68	
Kentucky .....	-	-	-	-	-	-	-	-	
Louisiana .....	-	-	-	-	-	-	-	-	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	5	350	5.9	-	5	-	-	-	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	228	12,180	7.5	141	42	45	-	-	
Minnesota .....	302	21,055	5.4	171	56	57	18	-	
Mississippi .....	12	222	4.0	12	-	-	-	-	
Missouri .....	23	478	5.2	23	-	-	-	-	
Montana .....	4,836	872,353	3.7	1,681	965	1,124	653	413	
Nebraska .....	2,584	325,052	5.2	1,081	601	603	154	145	
Nevada .....	1,090	332,309	5.2	393	194	139	193	171	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	7	175	5.0	7	-	-	-	-	
New Mexico .....	3,712	135,448	5.7	3,047	333	287	33	12	
New York .....	2	(D)	(D)	-	-	1	-	1	
North Carolina .....	12	84	2.2	12	-	-	-	-	
North Dakota .....	176	9,538	4.7	88	66	22	-	-	
Ohio .....	26	1,110	6.4	23	-	3	-	-	
Oklahoma .....	243	34,640	6.2	75	46	94	26	2	
Oregon .....	2,634	331,194	4.9	1,513	292	539	150	140	
Pennsylvania .....	23	288	2.5	22	-	1	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	-	-	-	-	-	-	-	-	
South Dakota .....	347	45,734	4.2	44	61	237	-	5	
Tennessee .....	-	-	-	-	-	-	-	-	
Texas .....	621	56,268	6.0	349	110	114	27	21	
Utah .....	7,724	611,229	4.2	5,267	915	1,021	288	233	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	
Washington .....	2,569	278,089	6.6	1,544	327	390	209	99	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	224	23,936	6.3	123	38	40	11	12	
Wyoming .....	2,994	454,316	3.7	1,156	443	936	266	193	
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	63	975	4.7	57	5	1	-	-	
Region 03 South Atlantic-Gulf .....	106	3,451	3.8	81	25	-	-	-	
Region 04 Great Lakes .....	371	27,192	6.9	169	106	87	7	2	
Region 05 Ohio .....	23	(D)	(D)	23	-	-	-	-	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	399	26,174	6.0	273	66	40	9	11	
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	
Region 09 Souris-Red-Rainy .....	121	17,607	4.1	41	31	19	30	-	
Region 10 Missouri .....	11,483	1,680,634	4.3	4,501	2,168	3,102	1,008	704	
Region 11 Arkansas-White-Red .....	1,754	305,005	5.4	728	319	439	130	138	
Region 12 Texas-Gulf .....	476	34,330	6.3	249	152	50	20	5	
Region 13 Rio Grande .....	3,218	172,691	4.8	2,597	201	298	36	86	
Region 14 Upper Colorado .....	7,082	430,590	3.6	5,004	892	974	104	108	
Region 15 Lower Colorado .....	1,093	337,052	8.2	630	110	115	43	195	
Region 16 Great Basin .....	6,776	849,809	4.7	4,093	821	1,003	472	387	
Region 17 Pacific Northwest .....	13,080	1,574,264	5.2	7,413	2,070	1,912	1,033	652	
Region 18 California .....	2,648	704,820	6.2	789	433	614	392	420	
Region 19 Alaska .....	1	(D)	(D)	-	1	-	-	-	
Region 20 Hawaii .....	3	27	6.6	3	-	-	-	-	

See footnote(s) at end of table.

--continued

**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All other hay (dry hay, greenchop, and silage)								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (tons, dry)	Farms by irrigated acres harvested					
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more	
United States .....2018	25,402	3,263,946	4.3	11,357	3,873	2,854	4,175	3,143	
.....2013	28,142	3,300,889	3.7	11,149	5,725	4,026	4,140	3,102	
<b>2018 DATA</b>									
Alabama .....	50	425	6.0	50	-	-	-	-	
Alaska .....	4	713	2.8	-	-	3	-	1	
Arizona .....	251	44,101	4.7	97	49	-	72	33	
Arkansas .....	93	7,205	4.3	23	23	18	24	5	
California .....	1,961	557,566	8.6	340	294	314	394	619	
Colorado .....	3,917	362,160	2.5	2,015	726	457	441	278	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	
Florida .....	179	35,676	3.8	-	105	-	66	8	
Georgia .....	214	20,251	6.9	23	93	49	48	1	
Hawaii .....	-	-	-	-	-	-	-	-	
Idaho .....	1,701	156,806	3.1	866	274	264	115	182	
Illinois .....	12	1,800	0.5	-	-	-	12	-	
Indiana .....	9	540	2.5	-	-	9	-	-	
Iowa .....	-	-	-	-	-	-	-	-	
Kansas .....	355	47,827	9.3	44	60	48	175	28	
Kentucky .....	-	-	-	-	-	-	-	-	
Louisiana .....	49	2,506	1.9	27	8	-	14	-	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	41	1,133	1.0	20	20	-	-	1	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	-	-	-	-	-	-	-	-	
Minnesota .....	-	-	-	-	-	-	-	-	
Mississippi .....	31	2,284	2.7	12	6	-	13	-	
Missouri .....	72	4,160	4.2	24	8	16	24	-	
Montana .....	2,035	332,932	2.3	913	219	182	280	441	
Nebraska .....	829	94,336	4.4	237	62	189	249	92	
Nevada .....	417	150,331	3.8	61	31	88	86	151	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	2	(D)	(D)	2	-	-	-	-	
New Mexico .....	1,957	101,446	5.9	1,420	255	38	144	100	
New York .....	-	-	-	-	-	-	-	-	
North Carolina .....	92	3,036	3.5	53	-	39	-	-	
North Dakota .....	63	3,707	4.6	-	31	31	-	1	
Ohio .....	-	-	-	-	-	-	-	-	
Oklahoma .....	280	44,201	5.4	77	-	80	79	44	
Oregon .....	3,363	276,496	2.3	1,927	541	272	420	203	
Pennsylvania .....	-	-	-	-	-	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	76	1,445	4.0	76	-	-	-	-	
South Dakota .....	84	20,349	4.7	44	-	-	-	40	
Tennessee .....	21	1,680	2.0	-	-	21	-	-	
Texas .....	2,341	275,863	5.0	990	438	158	531	224	
Utah .....	1,924	133,745	2.5	1,171	230	236	142	145	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	
Washington .....	1,204	149,317	5.1	390	138	144	356	176	
West Virginia .....	20	(D)	(D)	20	-	-	-	-	
Wisconsin .....	4	1,440	4.5	-	-	-	3	1	
Wyoming .....	1,751	428,427	2.1	435	262	198	487	369	
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	43	1,155	1.1	22	20	-	-	1	
Region 03 South Atlantic-Gulf .....	617	63,067	4.8	189	204	88	127	9	
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	
Region 05 Ohio .....	32	1,820	0.5	20	-	-	12	-	
Region 06 Tennessee .....	25	50	6.0	25	-	-	-	-	
Region 07 Upper Mississippi .....	29	2,220	4.0	16	-	9	3	1	
Region 08 Lower Mississippi .....	84	3,276	2.6	41	13	30	-	-	
Region 09 Souris-Red-Rainy .....	31	2,077	5.0	-	-	31	-	-	
Region 10 Missouri .....	4,788	710,252	2.7	1,847	660	653	886	742	
Region 11 Arkansas-White-Red .....	1,475	233,157	6.5	352	203	201	535	184	
Region 12 Texas-Gulf .....	2,040	219,664	4.8	931	380	143	360	226	
Region 13 Rio Grande .....	1,630	71,023	4.2	1,245	189	57	77	62	
Region 14 Upper Colorado .....	3,185	364,806	2.1	1,618	535	345	413	274	
Region 15 Lower Colorado .....	409	52,440	4.8	183	83	-	108	35	
Region 16 Great Basin .....	2,117	297,058	2.9	971	267	295	233	351	
Region 17 Pacific Northwest .....	6,818	667,792	3.1	3,534	979	672	1,013	620	
Region 18 California .....	2,075	573,376	8.5	363	340	327	408	637	
Region 19 Alaska .....	4	713	2.8	-	-	3	-	1	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Peanuts								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (pounds)	Farms by irrigated acres harvested					
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more	
United States .....	1,701	460,155	4,518	316	330	571	274	210	
2013	1,605	371,634	4,533	167	353	689	240	156	
<b>2018 DATA</b>									
Alabama .....	85	18,150	4,399	25	1	37	8	14	
Alaska .....	-	-	-	-	-	-	-	-	
Arizona .....	-	-	-	-	-	-	-	-	
Arkansas .....	43	18,553	4,682	5	9	5	12	12	
California .....	3	3	4,000	3	-	-	-	-	
Colorado .....	-	-	-	-	-	-	-	-	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	
Florida .....	164	55,617	4,512	54	27	30	18	35	
Georgia .....	849	247,135	4,832	98	144	318	181	108	
Hawaii .....	-	-	-	-	-	-	-	-	
Idaho .....	-	-	-	-	-	-	-	-	
Illinois .....	-	-	-	-	-	-	-	-	
Indiana .....	-	-	-	-	-	-	-	-	
Iowa .....	-	-	-	-	-	-	-	-	
Kansas .....	-	-	-	-	-	-	-	-	
Kentucky .....	-	-	-	-	-	-	-	-	
Louisiana .....	19	3,040	5,000	-	-	19	-	-	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	-	-	-	-	-	-	-	-	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	-	-	-	-	-	-	-	-	
Minnesota .....	-	-	-	-	-	-	-	-	
Mississippi .....	11	1,425	4,329	-	7	3	1	-	
Missouri .....	-	-	-	-	-	-	-	-	
Montana .....	-	-	-	-	-	-	-	-	
Nebraska .....	-	-	-	-	-	-	-	-	
Nevada .....	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	
New Mexico .....	24	4,272	3,540	-	-	23	-	1	
New York .....	-	-	-	-	-	-	-	-	
North Carolina .....	54	2,306	5,379	53	-	-	-	1	
North Dakota .....	-	-	-	-	-	-	-	-	
Ohio .....	-	-	-	-	-	-	-	-	
Oklahoma .....	17	2,265	4,183	-	13	-	4	-	
Oregon .....	-	-	-	-	-	-	-	-	
Pennsylvania .....	-	-	-	-	-	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	124	17,791	4,822	37	40	36	6	5	
South Dakota .....	-	-	-	-	-	-	-	-	
Tennessee .....	22	22	4,500	22	-	-	-	-	
Texas .....	286	89,576	3,605	19	89	100	44	34	
Utah .....	-	-	-	-	-	-	-	-	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	
Washington .....	-	-	-	-	-	-	-	-	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	-	-	-	-	-	-	-	-	
Wyoming .....	-	-	-	-	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	
Region 03 South Atlantic-Gulf .....	1,276	340,999	4,760	267	212	421	213	163	
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	
Region 05 Ohio .....	-	-	-	-	-	-	-	-	
Region 06 Tennessee .....	22	22	4,500	22	-	-	-	-	
Region 07 Upper Mississippi .....	-	-	-	-	-	-	-	-	
Region 08 Lower Mississippi .....	56	19,265	4,897	5	12	26	1	12	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	-	-	-	-	-	-	-	-	
Region 11 Arkansas-White-Red .....	54	(D)	(D)	-	37	1	16	-	
Region 12 Texas-Gulf .....	289	91,251	3,585	19	69	123	44	34	
Region 13 Rio Grande .....	1	(D)	(D)	-	-	-	-	1	
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	
Region 18 California .....	3	3	4,000	3	-	-	-	-	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Cotton								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (lbs, lint)	Farms by irrigated acres harvested					
				1 to 99 acres	100 to 249 acres	250 to 499 acres	500 to 999 acres	1,000 acres or more	
United States .....2018	6,918	3,697,167	1,167	1,094	1,963	1,573	1,320	968	
.....2013	6,804	2,954,457	1,172	1,299	1,747	1,990	1,148	620	
<b>2018 DATA</b>									
Alabama .....	199	52,608	1,102	50	102	17	15	15	
Alaska .....	-	-	-	-	-	-	-	-	
Arizona .....	277	164,846	1,480	33	65	92	36	51	
Arkansas .....	410	386,089	1,251	32	66	76	87	149	
California .....	461	254,785	1,615	20	204	118	84	35	
Colorado .....	-	-	-	-	-	-	-	-	
Connecticut .....	-	-	-	-	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	
Florida .....	31	(D)	(D)	-	27	-	-	4	
Georgia .....	1,041	463,450	787	187	277	268	238	71	
Hawaii .....	-	-	-	-	-	-	-	-	
Idaho .....	-	-	-	-	-	-	-	-	
Illinois .....	1	(D)	(D)	-	-	1	-	-	
Indiana .....	-	-	-	-	-	-	-	-	
Iowa .....	-	-	-	-	-	-	-	-	
Kansas .....	127	40,974	1,237	18	69	25	9	6	
Kentucky .....	-	-	-	-	-	-	-	-	
Louisiana .....	75	33,908	1,270	6	35	9	22	3	
Maine .....	-	-	-	-	-	-	-	-	
Maryland .....	-	-	-	-	-	-	-	-	
Massachusetts .....	-	-	-	-	-	-	-	-	
Michigan .....	-	-	-	-	-	-	-	-	
Minnesota .....	-	-	-	-	-	-	-	-	
Mississippi .....	235	209,107	1,286	19	24	48	64	80	
Missouri .....	204	208,092	1,425	-	23	43	48	90	
Montana .....	-	-	-	-	-	-	-	-	
Nebraska .....	-	-	-	-	-	-	-	-	
Nevada .....	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	
New Mexico .....	230	51,304	1,094	133	-	48	47	2	
New York .....	-	-	-	-	-	-	-	-	
North Carolina .....	101	14,202	1,073	26	61	9	5	-	
North Dakota .....	-	-	-	-	-	-	-	-	
Ohio .....	-	-	-	-	-	-	-	-	
Oklahoma .....	250	113,902	1,358	63	72	39	55	21	
Oregon .....	-	-	-	-	-	-	-	-	
Pennsylvania .....	-	-	-	-	-	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	
South Carolina .....	199	39,558	1,111	103	54	24	16	2	
South Dakota .....	-	-	-	-	-	-	-	-	
Tennessee .....	93	23,539	1,198	56	7	17	7	6	
Texas .....	2,974	1,632,965	1,095	338	877	739	587	433	
Utah .....	-	-	-	-	-	-	-	-	
Vermont .....	-	-	-	-	-	-	-	-	
Virginia .....	10	400	908	10	-	-	-	-	
Washington .....	-	-	-	-	-	-	-	-	
West Virginia .....	-	-	-	-	-	-	-	-	
Wisconsin .....	-	-	-	-	-	-	-	-	
Wyoming .....	-	-	-	-	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	
Region 03 South Atlantic-Gulf .....	1,504	570,825	843	363	457	319	272	93	
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	
Region 05 Ohio .....	-	-	-	-	-	-	-	-	
Region 06 Tennessee .....	131	(D)	(D)	47	64	11	8	1	
Region 07 Upper Mississippi .....	1	(D)	(D)	-	-	1	-	-	
Region 08 Lower Mississippi .....	950	844,580	1,299	79	142	181	222	326	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	-	-	-	-	-	-	-	-	
Region 11 Arkansas-White-Red .....	1,059	522,693	1,314	218	360	188	177	116	
Region 12 Texas-Gulf .....	2,309	1,270,679	1,032	182	666	638	483	340	
Region 13 Rio Grande .....	226	47,646	1,117	152	5	25	38	6	
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	
Region 15 Lower Colorado .....	285	169,313	1,496	33	68	95	36	53	
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	
Region 18 California .....	453	250,318	1,606	20	201	115	84	33	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Land in vegetables							
	Farms	Irrigated acres harvested	Farms by irrigated acres harvested					
			Less than 5.0 acres	5.0 to 24.9 acres	25.0 to 99.9 acres	100.0 to 249.9 acres	250.0 acres or more	
United States .....	23,087	3,127,705	12,999	4,722	1,768	1,351	2,247	
2013 .....	24,157	2,993,600	15,026	3,583	1,792	1,496	2,260	
<b>2018 DATA</b>								
Alabama .....	229	14,532	76	97	28	-	28	
Alaska .....	70	375	61	8	-	1	-	
Arizona .....	202	133,733	46	64	-	16	76	
Arkansas .....	143	14,993	81	42	4	-	16	
California .....	2,015	975,424	764	246	174	194	637	
Colorado .....	475	52,390	356	54	22	-	43	
Connecticut .....	191	693	178	7	5	1	-	
Delaware .....	79	14,293	17	-	28	30	4	
Florida .....	741	172,039	287	228	81	9	136	
Georgia .....	467	77,134	134	85	83	71	94	
Hawaii .....	337	5,055	234	79	22	-	2	
Idaho .....	945	317,115	316	100	134	160	235	
Illinois .....	379	22,988	214	75	39	48	3	
Indiana .....	404	37,099	194	84	26	54	46	
Iowa .....	214	4,727	132	46	-	36	-	
Kansas .....	172	3,036	136	29	-	3	4	
Kentucky .....	493	3,821	280	160	53	-	-	
Louisiana .....	101	18,798	70	13	11	-	7	
Maine .....	462	15,979	352	55	26	9	20	
Maryland .....	408	19,262	175	84	93	41	15	
Massachusetts .....	364	2,971	200	123	40	-	1	
Michigan .....	974	121,194	485	239	69	80	101	
Minnesota .....	418	55,436	199	38	59	56	66	
Mississippi .....	198	5,602	105	74	13	-	6	
Missouri .....	608	6,848	447	127	8	26	-	
Montana .....	271	7,532	197	34	2	36	2	
Nebraska .....	201	21,317	126	56	4	-	15	
Nevada .....	34	3,622	26	5	-	-	3	
New Hampshire .....	219	1,313	169	48	1	-	1	
New Jersey .....	737	31,376	331	196	115	70	25	
New Mexico .....	764	14,459	655	100	-	-	9	
New York .....	713	18,612	315	258	96	27	17	
North Carolina .....	648	53,854	472	81	48	-	47	
North Dakota .....	62	22,404	46	4	-	-	12	
Ohio .....	654	10,557	382	183	79	3	7	
Oklahoma .....	336	7,041	229	77	-	26	4	
Oregon .....	1,220	117,103	836	76	95	109	104	
Pennsylvania .....	1,131	26,369	637	409	61	15	9	
Rhode Island .....	99	1,348	75	17	-	7	-	
South Carolina .....	496	42,781	287	146	29	2	32	
South Dakota .....	94	355	65	29	-	-	-	
Tennessee .....	335	3,929	249	85	-	-	1	
Texas .....	705	128,652	364	139	58	75	69	
Utah .....	402	4,302	210	156	32	4	-	
Vermont .....	232	1,505	169	50	12	1	-	
Virginia .....	468	12,751	312	100	33	13	10	
Washington .....	1,244	292,946	780	182	12	30	240	
West Virginia .....	149	5,798	139	-	5	-	5	
Wisconsin .....	703	200,869	318	134	68	88	95	
Wyoming .....	81	1,372	71	-	-	10	-	
<b>Water Resources Regions</b>								
Region 01 New England .....	1,434	23,068	1,037	283	75	17	22	
Region 02 Mid-Atlantic .....	2,826	113,785	1,442	753	375	187	69	
Region 03 South Atlantic-Gulf .....	2,754	361,043	1,337	738	260	82	337	
Region 04 Great Lakes .....	2,064	165,170	1,112	486	201	123	142	
Region 05 Ohio .....	1,619	42,465	925	483	113	70	28	
Region 06 Tennessee .....	372	1,493	271	86	15	-	-	
Region 07 Upper Mississippi .....	1,524	261,276	793	245	144	182	160	
Region 08 Lower Mississippi .....	273	45,308	133	62	30	18	30	
Region 09 Souris-Red-Rainy .....	105	10,108	92	7	-	-	6	
Region 10 Missouri .....	1,150	66,341	804	274	12	22	38	
Region 11 Arkansas-White-Red .....	732	27,964	568	109	14	29	12	
Region 12 Texas-Gulf .....	672	63,080	360	139	58	70	45	
Region 13 Rio Grande .....	590	83,729	462	67	-	5	56	
Region 14 Upper Colorado .....	323	6,596	256	64	-	-	3	
Region 15 Lower Colorado .....	244	144,729	83	64	-	16	81	
Region 16 Great Basin .....	407	17,489	198	161	32	4	12	
Region 17 Pacific Northwest .....	3,581	724,193	2,067	368	243	331	572	
Region 18 California .....	2,010	964,439	764	246	174	194	632	
Region 19 Alaska .....	70	375	61	8	-	1	-	
Region 20 Hawaii .....	337	5,055	234	79	22	-	2	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Sweet corn								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Farms by irrigated acres harvested					
				Less than 5.0 acres	5.0 to 24.9 acres	25.0 to 49.9 acres	50.0 to 99.9 acres	100.0 acres or more	
United States .....2018	5,476	285,749	207	3,366	1,048	216	297	549	
.....2013	5,923	321,992	207	3,689	1,022	285	269	658	
<b>2018 DATA</b>									
Alabama .....	66	629	198	40	25	-	-	1	
Alaska .....	10	1	134	10	-	-	-	-	
Arizona .....	16	16	200	16	-	-	-	-	
Arkansas .....	9	18	289	9	-	-	-	-	
California .....	205	19,166	307	129	28	2	-	46	
Colorado .....	144	3,050	250	140	-	-	-	4	
Connecticut .....	71	92	61	70	-	1	-	-	
Delaware .....	55	10,184	188	-	-	-	22	33	
Florida .....	141	20,610	347	76	27	-	27	11	
Georgia .....	114	23,965	232	70	-	-	6	38	
Hawaii .....	1	(D)	(D)	-	-	-	-	1	
Idaho .....	196	3,178	92	121	27	25	20	3	
Illinois .....	64	6,268	193	15	-	18	12	19	
Indiana .....	94	5,461	80	19	39	19	1	16	
Iowa .....	45	1,676	134	22	5	-	18	-	
Kansas .....	49	86	137	49	-	-	-	-	
Kentucky .....	59	306	100	32	27	-	-	-	
Louisiana .....	63	168	211	52	11	-	-	-	
Maine .....	126	1,163	240	89	31	-	3	3	
Maryland .....	175	12,555	129	53	-	20	50	52	
Massachusetts .....	77	482	156	10	67	-	-	-	
Michigan .....	233	1,469	113	119	106	6	-	2	
Minnesota .....	181	17,942	147	25	23	18	37	78	
Mississippi .....	75	164	209	63	12	-	-	-	
Missouri .....	86	228	143	58	28	-	-	-	
Montana .....	57	83	84	55	2	-	-	-	
Nebraska .....	61	233	50	43	14	4	-	-	
Nevada .....	17	5	150	17	-	-	-	-	
New Hampshire .....	9	152	251	-	7	-	2	-	
New Jersey .....	158	3,617	104	46	67	14	28	3	
New Mexico .....	176	120	62	176	-	-	-	-	
New York .....	238	3,504	125	91	120	11	4	12	
North Carolina .....	170	347	230	143	27	-	-	-	
North Dakota .....	40	18	130	40	-	-	-	-	
Ohio .....	201	2,815	185	159	31	6	-	5	
Oklahoma .....	53	2,343	200	27	-	-	26	-	
Oregon .....	344	21,363	223	258	24	6	5	51	
Pennsylvania .....	292	2,684	134	168	94	25	3	2	
Rhode Island .....	13	77	(D)	12	-	-	1	-	
South Carolina .....	144	948	97	115	26	-	-	3	
South Dakota .....	36	257	100	14	22	-	-	-	
Tennessee .....	136	679	40	135	-	-	-	1	
Texas .....	69	2,881	100	42	19	-	-	8	
Utah .....	95	341	198	61	34	-	-	-	
Vermont .....	25	97	(D)	19	6	-	-	-	
Virginia .....	124	4,638	143	98	22	-	-	4	
Washington .....	432	60,256	229	286	42	-	2	102	
West Virginia .....	3	3	250	3	-	-	-	-	
Wisconsin .....	228	49,107	177	71	35	41	30	51	
Wyoming .....	-	-	-	-	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	304	2,011	204	185	109	1	6	3	
Region 02 Mid-Atlantic .....	819	34,844	145	344	205	64	106	100	
Region 03 South Atlantic-Gulf .....	727	46,747	279	524	117	-	33	53	
Region 04 Great Lakes .....	469	11,335	143	198	211	30	11	19	
Region 05 Ohio .....	388	6,581	106	269	95	6	-	18	
Region 06 Tennessee .....	116	74	(D)	116	-	-	-	-	
Region 07 Upper Mississippi .....	492	69,485	171	126	60	78	88	140	
Region 08 Lower Mississippi .....	61	744	82	49	11	-	-	1	
Region 09 Souris-Red-Rainy .....	37	10	124	37	-	-	-	-	
Region 10 Missouri .....	324	3,821	218	252	64	4	-	4	
Region 11 Arkansas-White-Red .....	144	2,429	200	118	-	-	26	-	
Region 12 Texas-Gulf .....	69	2,881	100	42	19	-	-	8	
Region 13 Rio Grande .....	76	(D)	62	76	-	-	-	-	
Region 14 Upper Colorado .....	80	81	68	80	-	-	-	-	
Region 15 Lower Colorado .....	49	19	191	49	-	-	-	-	
Region 16 Great Basin .....	112	346	198	78	34	-	-	-	
Region 17 Pacific Northwest .....	993	84,827	222	684	95	31	27	156	
Region 18 California .....	205	19,166	307	129	28	2	-	46	
Region 19 Alaska .....	10	1	134	10	-	-	-	-	
Region 20 Hawaii .....	1	(D)	(D)	-	-	-	-	1	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Tomatoes in the open								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Farms by irrigated acres harvested					
				Less than 5.0 acres	5.0 to 24.9 acres	25.0 to 49.9 acres	50.0 to 99.9 acres	100.0 acres or more	
United States .....	8,879	288,114	766	7,913	490	71	76	329	
2013 .....	10,496	358,985	798	9,459	445	69	65	458	
<b>2018 DATA</b>									
Alabama .....	104	1,174	571	54	25	25	-	-	
Alaska .....	12	2	159	12	-	-	-	-	
Arizona .....	16	2	50	16	-	-	-	-	
Arkansas .....	63	170	489	43	20	-	-	-	
California .....	1,007	240,734	827	629	36	28	37	277	
Colorado .....	186	104	181	186	-	-	-	-	
Connecticut .....	127	73	348	126	-	1	-	-	
Delaware .....	8	5	605	8	-	-	-	-	
Florida .....	181	21,795	566	173	-	-	-	8	
Georgia .....	98	141	198	94	-	4	-	-	
Hawaii .....	34	(D)	(D)	33	-	-	-	1	
Idaho .....	151	49	100	151	-	-	-	-	
Illinois .....	135	157	20	120	15	-	-	-	
Indiana .....	160	2,427	426	148	-	-	2	10	
Iowa .....	83	(D)	246	78	5	-	-	-	
Kansas .....	73	81	20	73	-	-	-	-	
Kentucky .....	264	346	273	244	20	-	-	-	
Louisiana .....	60	69	131	60	-	-	-	-	
Maine .....	105	23	216	105	-	-	-	-	
Maryland .....	170	503	60	157	9	-	4	-	
Massachusetts .....	261	226	108	261	-	-	-	-	
Michigan .....	509	5,508	736	456	20	-	21	12	
Minnesota .....	100	76	(D)	100	-	-	-	-	
Mississippi .....	135	209	558	122	13	-	-	-	
Missouri .....	267	204	261	259	8	-	-	-	
Montana .....	102	38	98	102	-	-	-	-	
Nebraska .....	73	37	372	73	-	-	-	-	
Nevada .....	21	4	300	21	-	-	-	-	
New Hampshire .....	16	14	124	16	-	-	-	-	
New Jersey .....	333	1,905	142	276	47	-	8	2	
New Mexico .....	323	163	155	323	-	-	-	-	
New York .....	337	500	292	302	33	-	2	-	
North Carolina .....	204	550	54	192	-	12	-	-	
North Dakota .....	38	9	88	38	-	-	-	-	
Ohio .....	325	1,029	469	278	42	1	1	3	
Oklahoma .....	227	296	170	202	25	-	-	-	
Oregon .....	372	271	200	348	24	-	-	-	
Pennsylvania .....	344	761	330	335	8	-	-	1	
Rhode Island .....	30	100	250	29	-	-	1	-	
South Carolina .....	176	4,808	101	136	26	-	-	14	
South Dakota .....	41	13	161	41	-	-	-	-	
Tennessee .....	262	277	314	220	42	-	-	-	
Texas .....	250	204	172	250	-	-	-	-	
Utah .....	106	186	40	79	27	-	-	-	
Vermont .....	25	16	185	25	-	-	-	-	
Virginia .....	235	1,755	100	212	22	-	-	1	
Washington .....	285	111	294	285	-	-	-	-	
West Virginia .....	92	32	533	92	-	-	-	-	
Wisconsin .....	310	273	336	287	23	-	-	-	
Wyoming .....	43	46	243	43	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	543	439	187	541	-	1	1	-	
Region 02 Mid-Atlantic .....	1,125	5,001	154	998	111	-	12	4	
Region 03 South Atlantic-Gulf .....	856	28,215	482	748	57	29	-	22	
Region 04 Great Lakes .....	1,006	6,652	678	918	49	-	24	15	
Region 05 Ohio .....	811	2,722	475	739	62	1	-	9	
Region 06 Tennessee .....	274	732	150	220	42	12	-	-	
Region 07 Upper Mississippi .....	557	943	127	532	22	-	2	1	
Region 08 Lower Mississippi .....	132	325	405	102	30	-	-	-	
Region 09 Souris-Red-Rainy .....	35	7	106	35	-	-	-	-	
Region 10 Missouri .....	470	304	(D)	470	-	-	-	-	
Region 11 Arkansas-White-Red .....	365	398	191	335	30	-	-	-	
Region 12 Texas-Gulf .....	238	187	169	238	-	-	-	-	
Region 13 Rio Grande .....	223	109	185	223	-	-	-	-	
Region 14 Upper Colorado .....	154	(D)	150	154	-	-	-	-	
Region 15 Lower Colorado .....	53	605	913	51	-	-	-	2	
Region 16 Great Basin .....	125	190	45	98	27	-	-	-	
Region 17 Pacific Northwest .....	861	441	211	837	24	-	-	-	
Region 18 California .....	1,005	240,134	827	629	36	28	37	275	
Region 19 Alaska .....	12	2	159	12	-	-	-	-	
Region 20 Hawaii .....	34	(D)	(D)	33	-	-	-	1	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Lettuce and romaine								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Farms by irrigated acres harvested					
				Less than 5.0 acres	5.0 to 24.9 acres	25.0 to 49.9 acres	50.0 to 99.9 acres	100.0 acres or more	
United States .....2018	4,589	277,616	640	4,169	75	54	33	258	
.....2013	5,052	264,154	415	4,665	139	7	14	227	
<b>2018 DATA</b>									
Alabama .....	-	-	-	-	-	-	-	-	
Alaska .....	33	49	258	32	-	1	-	-	
Arizona .....	43	44,363	568	5	-	-	-	38	
Arkansas .....	20	26	281	16	4	-	-	-	
California .....	563	198,895	650	348	6	-	23	186	
Colorado .....	134	33	348	134	-	-	-	-	
Connecticut .....	88	28	415	88	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	
Florida .....	112	25,620	800	103	-	-	-	9	
Georgia .....	67	14	100	67	-	-	-	-	
Hawaii .....	85	328	200	70	15	-	-	-	
Idaho .....	87	18	300	87	-	-	-	-	
Illinois .....	79	99	500	79	-	-	-	-	
Indiana .....	76	94	800	60	16	-	-	-	
Iowa .....	18	2	205	18	-	-	-	-	
Kansas .....	19	2	116	19	-	-	-	-	
Kentucky .....	76	57	100	76	-	-	-	-	
Louisiana .....	36	5	217	36	-	-	-	-	
Maine .....	177	55	450	174	3	-	-	-	
Maryland .....	80	36	200	80	-	-	-	-	
Massachusetts .....	203	1,055	217	173	-	30	-	-	
Michigan .....	101	2,012	350	81	-	-	-	20	
Minnesota .....	52	21	200	52	-	-	-	-	
Mississippi .....	55	45	263	55	-	-	-	-	
Missouri .....	62	25	180	62	-	-	-	-	
Montana .....	103	33	285	103	-	-	-	-	
Nebraska .....	58	14	110	58	-	-	-	-	
Nevada .....	19	2	200	19	-	-	-	-	
New Hampshire .....	7	7	181	7	-	-	-	-	
New Jersey .....	145	2,052	390	82	30	23	10	-	
New Mexico .....	101	1,653	295	96	-	-	-	5	
New York .....	185	93	447	185	-	-	-	-	
North Carolina .....	127	32	369	127	-	-	-	-	
North Dakota .....	9	5	130	9	-	-	-	-	
Ohio .....	89	37	205	89	-	-	-	-	
Oklahoma .....	29	4	800	29	-	-	-	-	
Oregon .....	360	200	113	360	-	-	-	-	
Pennsylvania .....	73	48	100	73	-	-	-	-	
Rhode Island .....	29	41	350	29	-	-	-	-	
South Carolina .....	48	8	101	48	-	-	-	-	
South Dakota .....	12	2	153	12	-	-	-	-	
Tennessee .....	49	5	385	49	-	-	-	-	
Texas .....	113	90	150	113	-	-	-	-	
Utah .....	27	27	350	27	-	-	-	-	
Vermont .....	57	59	503	56	1	-	-	-	
Virginia .....	143	90	500	143	-	-	-	-	
Washington .....	314	155	201	314	-	-	-	-	
West Virginia .....	29	14	364	29	-	-	-	-	
Wisconsin .....	196	65	215	196	-	-	-	-	
Wyoming .....	1	(D)	(D)	1	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	521	1,203	245	487	4	30	-	-	
Region 02 Mid-Atlantic .....	493	2,234	387	430	30	23	10	-	
Region 03 South Atlantic-Gulf .....	377	25,686	799	368	-	-	-	9	
Region 04 Great Lakes .....	294	2,117	350	274	-	-	-	20	
Region 05 Ohio .....	289	235	445	273	16	-	-	-	
Region 06 Tennessee .....	62	17	389	62	-	-	-	-	
Region 07 Upper Mississippi .....	316	183	396	316	-	-	-	-	
Region 08 Lower Mississippi .....	52	45	274	48	4	-	-	-	
Region 09 Souris-Red-Rainy .....	24	4	192	24	-	-	-	-	
Region 10 Missouri .....	226	65	225	226	-	-	-	-	
Region 11 Arkansas-White-Red .....	93	20	385	93	-	-	-	-	
Region 12 Texas-Gulf .....	113	90	150	113	-	-	-	-	
Region 13 Rio Grande .....	101	1,653	295	96	-	-	-	5	
Region 14 Upper Colorado .....	36	12	340	36	-	-	-	-	
Region 15 Lower Colorado .....	45	44,363	568	7	-	-	-	38	
Region 16 Great Basin .....	44	29	340	44	-	-	-	-	
Region 17 Pacific Northwest .....	822	388	163	822	-	-	-	-	
Region 18 California .....	563	198,895	650	348	6	-	23	186	
Region 19 Alaska .....	33	49	258	32	-	1	-	-	
Region 20 Hawaii .....	85	328	200	70	15	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Potatoes, excluding sweet potatoes								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Farms by irrigated acres harvested					
				Less than 15.0 acres	15.0 to 99.9 acres	100.0 to 249.9 acres	250.0 to 499.9 acres	500.0 acres or more	
United States ..... 2018	5,361	866,288	476	4,168	246	360	242	345	
..... 2013	5,596	903,297	408	4,199	171	472	301	453	
<b>2018 DATA</b>									
Alabama .....	22	33	280	22	-	-	-	-	
Alaska .....	41	203	367	36	4	1	-	-	
Arizona .....	22	3,109	267	5	-	16	-	1	
Arkansas .....	12	5	162	12	-	-	-	-	
California .....	252	25,442	389	184	3	45	7	13	
Colorado .....	171	46,579	479	132	-	4	14	21	
Connecticut .....	13	4	246	13	-	-	-	-	
Delaware .....	1	(D)	(D)	-	-	1	-	-	
Florida .....	81	4,608	245	76	-	-	-	5	
Georgia .....	99	113	200	99	-	-	-	-	
Hawaii .....	33	17	402	33	-	-	-	-	
Idaho .....	576	296,665	451	144	94	126	86	126	
Illinois .....	82	(D)	(D)	80	-	-	-	2	
Indiana .....	69	(D)	(D)	68	-	-	-	1	
Iowa .....	40	21	198	40	-	-	-	-	
Kansas .....	50	2,381	400	43	-	3	-	4	
Kentucky .....	42	68	300	42	-	-	-	-	
Louisiana .....	13	1	130	13	-	-	-	-	
Maine .....	238	9,195	351	211	3	6	13	5	
Maryland .....	77	364	357	67	10	-	-	-	
Massachusetts .....	67	359	(D)	66	-	-	1	-	
Michigan .....	232	46,712	368	161	36	21	3	11	
Minnesota .....	89	18,783	465	53	19	-	5	12	
Mississippi .....	13	10	200	13	-	-	-	-	
Missouri .....	104	2,028	300	94	-	10	-	-	
Montana .....	152	6,923	378	114	-	36	-	2	
Nebraska .....	79	20,530	452	64	-	-	7	8	
Nevada .....	21	(D)	(D)	20	-	-	-	1	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	86	1,272	291	82	-	1	3	-	
New Mexico .....	141	(D)	(D)	139	-	-	-	2	
New York .....	177	3,140	310	139	30	6	1	1	
North Carolina .....	132	54	440	132	-	-	-	-	
North Dakota .....	48	22,294	475	36	-	-	5	7	
Ohio .....	99	170	337	98	1	-	-	-	
Oklahoma .....	65	31	259	65	-	-	-	-	
Oregon .....	344	41,695	535	314	2	8	3	17	
Pennsylvania .....	143	1,078	304	132	6	5	-	-	
Rhode Island .....	17	812	240	12	-	5	-	-	
South Carolina .....	60	(D)	(D)	59	-	-	-	1	
South Dakota .....	19	5	140	19	-	-	-	-	
Tennessee .....	72	12	440	72	-	-	-	-	
Texas .....	134	22,010	264	103	19	-	4	8	
Utah .....	102	145	200	102	-	-	-	-	
Vermont .....	60	71	(D)	60	-	-	-	-	
Virginia .....	145	3,378	367	122	10	8	4	1	
Washington .....	480	166,613	645	327	-	24	73	56	
West Virginia .....	50	17	440	50	-	-	-	-	
Wisconsin .....	295	84,234	443	199	9	34	13	40	
Wyoming .....	1	(D)	(D)	1	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	346	10,391	336	313	3	11	14	5	
Region 02 Mid-Atlantic .....	459	7,084	333	386	49	15	8	1	
Region 03 South Atlantic-Gulf .....	422	22,887	407	416	-	-	-	6	
Region 04 Great Lakes .....	487	58,728	371	369	52	40	13	13	
Region 05 Ohio .....	265	(D)	(D)	263	1	-	-	1	
Region 06 Tennessee .....	97	27	393	97	-	-	-	-	
Region 07 Upper Mississippi .....	410	97,644	443	313	19	21	8	49	
Region 08 Lower Mississippi .....	36	2,011	299	26	-	10	-	-	
Region 09 Souris-Red-Rainy .....	57	9,942	539	51	-	-	-	6	
Region 10 Missouri .....	373	56,182	474	335	-	8	12	18	
Region 11 Arkansas-White-Red .....	123	18,854	279	113	-	3	-	7	
Region 12 Texas-Gulf .....	131	5,556	272	103	19	-	4	5	
Region 13 Rio Grande .....	103	26,782	446	73	-	-	14	16	
Region 14 Upper Colorado .....	68	(D)	(D)	66	-	-	-	2	
Region 15 Lower Colorado .....	55	3,112	266	38	-	16	-	1	
Region 16 Great Basin .....	132	11,583	449	122	-	-	-	10	
Region 17 Pacific Northwest .....	1,471	501,719	522	831	96	190	162	192	
Region 18 California .....	252	25,442	389	184	3	45	7	13	
Region 19 Alaska .....	41	203	367	36	4	1	-	-	
Region 20 Hawaii .....	33	17	402	33	-	-	-	-	

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All berries		Land in orchards, vineyards, and nut trees						
	Farms	Irrigated acres harvested	Farms	Irrigated acres harvested	Farms by irrigated acres harvested				
					Less than 5.0 acres	5.0 to 14.9 acres	15.0 to 49.9 acres	50.0 to 99.9 acres	100.0 acres or more
United States .....2018	11,562	219,254	52,959	5,021,860	19,242	10,761	9,917	4,356	8,683
.....2013	12,763	227,651	52,018	3,662,131	24,135	10,112	8,384	3,868	5,519
<b>2018 DATA</b>									
Alabama .....	144	549	111	681	61	50	-	-	-
Alaska .....	50	14	30	12	30	-	-	-	-
Arizona .....	16	832	761	77,091	269	228	96	51	117
Arkansas .....	125	417	93	3,668	22	23	19	20	9
California .....	934	50,685	30,750	3,703,045	8,161	6,139	6,826	3,220	6,404
Colorado .....	158	208	908	3,849	642	219	47	-	-
Connecticut .....	128	176	125	330	122	-	3	-	-
Delaware .....	9	32	5	(D)	4	-	-	-	1
Florida .....	668	13,328	3,102	411,470	868	579	587	355	713
Georgia .....	532	16,859	867	116,664	186	264	277	23	117
Hawaii .....	52	42	746	8,780	625	100	14	-	7
Idaho .....	166	190	506	1,675	403	83	20	-	-
Illinois .....	93	1,023	17	5	17	-	-	-	-
Indiana .....	168	721	29	1,227	3	6	-	20	-
Iowa .....	94	464	65	140	65	-	-	-	-
Kansas .....	39	34	40	61	40	-	-	-	-
Kentucky .....	107	140	28	(D)	28	-	-	-	-
Louisiana .....	107	333	121	495	93	14	14	-	-
Maine .....	355	8,460	76	296	65	8	-	3	-
Maryland .....	93	145	36	241	20	7	9	-	-
Massachusetts .....	530	11,642	92	1,534	34	38	10	10	-
Michigan .....	582	12,096	367	24,360	122	81	61	22	81
Minnesota .....	63	436	96	751	35	42	19	-	-
Mississippi .....	102	619	57	3,634	37	6	-	-	14
Missouri .....	277	398	176	3,768	131	23	18	-	4
Montana .....	151	106	421	1,684	311	86	24	-	-
Nebraska .....	77	161	56	229	40	16	-	-	-
Nevada .....	3	(Z)	57	157	53	4	-	-	-
New Hampshire .....	190	535	19	269	3	8	7	-	1
New Jersey .....	243	15,473	81	2,861	45	22	3	1	10
New Mexico .....	90	44	2,900	61,630	2,118	543	66	67	106
New York .....	197	1,800	239	8,050	92	46	72	7	22
North Carolina .....	373	12,768	203	1,566	123	26	54	-	-
North Dakota .....	35	21	33	14	33	-	-	-	-
Ohio .....	200	350	106	1,295	86	1	9	-	10
Oklahoma .....	66	146	86	129	86	-	-	-	-
Oregon .....	1,360	20,229	2,228	90,320	1,124	423	328	124	229
Pennsylvania .....	341	783	281	4,164	97	109	70	1	4
Rhode Island .....	39	159	18	81	13	5	-	-	-
South Carolina .....	94	210	200	8,552	144	-	52	-	4
South Dakota .....	-	-	31	85	31	-	-	-	-
Tennessee .....	193	230	66	416	44	-	22	-	-
Texas .....	369	1,380	2,413	80,157	1,137	770	372	79	55
Utah .....	99	234	517	13,980	395	27	54	-	41
Vermont .....	136	568	44	356	40	-	2	1	1
Virginia .....	214	438	47	218	46	-	-	-	1
Washington .....	999	14,766	3,594	381,210	1,037	711	762	352	732
West Virginia .....	126	185	2	(D)	2	-	-	-	-
Wisconsin .....	375	28,825	67	291	13	54	-	-	-
Wyoming .....	-	-	46	48	46	-	-	-	-
<b>Water Resources Regions</b>									
Region 01 New England .....	1,301	21,380	383	2,662	290	59	20	13	1
Region 02 Mid-Atlantic .....	844	17,238	490	10,370	237	116	105	10	22
Region 03 South Atlantic-Gulf .....	1,911	44,325	4,478	540,314	1,389	900	970	378	841
Region 04 Great Lakes .....	1,019	17,026	569	29,327	209	145	95	22	98
Region 05 Ohio .....	587	876	156	2,248	89	29	26	2	10
Region 06 Tennessee .....	124	198	103	687	56	25	22	-	-
Region 07 Upper Mississippi .....	539	27,853	280	2,398	157	78	27	18	-
Region 08 Lower Mississippi .....	188	452	176	6,819	119	18	18	5	16
Region 09 Souris-Red-Rainy .....	70	79	35	15	35	-	-	-	-
Region 10 Missouri .....	333	328	409	1,028	352	47	10	-	-
Region 11 Arkansas-White-Red .....	305	966	645	4,424	391	209	26	15	4
Region 12 Texas-Gulf .....	334	1,010	2,044	64,074	966	607	341	60	50
Region 13 Rio Grande .....	51	256	2,846	65,622	2,014	554	86	86	106
Region 14 Upper Colorado .....	97	163	783	3,726	547	189	47	-	-
Region 15 Lower Colorado .....	53	843	883	94,269	362	250	96	51	124
Region 16 Great Basin .....	98	230	476	14,054	328	53	54	-	41
Region 17 Pacific Northwest .....	2,672	35,290	6,699	474,713	2,841	1,287	1,134	476	961
Region 18 California .....	934	50,685	30,728	3,696,321	8,185	6,095	6,826	3,220	6,402
Region 19 Alaska .....	50	14	30	12	30	-	-	-	-
Region 20 Hawaii .....	52	42	746	8,780	625	100	14	-	7

See footnote(s) at end of table.

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**Table 35. Crops Harvested in the Open from Irrigated Farms and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Nursery and other horticultural crops (see text)		All other crops <sup>1</sup> (see text)		Irrigated pastureland, all types	
	Farms	Irrigated acres harvested	Farms	Irrigated acres harvested	Farms	Irrigated acres
United States ..... 2018 2013	15,623 (NA)	581,936 (NA)	7,006 26,309	1,783,325 2,320,822	51,644 42,733	4,004,854 3,034,409
<b>2018 DATA</b>						
Alabama .....	185	21,002	-	-	7	128
Alaska .....	85	199	2	(D)	-	-
Arizona .....	87	5,457	132	30,180	1,117	28,650
Arkansas .....	97	6,157	16	53	57	10,456
California .....	1,951	74,259	590	179,469	5,237	699,056
Colorado .....	417	12,869	456	36,649	5,243	407,293
Connecticut .....	146	3,294	93	817	3	60
Delaware .....	22	1,665	5	(D)	22	110
Florida .....	2,039	85,141	183	419,337	583	33,841
Georgia .....	356	21,221	37	9,808	164	7,751
Hawaii .....	483	1,582	102	201	213	3,895
Idaho .....	401	28,628	664	207,665	8,552	450,482
Illinois .....	217	10,815	69	23,587	17	85
Indiana .....	159	3,469	132	30,639	36	162
Iowa .....	122	2,692	21	1,734	-	-
Kansas .....	120	3,388	102	44,828	33	9,271
Kentucky .....	167	1,092	76	1,126	26	52
Louisiana .....	152	3,446	13	13	27	4,910
Maine .....	141	3,069	38	210	59	59
Maryland .....	149	9,875	36	1,242	8	(D)
Massachusetts .....	219	1,960	136	772	28	336
Michigan .....	453	22,221	113	3,756	50	5,550
Minnesota .....	197	4,480	17	7,900	19	228
Mississippi .....	82	5,273	16	(D)	26	525
Missouri .....	217	3,955	46	612	125	16,576
Montana .....	77	766	369	67,616	4,090	507,345
Nebraska .....	122	2,476	427	106,368	772	73,612
Nevada .....	17	671	58	21,962	776	137,136
New Hampshire .....	212	385	32	36	11	18
New Jersey .....	492	17,831	81	1,311	58	760
New Mexico .....	159	1,570	222	8,234	3,216	99,552
New York .....	556	11,663	222	2,623	23	23
North Carolina .....	462	8,611	253	10,072	94	5,796
North Dakota .....	6	(D)	81	28,698	-	-
Ohio .....	333	9,272	23	276	2	(D)
Oklahoma .....	171	14,794	65	12,605	229	69,960
Oregon .....	1,079	53,291	773	205,147	5,949	344,462
Pennsylvania .....	542	1,999	192	2,270	24	376
Rhode Island .....	34	1,426	11	14	10	(D)
South Carolina .....	260	18,039	66	1,730	140	4,669
South Dakota .....	40	893	24	5,564	108	8,681
Tennessee .....	207	8,145	-	-	-	-
Texas .....	532	46,750	223	59,826	2,193	223,515
Utah .....	141	2,518	114	3,271	6,324	255,176
Vermont .....	60	141	7	51	2	(D)
Virginia .....	325	3,806	92	1,803	-	-
Washington .....	738	27,845	444	196,991	3,545	139,408
West Virginia .....	62	152	-	-	-	-
Wisconsin .....	322	11,485	10	(D)	19	399
Wyoming .....	10	(D)	122	45,491	2,407	454,414
<b>Water Resources Regions</b>						
Region 01 New England .....	769	10,178	315	1,896	111	483
Region 02 Mid-Atlantic .....	1,658	44,340	387	6,548	135	1,277
Region 03 South Atlantic-Gulf .....	3,337	155,435	647	442,766	984	52,584
Region 04 Great Lakes .....	974	31,314	230	5,121	52	5,606
Region 05 Ohio .....	720	13,490	212	24,142	28	54
Region 06 Tennessee .....	261	7,454	-	-	23	115
Region 07 Upper Mississippi .....	830	27,924	150	36,537	99	1,194
Region 08 Lower Mississippi .....	170	6,675	30	(D)	58	5,357
Region 09 Souris-Red-Rainy .....	15	92	15	4,400	23	437
Region 10 Missouri .....	554	16,326	1,319	292,550	6,420	789,649
Region 11 Arkansas-White-Red .....	451	23,077	253	65,891	1,178	212,768
Region 12 Texas-Gulf .....	509	46,205	166	42,936	1,913	165,828
Region 13 Rio Grande .....	93	1,732	189	4,298	2,618	113,609
Region 14 Upper Colorado .....	294	3,230	140	5,560	6,703	570,461
Region 15 Lower Colorado .....	112	5,907	134	30,680	1,469	37,676
Region 16 Great Basin .....	116	3,230	152	27,294	5,004	295,090
Region 17 Pacific Northwest .....	2,260	109,730	1,975	612,779	19,000	959,158
Region 18 California .....	1,932	73,817	588	178,969	5,613	789,613
Region 19 Alaska .....	85	199	2	(D)	-	-
Region 20 Hawaii .....	483	1,582	102	201	213	3,895

<sup>1</sup> 2013 data include nursery and other horticultural crops grown in the open.

**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Corn for grain or seed											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
United States ..... 2018	31,828	11,610,238	210	0.9	26,186	10,052,218	212	0.8	5,642	1,558,020	190	1.2
..... 2013	37,247	13,289,247	196	1.1	29,752	11,012,114	197	1.1	7,495	2,277,133	191	1.4
<b>2018 DATA</b>												
Alabama .....	124	32,857	216	0.5	120	30,699	217	0.5	4	2,158	203	0.8
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	41	13,340	231	2.9	23	12,900	232	2.8	18	440	214	5.7
Arkansas .....	1,089	447,403	184	1.0	116	43,872	180	0.7	973	403,531	185	1.0
California .....	337	134,945	183	3.0	43	5,185	186	2.8	294	129,760	183	3.0
Colorado .....	1,646	642,494	198	1.4	1,104	594,366	198	1.4	542	48,128	200	1.9
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	417	111,849	171	0.4	417	111,849	171	0.4	-	-	-	-
Florida .....	79	33,481	185	1.4	79	33,481	185	1.4	-	-	-	-
Georgia .....	662	135,101	209	0.9	662	135,101	209	0.9	-	-	-	-
Hawaii .....	15	4,720	59	1.2	15	4,720	59	1.2	-	-	-	-
Idaho .....	862	112,975	218	2.5	425	91,777	220	2.5	437	21,198	206	2.9
Illinois .....	996	313,408	214	0.6	996	313,408	214	0.6	-	-	-	-
Indiana .....	1,098	317,229	209	0.4	1,098	317,229	209	0.4	-	-	-	-
Iowa .....	461	109,131	203	0.4	461	109,131	203	0.4	-	-	-	-
Kansas .....	3,065	1,275,781	204	1.1	2,784	1,252,465	205	1.1	281	23,316	174	0.7
Kentucky .....	59	29,337	207	0.4	57	(D)	(D)	(D)	2	(D)	(D)	(D)
Louisiana .....	534	285,780	195	0.6	45	28,214	194	0.5	489	257,566	195	0.6
Maine .....	33	2,283	175	0.5	33	2,283	175	0.5	-	-	-	-
Maryland .....	287	51,602	193	0.6	267	51,542	193	0.6	20	60	196	0.5
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	1,157	378,664	196	0.5	1,157	378,664	196	0.5	-	-	-	-
Minnesota .....	1,421	280,391	206	0.5	1,421	280,391	206	0.5	-	-	-	-
Mississippi .....	454	283,200	199	0.6	147	69,997	203	0.6	307	213,203	198	0.7
Missouri .....	934	351,031	196	0.7	690	248,967	198	0.6	244	102,064	190	1.0
Montana .....	139	24,055	173	1.2	30	8,348	161	1.4	109	15,707	179	1.1
Nebraska .....	10,581	4,522,575	222	0.7	9,508	4,327,428	222	0.7	1,073	195,147	209	0.9
Nevada .....	26	1,828	167	2.6	1	(D)	(D)	(D)	25	(D)	(D)	(D)
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	88	8,895	194	0.5	88	8,895	194	0.5	-	-	-	-
New Mexico .....	231	48,130	160	2.1	98	34,008	175	2.4	133	14,122	122	1.5
New York .....	5	1,446	182	0.4	5	1,446	182	0.4	-	-	-	-
North Carolina .....	145	12,127	194	0.4	118	10,885	191	0.4	27	1,242	220	0.1
North Dakota .....	336	104,053	209	0.5	305	98,318	212	0.5	31	5,735	170	0.8
Ohio .....	60	8,045	214	0.7	59	(D)	(D)	(D)	1	(D)	(D)	(D)
Oklahoma .....	197	130,878	202	1.4	197	130,878	202	1.4	-	-	-	-
Oregon .....	211	47,757	261	2.7	183	43,557	259	2.6	28	4,200	281	3.0
Pennsylvania .....	37	1,621	275	0.4	37	1,621	275	0.4	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	281	94,386	191	0.8	281	94,386	191	0.8	-	-	-	-
South Dakota .....	656	179,472	199	0.6	634	178,812	199	0.6	22	660	160	1.5
Tennessee .....	291	70,957	222	0.4	290	(D)	(D)	(D)	1	(D)	(D)	(D)
Texas .....	1,218	672,323	206	1.5	974	586,955	213	1.5	244	85,368	155	1.5
Utah .....	199	13,215	213	2.1	32	2,840	171	2.4	167	10,375	224	2.0
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	78	11,466	200	0.4	78	11,466	200	0.4	-	-	-	-
Washington .....	493	119,019	256	2.5	486	117,218	257	2.5	7	1,801	192	2.0
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	484	142,895	213	0.5	484	142,895	213	0.5	-	-	-	-
Wyoming .....	301	48,093	179	1.8	138	29,860	180	1.9	163	18,233	178	1.7
<b>Water Resources Regions</b>												
Region 01 New England .....	33	2,283	175	0.5	33	2,283	175	0.5	-	-	-	-
Region 02 Mid-Atlantic .....	877	183,223	181	0.5	857	183,163	181	0.5	20	60	196	0.5
Region 03 South Atlantic-Gulf .....	1,337	307,666	199	0.9	1,308	304,866	199	0.9	29	2,800	206	0.3
Region 04 Great Lakes .....	1,612	514,095	199	0.5	1,611	(D)	(D)	(D)	1	(D)	(D)	(D)
Region 05 Ohio .....	788	207,304	209	0.4	786	(D)	(D)	(D)	2	(D)	(D)	(D)
Region 06 Tennessee .....	43	23,014	227	0.8	41	(D)	(D)	(D)	2	(D)	(D)	(D)
Region 07 Upper Mississippi .....	3,069	760,729	211	0.5	3,054	756,667	211	0.5	15	4,062	199	0.3
Region 08 Lower Mississippi .....	2,630	1,254,247	194	0.7	789	338,660	200	0.5	1,841	915,587	191	0.8
Region 09 Souris-Red-Rainy .....	255	94,411	213	0.6	255	94,411	213	0.6	-	-	-	-
Region 10 Missouri .....	14,922	5,915,979	216	0.8	13,098	5,635,896	216	0.7	1,824	280,083	203	1.1
Region 11 Arkansas-White-Red .....	3,046	1,648,999	210	1.3	2,720	1,577,140	212	1.3	326	71,859	181	1.0
Region 12 Texas-Gulf .....	605	203,779	168	1.3	361	118,411	176	1.2	244	85,368	155	1.5
Region 13 Rio Grande .....	87	18,593	126	1.5	54	4,773	142	1.6	33	13,820	120	1.5
Region 14 Upper Colorado .....	399	30,782	195	3.3	16	17,468	185	3.6	383	13,314	207	2.7
Region 15 Lower Colorado .....	41	13,340	231	2.9	23	12,900	232	2.8	18	440	214	5.7
Region 16 Great Basin .....	190	13,511	215	2.2	32	2,243	202	2.5	158	11,268	218	2.1
Region 17 Pacific Northwest .....	1,542	278,618	241	2.5	1,090	252,199	244	2.5	452	26,419	217	2.9
Region 18 California .....	337	134,945	183	3.0	43	5,185	186	2.8	294	129,760	183	3.0
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	15	4,720	59	1.2	15	4,720	59	1.2	-	-	-	-

See footnote(s) at end of table.

--continued

**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Corn for silage or greenchop											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (tons, green)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (tons, green)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (tons, green)	Average acre-feet applied per acre
United States ..... 2018	7,930	1,648,789	26	2.0	4,654	991,891	26	1.4	3,276	656,898	27	2.9
..... 2013	8,382	1,729,358	25	1.9	4,660	1,204,133	24	1.5	3,722	525,225	27	2.7
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	159	65,219	31	4.7	2	(D)	(D)	(D)	157	(D)	(D)	(D)
Arkansas .....	5	400	15	0.4	5	400	15	0.4	-	-	-	-
California .....	1,515	454,607	27	3.0	88	14,211	27	2.4	1,427	440,396	27	3.0
Colorado .....	730	133,455	25	1.7	451	93,882	25	1.5	279	39,573	24	2.3
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	9	780	21	0.2	9	780	21	0.2	-	-	-	-
Florida .....	12	13,130	23	1.2	12	13,130	23	1.2	-	-	-	-
Georgia .....	37	2,888	24	0.7	37	2,888	24	0.7	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	985	235,357	30	2.1	691	216,564	30	2.1	294	18,793	30	2.3
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	98	8,504	25	0.2	98	8,504	25	0.2	-	-	-	-
Iowa .....	18	720	25	1.5	18	720	25	1.5	-	-	-	-
Kansas .....	301	72,418	25	1.3	271	67,978	26	1.3	30	4,440	18	0.5
Kentucky .....	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	14	2,800	29	0.2	14	2,800	29	0.2	-	-	-	-
Massachusetts .....	29	58	29	0.2	29	58	29	0.2	-	-	-	-
Michigan .....	170	14,790	20	0.5	170	14,790	20	0.5	-	-	-	-
Minnesota .....	174	17,807	25	0.4	174	17,807	25	0.4	-	-	-	-
Mississippi .....	7	665	18	1.3	7	665	18	1.3	-	-	-	-
Missouri .....	16	2,720	23	0.3	16	2,720	23	0.3	-	-	-	-
Montana .....	216	31,210	30	1.2	94	17,832	30	1.4	122	13,378	29	1.0
Nebraska .....	825	109,372	25	0.7	678	102,175	25	0.7	147	7,197	23	1.0
Nevada .....	98	9,501	25	3.6	15	2,097	12	4.9	83	7,404	28	3.2
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	316	80,893	25	1.5	305	72,689	25	1.5	11	8,204	26	1.6
New York .....	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	45	3,279	19	1.6	14	1,450	25	(D)	31	1,829	14	(D)
Ohio .....	10	750	17	0.1	10	750	17	0.1	-	-	-	-
Oklahoma .....	14	7,124	16	0.8	14	7,124	16	0.8	-	-	-	-
Oregon .....	205	17,515	26	2.0	150	13,975	26	2.2	55	3,540	26	1.2
Pennsylvania .....	24	(D)	(D)	(D)	24	(D)	(D)	(D)	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	52	5,200	13	0.3	52	5,200	13	0.3	-	-	-	-
South Dakota .....	46	5,250	20	0.4	24	4,370	23	0.4	22	880	9	0.8
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	378	166,040	24	1.1	378	166,040	24	1.1	-	-	-	-
Utah .....	653	61,833	26	2.1	275	37,541	27	2.4	378	24,292	24	1.6
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	71	5,122	23	0.3	71	5,122	23	0.3	-	-	-	-
Washington .....	318	62,858	29	1.6	255	52,340	28	1.6	63	10,518	32	1.3
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	146	24,703	26	0.4	146	24,703	26	0.4	-	-	-	-
Wyoming .....	230	30,802	25	2.0	53	9,579	24	1.1	177	21,223	25	2.4
<b>Water Resources Regions</b>												
Region 01 New England .....	29	58	29	0.2	29	58	29	0.2	-	-	-	-
Region 02 Mid-Atlantic .....	118	9,174	25	0.3	118	9,174	25	0.3	-	-	-	-
Region 03 South Atlantic-Gulf .....	101	21,218	21	0.9	101	21,218	21	0.9	-	-	-	-
Region 04 Great Lakes .....	299	34,097	23	0.4	299	34,097	23	0.4	-	-	-	-
Region 05 Ohio .....	19	139	25	0.3	19	139	25	0.3	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	269	29,865	25	0.4	269	29,865	25	0.4	-	-	-	-
Region 08 Lower Mississippi .....	17	665	18	1.3	7	665	18	1.3	-	-	-	-
Region 09 Souris-Red-Rainy .....	15	3,000	27	0.4	15	3,000	27	0.4	-	-	-	-
Region 10 Missouri .....	1,998	293,910	26	1.3	1,353	230,461	26	1.1	645	63,449	25	1.9
Region 11 Arkansas-White-Red .....	553	159,271	24	1.1	469	150,899	24	1.2	84	8,372	22	0.9
Region 12 Texas-Gulf .....	402	138,842	23	1.1	402	138,842	23	1.1	-	-	-	-
Region 13 Rio Grande .....	101	34,101	29	2.1	90	25,897	30	2.3	11	8,204	26	1.6
Region 14 Upper Colorado .....	140	24,419	23	2.3	37	(D)	(D)	(D)	103	(D)	(D)	(D)
Region 15 Lower Colorado .....	191	66,440	31	4.7	2	(D)	(D)	(D)	189	(D)	(D)	(D)
Region 16 Great Basin .....	731	73,315	25	2.1	301	42,770	26	2.3	430	30,545	25	1.9
Region 17 Pacific Northwest .....	1,447	306,538	30	2.0	1,055	275,087	30	2.0	392	31,451	30	1.9
Region 18 California .....	1,510	453,737	27	3.0	88	14,211	27	2.4	1,422	439,526	27	3.0
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Sorghum for grain or seed											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
United States ..... 2018	1,594	286,851	98	1.3	1,220	228,197	100	1.0	374	58,654	92	2.2
..... 2013	3,923	809,579	97	1.1	3,263	686,269	96	1.0	660	123,310	98	1.3
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	41	22,346	96	4.4	18	5,026	90	3.0	23	17,320	98	4.8
Arkansas .....	38	2,865	70	0.8	23	2,030	62	0.7	15	835	90	1.0
California .....	7	1,750	70	1.8	7	1,750	70	1.8	-	-	-	-
Colorado .....	174	15,935	84	1.3	80	9,557	81	1.3	94	6,378	88	1.2
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	-	-	-	-	-	-	-	-	-	-	-	-
Georgia .....	30	3,419	99	0.5	30	3,419	99	0.5	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-	-	-	-	-	-
Illinois .....	5	250	110	0.3	5	250	110	0.3	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	490	86,970	116	0.8	430	82,365	116	0.8	60	4,605	113	0.6
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	24	3,681	128	0.4	24	3,681	128	0.4	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-
Montana .....	16	1,824	60	0.8	-	-	-	-	16	1,824	60	0.8
Nebraska .....	110	5,077	117	0.6	110	5,077	117	0.6	-	-	-	-
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	73	5,982	100	2.8	33	5,855	100	2.8	40	127	100	2.6
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	92	12,353	108	1.4	80	12,113	109	1.4	12	240	60	1.5
Oregon .....	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	484	123,669	87	1.1	370	96,344	87	1.0	114	27,325	88	1.3
Utah .....	-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming .....	10	730	70	3.7	10	730	70	3.7	-	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....	30	3,419	99	0.5	30	3,419	99	0.5	-	-	-	-
Region 04 Great Lakes .....	24	3,681	128	0.4	24	3,681	128	0.4	-	-	-	-
Region 05 Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	5	250	110	0.3	5	250	110	0.3	-	-	-	-
Region 08 Lower Mississippi .....	16	955	87	0.9	6	320	69	0.7	10	635	96	1.0
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	243	22,975	107	0.8	212	20,476	109	0.8	31	2,499	85	0.8
Region 11 Arkansas-White-Red .....	911	181,709	101	1.0	772	169,533	102	1.0	139	12,176	96	0.9
Region 12 Texas-Gulf .....	225	48,474	83	1.2	141	22,742	80	1.1	84	25,732	86	1.3
Region 13 Rio Grande .....	45	1,127	100	3.0	5	1,000	100	3.0	40	127	100	2.6
Region 14 Upper Colorado .....	47	165	85	2.5	-	-	-	-	47	165	85	2.5
Region 15 Lower Colorado .....	41	22,346	96	4.4	18	5,026	90	3.0	23	17,320	98	4.8
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 18 California .....	7	1,750	70	1.8	7	1,750	70	1.8	-	-	-	-
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Wheat for grain or seed											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
United States .....2018 2013	8,760 12,974	2,311,703 3,197,501	89 78	1.4 1.4	6,363 9,934	1,831,164 2,654,442	87 75	1.2 1.3	2,397 3,040	480,539 543,059	94 95	2.1 2.1
<b>2018 DATA</b>												
Alabama .....	26	2,915	78	0.4	26	2,915	78	0.4	-	-	-	-
Alaska .....	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Arizona .....	170	76,229	105	3.6	1	(D)	(D)	(D)	169	(D)	(D)	(D)
Arkansas .....	5	5,000	55	0.6	-	-	-	-	5	5,000	55	0.6
California .....	674	207,599	97	2.3	156	36,763	103	1.9	518	170,836	96	2.3
Colorado .....	521	75,935	74	1.2	343	65,970	73	1.1	178	9,965	79	2.1
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	101	10,572	78	0.3	101	10,572	78	0.3	-	-	-	-
Florida .....	-	-	-	-	-	-	-	-	-	-	-	-
Georgia .....	102	22,020	68	1.1	102	22,020	68	1.1	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	1,906	597,386	117	1.7	1,278	540,892	117	1.7	628	56,494	123	2.4
Illinois .....	65	5,904	77	0.4	65	5,904	77	0.4	-	-	-	-
Indiana .....	25	5,150	74	0.2	25	5,150	74	0.2	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	976	261,493	60	0.7	931	254,098	61	0.7	45	7,395	45	0.4
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	29	4,719	71	0.2	29	4,719	71	0.2	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	125	17,673	91	0.5	125	17,673	91	0.5	-	-	-	-
Minnesota .....	51	10,040	50	0.5	51	10,040	50	0.5	-	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Missouri .....	122	40,257	69	0.4	96	34,241	70	0.4	26	6,016	64	0.8
Montana .....	555	145,394	84	0.8	338	100,161	90	0.9	217	45,233	70	0.8
Nebraska .....	370	64,530	76	0.6	348	63,186	76	0.6	22	1,344	57	0.6
Nevada .....	28	19,698	109	2.7	5	(D)	150	2.0	23	(D)	99	2.9
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	12	2,217	54	0.1	12	2,217	54	0.1	-	-	-	-
New Mexico .....	177	41,372	82	1.9	138	33,678	81	2.0	39	7,694	86	1.5
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	28	1,850	77	0.2	28	1,850	77	0.2	-	-	-	-
North Dakota .....	167	41,094	75	0.6	96	13,130	82	0.4	71	27,964	72	0.6
Ohio .....	14	1,370	71	0.1	14	1,370	71	0.1	-	-	-	-
Oklahoma .....	325	103,858	46	0.9	313	99,778	46	0.9	12	4,080	40	2.0
Oregon .....	269	53,972	117	1.6	251	47,917	117	1.5	18	6,055	113	2.2
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	19	3,650	75	0.5	19	3,650	75	0.5	-	-	-	-
South Dakota .....	47	7,434	63	0.4	47	7,434	63	0.4	-	-	-	-
Tennessee .....	14	700	70	0.3	14	700	70	0.3	-	-	-	-
Texas .....	832	260,803	57	1.1	802	255,486	57	1.1	30	5,317	61	2.3
Utah .....	434	30,674	97	1.4	117	9,644	80	1.2	317	21,030	105	1.5
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	4	1,324	80	0.3	-	-	-	-	4	1,324	80	0.3
Washington .....	445	166,293	111	1.8	408	162,736	111	1.7	37	3,557	125	2.4
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	21	1,189	70	0.3	21	1,189	70	0.3	-	-	-	-
Wyoming .....	100	21,380	95	0.7	62	11,930	(D)	(D)	38	9,450	(D)	(D)
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	146	18,832	73	(D)	142	17,508	73	0.2	4	1,324	80	(D)
Region 03 South Atlantic-Gulf .....	149	27,520	70	0.9	149	27,520	70	0.9	-	-	-	-
Region 04 Great Lakes .....	143	20,543	88	0.4	143	20,543	88	0.4	-	-	-	-
Region 05 Ohio .....	31	3,122	81	0.3	31	3,122	81	0.3	-	-	-	-
Region 06 Tennessee .....	26	2,915	78	0.4	26	2,915	78	0.4	-	-	-	-
Region 07 Upper Mississippi .....	120	13,253	64	0.3	120	13,253	64	0.3	-	-	-	-
Region 08 Lower Mississippi .....	117	40,997	67	0.4	86	29,981	70	0.3	31	11,016	60	0.7
Region 09 Souris-Red-Rainy .....	17	6,070	57	0.5	17	6,070	57	0.5	-	-	-	-
Region 10 Missouri .....	1,593	342,703	77	0.7	1,221	258,232	78	0.7	372	84,471	73	0.8
Region 11 Arkansas-White-Red .....	1,778	570,204	58	0.9	1,577	540,824	58	0.9	201	29,380	60	1.2
Region 12 Texas-Gulf .....	431	56,317	51	0.8	431	56,317	51	0.8	-	-	-	-
Region 13 Rio Grande .....	120	21,022	89	1.9	115	20,502	88	1.9	5	520	120	4.5
Region 14 Upper Colorado .....	83	(D)	(D)	3.7	9	(D)	(D)	(D)	74	(D)	(D)	(D)
Region 15 Lower Colorado .....	173	79,858	104	3.5	3	(D)	(D)	(D)	170	(D)	(D)	(D)
Region 16 Great Basin .....	581	86,093	95	1.7	241	49,115	89	1.4	340	36,978	102	2.1
Region 17 Pacific Northwest .....	2,580	804,426	116	1.7	1,897	738,320	116	1.6	683	66,106	122	2.4
Region 18 California .....	671	203,970	97	2.2	154	35,523	104	1.9	517	168,447	96	2.3
Region 19 Alaska .....	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Farms	Irrigated acres harvested	Average yield per irrigated acre (bushels)	Average acre-feet applied per acre	Soybeans for beans							
					Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
United States ..... 2018	21,316	8,215,031	61	0.6	16,326	4,496,694	63	0.5	4,990	3,718,337	59	0.7
..... 2013	21,755	7,413,276	54	0.9	15,399	4,041,900	57	0.8	6,356	3,371,376	51	1.0
<b>2018 DATA</b>												
Alabama .....	119	21,199	66	0.4	119	21,199	66	0.4	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas .....	2,367	2,154,112	56	0.8	194	218,030	56	0.6	2,173	1,936,082	56	0.8
California .....	-	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	84	13,428	51	0.8	84	13,428	51	0.8	-	-	-	-
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	314	62,087	50	0.5	314	62,087	50	0.5	-	-	-	-
Florida .....	30	3,060	46	0.8	30	3,060	46	0.8	-	-	-	-
Georgia .....	153	26,770	40	0.3	153	26,770	40	0.3	-	-	-	-
Hawaii .....	7	250	50	1.2	7	250	50	1.2	-	-	-	-
Idaho .....	2	(D)	(D)	(D)	-	-	-	-	2	(D)	(D)	(D)
Illinois .....	618	184,406	66	0.5	618	184,406	66	0.5	-	-	-	-
Indiana .....	848	175,327	65	0.5	848	175,327	65	0.5	-	-	-	-
Iowa .....	201	45,974	58	0.3	201	45,974	58	0.3	-	-	-	-
Kansas .....	1,683	390,288	68	0.8	1,506	382,785	68	0.8	177	7,503	52	0.7
Kentucky .....	54	21,848	62	0.3	53	(D)	(D)	(D)	1	(D)	(D)	(D)
Louisiana .....	638	418,548	62	0.6	51	34,094	57	0.7	587	384,454	62	0.6
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	247	44,447	52	0.4	247	44,447	52	0.4	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	809	192,450	60	0.5	809	192,450	60	0.5	-	-	-	-
Minnesota .....	891	104,194	57	0.4	891	104,194	57	0.4	-	-	-	-
Mississippi .....	993	1,053,930	65	0.6	156	86,800	60	0.6	837	967,130	66	0.6
Missouri .....	1,139	640,311	54	0.7	697	332,995	54	0.6	442	307,316	55	0.7
Montana .....	23	4,078	41	0.9	19	(D)	(D)	(D)	4	(D)	(D)	(D)
Nebraska .....	7,821	2,202,453	67	0.5	7,156	2,109,630	67	0.5	665	92,823	67	0.7
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	143	12,269	45	0.8	143	12,269	45	0.8	-	-	-	-
New Mexico .....	10	(D)	(D)	2.0	-	-	-	-	10	(D)	(D)	2.0
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	103	6,614	51	0.3	103	6,614	51	0.3	-	-	-	-
North Dakota .....	248	58,653	55	0.7	231	48,453	55	0.6	17	10,200	55	1.4
Ohio .....	42	4,745	67	0.2	41	(D)	(D)	(D)	1	(D)	(D)	(D)
Oklahoma .....	166	62,313	55	1.0	166	62,313	55	1.0	-	-	-	-
Oregon .....	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....	16	80	80	(D)	16	80	80	(D)	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	148	18,156	52	0.6	148	18,156	52	0.6	-	-	-	-
South Dakota .....	420	97,467	58	0.5	420	97,467	58	0.5	-	-	-	-
Tennessee .....	312	80,717	55	0.4	290	75,767	56	0.4	22	4,950	50	0.2
Texas .....	133	29,032	58	0.8	103	24,592	60	0.7	30	4,440	48	1.0
Utah .....	-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	67	9,749	61	0.2	67	9,749	61	0.2	-	-	-	-
Washington .....	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	445	73,832	59	0.4	445	73,832	59	0.4	-	-	-	-
Wyoming .....	22	2,200	15	3.0	-	-	-	-	22	2,200	15	3.0
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	787	128,632	51	0.4	787	128,632	51	0.4	-	-	-	-
Region 03 South Atlantic-Gulf .....	536	71,995	51	0.4	530	70,195	50	0.4	6	1,800	60	0.7
Region 04 Great Lakes .....	1,138	255,751	61	0.5	1,137	(D)	(D)	(D)	1	(D)	(D)	(D)
Region 05 Ohio .....	568	142,249	65	0.5	567	(D)	(D)	(D)	1	(D)	(D)	(D)
Region 06 Tennessee .....	67	17,009	67	0.6	67	17,009	67	0.6	-	-	-	-
Region 07 Upper Mississippi .....	2,089	385,280	61	0.5	2,081	383,408	61	0.5	8	1,872	53	0.2
Region 08 Lower Mississippi .....	4,595	3,951,114	59	0.7	1,009	637,422	56	0.6	3,586	3,313,692	60	0.8
Region 09 Souris-Red-Rainy .....	230	42,570	57	0.5	230	42,570	57	0.5	-	-	-	-
Region 10 Missouri .....	9,518	2,564,114	66	0.5	8,662	2,452,459	66	0.5	856	111,655	64	0.8
Region 11 Arkansas-White-Red .....	1,701	651,431	59	0.8	1,211	367,272	65	0.9	490	284,159	51	0.6
Region 12 Texas-Gulf .....	68	4,592	48	1.0	38	(D)	(D)	(D)	30	(D)	(D)	(D)
Region 13 Rio Grande .....	10	(D)	(D)	(D)	-	-	-	-	10	(D)	(D)	(D)
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....	2	(D)	(D)	(D)	-	-	-	-	2	(D)	(D)	(D)
Region 18 California .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	7	250	50	1.2	7	250	50	1.2	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Beans, dry edible											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
United States .....2018	2,275	416,608	27	1.4	1,558	328,169	27	1.2	717	88,439	27	2.0
.....2013	2,793	433,590	25	1.4	1,617	320,390	25	1.1	1,176	113,200	25	2.2
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	9	7,274	17	2.3	2	(D)	(D)	(D)	7	(D)	(D)	(D)
Arkansas .....	-	-	-	-	-	-	-	-	-	-	-	-
California .....	244	40,176	28	2.2	144	21,849	28	2.0	100	18,327	28	2.4
Colorado .....	141	18,913	29	1.3	104	16,436	29	1.3	37	2,477	28	1.0
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	27	270	10	1.0	27	270	10	1.0	-	-	-	-
Georgia .....	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	641	77,397	27	2.3	270	48,640	27	2.2	371	28,757	27	2.4
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	13	8,210	28	0.6	13	8,210	28	0.6	-	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	32	32	25	0.8	32	32	25	0.8	-	-	-	-
Maryland .....	4	420	30	0.7	4	420	30	0.7	-	-	-	-
Massachusetts .....	28	28	20	2.0	28	28	20	2.0	-	-	-	-
Michigan .....	111	18,223	22	0.7	111	18,223	22	0.7	-	-	-	-
Minnesota .....	130	49,311	29	0.4	130	49,311	29	0.4	-	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-
Montana .....	24	3,089	35	(D)	8	1,009	24	(D)	16	2,080	40	0.8
Nebraska .....	414	103,771	26	0.9	299	81,399	26	0.9	115	22,372	27	0.9
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	63	21,260	28	0.4	63	21,260	28	0.4	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	-	-	-	-	-	-	-	-	-	-	-	-
Oregon .....	35	4,827	27	1.4	35	4,827	27	1.4	-	-	-	-
Pennsylvania .....	24	24	16	0.8	24	24	16	0.8	-	-	-	-
Rhode Island .....	9	9	20	1.0	9	9	20	1.0	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	11	1,110	15	0.6	6	(D)	(D)	(D)	5	(D)	(D)	(D)
Utah .....	4	208	28	0.3	-	-	-	-	4	208	28	0.3
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	202	27,673	31	2.5	172	26,278	31	2.5	30	1,395	31	2.5
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	11	8,548	23	0.5	11	8,548	23	0.5	-	-	-	-
Wyoming .....	95	19,440	24	2.2	63	8,209	24	0.9	32	11,231	24	3.2
<b>Water Resources Regions</b>												
Region 01 New England .....	69	69	22	1.3	69	69	22	1.3	-	-	-	-
Region 02 Mid-Atlantic .....	6	422	30	0.7	6	422	30	0.7	-	-	-	-
Region 03 South Atlantic-Gulf .....	27	270	10	1.0	27	270	10	1.0	-	-	-	-
Region 04 Great Lakes .....	133	18,245	22	0.7	133	18,245	22	0.7	-	-	-	-
Region 05 Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	129	51,899	27	0.4	129	51,899	27	0.4	-	-	-	-
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	71	26,500	29	(D)	71	26,500	29	(D)	-	-	-	-
Region 10 Missouri .....	675	154,416	26	1.1	475	116,256	26	(D)	200	38,160	27	(D)
Region 11 Arkansas-White-Red .....	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Region 12 Texas-Gulf .....	10	920	(D)	0.6	5	(D)	(D)	0.8	5	(D)	(D)	0.5
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 14 Upper Colorado .....	15	(D)	21	(D)	15	(D)	21	(D)	-	-	-	-
Region 15 Lower Colorado .....	9	7,274	17	2.3	2	(D)	(D)	(D)	7	(D)	(D)	(D)
Region 16 Great Basin .....	4	208	28	0.3	-	-	-	-	4	208	28	0.3
Region 17 Pacific Northwest .....	881	110,047	28	2.3	480	79,895	28	2.2	401	30,152	28	2.4
Region 18 California .....	244	40,176	28	2.2	144	21,849	28	2.0	100	18,327	28	2.4
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Rice											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
United States ..... 2018	3,813	2,370,113	79	2.5	33	10,600	67	1.2	3,780	2,359,513	79	2.5
..... 2013	5,613	3,132,894	80	2.9	146	33,690	68	1.4	5,467	3,099,204	80	2.9
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas .....	1,715	1,190,434	79	2.1	12	4,520	78	1.4	1,703	1,185,914	79	2.1
California .....	837	393,275	88	4.7	-	-	-	-	837	393,275	88	4.7
Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	16	(D)	(D)	(D)	8	4,000	54	0.7	8	(D)	(D)	(D)
Georgia .....	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-	-	-	-	-	-
Illinois .....	1	(D)	(D)	(D)	-	-	-	-	1	(D)	(D)	(D)
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	561	282,375	72	2.0	13	2,080	68	1.7	548	280,295	72	2.0
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....	148	99,888	78	2.0	-	-	-	-	148	99,888	78	2.0
Missouri .....	257	173,652	79	1.5	-	-	-	-	257	173,652	79	1.5
Montana .....	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska .....	-	-	-	-	-	-	-	-	-	-	-	-
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	-	-	-	-	-	-	-	-	-	-	-	-
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	-	-	-	-	-	-	-	-	-	-	-	-
Oregon .....	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....	1	(D)	(D)	(D)	-	-	-	-	1	(D)	(D)	(D)
Texas .....	277	206,790	78	3.0	-	-	-	-	277	206,790	78	3.0
Utah .....	-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....	16	(D)	(D)	(D)	8	4,000	54	0.7	8	(D)	(D)	(D)
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 05 Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	1	(D)	(D)	(D)	-	-	-	-	1	(D)	(D)	(D)
Region 08 Lower Mississippi .....	2,279	1,456,107	78	2.0	25	6,600	75	1.5	2,254	1,449,507	78	2.0
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 11 Arkansas-White-Red .....	403	290,592	79	2.0	-	-	-	-	403	290,592	79	2.0
Region 12 Texas-Gulf .....	277	206,790	78	3.0	-	-	-	-	277	206,790	78	3.0
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 18 California .....	837	393,275	88	4.7	-	-	-	-	837	393,275	88	4.7
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Other small grains (barley, oats, rye, etc.)								
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Primary method of distribution					
				Pressure system			Gravity system		
				Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
United States .....2018	5,767	1,026,289	1.5	3,372	713,678	1.4	2,395	312,611	1.8
.....2013	6,258	1,209,527	1.4	3,949	887,964	1.3	2,309	321,563	1.6
<b>2018 DATA</b>									
Alabama .....	4	8	2.7	4	8	2.7	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	130	13,912	4.8	33	2,231	1.1	97	11,681	5.5
Arkansas .....	-	-	-	-	-	-	-	-	-
California .....	551	127,718	1.7	67	8,605	1.8	484	119,113	1.7
Colorado .....	366	81,378	1.5	260	72,053	1.6	106	9,325	1.2
Connecticut .....	-	-	-	-	-	-	-	-	-
Delaware .....	10	1,300	0.1	10	1,300	0.1	-	-	-
Florida .....	56	9,630	0.5	56	9,630	0.5	-	-	-
Georgia .....	25	732	1.0	25	732	1.0	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-
Idaho .....	1,580	388,697	1.5	1,012	316,053	1.4	568	72,644	1.7
Illinois .....	-	-	-	-	-	-	-	-	-
Indiana .....	35	2,342	0.4	35	2,342	0.4	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-
Kansas .....	10	4,135	1.4	10	4,135	1.4	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-
Maryland .....	31	1,351	0.3	31	1,351	0.3	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-
Michigan .....	11	507	0.2	11	507	0.2	-	-	-
Minnesota .....	27	2,020	0.5	27	2,020	0.5	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-
Montana .....	537	141,966	1.0	227	91,688	1.0	310	50,278	0.9
Nebraska .....	84	7,930	0.2	84	7,930	0.2	-	-	-
Nevada .....	137	13,163	2.9	64	7,929	2.9	73	5,234	3.0
New Hampshire .....	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-
New Mexico .....	79	9,507	0.8	79	9,507	0.8	-	-	-
New York .....	3	9	0.1	3	9	0.1	-	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-
North Dakota .....	15	4,100	0.5	15	4,100	0.5	-	-	-
Ohio .....	23	690	1.8	23	690	1.8	-	-	-
Oklahoma .....	22	22,590	0.4	22	22,590	0.4	-	-	-
Oregon .....	181	18,081	1.8	155	14,391	1.8	26	3,690	1.7
Pennsylvania .....	22	176	0.2	22	176	0.2	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-
South Dakota .....	28	4,091	0.5	28	4,091	0.5	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-
Texas .....	168	46,444	1.2	168	46,444	1.2	-	-	-
Utah .....	947	45,301	1.4	503	30,001	1.4	444	15,300	1.4
Vermont .....	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-
Washington .....	210	22,136	1.9	182	20,996	1.9	28	1,140	1.1
West Virginia .....	-	-	-	-	-	-	-	-	-
Wisconsin .....	33	1,777	0.3	33	1,777	0.3	-	-	-
Wyoming .....	442	54,598	2.5	183	30,392	2.6	259	24,206	2.4
<b>Water Resources Regions</b>									
Region 01 New England .....	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	66	2,836	0.2	66	2,836	0.2	-	-	-
Region 03 South Atlantic-Gulf .....	85	10,370	0.6	85	10,370	0.6	-	-	-
Region 04 Great Lakes .....	21	(D)	(D)	21	(D)	(D)	-	-	-
Region 05 Ohio .....	58	3,032	0.7	58	3,032	0.7	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	49	2,697	0.4	49	2,697	0.4	-	-	-
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	1	(D)	(D)	1	(D)	(D)	-	-	-
Region 10 Missouri .....	1,156	213,627	1.2	573	138,841	1.1	583	74,786	1.4
Region 11 Arkansas-White-Red .....	137	42,669	0.8	110	36,584	0.7	27	6,085	1.0
Region 12 Texas-Gulf .....	94	32,755	1.1	94	32,755	1.1	-	-	-
Region 13 Rio Grande .....	153	67,629	1.6	153	67,629	1.6	-	-	-
Region 14 Upper Colorado .....	377	17,247	1.6	284	13,329	1.6	93	3,918	1.5
Region 15 Lower Colorado .....	159	14,980	4.5	35	3,191	1.1	124	11,789	5.5
Region 16 Great Basin .....	941	80,846	1.6	502	62,090	1.6	439	18,756	1.9
Region 17 Pacific Northwest .....	1,893	406,196	1.6	1,248	328,032	1.5	645	78,164	1.7
Region 18 California .....	577	129,798	1.7	93	10,685	2.0	484	119,113	1.7
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage)											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (tons, dry)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (tons, dry)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (tons, dry)	Average acre-feet applied per acre
United States ..... 2018	48,697	6,165,406	5.1	2.2	25,263	3,790,205	5.1	1.9	23,434	2,375,201	5.0	2.7
..... 2013	46,181	5,512,871	5.1	2.3	26,645	3,545,400	5.1	2.1	19,536	1,967,471	5.3	2.8
<b>2018 DATA</b>												
Alabama .....	25	2,000	2.0	1.5	-	-	-	-	25	2,000	2.0	1.5
Alaska .....	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Arizona .....	824	304,152	8.3	5.8	81	45,239	9.1	5.7	743	258,913	8.2	5.8
Arkansas .....	10	360	5.3	0.3	5	300	6.0	0.3	5	60	1.8	0.3
California .....	2,544	701,813	6.3	3.7	498	125,188	5.4	3.0	2,046	576,625	6.4	3.9
Colorado .....	6,749	592,838	4.1	1.8	2,102	290,165	4.6	1.9	4,647	302,673	3.7	1.7
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	28	162	6.0	0.7	28	162	6.0	0.7	-	-	-	-
Florida .....	-	-	-	-	-	-	-	-	-	-	-	-
Georgia .....	57	1,145	7.0	0.2	57	1,145	7.0	0.2	-	-	-	-
Hawaii .....	3	27	6.6	1.3	3	27	6.6	1.3	-	-	-	-
Idaho .....	7,361	856,511	5.2	1.8	4,085	688,986	5.4	1.8	3,276	167,525	4.7	1.9
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	55	2,966	7.4	0.4	55	2,966	7.4	0.4	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	646	156,569	6.0	1.5	570	153,906	6.0	1.5	76	2,663	5.5	0.5
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	5	350	5.9	0.3	5	350	5.9	0.3	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	228	12,180	7.5	0.7	228	12,180	7.5	0.7	-	-	-	-
Minnesota .....	302	21,055	5.4	0.6	302	21,055	5.4	0.6	-	-	-	-
Mississippi .....	12	222	4.0	0.9	6	132	4.0	0.5	6	90	4.0	1.5
Missouri .....	23	478	5.2	0.3	23	478	5.2	0.3	-	-	-	-
Montana .....	4,836	872,353	3.7	1.3	2,445	514,284	3.9	1.3	2,391	358,069	3.6	1.2
Nebraska .....	2,584	325,052	5.2	0.9	2,206	295,490	5.3	0.9	378	29,562	4.1	0.7
Nevada .....	1,090	332,309	5.2	3.2	394	189,516	5.3	3.3	696	142,793	5.2	3.2
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	7	175	5.0	0.2	7	175	5.0	0.2	-	-	-	-
New Mexico .....	3,712	135,448	5.7	2.4	697	65,651	6.4	2.9	3,015	69,797	5.1	1.9
New York .....	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
North Carolina .....	12	84	2.2	0.2	12	84	2.2	0.2	-	-	-	-
North Dakota .....	176	9,538	4.7	0.9	136	6,513	4.6	0.8	40	3,025	5.1	1.2
Ohio .....	26	1,110	6.4	1.2	26	1,110	6.4	1.2	-	-	-	-
Oklahoma .....	243	34,640	6.2	1.4	243	34,640	6.2	1.4	-	-	-	-
Oregon .....	2,634	331,194	4.9	2.2	1,932	250,939	5.2	2.3	702	80,255	4.0	1.9
Pennsylvania .....	23	288	2.5	0.1	23	288	2.5	0.1	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	347	45,734	4.2	1.0	148	18,727	5.0	0.9	199	27,007	3.7	1.0
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	621	56,268	6.0	1.6	442	52,718	6.0	1.6	179	3,550	6.1	1.9
Utah .....	7,724	611,229	4.2	2.1	4,886	459,215	4.2	2.1	2,838	152,014	4.2	2.0
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	2,569	278,089	6.6	2.3	2,449	273,379	6.6	2.3	120	4,710	6.2	2.2
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	224	23,936	6.3	0.4	224	23,936	6.3	0.4	-	-	-	-
Wyoming .....	2,994	454,316	3.7	1.5	942	260,446	4.1	1.4	2,052	193,870	3.2	1.6
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	63	975	4.7	(D)	63	975	4.7	(D)	-	-	-	-
Region 03 South Atlantic-Gulf .....	106	3,451	3.8	1.0	75	1,361	6.4	0.2	31	2,090	2.1	1.5
Region 04 Great Lakes .....	371	27,192	6.9	0.5	371	27,192	6.9	0.5	-	-	-	-
Region 05 Ohio .....	23	(D)	(D)	1.8	23	(D)	(D)	1.8	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	399	26,174	6.0	0.5	399	26,174	6.0	0.5	-	-	-	-
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	121	17,607	4.1	0.7	121	17,607	4.1	0.7	-	-	-	-
Region 10 Missouri .....	11,483	1,680,634	4.3	1.3	6,072	1,056,090	4.7	1.2	5,411	624,544	3.6	1.4
Region 11 Arkansas-White-Red .....	1,754	305,005	5.4	1.4	792	220,074	5.9	1.5	962	84,931	4.1	1.1
Region 12 Texas-Gulf .....	476	34,330	6.3	1.4	397	31,980	6.3	1.3	79	2,350	6.1	1.9
Region 13 Rio Grande .....	3,218	172,691	4.8	2.4	463	93,655	4.9	2.7	2,755	79,036	4.7	2.0
Region 14 Upper Colorado .....	7,082	430,590	3.6	2.1	3,045	237,291	3.9	2.3	4,037	193,299	3.3	1.9
Region 15 Lower Colorado .....	1,093	337,052	8.2	5.6	214	53,043	8.2	5.1	879	284,009	8.2	5.7
Region 16 Great Basin .....	6,776	849,809	4.7	2.5	3,819	564,105	4.7	2.4	2,957	285,704	4.7	2.5
Region 17 Pacific Northwest .....	13,080	1,574,264	5.2	1.9	8,785	1,306,005	5.4	1.9	4,295	268,259	4.4	1.9
Region 18 California .....	2,648	704,820	6.2	3.6	620	153,841	5.6	2.8	2,028	550,979	6.4	3.8
Region 19 Alaska .....	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Region 20 Hawaii .....	3	27	6.6	1.3	3	27	6.6	1.3	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All other hay (dry hay, greenchop, and silage)											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (tons, dry)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (tons, dry)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (tons, dry)	Average acre-feet applied per acre
United States .....2018	25,402	3,263,946	4.3	1.7	11,877	1,212,542	4.8	1.4	13,525	2,051,404	3.9	1.9
.....2013	28,142	3,300,889	3.7	1.8	14,595	1,462,829	4.2	1.5	13,547	1,838,060	3.3	2.0
<b>2018 DATA</b>												
Alabama .....	50	425	6.0	0.3	-	-	-	-	50	425	6.0	0.3
Alaska .....	4	713	2.8	1.0	4	713	2.8	1.0	-	-	-	-
Arizona .....	251	44,101	4.7	3.3	40	7,083	4.0	2.4	211	37,018	4.8	3.5
Arkansas .....	93	7,205	4.3	0.6	60	4,155	4.3	0.5	33	3,050	4.4	0.9
California .....	1,961	557,566	8.6	2.8	333	43,864	7.7	1.8	1,628	513,702	8.7	2.9
Colorado .....	3,917	362,160	2.5	1.4	762	77,483	4.4	1.3	3,155	284,677	2.0	1.5
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	179	35,676	3.8	0.8	149	12,087	3.4	1.5	30	23,589	4.0	0.4
Georgia .....	214	20,251	6.9	1.6	214	20,251	6.9	1.6	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	1,701	156,806	3.1	1.9	725	68,909	3.6	2.0	976	87,897	2.6	1.8
Illinois .....	12	1,800	0.5	1.7	12	1,800	0.5	1.7	-	-	-	-
Indiana .....	9	540	2.5	0.3	9	540	2.5	0.3	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	355	47,827	9.3	0.7	355	47,827	9.3	0.7	-	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	49	2,506	1.9	0.4	8	320	1.2	0.2	41	2,186	2.0	0.5
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	41	1,133	1.0	0.2	41	1,133	1.0	0.2	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....	31	2,284	2.7	0.7	19	1,990	2.7	0.7	12	294	2.7	0.6
Missouri .....	72	4,160	4.2	0.7	72	4,160	4.2	0.7	-	-	-	-
Montana .....	2,035	332,932	2.3	1.2	892	59,585	3.3	1.1	1,143	273,347	2.1	1.2
Nebraska .....	829	94,336	4.4	0.9	735	89,641	4.4	0.9	94	4,695	4.1	1.0
Nevada .....	417	150,331	3.8	2.5	74	31,851	5.6	2.7	343	118,480	3.3	2.5
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
New Mexico .....	1,957	101,446	5.9	1.2	494	75,354	6.2	1.0	1,463	26,092	5.1	1.6
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	92	3,036	3.5	0.3	92	3,036	3.5	0.3	-	-	-	-
North Dakota .....	63	3,707	4.6	1.1	63	3,707	4.6	1.1	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	280	44,201	5.4	0.6	280	44,201	5.4	0.6	-	-	-	-
Oregon .....	3,363	276,496	2.3	1.5	2,217	96,552	3.0	1.3	1,146	179,944	2.0	1.5
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	76	1,445	4.0	0.4	76	1,445	4.0	0.4	-	-	-	-
South Dakota .....	84	20,349	4.7	1.8	40	19,733	4.8	1.8	44	616	2.6	1.1
Tennessee .....	21	1,680	2.0	0.5	21	1,680	2.0	0.5	-	-	-	-
Texas .....	2,341	275,863	5.0	1.0	1,834	255,813	5.2	1.1	507	20,050	2.4	0.9
Utah .....	1,924	133,745	2.5	1.9	774	45,761	2.5	1.6	1,150	87,984	2.4	2.1
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	1,204	149,317	5.1	2.1	1,028	134,467	5.2	2.1	176	14,850	4.2	2.6
West Virginia .....	20	(D)	(D)	(D)	20	(D)	(D)	(D)	-	-	-	-
Wisconsin .....	4	1,440	4.5	0.3	4	1,440	4.5	0.3	-	-	-	-
Wyoming .....	1,751	428,427	2.1	1.5	428	55,919	2.9	1.5	1,323	372,508	2.0	1.5
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	43	1,155	1.1	0.2	43	1,155	1.1	0.2	-	-	-	-
Region 03 South Atlantic-Gulf .....	617	63,067	4.8	1.0	550	38,809	5.2	1.4	67	24,258	4.0	0.4
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 05 Ohio .....	32	1,820	0.5	1.7	32	1,820	0.5	1.7	-	-	-	-
Region 06 Tennessee .....	25	50	6.0	0.2	-	-	-	-	25	50	6.0	0.2
Region 07 Upper Mississippi .....	29	2,220	4.0	0.3	29	2,220	4.0	0.3	-	-	-	-
Region 08 Lower Mississippi .....	84	3,276	2.6	0.5	43	2,700	2.5	0.5	41	576	2.9	0.4
Region 09 Souris-Red-Rainy .....	31	2,077	5.0	1.0	31	2,077	5.0	1.0	-	-	-	-
Region 10 Missouri .....	4,788	710,252	2.7	1.2	2,051	229,021	3.9	1.1	2,737	481,231	2.1	1.3
Region 11 Arkansas-White-Red .....	1,475	233,157	6.5	0.9	921	202,502	7.1	0.8	554	30,655	2.4	1.2
Region 12 Texas-Gulf .....	2,040	219,664	4.8	1.0	1,670	208,567	5.0	1.0	370	11,097	2.2	0.6
Region 13 Rio Grande .....	1,630	71,023	4.2	1.5	273	32,466	4.4	1.4	1,357	38,557	4.0	1.6
Region 14 Upper Colorado .....	3,185	364,806	2.1	1.6	682	36,832	3.0	2.2	2,503	327,974	1.9	1.6
Region 15 Lower Colorado .....	409	52,440	4.8	3.2	134	13,081	4.2	2.3	275	39,359	5.0	3.5
Region 16 Great Basin .....	2,117	297,058	2.9	2.1	688	82,129	2.9	2.0	1,429	214,929	2.9	2.2
Region 17 Pacific Northwest .....	6,818	667,792	3.1	1.7	4,300	298,970	4.2	1.7	2,518	368,822	2.2	1.7
Region 18 California .....	2,075	573,376	8.5	2.8	426	59,480	7.1	2.0	1,649	513,896	8.6	2.9
Region 19 Alaska .....	4	713	2.8	1.0	4	713	2.8	1.0	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Peanuts											
	Farms	Irrigated acres harvested	Average yield per irrigated acre (pounds)	Average acre-feet applied per acre	Primary method of distribution							
					Pressure system				Gravity system			
					Farms	Acres	Average yield per acre (pounds)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (pounds)	Average acre-feet applied per acre
United States ..... 2018	1,701	460,155	4,518	0.7	1,629	447,984	4,517	0.7	72	12,171	4,547	0.5
..... 2013	1,605	371,634	4,533	0.7	1,566	360,505	4,555	0.7	39	11,129	3,831	0.8
<b>2018 DATA</b>												
Alabama .....	85	18,150	4,399	0.6	60	15,400	4,381	0.7	25	2,750	4,500	0.3
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas .....	43	18,553	4,682	0.4	18	12,175	4,856	0.3	25	6,378	4,351	0.6
California .....	3	3	4,000	0.3	-	-	-	-	3	3	4,000	0.3
Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	164	55,617	4,512	0.7	164	55,617	4,512	0.7	-	-	-	-
Georgia .....	849	247,135	4,832	0.6	849	247,135	4,832	0.6	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-	-	-	-	-	-
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	19	3,040	5,000	0.5	-	-	-	-	19	3,040	5,000	0.5
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....	11	1,425	4,329	0.6	11	1,425	4,329	0.6	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-
Montana .....	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska .....	-	-	-	-	-	-	-	-	-	-	-	-
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	24	4,272	3,540	0.4	24	4,272	3,540	0.4	-	-	-	-
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	54	2,306	5,379	0.6	54	2,306	5,379	0.6	-	-	-	-
North Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	17	2,265	4,183	1.3	17	2,265	4,183	1.3	-	-	-	-
Oregon .....	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	124	17,791	4,822	1.0	124	17,791	4,822	1.0	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....	22	22	4,500	0.2	22	22	4,500	0.2	-	-	-	-
Texas .....	286	89,576	3,605	1.1	286	89,576	3,605	1.1	-	-	-	-
Utah .....	-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....	1,276	340,999	4,760	0.6	1,251	338,249	4,762	0.6	25	2,750	4,500	0.3
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 05 Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 06 Tennessee .....	22	22	4,500	0.2	22	22	4,500	0.2	-	-	-	-
Region 07 Upper Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 08 Lower Mississippi .....	56	19,265	4,897	0.4	23	12,150	4,914	0.3	33	7,115	4,868	0.6
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 11 Arkansas-White-Red .....	54	(D)	(D)	(D)	43	(D)	(D)	(D)	11	2,303	3,609	0.5
Region 12 Texas-Gulf .....	289	91,251	3,585	1.0	289	91,251	3,585	1.0	-	-	-	-
Region 13 Rio Grande .....	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 18 California .....	3	3	4,000	0.3	-	-	-	-	3	3	4,000	0.3
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Cotton							
	Farms	Irrigated acres harvested	Average yield per irrigated acre (lbs, lint)	Average acre-feet applied per acre	Primary method of distribution			
					Sprinkler system <sup>2</sup>			
					Farms	Acres	Average yield per acre (lbs, lint)	Average acre-feet applied per acre
United States .....2018	6,918	3,697,167	1,167	1.3	4,387	2,224,864	1,050	0.9
.....2013	6,804	2,954,457	1,172	1.3	4,723	2,009,414	1,061	1.0
<b>2018 DATA</b>								
Alabama .....	199	52,608	1,102	0.5	172	46,666	1,097	0.6
Alaska .....	-	-	-	-	-	-	-	-
Arizona .....	277	164,846	1,480	4.6	2	(D)	(D)	(D)
Arkansas .....	410	386,089	1,251	1.0	60	40,911	1,233	0.8
California .....	461	254,785	1,615	3.2	-	-	-	-
Colorado .....	-	-	-	-	-	-	-	-
Connecticut .....	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	31	(D)	(D)	0.9	4	4,068	1,066	0.9
Georgia .....	1,041	463,450	787	0.6	1,041	463,450	787	0.6
Hawaii .....	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-	-
Illinois .....	1	(D)	(D)	(D)	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-
Kansas .....	127	40,974	1,237	0.7	127	40,974	1,237	0.7
Kentucky .....	-	-	-	-	-	-	-	-
Louisiana .....	75	33,908	1,270	0.4	1	(D)	(D)	(D)
Maine .....	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-
Mississippi .....	235	209,107	1,286	0.5	106	80,616	1,263	0.4
Missouri .....	204	208,092	1,425	0.6	23	19,600	1,171	0.8
Montana .....	-	-	-	-	-	-	-	-
Nebraska .....	-	-	-	-	-	-	-	-
Nevada .....	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-
New Mexico .....	230	51,304	1,094	1.4	49	25,794	838	1.2
New York .....	-	-	-	-	-	-	-	-
North Carolina .....	101	14,202	1,073	0.4	101	14,202	1,073	0.4
North Dakota .....	-	-	-	-	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-
Oklahoma .....	250	113,902	1,358	1.2	153	64,775	1,345	1.2
Oregon .....	-	-	-	-	-	-	-	-
Pennsylvania .....	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-
South Carolina .....	199	39,558	1,111	0.7	199	39,558	1,111	0.7
South Dakota .....	-	-	-	-	-	-	-	-
Tennessee .....	93	23,539	1,198	(D)	69	(D)	(D)	(D)
Texas .....	2,974	1,632,965	1,095	1.1	2,270	1,358,610	1,097	1.1
Utah .....	-	-	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-	-
Virginia .....	10	400	908	0.2	10	400	908	0.2
Washington .....	-	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-
Wyoming .....	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>								
Region 01 New England .....	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....	1,504	570,825	843	0.6	1,450	561,913	839	0.6
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-
Region 05 Ohio .....	-	-	-	-	-	-	-	-
Region 06 Tennessee .....	131	(D)	(D)	(D)	109	20,691	1,403	0.4
Region 07 Upper Mississippi .....	1	(D)	(D)	(D)	-	-	-	-
Region 08 Lower Mississippi .....	950	844,580	1,299	0.7	227	145,642	1,217	0.6
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-
Region 10 Missouri .....	-	-	-	-	-	-	-	-
Region 11 Arkansas-White-Red .....	1,059	522,693	1,314	1.1	852	455,468	1,324	1.1
Region 12 Texas-Gulf .....	2,309	1,270,679	1,032	1.1	1,746	1,031,223	1,011	1.1
Region 13 Rio Grande .....	226	47,646	1,117	2.0	1	(D)	(D)	(D)
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....	285	169,313	1,496	4.6	2	(D)	(D)	(D)
Region 16 Great Basin .....	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-
Region 18 California .....	453	250,318	1,606	3.2	-	-	-	-
Region 19 Alaska .....	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area		Cotton - con.							
		Primary method of distribution - con.							
		Gravity system				Drip, trickle, or low-flow micro system			
		Farms	Acres	Average yield per acre (lbs, lint)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (lbs, lint)	Average acre-feet applied per acre
United States	2018	2,209	1,371,451	1,350	1.7	322	100,852	1,266	1.6
	2013	1,583	774,528	1,409	2.2	498	170,515	1,398	1.6
<b>2018 DATA</b>									
Alabama		27	5,942	1,142	0.3	-	-	-	-
Alaska		-	-	-	-	-	-	-	-
Arizona		272	156,265	1,488	4.6	3	(D)	(D)	(D)
Arkansas		350	345,178	1,254	1.0	-	-	-	-
California		429	233,738	1,600	3.2	32	21,047	1,778	3.6
Colorado		-	-	-	-	-	-	-	-
Connecticut		-	-	-	-	-	-	-	-
Delaware		-	-	-	-	-	-	-	-
Florida		27	(D)	(D)	1.0	-	-	-	-
Georgia		-	-	-	-	-	-	-	-
Hawaii		-	-	-	-	-	-	-	-
Idaho		-	-	-	-	-	-	-	-
Illinois		1	(D)	(D)	(D)	-	-	-	-
Indiana		-	-	-	-	-	-	-	-
Iowa		-	-	-	-	-	-	-	-
Kansas		-	-	-	-	-	-	-	-
Kentucky		-	-	-	-	-	-	-	-
Louisiana		74	(D)	(D)	(D)	-	-	-	-
Maine		-	-	-	-	-	-	-	-
Maryland		-	-	-	-	-	-	-	-
Massachusetts		-	-	-	-	-	-	-	-
Michigan		-	-	-	-	-	-	-	-
Minnesota		-	-	-	-	-	-	-	-
Mississippi		129	128,491	1,300	0.6	-	-	-	-
Missouri		181	188,492	1,451	0.5	-	-	-	-
Montana		-	-	-	-	-	-	-	-
Nebraska		-	-	-	-	-	-	-	-
Nevada		-	-	-	-	-	-	-	-
New Hampshire		-	-	-	-	-	-	-	-
New Jersey		-	-	-	-	-	-	-	-
New Mexico		181	25,510	1,353	1.6	-	-	-	-
New York		-	-	-	-	-	-	-	-
North Carolina		-	-	-	-	-	-	-	-
North Dakota		-	-	-	-	-	-	-	-
Ohio		-	-	-	-	-	-	-	-
Oklahoma		97	49,127	1,377	1.1	-	-	-	-
Oregon		-	-	-	-	-	-	-	-
Pennsylvania		-	-	-	-	-	-	-	-
Rhode Island		-	-	-	-	-	-	-	-
South Carolina		-	-	-	-	-	-	-	-
South Dakota		-	-	-	-	-	-	-	-
Tennessee		2	(D)	(D)	(D)	22	22	1,160	0.3
Texas		439	(D)	(D)	(D)	265	(D)	(D)	(D)
Utah		-	-	-	-	-	-	-	-
Vermont		-	-	-	-	-	-	-	-
Virginia		-	-	-	-	-	-	-	-
Washington		-	-	-	-	-	-	-	-
West Virginia		-	-	-	-	-	-	-	-
Wisconsin		-	-	-	-	-	-	-	-
Wyoming		-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>									
Region 01 New England		-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic		-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf		54	8,912	1,116	0.5	-	-	-	-
Region 04 Great Lakes		-	-	-	-	-	-	-	-
Region 05 Ohio		-	-	-	-	-	-	-	-
Region 06 Tennessee		-	-	-	-	22	(D)	(D)	(D)
Region 07 Upper Mississippi		1	(D)	(D)	(D)	-	-	-	-
Region 08 Lower Mississippi		723	698,938	1,316	0.8	-	-	-	-
Region 09 Souris-Red-Rainy		-	-	-	-	-	-	-	-
Region 10 Missouri		-	-	-	-	-	-	-	-
Region 11 Arkansas-White-Red		167	(D)	1,236	(D)	40	(D)	1,581	(D)
Region 12 Texas-Gulf		343	164,649	1,128	1.5	220	74,807	1,105	1.0
Region 13 Rio Grande		220	43,584	(D)	1.8	5	(D)	(D)	(D)
Region 14 Upper Colorado		-	-	-	-	-	-	-	-
Region 15 Lower Colorado		280	160,732	1,506	4.6	3	(D)	(D)	(D)
Region 16 Great Basin		-	-	-	-	-	-	-	-
Region 17 Pacific Northwest		-	-	-	-	-	-	-	-
Region 18 California		421	229,271	1,590	3.2	32	21,047	1,778	3.6
Region 19 Alaska		-	-	-	-	-	-	-	-
Region 20 Hawaii		-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Land in vegetables											
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Primary method of distribution								
				Sprinkler system <sup>2</sup>			Gravity system			Drip, trickle, or low-flow micro system		
				Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
United States .....2018	23,087	3,127,705	1.9	8,818	1,792,090	1.6	2,682	386,677	2.3	11,587	948,938	2.1
.....2013	24,157	2,993,600	2.0	11,113	1,822,915	1.7	1,945	340,345	2.6	11,099	830,341	2.2
<b>2018 DATA</b>												
Alabama .....	229	14,532	0.5	61	5,054	0.4	25	1,500	0.5	143	7,977	0.5
Alaska .....	70	375	0.5	21	288	0.5	1	(D)	(D)	48	(D)	(D)
Arizona .....	202	133,733	3.0	36	19,229	2.8	143	96,130	3.0	23	18,375	3.0
Arkansas .....	143	14,993	0.6	61	1,621	1.4	16	12,970	0.5	66	403	0.8
California .....	2,015	975,424	2.8	342	202,654	3.3	284	117,237	3.3	1,389	655,532	2.5
Colorado .....	475	52,390	1.7	211	50,577	1.7	113	1,315	1.0	151	499	1.2
Connecticut .....	191	693	0.3	71	466	0.3	71	57	0.5	49	170	0.4
Delaware .....	79	14,293	0.4	56	13,640	0.4	8	13	0.9	15	639	0.4
Florida .....	741	172,039	0.9	298	54,535	0.9	18	29,358	1.1	425	88,147	0.7
Georgia .....	467	77,134	0.6	261	74,187	0.6	11	11	0.1	195	2,936	0.4
Hawaii .....	337	5,055	1.1	108	597	0.7	-	-	-	229	4,459	1.2
Idaho .....	945	317,115	2.2	575	298,375	2.1	246	13,919	3.1	124	4,821	3.3
Illinois .....	379	22,988	0.9	184	22,202	0.9	21	18	1.0	174	769	0.9
Indiana .....	404	37,099	0.4	141	13,540	0.5	-	-	-	263	23,559	0.3
Iowa .....	214	4,727	0.5	58	4,126	0.5	-	-	-	156	601	0.7
Kansas .....	172	3,036	1.6	30	2,404	1.9	14	252	0.7	128	380	0.4
Kentucky .....	493	3,821	0.5	61	144	0.7	57	52	0.4	375	3,625	0.5
Louisiana .....	101	18,798	0.4	34	(D)	(D)	20	18,261	0.4	47	(D)	(D)
Maine .....	462	15,979	0.5	325	15,646	0.5	8	17	0.2	129	317	1.3
Maryland .....	408	19,262	0.5	166	15,021	0.5	20	400	1.0	222	3,841	0.4
Massachusetts .....	364	2,971	1.2	154	2,091	1.3	28	196	1.0	182	684	0.8
Michigan .....	974	121,194	0.6	422	113,191	0.6	-	-	-	552	8,004	0.5
Minnesota .....	418	55,436	0.5	300	55,111	0.5	19	19	0.4	99	306	0.7
Mississippi .....	198	5,602	0.8	52	4,406	0.9	27	165	0.4	119	1,032	0.4
Missouri .....	608	6,848	1.0	123	4,077	1.0	8	8	1.0	477	2,763	0.9
Montana .....	271	7,532	1.1	163	7,288	1.1	36	52	1.0	72	192	1.3
Nebraska .....	201	21,317	0.9	75	20,867	0.9	18	74	0.2	108	376	1.2
Nevada .....	34	3,622	2.7	8	(D)	(D)	4	(D)	(D)	22	(D)	(D)
New Hampshire .....	219	1,313	0.4	45	491	0.4	-	-	-	174	822	0.4
New Jersey .....	737	31,376	0.6	330	20,559	0.4	58	93	0.3	349	10,724	0.9
New Mexico .....	764	14,459	4.3	20	6,305	4.7	586	1,824	1.8	158	6,329	4.7
New York .....	713	18,612	0.4	316	13,003	0.3	69	573	0.2	328	5,037	0.5
North Carolina .....	648	53,854	0.3	265	47,076	0.3	27	54	0.5	356	6,724	0.4
North Dakota .....	62	22,404	0.9	51	22,388	0.9	4	4	0.1	7	12	0.7
Ohio .....	654	10,557	0.4	211	5,724	0.4	25	97	0.3	418	4,736	0.5
Oklahoma .....	336	7,041	0.5	154	2,663	0.4	30	3,904	0.5	152	474	0.6
Oregon .....	1,220	117,103	2.0	714	103,154	1.9	46	40	2.1	460	13,909	2.4
Pennsylvania .....	1,131	26,369	1.5	231	4,093	1.0	49	15,037	2.0	851	7,238	0.7
Rhode Island .....	99	1,348	0.5	6	913	0.3	4	16	1.3	89	419	1.0
South Carolina .....	496	42,781	0.9	189	29,817	0.9	14	70	0.2	293	12,894	1.1
South Dakota .....	94	355	0.8	20	47	0.4	22	242	1.0	52	67	0.2
Tennessee .....	335	3,929	0.9	43	(D)	(D)	43	53	0.4	249	(D)	(D)
Texas .....	705	128,652	1.2	241	51,153	1.2	140	63,133	1.1	324	14,366	1.1
Utah .....	402	4,302	0.7	92	978	1.3	157	2,810	0.4	153	514	0.6
Vermont .....	232	1,505	1.9	105	1,233	2.0	8	20	1.5	119	252	1.4
Virginia .....	468	12,751	0.3	191	9,230	0.3	9	7	1.0	268	3,514	0.3
Washington .....	1,244	292,946	2.4	652	259,743	2.5	132	6,583	2.2	460	26,621	1.8
West Virginia .....	149	5,798	0.3	100	5,755	0.3	-	-	-	49	43	0.2
Wisconsin .....	703	200,869	0.8	429	200,016	0.8	-	-	-	274	853	0.9
Wyoming .....	81	1,372	1.9	16	1,264	2.0	43	86	1.4	22	22	1.0
<b>Water Resources Regions</b>												
Region 01 New England .....	1,434	23,068	0.6	646	20,239	0.6	111	286	0.9	677	2,544	0.8
Region 02 Mid-Atlantic .....	2,826	113,785	0.7	1,050	71,789	0.4	123	15,548	2.0	1,653	26,447	0.7
Region 03 South Atlantic-Gulf .....	2,754	361,043	0.7	1,112	210,730	0.7	95	31,104	1.0	1,547	119,209	0.7
Region 04 Great Lakes .....	2,064	165,170	0.6	821	149,561	0.6	121	664	0.2	1,122	14,945	0.5
Region 05 Ohio .....	1,619	42,465	0.5	459	18,454	0.5	81	91	0.4	1,079	23,920	0.4
Region 06 Tennessee .....	372	1,493	0.4	99	152	0.6	48	96	0.4	225	1,245	0.4
Region 07 Upper Mississippi .....	1,524	261,276	0.7	889	253,355	0.7	40	37	0.7	595	7,884	0.3
Region 08 Lower Mississippi .....	273	45,308	0.6	91	11,778	(D)	36	31,231	0.4	146	2,299	(D)
Region 09 Souris-Red-Rainy .....	105	10,108	0.8	67	10,034	0.8	4	(D)	(D)	34	(D)	(D)
Region 10 Missouri .....	1,150	66,341	1.2	357	63,167	1.2	118	654	0.9	675	2,520	0.9
Region 11 Arkansas-White-Red .....	732	27,964	1.2	279	22,039	1.3	101	5,011	0.6	352	914	0.6
Region 12 Texas-Gulf .....	672	63,080	1.0	245	34,347	1.1	120	15,133	0.5	307	13,599	1.0
Region 13 Rio Grande .....	590	83,729	1.8	55	28,252	1.9	440	49,515	1.3	95	5,962	4.7
Region 14 Upper Colorado .....	323	6,596	4.4	21	(D)	(D)	180	(D)	1.8	122	1,226	(D)
Region 15 Lower Colorado .....	244	144,729	3.1	36	19,229	2.8	183	106,325	3.2	25	19,175	3.0
Region 16 Great Basin .....	407	17,489	1.9	109	(D)	2.1	150	(D)	0.4	148	2,262	2.5
Region 17 Pacific Northwest .....	3,581	724,193	2.2	2,011	658,163	2.2	449	20,583	2.8	1,121	45,447	2.1
Region 18 California .....	2,010	964,439	2.8	342	202,654	3.3	281	107,052	3.1	1,387	654,732	2.5
Region 19 Alaska .....	70	375	0.5	21	288	0.5	1	(D)	(D)	48	(D)	(D)
Region 20 Hawaii .....	337	5,055	1.1	108	597	0.7	-	-	-	229	4,459	1.2

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Sweet corn								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Average acre-feet applied per acre	Primary method of distribution				
					Sprinkler system <sup>2</sup>				
					Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	
United States ..... 2018	5,476	285,749	207	1.3	2,915	234,771	195	1.1	
..... 2013	5,923	321,992	207	1.3	3,275	260,692	189	1.2	
<b>2018 DATA</b>									
Alabama .....	66	629	198	0.2	34	(D)	(D)	(D)	
Alaska .....	10	1	134	0.4	-	-	-	-	
Arizona .....	16	16	200	3.5	-	-	-	-	
Arkansas .....	9	18	289	1.6	-	-	-	-	
California .....	205	19,166	307	2.4	33	6	316	1.2	
Colorado .....	144	3,050	250	0.2	86	3,011	250	0.2	
Connecticut .....	71	92	61	0.3	28	79	54	0.3	
Delaware .....	55	10,184	188	0.4	55	10,184	188	0.4	
Florida .....	141	20,610	347	1.8	106	(D)	(D)	(D)	
Georgia .....	114	23,965	232	0.8	44	23,821	232	0.8	
Hawaii .....	1	(D)	(D)	(D)	-	-	-	-	
Idaho .....	196	3,178	92	3.0	56	831	87	2.6	
Illinois .....	64	6,268	193	0.8	49	6,208	193	0.8	
Indiana .....	94	5,461	80	0.2	64	2,488	80	0.3	
Iowa .....	45	1,676	134	0.1	18	1,620	135	0.1	
Kansas .....	49	86	137	0.4	19	38	120	0.7	
Kentucky .....	59	306	100	0.1	24	29	100	0.2	
Louisiana .....	63	168	211	1.4	13	13	375	(D)	
Maine .....	126	1,163	240	0.4	110	1,157	240	0.4	
Maryland .....	175	12,555	129	0.5	142	12,476	129	0.5	
Massachusetts .....	77	482	156	0.6	49	286	139	0.3	
Michigan .....	233	1,469	113	0.5	173	1,307	113	0.5	
Minnesota .....	181	17,942	147	0.7	181	17,942	147	0.7	
Mississippi .....	75	164	209	0.7	18	84	200	0.9	
Missouri .....	86	228	143	0.8	48	132	143	0.9	
Montana .....	57	83	84	0.7	45	78	83	0.7	
Nebraska .....	61	233	50	0.5	13	127	50	0.7	
Nevada .....	17	5	150	2.1	-	-	-	-	
New Hampshire .....	9	152	251	0.2	2	(D)	(D)	(D)	
New Jersey .....	158	3,617	104	0.6	108	3,057	108	0.6	
New Mexico .....	176	120	62	0.7	10	20	50	2.0	
New York .....	238	3,504	125	0.4	168	3,173	125	0.4	
North Carolina .....	170	347	230	0.3	63	34	183	0.2	
North Dakota .....	40	18	130	0.5	35	17	132	0.5	
Ohio .....	201	2,815	185	0.3	151	2,227	185	0.3	
Oklahoma .....	53	2,343	200	1.0	-	-	-	-	
Oregon .....	344	21,363	223	1.8	187	20,921	223	1.8	
Pennsylvania .....	292	2,684	134	0.4	155	1,791	(D)	(D)	
Rhode Island .....	13	77	(D)	0.1	1	(D)	(D)	(D)	
South Carolina .....	144	948	97	0.8	84	749	98	0.9	
South Dakota .....	36	257	100	1.0	-	-	-	-	
Tennessee .....	136	679	40	0.2	1	(D)	(D)	(D)	
Texas .....	69	2,881	100	0.4	8	2,700	100	0.4	
Utah .....	95	341	198	0.7	-	-	-	-	
Vermont .....	25	97	(D)	1.9	21	96	100	1.9	
Virginia .....	124	4,638	143	0.3	48	4,455	141	0.3	
Washington .....	432	60,256	229	2.3	273	56,911	232	2.3	
West Virginia .....	3	3	250	0.4	3	3	250	0.4	
Wisconsin .....	228	49,107	177	0.6	189	49,082	177	0.6	
Wyoming .....	-	-	-	-	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	304	2,011	204	0.5	198	1,742	206	0.4	
Region 02 Mid-Atlantic .....	819	34,844	145	0.4	523	33,051	147	0.4	
Region 03 South Atlantic-Gulf .....	727	46,747	279	1.2	343	31,585	246	0.9	
Region 04 Great Lakes .....	469	11,335	143	0.5	377	10,965	144	0.5	
Region 05 Ohio .....	388	6,581	106	0.3	214	2,712	120	0.3	
Region 06 Tennessee .....	116	74	(D)	(D)	22	11	(D)	0.4	
Region 07 Upper Mississippi .....	492	69,485	171	0.7	427	69,372	171	0.7	
Region 08 Lower Mississippi .....	61	744	82	0.5	20	(D)	50	(D)	
Region 09 Souris-Red-Rainy .....	37	10	124	0.2	33	10	126	0.2	
Region 10 Missouri .....	324	3,821	218	0.3	127	3,280	237	0.2	
Region 11 Arkansas-White-Red .....	144	2,429	200	1.0	39	42	135	0.7	
Region 12 Texas-Gulf .....	69	2,881	100	0.4	8	2,700	100	0.4	
Region 13 Rio Grande .....	76	(D)	62	1.5	10	(D)	(D)	(D)	
Region 14 Upper Colorado .....	80	81	68	0.2	10	1	215	0.7	
Region 15 Lower Colorado .....	49	19	191	3.1	-	-	-	-	
Region 16 Great Basin .....	112	346	198	0.7	-	-	-	-	
Region 17 Pacific Northwest .....	993	84,827	222	2.2	531	78,693	228	2.2	
Region 18 California .....	205	19,166	307	2.4	33	6	316	1.2	
Region 19 Alaska .....	10	1	134	0.4	-	-	-	-	
Region 20 Hawaii .....	1	(D)	(D)	(D)	-	-	-	-	

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Sweet corn - con.							
	Primary method of distribution - con.							
	Gravity system				Drip, trickle, or low-flow micro system			
	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
United States .....2018	751	23,468	300	2.6	1,810	27,511	235	1.4
.....2013	718	30,624	284	1.8	1,930	30,677	289	1.7
<b>2018 DATA</b>								
Alabama .....	-	-	-	-	32	(D)	(D)	(D)
Alaska .....	-	-	-	-	10	1	134	0.4
Arizona .....	16	16	200	3.5	-	-	-	-
Arkansas .....	-	-	-	-	9	18	289	1.6
California .....	44	5,156	367	3.8	128	14,004	284	1.9
Colorado .....	50	(D)	250	0.9	8	(D)	250	0.2
Connecticut .....	43	13	105	0.2	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	7	11,100	360	2.4	28	(D)	(D)	(D)
Georgia .....	-	-	-	-	70	144	228	0.5
Hawaii .....	-	-	-	-	1	(D)	(D)	(D)
Idaho .....	118	2,345	94	3.2	22	2	44	1.0
Illinois .....	-	-	-	-	15	60	184	0.5
Indiana .....	-	-	-	-	30	2,973	80	0.2
Iowa .....	-	-	-	-	27	56	119	1.4
Kansas .....	-	-	-	-	30	48	149	0.2
Kentucky .....	-	-	-	-	35	277	100	0.1
Louisiana .....	13	26	189	(D)	37	129	199	1.7
Maine .....	3	(Z)	240	0.8	13	6	240	0.6
Maryland .....	-	-	-	-	33	79	106	0.6
Massachusetts .....	28	196	181	1.0	-	-	-	-
Michigan .....	-	-	-	-	60	162	110	0.2
Minnesota .....	-	-	-	-	-	-	-	-
Mississippi .....	22	56	204	0.5	35	24	254	0.7
Missouri .....	-	-	-	-	38	96	143	0.6
Montana .....	2	(D)	(D)	(D)	10	(D)	(D)	(D)
Nebraska .....	18	74	(D)	0.2	30	32	(D)	0.5
Nevada .....	-	-	-	-	17	5	150	2.1
New Hampshire .....	-	-	-	-	7	(D)	(D)	(D)
New Jersey .....	23	37	108	0.3	27	524	83	0.6
New Mexico .....	166	100	65	0.4	-	-	-	-
New York .....	-	-	-	-	70	331	125	0.4
North Carolina .....	-	-	-	-	107	313	235	0.3
North Dakota .....	4	(D)	(D)	(D)	1	(D)	(D)	(D)
Ohio .....	-	-	-	-	50	588	186	0.2
Oklahoma .....	26	2,340	200	1.0	27	3	200	1.0
Oregon .....	1	-	-	-	157	442	229	1.1
Pennsylvania .....	1	(D)	(D)	(D)	136	(D)	(D)	0.8
Rhode Island .....	4	4	(D)	0.1	8	(D)	(D)	(D)
South Carolina .....	-	-	-	-	60	198	91	0.3
South Dakota .....	29	256	100	1.0	7	1	110	0.1
Tennessee .....	-	-	-	-	135	(D)	(D)	(D)
Texas .....	58	181	100	0.4	3	(Z)	100	0.8
Utah .....	61	313	199	0.6	34	28	194	1.7
Vermont .....	-	-	-	-	4	1	(D)	1.0
Virginia .....	9	2	250	0.3	67	181	208	0.3
Washington .....	6	1,200	234	3.0	153	2,145	153	3.0
West Virginia .....	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	39	26	174	0.3
Wyoming .....	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>								
Region 01 New England .....	78	213	(D)	0.9	28	56	(D)	0.3
Region 02 Mid-Atlantic .....	33	52	111	0.3	263	1,741	122	0.7
Region 03 South Atlantic-Gulf .....	29	11,156	359	2.4	355	4,006	315	0.3
Region 04 Great Lakes .....	-	-	-	-	92	370	125	0.2
Region 05 Ohio .....	-	-	-	-	174	3,869	97	0.2
Region 06 Tennessee .....	-	-	-	-	94	63	(D)	(D)
Region 07 Upper Mississippi .....	-	-	-	-	65	114	151	0.4
Region 08 Lower Mississippi .....	13	(D)	189	(D)	28	(D)	197	1.6
Region 09 Souris-Red-Rainy .....	4	(Z)	70	0.2	-	-	-	-
Region 10 Missouri .....	72	343	94	0.8	125	198	123	0.8
Region 11 Arkansas-White-Red .....	50	2,364	201	1.0	55	23	260	1.4
Region 12 Texas-Gulf .....	58	181	100	0.4	3	(Z)	100	0.8
Region 13 Rio Grande .....	66	(D)	(D)	(D)	-	-	-	-
Region 14 Upper Colorado .....	70	80	66	0.2	-	-	-	-
Region 15 Lower Colorado .....	49	19	191	3.1	-	-	-	-
Region 16 Great Basin .....	61	313	199	0.6	51	33	188	1.7
Region 17 Pacific Northwest .....	124	3,545	141	3.1	338	2,590	166	2.6
Region 18 California .....	44	5,156	367	3.8	128	14,004	284	1.9
Region 19 Alaska .....	-	-	-	-	10	1	134	0.4
Region 20 Hawaii .....	-	-	-	-	1	(D)	(D)	(D)

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Tomatoes in the open								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Average acre-feet applied per acre	Primary method of distribution				
					Sprinkler system <sup>2</sup>				
					Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	
United States ..... 2018	8,879	288,114	766	2.3	2,216	16,485	514	1.9	
..... 2013	10,496	358,985	798	2.4	3,211	37,042	707	2.6	
<b>2018 DATA</b>									
Alabama .....	104	1,174	571	2.0	22	34	569	1.8	
Alaska .....	12	2	159	0.9	11	(D)	(D)	(D)	
Arizona .....	16	2	50	0.1	-	-	-	-	
Arkansas .....	63	170	489	0.6	23	7	448	(D)	
California .....	1,007	240,734	827	2.5	68	5,802	576	4.6	
Colorado .....	186	104	181	(D)	98	58	177	0.6	
Connecticut .....	127	73	348	0.6	11	(D)	(D)	(D)	
Delaware .....	8	5	605	0.5	-	-	-	-	
Florida .....	181	21,795	566	1.7	72	(D)	(D)	(D)	
Georgia .....	98	141	198	0.9	12	101	200	1.0	
Hawaii .....	34	(D)	(D)	(D)	-	-	-	-	
Idaho .....	151	49	100	1.9	90	35	100	2.0	
Illinois .....	135	157	20	1.1	32	12	20	0.4	
Indiana .....	160	2,427	426	0.4	30	2,255	444	0.4	
Iowa .....	83	(D)	246	1.2	5	(D)	350	2.0	
Kansas .....	73	81	20	0.2	8	4	20	0.1	
Kentucky .....	264	346	273	0.4	6	5	383	0.4	
Louisiana .....	60	69	131	1.4	13	13	280	0.3	
Maine .....	105	23	216	1.6	48	13	216	1.7	
Maryland .....	170	503	60	0.5	15	242	25	0.3	
Massachusetts .....	261	226	108	0.2	144	168	93	0.2	
Michigan .....	509	5,508	736	0.4	146	3,779	738	0.4	
Minnesota .....	100	76	(D)	0.7	16	14	250	0.3	
Mississippi .....	135	209	558	0.7	18	(D)	(D)	2.9	
Missouri .....	267	204	261	0.8	52	36	255	0.9	
Montana .....	102	38	98	1.3	41	27	99	1.4	
Nebraska .....	73	37	372	0.8	27	28	366	0.6	
Nevada .....	21	4	300	2.3	-	-	-	-	
New Hampshire .....	16	14	124	0.8	1	(D)	(D)	(D)	
New Jersey .....	333	1,905	142	0.4	94	1,080	134	0.2	
New Mexico .....	323	163	155	1.0	10	10	100	1.0	
New York .....	337	500	292	0.5	97	259	269	0.5	
North Carolina .....	204	550	54	0.4	42	18	54	0.6	
North Dakota .....	38	9	88	0.4	33	7	102	0.3	
Ohio .....	325	1,029	469	0.2	97	492	464	0.1	
Oklahoma .....	227	296	170	0.4	100	105	170	0.6	
Oregon .....	372	271	200	1.2	165	89	131	1.4	
Pennsylvania .....	344	761	330	0.7	24	34	350	0.3	
Rhode Island .....	30	100	250	0.6	-	-	-	-	
South Carolina .....	176	4,808	101	1.2	53	263	110	0.6	
South Dakota .....	41	13	161	0.1	10	1	160	0.5	
Tennessee .....	262	277	314	0.3	42	27	456	1.0	
Texas .....	250	204	172	0.9	69	33	147	0.9	
Utah .....	106	186	40	0.6	27	8	(D)	2.5	
Vermont .....	25	16	185	0.4	15	(D)	(D)	(D)	
Virginia .....	235	1,755	100	0.2	113	54	100	0.2	
Washington .....	285	111	294	1.9	61	17	283	1.1	
West Virginia .....	92	32	533	0.1	67	24	506	0.2	
Wisconsin .....	310	273	336	0.6	88	186	351	0.4	
Wyoming .....	43	46	243	0.8	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	543	439	187	0.5	208	216	149	0.3	
Region 02 Mid-Atlantic .....	1,125	5,001	154	0.4	247	1,503	132	0.2	
Region 03 South Atlantic-Gulf .....	856	28,215	482	1.6	218	1,469	438	1.0	
Region 04 Great Lakes .....	1,006	6,652	678	0.4	238	4,491	687	0.4	
Region 05 Ohio .....	811	2,722	475	0.4	213	1,954	521	0.4	
Region 06 Tennessee .....	274	732	150	0.3	76	34	447	0.8	
Region 07 Upper Mississippi .....	557	943	127	0.5	132	541	104	0.4	
Region 08 Lower Mississippi .....	132	325	405	1.0	31	38	468	2.0	
Region 09 Souris-Red-Rainy .....	35	7	106	0.3	35	7	106	0.3	
Region 10 Missouri .....	470	304	(D)	0.7	154	107	209	0.8	
Region 11 Arkansas-White-Red .....	365	398	191	(D)	153	126	178	(D)	
Region 12 Texas-Gulf .....	238	187	169	0.9	69	33	147	0.9	
Region 13 Rio Grande .....	223	109	185	1.3	10	10	(D)	1.0	
Region 14 Upper Colorado .....	154	(D)	150	0.6	3	(D)	184	0.1	
Region 15 Lower Colorado .....	53	605	913	3.0	-	-	-	-	
Region 16 Great Basin .....	125	190	45	0.7	27	8	40	2.5	
Region 17 Pacific Northwest .....	861	441	211	1.4	323	144	141	1.5	
Region 18 California .....	1,005	240,134	827	2.5	68	5,802	576	4.6	
Region 19 Alaska .....	12	2	159	0.9	11	(D)	(D)	(D)	
Region 20 Hawaii .....	34	(D)	(D)	(D)	-	-	-	-	

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Tomatoes in the open - con.							
	Primary method of distribution - con.							
	Gravity system				Drip, trickle, or low-flow micro system			
	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
United States .....2018	1,086	38,846	771	2.5	5,577	232,784	782	2.2
.....2013	644	62,860	823	2.9	6,641	259,083	805	2.2
<b>2018 DATA</b>								
Alabama .....	-	-	-	-	82	1,140	571	2.0
Alaska .....	-	-	-	-	1	(D)	(D)	(D)
Arizona .....	-	-	-	-	16	2	50	0.1
Arkansas .....	5	40	490	(D)	35	123	491	0.6
California .....	125	31,047	822	2.6	814	203,885	835	2.4
Colorado .....	26	5	184	(D)	62	40	186	(D)
Connecticut .....	71	18	302	0.6	45	(D)	(D)	(D)
Delaware .....	4	1	280	0.1	4	4	703	0.6
Florida .....	2	(D)	(D)	(D)	107	13,553	550	1.6
Georgia .....	11	3	200	0.1	75	37	193	0.7
Hawaii .....	-	-	-	-	34	(D)	(D)	(D)
Idaho .....	26	7	100	2.2	35	7	100	1.3
Illinois .....	21	9	20	1.0	82	136	20	1.1
Indiana .....	-	-	-	-	130	173	201	0.3
Iowa .....	-	-	-	-	78	(D)	100	0.1
Kansas .....	-	-	-	-	65	77	20	0.2
Kentucky .....	57	29	274	0.7	201	312	272	0.4
Louisiana .....	-	-	-	-	47	56	97	1.6
Maine .....	-	-	-	-	57	10	216	1.5
Maryland .....	-	-	-	-	155	261	92	0.7
Massachusetts .....	-	-	-	-	117	59	151	0.3
Michigan .....	20	8	734	0.2	343	1,721	731	0.3
Minnesota .....	19	5	250	0.3	65	57	(D)	0.8
Mississippi .....	23	(D)	(D)	0.3	94	152	555	0.3
Missouri .....	-	-	-	-	215	167	262	0.8
Montana .....	34	6	97	0.9	27	5	95	0.9
Nebraska .....	-	-	-	-	46	9	390	1.5
Nevada .....	4	1	300	3.0	17	3	300	2.0
New Hampshire .....	-	-	-	-	15	(D)	(D)	(D)
New Jersey .....	36	6	140	0.4	203	819	151	0.6
New Mexico .....	306	152	159	1.0	7	1	100	0.3
New York .....	22	2	30	0.1	218	239	319	0.5
North Carolina .....	-	-	-	-	162	532	54	0.4
North Dakota .....	-	-	-	-	5	2	48	0.5
Ohio .....	23	12	481	0.1	205	526	473	0.2
Oklahoma .....	-	-	-	-	127	191	170	0.2
Oregon .....	9	5	68	2.5	198	176	239	1.0
Pennsylvania .....	43	9	340	0.6	277	719	328	0.8
Rhode Island .....	4	4	250	0.3	26	96	250	0.6
South Carolina .....	-	-	-	-	123	4,545	100	1.3
South Dakota .....	-	-	-	-	31	12	161	0.1
Tennessee .....	43	15	103	0.1	177	235	312	0.2
Texas .....	3	1	300	0.8	178	170	176	0.9
Utah .....	65	174	40	0.6	14	4	(D)	0.1
Vermont .....	5	1	191	1.0	5	(D)	(D)	(D)
Virginia .....	9	2	100	0.1	113	1,699	100	0.2
Washington .....	27	14	293	2.1	197	81	296	2.0
West Virginia .....	-	-	-	-	25	7	625	0.1
Wisconsin .....	-	-	-	-	222	88	303	1.1
Wyoming .....	43	46	243	0.8	-	-	-	-
<b>Water Resources Regions</b>								
Region 01 New England .....	75	22	293	0.5	260	200	216	0.6
Region 02 Mid-Atlantic .....	71	16	230	0.4	807	3,482	164	0.4
Region 03 South Atlantic-Gulf .....	36	7,227	600	2.0	602	19,519	442	1.5
Region 04 Great Lakes .....	91	24	505	0.2	677	2,137	662	0.3
Region 05 Ohio .....	79	40	205	0.5	519	728	366	0.4
Region 06 Tennessee .....	21	4	310	0.2	177	694	134	0.3
Region 07 Upper Mississippi .....	40	14	101	0.7	385	388	159	0.6
Region 08 Lower Mississippi .....	5	40	490	0.4	96	247	382	0.9
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-
Region 10 Missouri .....	33	8	405	1.5	283	190	(D)	0.6
Region 11 Arkansas-White-Red .....	-	-	-	-	212	272	197	(D)
Region 12 Texas-Gulf .....	3	1	300	0.8	166	153	173	0.9
Region 13 Rio Grande .....	206	98	194	1.3	7	1	(D)	0.3
Region 14 Upper Colorado .....	114	98	144	0.6	37	(D)	191	1.0
Region 15 Lower Colorado .....	35	4	111	1.1	18	602	917	3.0
Region 16 Great Basin .....	67	175	41	0.6	31	7	146	0.9
Region 17 Pacific Northwest .....	85	28	188	2.1	453	269	250	1.3
Region 18 California .....	125	31,047	822	2.6	812	203,285	835	2.4
Region 19 Alaska .....	-	-	-	-	1	(D)	(D)	(D)
Region 20 Hawaii .....	-	-	-	-	34	(D)	(D)	(D)

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Lettuce and romaine								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Average acre-feet applied per acre	Primary method of distribution				
					Sprinkler system <sup>2</sup>				
					Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	
United States ..... 2018	4,589	277,616	640	2.5	1,568	105,171	711	2.4	
..... 2013	5,052	264,154	415	2.6	2,025	98,745	412	3.0	
<b>2018 DATA</b>									
Alabama .....	-	-	-	-	-	-	-	-	-
Alaska .....	33	49	258	0.9	13	(D)	(D)	(D)	
Arizona .....	43	44,363	568	2.4	-	-	-	-	
Arkansas .....	20	26	281	1.0	9	2	224	1.0	
California .....	563	198,895	650	2.9	149	(D)	709	3.1	
Colorado .....	134	33	348	0.5	75	15	350	0.4	
Connecticut .....	88	28	415	0.5	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	
Florida .....	112	25,620	800	0.3	59	23,199	(D)	0.3	
Georgia .....	67	14	100	0.6	8	1	100	0.8	
Hawaii .....	85	328	200	1.3	7	133	200	1.1	
Idaho .....	87	18	300	1.3	56	12	300	0.9	
Illinois .....	79	99	500	1.4	62	98	500	1.4	
Indiana .....	76	94	800	0.2	17	80	800	0.2	
Iowa .....	18	2	205	0.1	-	-	-	-	
Kansas .....	19	2	116	0.1	4	(Z)	100	0.1	
Kentucky .....	76	57	100	0.2	28	27	100	0.1	
Louisiana .....	36	5	217	1.1	-	-	-	-	
Maine .....	177	55	450	1.1	82	25	450	1.4	
Maryland .....	80	36	200	0.5	8	2	200	0.1	
Massachusetts .....	203	1,055	217	1.2	68	1,018	217	1.2	
Michigan .....	101	2,012	350	0.1	40	2,002	350	0.1	
Minnesota .....	52	21	200	0.6	20	9	200	0.4	
Mississippi .....	55	45	263	0.2	-	-	-	-	
Missouri .....	62	25	180	1.6	28	11	180	0.7	
Montana .....	103	33	285	1.2	53	27	287	1.5	
Nebraska .....	58	14	110	0.2	18	10	111	0.1	
Nevada .....	19	2	200	2.5	-	-	-	-	
New Hampshire .....	7	7	181	0.3	-	-	-	-	
New Jersey .....	145	2,052	390	0.5	42	890	411	0.4	
New Mexico .....	101	1,653	295	5.0	7	2	295	0.2	
New York .....	185	93	447	0.3	93	65	(D)	0.2	
North Carolina .....	127	32	369	0.4	46	8	367	0.5	
North Dakota .....	9	5	130	0.5	1	(D)	(D)	(D)	
Ohio .....	89	37	205	0.2	39	9	281	0.1	
Oklahoma .....	29	4	800	0.8	-	-	-	-	
Oregon .....	360	200	113	1.0	165	152	106	1.1	
Pennsylvania .....	73	48	100	0.3	11	5	100	0.4	
Rhode Island .....	29	41	350	0.9	9	5	371	1.0	
South Carolina .....	48	8	101	0.4	14	1	101	0.5	
South Dakota .....	12	2	153	0.7	3	1	150	1.0	
Tennessee .....	49	5	385	0.3	-	-	-	-	
Texas .....	113	90	150	0.5	38	19	150	0.1	
Utah .....	27	27	350	1.0	-	-	-	-	
Vermont .....	57	59	503	1.0	27	34	761	0.8	
Virginia .....	143	90	500	0.1	68	80	500	0.1	
Washington .....	314	155	201	1.4	101	72	201	1.8	
West Virginia .....	29	14	364	1.2	26	13	365	1.3	
Wisconsin .....	196	65	215	0.6	74	24	252	0.3	
Wyoming .....	1	(D)	(D)	(D)	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	521	1,203	245	1.1	173	1,064	232	1.2	
Region 02 Mid-Atlantic .....	493	2,234	387	0.5	176	992	416	0.4	
Region 03 South Atlantic-Gulf .....	377	25,686	799	0.3	127	23,210	(D)	0.3	
Region 04 Great Lakes .....	294	2,117	350	0.1	56	2,025	354	0.1	
Region 05 Ohio .....	289	235	445	0.3	153	173	550	0.3	
Region 06 Tennessee .....	62	17	389	0.1	-	-	-	-	
Region 07 Upper Mississippi .....	316	183	396	1.0	174	141	416	1.1	
Region 08 Lower Mississippi .....	52	45	274	0.6	5	1	280	0.2	
Region 09 Souris-Red-Rainy .....	24	4	192	0.3	2	(D)	(D)	(D)	
Region 10 Missouri .....	226	65	225	1.2	112	35	(D)	1.0	
Region 11 Arkansas-White-Red .....	93	20	385	0.7	36	9	316	0.6	
Region 12 Texas-Gulf .....	113	90	150	0.5	38	19	150	0.1	
Region 13 Rio Grande .....	101	1,653	295	5.0	7	2	295	0.2	
Region 14 Upper Colorado .....	36	12	340	0.3	3	(Z)	(D)	0.1	
Region 15 Lower Colorado .....	45	44,363	568	2.4	-	-	-	-	
Region 16 Great Basin .....	44	29	340	1.1	-	-	-	-	
Region 17 Pacific Northwest .....	822	388	163	1.2	337	247	150	1.3	
Region 18 California .....	563	198,895	650	2.9	149	(D)	709	3.1	
Region 19 Alaska .....	33	49	258	0.9	13	(D)	(D)	(D)	
Region 20 Hawaii .....	85	328	200	1.3	7	133	200	1.1	

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Lettuce and romaine - con.							
	Primary method of distribution - con.							
	Gravity system				Drip, trickle, or low-flow micro system			
	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
United States .....2018	359	60,464	585	2.7	2,662	111,981	604	2.6
.....2013	381	49,360	370	2.7	2,646	116,050	437	2.2
<b>2018 DATA</b>								
Alabama .....	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	20	(D)	(D)	(D)
Arizona .....	43	44,363	568	2.4	-	-	-	-
Arkansas .....	-	-	-	-	11	25	285	1.0
California .....	27	(D)	650	4.2	387	109,462	609	2.6
Colorado .....	3	6	350	0.1	56	12	344	0.7
Connecticut .....	43	4	315	0.5	45	24	433	0.5
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	3	(D)	800	(D)	50	(D)	(D)	(D)
Georgia .....	11	3	100	0.4	48	10	100	0.6
Hawaii .....	-	-	-	-	78	195	200	1.4
Idaho .....	20	2	300	(D)	11	4	300	(D)
Illinois .....	-	-	-	-	17	2	500	2.0
Indiana .....	-	-	-	-	59	14	800	0.3
Iowa .....	-	-	-	-	18	2	205	0.1
Kansas .....	-	-	-	-	15	2	120	0.1
Kentucky .....	-	-	-	-	48	30	100	0.3
Louisiana .....	-	-	-	-	36	5	217	1.1
Maine .....	3	(Z)	450	0.8	92	30	450	0.9
Maryland .....	-	-	-	-	72	33	200	0.5
Massachusetts .....	-	-	-	-	135	37	224	1.1
Michigan .....	-	-	-	-	61	10	350	0.4
Minnesota .....	-	-	-	-	32	12	200	0.7
Mississippi .....	6	6	280	0.3	49	39	261	0.2
Missouri .....	-	-	-	-	34	14	180	2.3
Montana .....	23	2	300	0.1	27	3	261	0.2
Nebraska .....	-	-	-	-	40	4	108	0.3
Nevada .....	2	(D)	(D)	(D)	17	(D)	(D)	(D)
New Hampshire .....	-	-	-	-	7	7	181	0.3
New Jersey .....	-	-	-	-	103	1,162	374	0.6
New Mexico .....	77	1,642	295	5.0	17	9	295	2.4
New York .....	-	-	-	-	92	28	(D)	0.3
North Carolina .....	-	-	-	-	81	24	370	0.4
North Dakota .....	4	(D)	(D)	(D)	4	4	130	0.5
Ohio .....	-	-	-	-	50	29	182	0.2
Oklahoma .....	-	-	-	-	29	4	800	0.8
Oregon .....	-	-	-	-	195	47	133	0.7
Pennsylvania .....	-	-	-	-	62	43	100	0.3
Rhode Island .....	4	4	193	0.4	16	32	367	1.0
South Carolina .....	-	-	-	-	34	7	101	0.3
South Dakota .....	-	-	-	-	9	1	158	0.3
Tennessee .....	21	2	400	0.1	28	3	375	0.4
Texas .....	-	-	-	-	75	71	150	0.6
Utah .....	27	27	350	1.0	-	-	-	-
Vermont .....	-	-	-	-	30	25	156	1.3
Virginia .....	9	2	500	0.1	66	9	500	0.1
Washington .....	33	8	201	1.5	180	75	202	1.1
West Virginia .....	-	-	-	-	3	1	360	0.1
Wisconsin .....	-	-	-	-	122	41	194	0.7
Wyoming .....	-	-	-	-	1	(D)	(D)	(D)
<b>Water Resources Regions</b>								
Region 01 New England .....	50	9	263	0.5	298	131	349	0.9
Region 02 Mid-Atlantic .....	9	2	500	0.1	308	1,240	363	0.6
Region 03 South Atlantic-Gulf .....	20	2,049	797	0.3	230	427	(D)	0.3
Region 04 Great Lakes .....	-	-	-	-	238	92	269	0.7
Region 05 Ohio .....	-	-	-	-	136	63	157	0.3
Region 06 Tennessee .....	21	2	400	0.1	41	15	388	0.1
Region 07 Upper Mississippi .....	-	-	-	-	142	42	331	0.6
Region 08 Lower Mississippi .....	-	-	-	-	47	45	274	0.6
Region 09 Souris-Red-Rainy .....	4	(D)	(D)	0.1	18	4	200	(D)
Region 10 Missouri .....	-	-	-	-	114	30	(D)	1.4
Region 11 Arkansas-White-Red .....	-	-	-	-	57	10	447	0.7
Region 12 Texas-Gulf .....	-	-	-	-	75	71	150	0.6
Region 13 Rio Grande .....	77	1,642	295	5.0	17	9	295	2.4
Region 14 Upper Colorado .....	3	(D)	(D)	(D)	30	(D)	329	(D)
Region 15 Lower Colorado .....	45	44,363	568	2.4	-	-	-	-
Region 16 Great Basin .....	27	27	350	1.0	17	2	200	2.4
Region 17 Pacific Northwest .....	76	13	235	(D)	409	129	180	(D)
Region 18 California .....	27	(D)	650	4.2	387	109,462	609	2.6
Region 19 Alaska .....	-	-	-	-	20	(D)	(D)	(D)
Region 20 Hawaii .....	-	-	-	-	78	195	200	1.4

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Potatoes, excluding sweet potatoes								
	Farms	Irrigated acres harvested	Average yield per irrigated acre (cwt)	Average acre-feet applied per acre	Primary method of distribution				
					Sprinkler system <sup>2</sup>				
				Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre		
United States ..... 2018	5,361	866,288	476	1.8	2,584	839,073	477	1.8	
..... 2013	5,596	903,297	408	1.7	3,385	867,125	414	1.7	
<b>2018 DATA</b>									
Alabama .....	22	33	280	0.3	22	33	280	0.3	
Alaska .....	41	203	367	0.5	16	166	378	0.4	
Arizona .....	22	3,109	267	2.0	17	3,108	267	2.0	
Arkansas .....	12	5	162	1.0	6	2	184	0.9	
California .....	252	25,442	389	2.4	61	9,953	380	1.6	
Colorado .....	171	46,579	479	1.6	120	46,511	479	1.6	
Connecticut .....	13	4	246	0.3	13	4	246	0.3	
Delaware .....	1	(D)	(D)	(D)	1	(D)	(D)	(D)	
Florida .....	81	4,608	245	0.5	4	(D)	(D)	(D)	
Georgia .....	99	113	200	0.4	4	4	200	0.1	
Hawaii .....	33	17	402	1.9	-	-	-	-	
Idaho .....	576	296,665	451	2.1	477	290,670	451	2.1	
Illinois .....	82	(D)	(D)	(D)	65	(D)	(D)	(D)	
Indiana .....	69	(D)	(D)	(D)	18	(D)	(D)	(D)	
Iowa .....	40	21	198	2.0	-	-	-	-	
Kansas .....	50	2,381	400	1.9	11	2,360	400	1.9	
Kentucky .....	42	68	300	0.1	2	(D)	(D)	(D)	
Louisiana .....	13	1	130	0.2	-	-	-	-	
Maine .....	238	9,195	351	0.6	158	9,177	351	0.6	
Maryland .....	77	364	357	1.0	37	314	349	1.0	
Massachusetts .....	67	359	(D)	(D)	1	(D)	(D)	(D)	
Michigan .....	232	46,712	368	1.1	111	46,654	368	1.1	
Minnesota .....	89	18,783	465	0.7	56	18,774	465	0.7	
Mississippi .....	13	10	200	0.1	-	-	-	-	
Missouri .....	104	2,028	300	1.0	34	2,010	300	1.0	
Montana .....	152	6,923	378	1.3	107	6,887	378	1.3	
Nebraska .....	79	20,530	452	0.9	24	20,502	452	0.9	
Nevada .....	21	(D)	(D)	(D)	4	(D)	(D)	(D)	
New Hampshire .....	-	-	-	-	-	-	-	-	
New Jersey .....	86	1,272	291	0.3	27	1,222	291	0.3	
New Mexico .....	141	(D)	(D)	(D)	9	(D)	(D)	(D)	
New York .....	177	3,140	310	1.8	110	3,085	310	1.9	
North Carolina .....	132	54	440	0.7	27	14	440	0.3	
North Dakota .....	48	22,294	475	0.9	48	22,294	475	0.9	
Ohio .....	99	170	337	0.3	65	(D)	(D)	0.4	
Oklahoma .....	65	31	259	0.1	25	3	259	0.1	
Oregon .....	344	41,695	535	2.6	106	41,326	535	2.6	
Pennsylvania .....	143	1,078	304	1.3	38	988	312	1.3	
Rhode Island .....	17	812	240	0.3	5	800	240	0.3	
South Carolina .....	60	(D)	(D)	(D)	26	(D)	(D)	(D)	
South Dakota .....	19	5	140	0.2	10	1	140	0.4	
Tennessee .....	72	12	440	0.3	-	-	-	-	
Texas .....	134	22,010	264	1.3	43	21,956	264	1.3	
Utah .....	102	145	200	1.0	27	3	200	2.5	
Vermont .....	60	71	(D)	(D)	24	(D)	(D)	(D)	
Virginia .....	145	3,378	367	0.3	91	3,305	367	0.3	
Washington .....	480	166,613	645	2.6	279	163,566	645	2.6	
West Virginia .....	50	17	440	1.1	50	17	440	1.1	
Wisconsin .....	295	84,234	443	0.9	205	84,201	443	0.9	
Wyoming .....	1	(D)	(D)	(D)	-	-	-	-	
<b>Water Resources Regions</b>									
Region 01 New England .....	346	10,391	336	0.6	186	10,324	337	0.6	
Region 02 Mid-Atlantic .....	459	7,084	333	0.5	222	6,890	(D)	0.5	
Region 03 South Atlantic-Gulf .....	422	22,887	407	0.7	94	21,676	(D)	0.8	
Region 04 Great Lakes .....	487	58,728	371	1.0	201	58,550	371	1.0	
Region 05 Ohio .....	265	(D)	(D)	(D)	134	(D)	(D)	(D)	
Region 06 Tennessee .....	97	27	393	0.3	34	6	213	0.2	
Region 07 Upper Mississippi .....	410	97,644	443	0.9	299	97,613	443	0.9	
Region 08 Lower Mississippi .....	36	2,011	299	1.0	10	2,000	300	1.0	
Region 09 Souris-Red-Rainy .....	57	9,942	539	0.8	39	9,939	539	0.8	
Region 10 Missouri .....	373	56,182	474	1.1	165	56,003	474	1.1	
Region 11 Arkansas-White-Red .....	123	18,854	279	1.5	73	18,824	279	1.5	
Region 12 Texas-Gulf .....	131	5,556	272	1.1	40	5,502	271	1.2	
Region 13 Rio Grande .....	103	26,782	446	1.7	37	26,759	446	1.7	
Region 14 Upper Colorado .....	68	(D)	(D)	(D)	12	(D)	(D)	(D)	
Region 15 Lower Colorado .....	55	3,112	266	2.0	17	3,108	267	2.0	
Region 16 Great Basin .....	132	11,583	449	2.2	40	11,438	452	2.2	
Region 17 Pacific Northwest .....	1,471	501,719	522	2.3	904	492,304	522	2.3	
Region 18 California .....	252	25,442	389	2.4	61	9,953	380	1.6	
Region 19 Alaska .....	41	203	367	0.5	16	166	378	0.4	
Region 20 Hawaii .....	33	17	402	1.9	-	-	-	-	

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Potatoes, excluding sweet potatoes - con.							
	Primary method of distribution - con.							
	Gravity system				Drip, trickle, or low-flow micro system			
	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
United States .....2018	480	19,373	467	2.9	2,297	7,842	327	1.4
.....2013	296	26,881	244	1.5	1,915	9,291	300	1.5
<b>2018 DATA</b>								
Alabama .....	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	25	37	314	0.5
Arizona .....	5	1	200	0.2	-	-	-	-
Arkansas .....	-	-	-	-	6	3	143	1.0
California .....	30	10,488	435	3.5	161	5,001	314	1.8
Colorado .....	23	2	498	0.6	28	66	498	0.8
Connecticut .....	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-
Florida .....	-	-	-	-	77	(D)	(D)	(D)
Georgia .....	11	3	200	0.1	84	106	200	0.5
Hawaii .....	-	-	-	-	33	17	402	1.9
Idaho .....	54	5,932	447	2.2	45	63	306	1.0
Illinois .....	-	-	-	-	17	10	364	(D)
Indiana .....	-	-	-	-	51	13	344	0.5
Iowa .....	-	-	-	-	40	21	198	2.0
Kansas .....	14	14	400	0.7	25	7	400	0.8
Kentucky .....	-	-	-	-	40	(D)	(D)	(D)
Louisiana .....	-	-	-	-	13	1	130	0.2
Maine .....	-	-	-	-	80	18	357	0.5
Maryland .....	-	-	-	-	40	50	407	1.0
Massachusetts .....	-	-	-	-	66	(D)	(D)	0.2
Michigan .....	-	-	-	-	121	58	372	0.3
Minnesota .....	15	5	476	0.5	18	4	476	0.4
Mississippi .....	-	-	-	-	13	10	200	0.1
Missouri .....	-	-	-	-	70	18	300	1.1
Montana .....	29	5	388	1.2	16	30	329	0.8
Nebraska .....	-	-	-	-	55	28	197	0.7
Nevada .....	-	-	-	-	17	2	410	2.2
New Hampshire .....	-	-	-	-	-	-	-	-
New Jersey .....	13	4	292	0.5	46	46	292	0.6
New Mexico .....	132	30	178	0.8	-	-	-	-
New York .....	23	46	311	0.4	44	9	333	0.4
North Carolina .....	-	-	-	-	105	40	440	0.8
North Dakota .....	-	-	-	-	-	-	-	-
Ohio .....	-	-	-	-	34	(D)	(D)	0.1
Oklahoma .....	-	-	-	-	40	28	259	0.1
Oregon .....	24	24	534	0.5	214	345	534	2.5
Pennsylvania .....	-	-	-	-	105	90	220	0.5
Rhode Island .....	4	4	240	0.6	8	8	240	0.3
South Carolina .....	-	-	-	-	34	7	450	0.6
South Dakota .....	-	-	-	-	9	4	140	0.1
Tennessee .....	-	-	-	-	72	12	440	0.3
Texas .....	19	4	262	0.2	72	50	352	0.6
Utah .....	34	85	200	0.5	41	58	200	1.6
Vermont .....	7	3	167	1.0	29	(D)	(D)	1.3
Virginia .....	9	2	374	0.1	45	71	374	0.3
Washington .....	34	2,723	647	2.4	167	324	642	0.2
West Virginia .....	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	90	33	284	0.8
Wyoming .....	-	-	-	-	1	(D)	(D)	(D)
<b>Water Resources Regions</b>								
Region 01 New England .....	6	6	216	0.7	154	61	226	0.3
Region 02 Mid-Atlantic .....	22	6	318	0.4	215	188	(D)	0.6
Region 03 South Atlantic-Gulf .....	11	3	200	0.1	317	1,208	(D)	0.3
Region 04 Great Lakes .....	28	47	309	0.4	258	132	299	0.6
Region 05 Ohio .....	-	-	-	-	131	99	312	0.2
Region 06 Tennessee .....	-	-	-	-	63	22	440	0.4
Region 07 Upper Mississippi .....	15	5	476	0.5	96	27	304	1.4
Region 08 Lower Mississippi .....	-	-	-	-	26	11	178	0.3
Region 09 Souris-Red-Rainy .....	-	-	-	-	18	4	476	0.4
Region 10 Missouri .....	20	17	398	0.8	188	162	358	0.9
Region 11 Arkansas-White-Red .....	-	-	-	-	50	30	266	0.1
Region 12 Texas-Gulf .....	19	4	262	0.2	72	50	352	0.6
Region 13 Rio Grande .....	66	23	186	0.9	-	-	-	-
Region 14 Upper Colorado .....	56	6	263	0.5	-	-	-	-
Region 15 Lower Colorado .....	38	4	200	0.8	-	-	-	-
Region 16 Great Basin .....	34	85	200	0.5	58	61	208	1.7
Region 17 Pacific Northwest .....	135	8,681	510	2.2	432	734	561	1.3
Region 18 California .....	30	10,488	435	3.5	161	5,001	314	1.8
Region 19 Alaska .....	-	-	-	-	25	37	314	0.5
Region 20 Hawaii .....	-	-	-	-	33	17	402	1.9

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All berries											
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Primary method of distribution								
				Sprinkler system <sup>2</sup>			Gravity system			Drip, trickle, or low-flow micro system		
				Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
United States ..... 2018	11,562	219,254	1.4	4,224	102,042	1.1	712	7,643	2.1	6,626	109,570	1.7
..... 2013	12,763	227,651	1.3	5,749	113,617	1.7	720	6,253	1.6	6,294	107,781	0.8
<b>2018 DATA</b>												
Alabama .....	144	549	0.9	19	41	0.2	-	-	-	125	508	1.0
Alaska .....	50	14	0.5	14	4	0.6	-	-	-	36	10	0.5
Arizona .....	16	832	0.8	-	-	-	-	-	-	16	832	0.8
Arkansas .....	125	417	1.2	38	73	1.4	5	20	1.7	82	324	1.1
California .....	934	50,685	1.9	149	14,509	(D)	15	2	0.4	770	36,174	(D)
Colorado .....	158	208	0.7	27	3	0.5	72	143	0.7	59	62	0.9
Connecticut .....	128	176	0.6	15	(D)	0.7	43	(D)	0.5	70	49	0.3
Delaware .....	9	32	0.2	-	-	-	4	1	0.1	5	31	0.2
Florida .....	668	13,328	2.8	317	2,513	3.0	-	-	-	351	10,815	2.8
Georgia .....	532	16,859	1.5	102	567	0.4	-	-	-	430	16,292	1.5
Hawaii .....	52	42	1.2	-	-	-	-	-	-	52	42	1.2
Idaho .....	166	190	0.7	52	132	0.3	43	22	2.0	71	36	1.4
Illinois .....	93	1,023	2.5	35	75	3.0	-	-	-	58	948	2.4
Indiana .....	168	721	0.1	68	188	0.2	-	-	-	100	532	0.1
Iowa .....	94	464	1.2	18	72	1.2	-	-	-	76	392	1.2
Kansas .....	39	34	0.2	14	2	0.2	-	-	-	25	32	0.2
Kentucky .....	107	140	0.6	10	5	0.5	-	-	-	97	135	0.6
Louisiana .....	107	333	0.8	27	91	1.0	-	-	-	80	242	0.8
Maine .....	355	8,460	0.5	267	8,405	0.5	5	1	0.3	83	53	0.5
Maryland .....	93	145	1.3	4	4	2.7	-	-	-	89	141	1.2
Massachusetts .....	530	11,642	2.1	345	6,843	1.8	118	4,688	2.5	67	110	1.5
Michigan .....	582	12,096	0.7	122	3,596	(D)	20	20	(D)	440	8,480	(D)
Minnesota .....	63	436	0.3	43	423	0.3	-	-	-	20	13	0.6
Mississippi .....	102	619	0.3	7	14	0.4	-	-	-	95	605	0.3
Missouri .....	277	398	1.3	33	(D)	(D)	1	(D)	(D)	243	371	1.4
Montana .....	151	106	1.0	5	1	2.0	25	4	1.5	121	101	1.0
Nebraska .....	77	161	0.4	25	14	0.2	-	-	-	52	148	0.5
Nevada .....	3	(Z)	0.5	-	-	-	-	-	-	3	(Z)	0.5
New Hampshire .....	190	535	0.7	29	55	0.8	49	84	0.9	112	397	0.6
New Jersey .....	243	15,473	1.2	78	7,524	1.4	36	8	0.3	129	7,941	1.0
New Mexico .....	90	44	2.1	17	12	0.9	46	15	1.8	27	17	3.2
New York .....	197	1,800	2.4	91	1,536	2.6	22	2	0.1	84	261	0.9
North Carolina .....	373	12,768	0.6	227	12,559	0.6	26	21	0.3	120	188	0.3
North Dakota .....	35	21	0.3	35	21	0.3	-	-	-	-	-	-
Ohio .....	200	350	0.6	98	(D)	(D)	2	(D)	(D)	100	240	0.7
Oklahoma .....	66	146	0.9	-	-	-	26	130	1.0	40	16	0.4
Oregon .....	1,360	20,229	1.0	789	10,607	1.0	29	2,235	1.7	542	7,388	0.9
Pennsylvania .....	341	783	0.4	70	356	0.3	-	-	-	271	427	0.4
Rhode Island .....	39	159	0.6	1	(D)	(D)	4	(D)	(D)	34	53	0.9
South Carolina .....	94	210	0.4	8	2	0.2	-	-	-	86	209	0.4
South Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....	193	230	0.9	43	55	0.4	21	2	0.1	129	173	1.1
Texas .....	369	1,380	0.4	19	2	1.7	-	-	-	350	1,379	0.4
Utah .....	99	234	2.2	27	3	2.5	-	-	-	72	231	2.2
Vermont .....	136	568	0.7	75	138	(D)	8	33	(D)	53	397	0.8
Virginia .....	214	438	0.9	23	46	1.0	-	-	-	191	392	0.9
Washington .....	999	14,766	1.8	465	2,383	1.8	55	150	0.3	479	12,233	1.8
West Virginia .....	126	185	0.3	65	45	0.4	19	19	0.2	42	120	0.3
Wisconsin .....	375	28,825	1.0	308	28,786	1.0	18	9	1.0	49	30	1.3
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	1,301	21,380	1.4	688	15,568	1.1	219	4,782	2.5	394	1,031	0.8
Region 02 Mid-Atlantic .....	844	17,238	1.2	190	8,301	1.3	40	9	0.3	614	8,928	1.0
Region 03 South Atlantic-Gulf .....	1,911	44,325	1.6	643	15,617	1.0	26	21	0.3	1,242	28,688	2.0
Region 04 Great Lakes .....	1,019	17,026	0.9	346	8,091	(D)	68	64	(D)	605	8,872	(D)
Region 05 Ohio .....	587	876	0.3	245	429	0.3	21	21	0.2	321	426	0.4
Region 06 Tennessee .....	124	198	0.9	37	79	0.3	21	2	0.1	66	117	1.3
Region 07 Upper Mississippi .....	539	27,853	1.0	327	26,042	1.0	-	-	-	212	1,811	1.6
Region 08 Lower Mississippi .....	188	452	1.2	29	91	1.0	-	-	-	159	361	1.3
Region 09 Souris-Red-Rainy .....	70	79	0.3	52	76	0.3	-	-	-	18	4	0.3
Region 10 Missouri .....	333	328	0.7	83	(D)	(D)	2	(D)	(D)	248	306	0.7
Region 11 Arkansas-White-Red .....	305	966	0.9	44	74	1.4	56	221	1.0	205	671	0.8
Region 12 Texas-Gulf .....	334	1,010	0.4	19	2	1.7	-	-	-	315	1,009	0.4
Region 13 Rio Grande .....	51	256	0.5	17	(D)	0.9	6	(D)	0.3	28	242	0.5
Region 14 Upper Colorado .....	97	163	1.0	3	(Z)	0.1	53	101	0.7	41	62	1.6
Region 15 Lower Colorado .....	53	843	0.8	-	-	-	33	7	1.0	20	836	0.8
Region 16 Great Basin .....	98	230	2.2	27	3	2.5	-	-	-	71	227	2.2
Region 17 Pacific Northwest .....	2,672	35,290	1.3	1,311	13,122	1.1	152	2,411	1.6	1,209	19,757	1.5
Region 18 California .....	934	50,685	1.9	149	14,509	(D)	15	2	0.4	770	36,174	(D)
Region 19 Alaska .....	50	14	0.5	14	4	0.6	-	-	-	36	10	0.5
Region 20 Hawaii .....	52	42	1.2	-	-	-	-	-	-	52	42	1.2

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Land in orchards, vineyards, and nut trees											
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Primary method of distribution								
				Sprinkler system <sup>2</sup>			Gravity system			Drip, trickle, or low-flow micro system		
				Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
United States .....2018	52,959	5,021,860	2.4	10,340	713,894	2.3	7,928	366,748	3.5	34,691	3,941,218	2.3
.....2013	52,018	3,662,131	2.4	12,659	505,106	2.4	8,841	513,650	2.8	30,518	2,643,376	2.3
<b>2018 DATA</b>												
Alabama .....	111	681	1.0	36	81	0.9	-	-	-	75	600	1.0
Alaska .....	30	12	(D)	4	3	0.6	-	-	-	26	9	0.1
Arizona .....	761	77,091	5.4	68	21,940	1.8	451	43,772	8.0	242	11,379	2.4
Arkansas .....	93	3,668	0.6	27	1,235	0.2	13	520	0.3	53	1,913	0.9
California .....	30,750	3,703,045	2.5	4,113	298,885	2.6	3,389	239,510	2.9	23,248	3,164,650	2.5
Colorado .....	908	3,849	2.1	130	206	1.6	491	2,602	1.8	287	1,040	2.8
Connecticut .....	125	330	0.3	52	128	0.1	42	84	0.1	31	118	0.7
Delaware .....	5	(D)	(D)	-	-	-	4	(D)	(D)	1	(D)	(D)
Florida .....	3,102	411,470	1.1	766	64,901	0.8	-	-	-	2,336	346,569	1.1
Georgia .....	867	116,664	0.9	66	4,444	0.5	70	1,225	0.1	731	110,994	1.0
Hawaii .....	746	8,780	1.8	247	351	1.7	67	459	0.5	432	7,970	1.9
Idaho .....	506	1,675	1.4	217	690	1.4	87	733	1.4	202	251	1.4
Illinois .....	17	5	1.0	17	5	1.0	-	-	-	-	-	-
Indiana .....	29	1,227	0.1	-	-	-	-	-	-	29	1,227	0.1
Iowa .....	65	140	0.3	-	-	-	-	-	-	65	140	0.3
Kansas .....	40	61	0.2	10	28	(D)	-	-	-	30	33	(D)
Kentucky .....	28	(D)	1.0	2	(D)	(D)	-	-	-	26	(D)	(D)
Louisiana .....	121	495	1.0	53	154	1.0	-	-	-	68	342	1.0
Maine .....	76	296	1.0	60	16	0.9	-	-	-	16	280	1.0
Maryland .....	36	241	0.5	20	40	0.7	-	-	-	16	201	0.4
Massachusetts .....	92	1,534	1.6	44	198	1.0	-	-	-	48	1,336	1.7
Michigan .....	367	24,360	0.9	29	7,550	0.3	20	20	2.7	318	16,790	1.2
Minnesota .....	96	751	0.2	2	(D)	(D)	15	(D)	(D)	79	746	0.2
Mississippi .....	57	3,634	0.8	6	12	(D)	6	12	(D)	45	3,610	0.9
Missouri .....	176	3,768	1.7	33	74	1.3	-	-	-	143	3,694	1.8
Montana .....	421	1,684	2.0	147	884	2.0	29	14	1.0	245	786	2.0
Nebraska .....	56	229	0.6	-	-	-	9	9	0.1	47	220	0.6
Nevada .....	57	157	2.4	19	45	2.0	16	56	2.5	22	55	2.7
New Hampshire .....	19	269	2.0	1	(D)	(D)	-	-	-	18	(D)	(D)
New Jersey .....	81	2,861	0.6	48	114	0.6	-	-	-	33	2,747	0.6
New Mexico .....	2,900	61,630	3.4	239	262	2.3	2,064	49,546	3.6	597	11,822	2.8
New York .....	239	8,050	1.4	82	2,251	1.7	4	900	2.0	153	4,899	1.2
North Carolina .....	203	1,566	0.5	87	803	0.4	27	108	0.2	89	654	0.6
North Dakota .....	33	14	0.4	33	14	0.4	-	-	-	-	-	-
Ohio .....	106	1,295	0.2	36	1,038	0.1	23	69	0.1	47	188	0.5
Oklahoma .....	86	129	0.5	25	25	1.0	-	-	-	61	104	0.3
Oregon .....	2,228	90,320	2.1	971	62,940	2.3	144	2,596	4.0	1,113	24,783	1.3
Pennsylvania .....	281	4,164	1.2	18	513	0.2	16	32	0.3	247	3,619	1.3
Rhode Island .....	18	81	0.5	5	(D)	(D)	-	-	-	13	(D)	(D)
South Carolina .....	200	8,552	0.8	9	(D)	(D)	-	-	-	191	(D)	(D)
South Dakota .....	31	85	0.1	-	-	-	2	(D)	(D)	29	(D)	(D)
Tennessee .....	66	416	0.2	22	(D)	1.3	22	374	0.1	22	(D)	1.3
Texas .....	2,413	80,157	2.7	448	25,978	2.8	510	17,956	3.4	1,455	36,223	2.2
Utah .....	517	13,980	2.9	176	8,093	2.9	225	1,019	0.8	116	4,869	3.3
Vermont .....	44	356	0.4	16	244	0.3	-	-	-	28	112	0.8
Virginia .....	47	218	0.2	-	-	-	-	-	-	47	218	0.2
Washington .....	3,594	381,210	2.4	1,933	209,317	2.5	139	4,997	0.4	1,522	166,896	2.2
West Virginia .....	2	(D)	(D)	-	-	-	-	-	-	2	(D)	(D)
Wisconsin .....	67	291	0.4	2	(D)	(D)	18	(D)	1.0	47	200	(D)
Wyoming .....	46	48	3.2	21	11	1.0	25	37	3.9	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	383	2,662	1.4	189	559	0.9	42	84	0.1	152	2,018	1.5
Region 02 Mid-Atlantic .....	490	10,370	1.0	120	1,598	0.8	22	434	1.9	348	8,338	1.0
Region 03 South Atlantic-Gulf .....	4,478	540,314	1.0	959	70,456	0.8	103	1,345	0.1	3,416	468,513	1.1
Region 04 Great Lakes .....	569	29,327	1.0	70	9,067	0.6	63	679	1.7	436	19,581	1.2
Region 05 Ohio .....	156	2,248	0.5	58	1,069	0.1	-	-	-	98	1,180	0.8
Region 06 Tennessee .....	103	687	0.5	11	6	0.1	22	374	0.1	70	307	0.9
Region 07 Upper Mississippi .....	280	2,398	0.2	18	7	0.7	15	5	0.8	247	2,386	0.2
Region 08 Lower Mississippi .....	176	6,819	1.1	70	959	0.3	13	520	0.3	93	5,341	1.4
Region 09 Souris-Red-Rainy .....	35	15	0.4	35	15	0.4	-	-	-	-	-	-
Region 10 Missouri .....	409	1,028	1.1	80	119	1.0	30	47	2.2	299	863	1.0
Region 11 Arkansas-White-Red .....	645	4,424	1.1	43	471	0.4	175	394	1.1	427	3,559	1.2
Region 12 Texas-Gulf .....	2,044	64,074	2.4	442	26,005	2.8	384	4,721	1.5	1,218	33,348	2.1
Region 13 Rio Grande .....	2,846	65,622	3.7	211	218	1.9	2,039	62,274	3.7	596	3,130	2.8
Region 14 Upper Colorado .....	783	3,726	2.1	141	200	1.6	479	2,694	1.8	163	832	3.1
Region 15 Lower Colorado .....	883	94,269	5.0	95	21,967	1.8	486	43,921	8.0	302	28,381	2.7
Region 16 Great Basin .....	476	14,054	2.9	168	8,111	2.9	181	1,059	1.0	127	4,885	3.3
Region 17 Pacific Northwest .....	6,699	474,713	2.3	3,266	273,831	2.5	440	8,362	1.6	2,993	192,519	2.1
Region 18 California .....	30,728	3,696,321	2.5	4,113	298,885	2.6	3,367	239,378	2.9	23,248	3,158,058	2.5
Region 19 Alaska .....	30	12	(D)	4	3	0.6	-	-	-	26	9	0.1
Region 20 Hawaii .....	746	8,780	1.8	247	351	1.7	67	459	0.5	432	7,970	1.9

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Nursery and other horticultural crops (see text)											
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Primary method of distribution								
				Sprinkler system <sup>2</sup>			Gravity system			Drip, trickle, or low-flow micro system		
				Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
United States ..... 2018 2013	15,623 (NA)	581,936 (NA)	1.3 (NA)	8,781 (NA)	425,773 (NA)	1.2 (NA)	652 (NA)	41,991 (NA)	2.4 (NA)	6,190 (NA)	114,173 (NA)	1.2 (NA)
<b>2018 DATA</b>												
Alabama .....	185	21,002	1.0	148	18,578	1.0	-	-	-	37	2,424	1.0
Alaska .....	85	199	0.7	16	(D)	1.2	22	(D)	0.4	47	106	0.5
Arizona .....	87	5,457	2.6	15	2,219	3.0	10	1,221	3.5	62	2,017	1.6
Arkansas .....	97	6,157	0.6	66	5,544	0.5	2	(D)	(D)	29	(D)	(D)
California .....	1,951	74,259	2.3	840	42,424	2.4	85	3,725	2.3	1,026	28,110	2.0
Colorado .....	417	12,869	2.1	167	9,461	2.1	141	3,047	2.5	109	361	0.7
Connecticut .....	146	3,294	0.8	111	3,101	0.8	1	(D)	(D)	34	(D)	(D)
Delaware .....	22	1,665	0.1	11	1,450	0.1	4	(D)	(D)	7	(D)	(D)
Florida .....	2,039	85,141	0.9	1,481	66,892	0.9	12	6,264	1.2	546	11,984	0.7
Georgia .....	356	21,221	1.1	228	18,810	1.1	-	-	-	128	2,412	0.8
Hawaii .....	483	1,582	0.9	228	771	0.6	8	55	0.2	247	756	1.2
Idaho .....	401	28,628	2.7	118	7,752	2.2	147	19,444	3.0	136	1,431	1.4
Illinois .....	217	10,815	0.7	128	6,106	0.7	-	-	-	89	4,710	0.8
Indiana .....	159	3,469	1.0	58	2,990	1.1	6	12	0.4	95	467	0.6
Iowa .....	122	2,692	0.7	49	1,249	0.6	-	-	-	73	1,443	0.7
Kansas .....	120	3,388	1.0	72	3,181	1.0	-	-	-	48	208	0.3
Kentucky .....	167	1,092	0.4	111	957	0.4	2	(D)	(D)	54	(D)	(D)
Louisiana .....	152	3,446	0.7	108	2,313	0.5	2	(D)	(D)	42	(D)	(D)
Maine .....	141	3,069	0.5	121	2,975	0.5	3	6	1.0	17	87	0.3
Maryland .....	149	9,875	0.8	63	8,178	0.9	27	95	2.5	59	1,603	0.2
Massachusetts .....	219	1,960	0.4	82	1,364	0.4	6	6	0.6	131	590	0.3
Michigan .....	453	22,221	1.1	169	15,348	1.2	-	-	-	284	6,873	0.9
Minnesota .....	197	4,480	0.8	132	4,115	0.8	-	-	-	65	365	0.6
Mississippi .....	82	5,273	0.3	60	4,734	0.3	-	-	-	22	539	0.4
Missouri .....	217	3,955	0.6	94	3,028	0.6	-	-	-	123	928	0.4
Montana .....	77	766	1.7	36	701	1.8	16	27	1.3	25	38	1.2
Nebraska .....	122	2,476	0.7	71	1,655	0.8	4	12	0.2	47	810	0.5
Nevada .....	17	671	2.9	10	650	3.0	-	-	-	7	21	1.0
New Hampshire .....	212	385	0.4	47	89	0.2	4	(D)	0.4	161	(D)	0.5
New Jersey .....	492	17,831	0.5	415	15,082	0.5	-	-	-	77	2,749	0.9
New Mexico .....	159	1,570	1.3	93	662	1.3	60	890	1.3	6	18	1.0
New York .....	556	11,663	0.7	257	8,290	0.8	22	4	0.5	277	3,369	0.5
North Carolina .....	462	8,611	0.7	358	6,530	0.6	-	-	-	104	2,082	1.0
North Dakota .....	6	(D)	(D)	3	(D)	(D)	2	(D)	(D)	1	(D)	(D)
Ohio .....	333	9,272	0.5	210	7,142	0.4	-	-	-	123	2,130	0.7
Oklahoma .....	171	14,794	1.0	48	14,217	1.0	-	-	-	123	577	0.7
Oregon .....	1,079	53,291	1.5	710	42,872	1.5	11	614	1.7	358	9,805	1.2
Pennsylvania .....	542	1,999	0.3	152	900	0.3	-	-	-	390	1,098	0.3
Rhode Island .....	34	1,426	0.3	19	1,371	0.3	5	(D)	(D)	10	(D)	(D)
South Carolina .....	260	18,039	0.7	145	10,861	0.8	-	-	-	115	7,178	0.5
South Dakota .....	40	893	0.6	32	887	0.6	-	-	-	8	5	0.4
Tennessee .....	207	8,145	0.5	104	6,409	0.4	-	-	-	103	1,736	1.0
Texas .....	532	46,750	1.8	267	38,820	1.9	28	3,378	1.5	237	4,553	1.0
Utah .....	141	2,518	2.3	114	2,025	2.0	12	88	3.8	15	405	3.4
Vermont .....	60	141	0.8	40	111	0.8	-	-	-	20	30	0.9
Virginia .....	325	3,806	0.5	204	3,492	0.5	-	-	-	121	314	0.5
Washington .....	738	27,845	1.5	479	18,270	1.4	8	1,809	2.9	251	7,766	1.6
West Virginia .....	62	152	0.8	53	70	(D)	-	-	-	9	82	(D)
Wisconsin .....	322	11,485	0.5	230	10,892	0.5	-	-	-	92	593	0.3
Wyoming .....	10	(D)	(D)	8	(D)	(D)	2	(D)	(D)	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	769	10,178	0.5	387	8,927	0.5	19	56	0.6	363	1,195	0.4
Region 02 Mid-Atlantic .....	1,658	44,340	0.6	942	35,870	0.6	31	101	2.4	685	8,369	0.6
Region 03 South Atlantic-Gulf .....	3,337	155,435	0.9	2,366	123,847	0.9	12	6,264	1.2	959	25,324	0.6
Region 04 Great Lakes .....	974	31,314	0.9	470	23,212	1.0	22	4	0.5	482	8,097	0.8
Region 05 Ohio .....	720	13,490	0.7	413	9,750	0.6	8	24	0.4	299	3,716	0.9
Region 06 Tennessee .....	261	7,454	0.8	122	5,584	0.7	-	-	-	139	1,870	1.1
Region 07 Upper Mississippi .....	830	27,924	0.7	495	20,733	0.6	-	-	-	335	7,191	0.7
Region 08 Lower Mississippi .....	170	6,675	0.7	132	5,069	0.5	4	1,182	1.3	34	424	1.3
Region 09 Souris-Red-Rainy .....	15	92	1.3	9	(D)	1.6	2	(D)	(D)	4	42	(D)
Region 10 Missouri .....	554	16,326	1.4	314	13,861	1.5	34	771	2.1	206	1,694	0.4
Region 11 Arkansas-White-Red .....	451	23,077	0.9	144	21,389	0.9	45	195	(D)	262	1,494	(D)
Region 12 Texas-Gulf .....	509	46,205	1.8	269	38,822	1.9	28	3,378	1.5	212	4,006	1.0
Region 13 Rio Grande .....	93	1,732	1.3	59	645	1.3	12	810	1.5	22	277	0.5
Region 14 Upper Colorado .....	294	3,230	2.7	140	992	3.1	126	2,192	2.6	28	46	1.0
Region 15 Lower Colorado .....	112	5,907	2.5	23	2,231	3.0	10	1,221	3.5	79	2,455	1.5
Region 16 Great Basin .....	116	3,230	2.2	87	2,719	2.0	12	88	3.8	17	423	3.3
Region 17 Pacific Northwest .....	2,260	109,730	1.8	1,329	68,833	1.6	172	21,879	3.0	759	19,018	1.4
Region 18 California .....	1,932	73,817	2.3	836	42,420	2.4	85	3,725	2.3	1,011	27,672	2.0
Region 19 Alaska .....	85	199	0.7	16	(D)	1.2	22	(D)	0.4	47	106	0.5
Region 20 Hawaii .....	483	1,582	0.9	228	771	0.6	8	55	0.2	247	756	1.2

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All other crops <sup>1</sup> (see text)								
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Primary method of distribution					
				Pressure system			Gravity system		
				Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
United States .....2018	7,006	1,783,325	1.6	5,229	967,090	1.5	1,777	816,235	1.7
.....2013	26,309	2,320,822	1.7	23,709	1,619,163	1.7	2,600	701,659	1.9
<b>2018 DATA</b>									
Alabama .....	-	-	-	-	-	-	-	-	-
Alaska .....	2	(D)	(D)	1	(D)	(D)	1	(D)	(D)
Arizona .....	132	30,180	2.2	39	3,298	3.2	93	26,882	2.1
Arkansas .....	16	53	0.5	11	48	0.5	5	5	0.1
California .....	590	179,469	2.3	197	12,802	2.3	393	166,667	2.3
Colorado .....	456	36,649	1.0	312	24,877	1.0	144	11,772	0.9
Connecticut .....	93	817	0.3	93	817	0.3	-	-	-
Delaware .....	5	(D)	(D)	5	(D)	(D)	-	-	-
Florida .....	183	419,337	1.0	151	11,684	0.7	32	407,653	1.1
Georgia .....	37	9,808	0.4	37	9,808	0.4	-	-	-
Hawaii .....	102	201	0.9	36	36	0.6	66	165	1.0
Idaho .....	664	207,665	2.5	474	156,750	2.3	190	50,915	3.2
Illinois .....	69	23,587	0.8	69	23,587	0.8	-	-	-
Indiana .....	132	30,639	0.5	132	30,639	0.5	-	-	-
Iowa .....	21	1,734	0.4	21	1,734	0.4	-	-	-
Kansas .....	102	44,828	0.7	102	44,828	0.7	-	-	-
Kentucky .....	76	1,126	0.3	75	(D)	(D)	1	(D)	(D)
Louisiana .....	13	13	0.3	13	13	0.3	-	-	-
Maine .....	38	210	0.3	38	210	0.3	-	-	-
Maryland .....	36	1,242	0.3	36	1,242	0.3	-	-	-
Massachusetts .....	136	772	0.3	136	772	0.3	-	-	-
Michigan .....	113	3,756	0.4	113	3,756	0.4	-	-	-
Minnesota .....	17	7,900	0.9	3	5,100	0.8	14	2,800	1.0
Mississippi .....	16	(D)	0.4	16	(D)	0.4	-	-	-
Missouri .....	46	601	0.4	45	(D)	(D)	1	(D)	(D)
Montana .....	369	67,616	1.3	203	37,955	1.4	166	29,661	1.2
Nebraska .....	427	106,368	0.8	395	104,848	0.8	32	1,520	0.8
Nevada .....	58	21,962	2.1	23	18,312	2.2	35	3,650	1.8
New Hampshire .....	32	36	0.3	11	15	0.4	21	21	0.3
New Jersey .....	81	1,311	0.3	81	1,311	0.3	-	-	-
New Mexico .....	222	8,234	1.0	90	6,716	1.2	132	1,518	0.4
New York .....	222	2,623	0.3	199	2,577	0.3	23	46	1.0
North Carolina .....	253	10,072	0.9	253	10,072	0.9	-	-	-
North Dakota .....	81	28,698	0.8	27	11,390	0.7	54	17,308	0.8
Ohio .....	23	276	0.1	23	276	0.1	-	-	-
Oklahoma .....	65	12,605	0.7	65	12,605	0.7	-	-	-
Oregon .....	773	205,147	1.4	696	193,534	1.3	77	11,613	2.8
Pennsylvania .....	192	2,270	0.3	192	2,270	0.3	-	-	-
Rhode Island .....	11	14	0.7	11	14	0.7	-	-	-
South Carolina .....	66	1,730	1.0	66	1,730	1.0	-	-	-
South Dakota .....	24	5,564	0.9	24	5,564	0.9	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-
Texas .....	223	59,826	2.2	145	21,125	1.2	78	38,701	2.8
Utah .....	114	3,271	1.9	82	2,014	2.5	32	1,257	1.0
Vermont .....	7	51	0.3	7	51	0.3	-	-	-
Virginia .....	92	1,803	0.4	92	1,803	0.4	-	-	-
Washington .....	444	196,991	2.1	363	189,944	2.0	81	7,047	2.6
West Virginia .....	-	-	-	-	-	-	-	-	-
Wisconsin .....	10	(D)	0.3	10	(D)	0.3	-	-	-
Wyoming .....	122	45,491	2.1	16	9,107	1.7	106	36,384	2.2
<b>Water Resources Regions</b>									
Region 01 New England .....	315	1,896	0.3	294	1,875	0.3	21	21	0.3
Region 02 Mid-Atlantic .....	387	6,548	0.3	364	6,502	0.3	23	46	1.0
Region 03 South Atlantic-Gulf .....	647	442,766	1.0	615	35,113	0.7	32	407,653	1.1
Region 04 Great Lakes .....	230	5,121	0.3	230	5,121	0.3	-	-	-
Region 05 Ohio .....	212	24,142	0.6	211	(D)	(D)	1	(D)	(D)
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	150	36,537	0.7	150	36,537	0.7	-	-	-
Region 08 Lower Mississippi .....	30	(D)	(D)	24	(D)	(D)	6	(D)	(D)
Region 09 Souris-Red-Rainy .....	15	4,400	0.9	1	(D)	(D)	14	(D)	(D)
Region 10 Missouri .....	1,319	292,550	1.1	905	198,643	1.0	414	93,907	1.5
Region 11 Arkansas-White-Red .....	253	65,891	0.9	213	64,521	0.9	40	1,370	1.0
Region 12 Texas-Gulf .....	166	42,936	2.6	88	4,235	0.6	78	38,701	2.8
Region 13 Rio Grande .....	189	4,298	0.8	90	2,813	1.0	99	1,485	0.3
Region 14 Upper Colorado .....	140	5,560	1.3	83	5,239	1.3	57	321	1.2
Region 15 Lower Colorado .....	134	30,680	2.3	39	3,298	3.2	95	27,382	2.2
Region 16 Great Basin .....	152	27,294	2.0	85	22,387	2.1	67	4,907	1.6
Region 17 Pacific Northwest .....	1,975	612,779	2.0	1,603	542,124	1.9	372	70,655	3.0
Region 18 California .....	588	178,969	2.3	197	12,802	2.3	391	166,167	2.3
Region 19 Alaska .....	2	(D)	(D)	1	(D)	(D)	1	(D)	(D)
Region 20 Hawaii .....	102	201	0.9	36	36	0.6	66	165	1.0

See footnote(s) at end of table.

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**Table 36. Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Irrigated pastureland, all types								
	Farms	Irrigated acres	Average acre-feet applied per acre	Primary method of distribution					
				Pressure system			Gravity system		
				Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
United States ..... 2018	51,644	4,004,854	1.6	19,940	998,032	1.4	31,704	3,006,822	1.7
..... 2013	42,733	3,034,409	1.6	19,164	860,538	1.4	23,569	2,173,871	1.7
<b>2018 DATA</b>									
Alabama .....	7	128	0.5	7	128	0.5	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-
Arizona .....	1,117	28,650	2.1	180	6,048	2.1	937	22,602	2.0
Arkansas .....	57	10,456	0.3	28	1,680	0.2	29	8,776	0.3
California .....	5,237	699,056	2.7	680	12,704	1.9	4,557	686,352	2.7
Colorado .....	5,243	407,293	1.4	771	57,545	1.3	4,472	349,748	1.4
Connecticut .....	3	60	0.5	3	60	0.5	-	-	-
Delaware .....	22	110	1.0	22	110	1.0	-	-	-
Florida .....	583	33,841	1.7	496	18,481	2.1	87	15,360	1.2
Georgia .....	164	7,751	0.3	164	7,751	0.3	-	-	-
Hawaii .....	213	3,895	1.1	147	3,235	1.2	66	660	0.8
Idaho .....	8,552	450,482	1.9	3,246	146,005	1.8	5,306	304,477	2.0
Illinois .....	17	85	0.8	17	85	0.8	-	-	-
Indiana .....	36	162	0.3	36	162	0.3	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-
Kansas .....	33	9,271	1.1	33	9,271	1.1	-	-	-
Kentucky .....	26	52	0.1	-	-	-	26	52	0.1
Louisiana .....	27	4,910	0.3	-	-	-	27	4,910	0.3
Maine .....	59	59	1.0	32	32	1.0	27	27	1.0
Maryland .....	8	(D)	(D)	8	(D)	(D)	-	-	-
Massachusetts .....	28	336	1.0	-	-	-	28	336	1.0
Michigan .....	50	5,550	1.0	50	5,550	1.0	-	-	-
Minnesota .....	19	228	0.4	19	228	0.4	-	-	-
Mississippi .....	26	525	0.3	6	372	0.2	20	153	0.4
Missouri .....	125	16,576	1.2	107	16,468	1.2	18	108	1.0
Montana .....	4,090	507,345	1.1	1,403	95,788	1.2	2,687	411,557	1.1
Nebraska .....	772	73,612	0.8	505	54,594	0.7	267	19,018	0.8
Nevada .....	776	137,136	2.0	83	673	2.9	693	136,463	2.0
New Hampshire .....	11	18	0.6	11	18	0.6	-	-	-
New Jersey .....	58	760	1.0	58	760	1.0	-	-	-
New Mexico .....	3,216	99,552	1.2	691	24,861	1.3	2,525	74,691	1.2
New York .....	23	23	1.0	-	-	-	23	23	1.0
North Carolina .....	94	5,796	0.4	94	5,796	0.4	-	-	-
North Dakota .....	-	-	-	-	-	-	-	-	-
Ohio .....	2	(D)	(D)	2	(D)	(D)	-	-	-
Oklahoma .....	229	69,960	0.5	186	59,060	0.4	43	10,900	1.3
Oregon .....	5,949	344,462	1.7	3,900	118,199	1.5	2,049	226,263	1.8
Pennsylvania .....	24	376	0.1	24	376	0.1	-	-	-
Rhode Island .....	10	(D)	(D)	10	(D)	(D)	-	-	-
South Carolina .....	140	4,669	0.8	140	4,669	0.8	-	-	-
South Dakota .....	108	8,681	1.3	-	-	-	108	8,681	1.3
Tennessee .....	-	-	-	-	-	-	-	-	-
Texas .....	2,193	223,515	1.0	1,307	140,341	1.2	886	83,174	0.6
Utah .....	6,324	255,176	1.8	2,178	64,266	1.5	4,146	190,910	1.9
Vermont .....	2	(D)	(D)	2	(D)	(D)	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-
Washington .....	3,545	139,408	1.7	3,036	92,895	2.0	509	46,513	1.1
West Virginia .....	-	-	-	-	-	-	-	-	-
Wisconsin .....	19	399	0.2	19	399	0.2	-	-	-
Wyoming .....	2,407	454,414	1.1	239	49,346	1.7	2,168	405,068	1.0
<b>Water Resources Regions</b>									
Region 01 New England .....	111	483	0.9	56	120	0.7	55	363	1.0
Region 02 Mid-Atlantic .....	135	1,277	0.7	112	(D)	(D)	23	(D)	(D)
Region 03 South Atlantic-Gulf .....	984	52,584	1.2	884	37,082	1.3	100	15,502	1.2
Region 04 Great Lakes .....	52	5,606	1.0	52	5,606	1.0	-	-	-
Region 05 Ohio .....	28	54	0.1	2	(D)	(D)	26	(D)	(D)
Region 06 Tennessee .....	23	115	0.3	23	115	0.3	-	-	-
Region 07 Upper Mississippi .....	99	1,194	1.0	99	1,194	1.0	-	-	-
Region 08 Lower Mississippi .....	58	5,357	0.3	5	10	0.3	53	5,347	0.3
Region 09 Souris-Red-Rainy .....	23	437	1.0	23	437	1.0	-	-	-
Region 10 Missouri .....	6,420	789,649	1.1	1,541	178,106	1.3	4,879	611,543	1.1
Region 11 Arkansas-White-Red .....	1,178	212,768	0.9	524	147,138	0.9	654	65,630	0.9
Region 12 Texas-Gulf .....	1,913	165,828	0.9	1,111	89,510	1.1	802	76,318	0.7
Region 13 Rio Grande .....	2,618	113,609	1.3	415	18,678	1.5	2,203	94,931	1.2
Region 14 Upper Colorado .....	6,703	570,461	1.4	1,810	84,669	1.4	4,893	485,792	1.4
Region 15 Lower Colorado .....	1,469	37,676	2.0	282	6,968	2.2	1,187	30,708	2.0
Region 16 Great Basin .....	5,004	295,090	1.9	1,360	21,555	1.6	3,644	273,535	1.9
Region 17 Pacific Northwest .....	19,000	959,158	1.7	10,613	360,501	1.8	8,387	598,657	1.7
Region 18 California .....	5,613	789,613	2.6	881	41,852	1.0	4,732	747,761	2.6
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	213	3,895	1.1	147	3,235	1.2	66	660	0.8

<sup>1</sup> 2013 data include nursery and other horticultural crops grown in the open.

<sup>2</sup> Includes other pressurized systems.

**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Corn for grain or seed												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	31,828 37,247	11,610,238 13,289,247	7,107 7,331	2,870,237 2,778,547	1,469 1,246	551,291 480,359	26,697 31,048	10,280,942 11,932,951	3,747 5,067	514,594 682,720	5,125 5,948	1,062,051 994,518
<b>2018 DATA</b>													
Alabama .....		124	32,857	7	4,225	-	-	19	11,065	102	20,184	12	4,758
Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....		41	13,340	24	13,000	16	1,920	41	13,340	-	-	18	440
Arkansas .....		1,089	447,403	44	8,088	21	4,975	1,066	418,019	164	35,743	5	2,285
California .....		337	134,945	35	10,235	14	3,860	156	63,206	71	23,506	170	62,642
Colorado .....		1,646	642,494	556	270,041	229	89,338	1,126	556,849	134	14,250	646	112,857
Connecticut .....		-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....		417	111,849	68	27,644	38	14,116	411	101,295	12	3,769	6	7,200
Florida .....		79	33,481	45	18,945	3	3,192	76	32,221	-	-	3	1,260
Georgia .....		662	135,101	116	20,450	73	9,690	449	100,832	320	22,701	53	13,232
Hawaii .....		15	4,720	11	2,954	1	(D)	1	(D)	3	1,194	12	3,526
Idaho .....		862	112,975	130	29,767	47	11,440	158	30,699	86	11,414	726	73,022
Illinois .....		996	313,408	194	68,828	18	2,160	925	303,576	24	5,395	58	4,437
Indiana .....		1,098	317,229	72	16,187	-	-	1,034	282,300	111	33,228	18	1,800
Iowa .....		461	109,131	101	18,807	52	6,230	425	104,631	18	(D)	54	4,860
Kansas .....		3,065	1,275,781	714	414,446	77	44,844	2,829	1,231,566	217	24,803	207	41,088
Kentucky .....		59	29,337	8	3,426	-	-	49	19,887	14	11,811	-	-
Louisiana .....		534	285,780	7	10,150	7	10,150	508	278,933	76	9,317	13	5,460
Maine .....		33	2,283	-	-	-	-	27	27	6	2,256	-	-
Maryland .....		287	51,602	65	6,598	4	496	208	45,525	109	7,487	-	-
Massachusetts .....		-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....		1,157	378,664	132	47,221	29	28,800	1,046	317,147	439	62,225	19	4,575
Minnesota .....		1,421	280,391	315	81,139	67	13,775	1,327	271,910	109	8,091	22	2,060
Mississippi .....		454	283,200	9	5,315	-	-	402	265,826	112	22,137	1	(D)
Missouri .....		934	351,031	95	28,260	9	9,180	791	321,250	176	41,037	39	3,648
Montana .....		139	24,055	26	6,680	8	2,080	6	720	4	480	133	22,855
Nebraska .....		10,581	4,522,575	2,660	1,214,968	436	204,265	9,977	4,199,365	815	63,189	1,539	360,592
Nevada .....		26	1,828	23	1,067	7	812	16	575	-	-	25	1,328
New Hampshire .....		-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....		88	8,895	-	-	-	-	75	6,899	15	1,996	-	-
New Mexico .....		231	48,130	35	15,079	-	-	63	7,259	-	-	168	40,871
New York .....		5	1,446	-	-	-	-	3	(D)	2	(D)	-	-
North Carolina .....		145	12,127	-	-	-	-	59	5,742	87	6,385	-	-
North Dakota .....		336	104,053	162	44,576	5	2,500	274	88,968	23	3,504	67	12,331
Ohio .....		60	8,045	17	2,080	11	1,465	15	3,276	35	3,310	10	1,459
Oklahoma .....		197	130,878	93	31,776	33	17,168	188	126,948	5	1,930	4	2,000
Oregon .....		211	47,757	90	27,304	21	9,476	77	13,103	72	5,849	66	28,805
Pennsylvania .....		37	1,621	16	1,600	-	-	37	1,621	16	1,600	-	-
Rhode Island .....		-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....		281	94,386	76	26,918	25	325	241	86,294	40	9,167	25	325
South Dakota .....		656	179,472	144	40,866	5	5,037	512	120,552	47	7,393	131	52,862
Tennessee .....		291	70,957	90	16,750	21	4,725	284	66,097	7	4,860	-	-
Texas .....		1,218	672,323	426	207,581	62	19,660	1,059	601,772	48	14,760	131	58,295
Utah .....		199	13,215	7	1,762	11	2,002	24	840	27	135	148	12,240
Vermont .....		-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....		78	11,466	10	500	-	-	31	1,780	68	10,686	-	-
Washington .....		493	119,019	256	61,519	84	18,489	146	20,495	60	7,125	375	92,029
West Virginia .....		-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....		484	142,895	209	61,900	25	9,036	447	139,484	50	4,226	19	(D)
Wyoming .....		301	48,093	19	1,585	10	(D)	89	17,758	23	5,801	202	26,324
<b>Water Resources Regions</b>													
Region 01 New England .....		33	2,283	-	-	-	-	27	27	6	2,256	-	-
Region 02 Mid-Atlantic .....		877	183,223	149	35,842	42	14,612	732	155,390	200	24,058	6	7,200
Region 03 South Atlantic-Gulf .....		1,337	307,666	253	73,428	101	13,207	877	231,847	592	65,458	83	16,375
Region 04 Great Lakes .....		1,612	514,095	306	80,873	63	38,501	1,461	437,161	509	75,083	47	7,834
Region 05 Ohio .....		788	207,304	42	12,565	-	-	691	177,559	101	30,216	18	(D)
Region 06 Tennessee .....		43	23,014	9	6,570	-	-	9	7,195	30	13,819	10	3,200
Region 07 Upper Mississippi .....		3,069	760,729	570	167,994	87	16,735	2,873	731,683	218	30,007	77	4,632
Region 08 Lower Mississippi .....		2,630	1,254,247	168	39,723	49	19,850	2,582	1,221,105	293	57,649	1	(D)
Region 09 Souris-Red-Rainy .....		255	94,411	130	52,853	-	-	218	87,263	47	5,808	22	2,060
Region 10 Missouri .....		14,922	5,915,979	3,722	1,651,066	707	321,889	13,235	5,347,520	1,194	127,322	2,675	591,837
Region 11 Arkansas-White-Red .....		3,046	1,648,999	1,016	568,359	142	67,832	2,867	1,600,386	147	21,443	196	53,588
Region 12 Texas-Gulf .....		605	203,779	84	26,485	17	6,300	450	136,288	43	11,700	127	57,791
Region 13 Rio Grande .....		87	18,593	20	2,500	-	-	21	4,707	-	-	66	13,886
Region 14 Upper Colorado .....		399	30,782	64	5,931	64	5,931	33	(D)	48	(D)	318	30,131
Region 15 Lower Colorado .....		41	13,340	24	13,000	16	1,920	41	13,340	-	-	18	440
Region 16 Great Basin .....		190	13,511	26	1,229	14	(D)	40	1,415	27	(D)	138	12,036
Region 17 Pacific Northwest .....		1,542	278,618	478	118,630	152	39,405	383	64,337	218	24,388	1,141	192,683
Region 18 California .....		337	134,945	35	10,235	14	3,860	156	63,206	71	23,506	170	62,642
Region 19 Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....		15	4,720	11	2,954	1	(D)	1	(D)	3	1,194	12	3,526

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Corn for silage or greenchop											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 7,930	1,648,789	1,912	479,350	630	153,271	4,169	1,005,446	1,431	320,085	3,581	606,782
	2013 8,382	1,729,358	2,087	440,327	325	66,653	4,329	1,164,020	1,309	306,772	4,318	562,021
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	159	65,219	76	27,808	34	4,696	63	26,979	9	5,460	127	46,881
Arkansas .....	5	400	-	-	-	-	-	-	5	400	-	-
California .....	1,515	454,607	254	80,989	128	38,922	813	284,445	520	166,079	841	201,804
Colorado .....	730	133,455	246	45,026	93	10,650	424	90,725	130	21,468	381	50,958
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	9	780	-	-	-	-	9	780	-	-	-	-
Florida .....	12	13,130	4	(D)	-	-	12	10,550	3	6,300	-	-
Georgia .....	37	2,888	6	1,200	6	1,200	37	2,888	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	985	235,357	150	45,813	46	27,510	240	73,854	101	36,263	707	127,036
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	98	8,504	-	-	-	-	98	8,504	9	144	-	-
Iowa .....	18	720	-	-	-	-	-	-	18	720	-	-
Kansas .....	301	72,418	92	32,479	16	2,345	287	70,681	47	5,388	7	4,160
Kentucky .....	2	(D)	-	-	-	-	2	(D)	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	14	2,800	-	-	-	-	14	2,800	-	-	-	-
Massachusetts .....	29	58	-	-	-	-	-	-	29	58	-	-
Michigan .....	170	14,790	30	2,500	-	-	99	6,650	101	7,440	10	700
Minnesota .....	174	17,807	37	1,973	19	893	174	17,807	-	-	-	-
Mississippi .....	7	665	-	-	-	-	-	-	7	665	-	-
Missouri .....	16	2,720	-	-	-	-	-	-	16	2,720	-	-
Montana .....	216	31,210	42	5,300	8	1,580	2	(D)	8	(D)	206	30,490
Nebraska .....	825	109,372	190	43,036	17	643	675	102,273	104	11,632	103	4,465
Nevada .....	98	9,501	24	5,115	7	2,940	16	2,311	-	-	96	9,052
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	316	80,893	108	30,781	4	4,400	276	72,631	5	(D)	45	8,737
New York .....	2	(D)	-	-	-	-	-	-	2	(D)	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	45	3,279	-	-	-	-	14	1,200	31	1,829	9	(D)
Ohio .....	10	750	-	-	10	60	-	-	10	750	-	-
Oklahoma .....	14	7,124	13	858	-	-	13	(D)	1	(D)	-	-
Oregon .....	205	17,515	42	1,360	7	(D)	55	(D)	31	(D)	119	12,063
Pennsylvania .....	24	(D)	-	-	-	-	2	(D)	22	22	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	52	5,200	-	-	-	-	26	2,860	26	2,340	-	-
South Dakota .....	46	5,250	4	2,800	-	-	-	-	-	-	46	5,250
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	378	166,040	216	92,164	98	43,820	378	161,040	44	19,000	-	-
Utah .....	653	61,833	124	21,070	86	9,394	160	21,726	73	6,926	454	34,081
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	71	5,122	24	312	-	-	24	672	47	4,450	-	-
Washington .....	318	62,858	108	19,153	1	(D)	87	(D)	1	(D)	231	49,031
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	146	24,703	65	10,393	29	1,579	146	24,703	-	-	-	-
Wyoming .....	230	30,802	55	8,070	21	2,184	23	1,622	31	8,156	199	21,524
<b>Water Resources Regions</b>												
Region 01 New England .....	29	58	2	(D)	-	-	-	-	29	58	-	-
Region 02 Mid-Atlantic .....	118	9,174	24	(D)	-	-	49	4,702	69	4,472	-	-
Region 03 South Atlantic-Gulf .....	101	21,218	10	2,250	6	1,200	75	16,298	29	8,640	-	-
Region 04 Great Lakes .....	299	34,097	64	6,540	20	860	216	24,680	113	8,717	10	700
Region 05 Ohio .....	19	139	-	-	-	-	19	139	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	269	29,865	68	8,326	38	1,672	269	29,865	9	144	-	-
Region 08 Lower Mississippi .....	7	665	-	-	-	-	-	-	7	665	-	-
Region 09 Souris-Red-Rainy .....	15	3,000	-	-	-	-	15	3,000	-	-	-	-
Region 10 Missouri .....	1,998	293,910	516	105,741	92	14,182	1,151	195,513	293	40,170	826	92,986
Region 11 Arkansas-White-Red .....	553	159,271	186	67,610	68	17,189	475	145,336	122	33,089	42	7,392
Region 12 Texas-Gulf .....	402	138,842	178	63,383	70	29,000	402	133,842	25	6,500	-	-
Region 13 Rio Grande .....	101	34,101	61	22,889	4	4,400	62	26,339	-	-	44	8,237
Region 14 Upper Colorado .....	140	24,419	47	2,851	27	1,251	4	1,200	-	-	140	23,919
Region 15 Lower Colorado .....	191	66,440	78	27,928	34	4,696	63	26,979	9	5,460	159	48,102
Region 16 Great Basin .....	731	73,315	131	25,095	96	12,844	192	25,837	73	6,926	510	42,614
Region 17 Pacific Northwest .....	1,447	306,538	295	65,456	47	27,055	364	87,271	133	39,165	1,014	181,898
Region 18 California .....	1,510	453,737	252	80,869	128	38,922	813	284,445	520	166,079	836	200,934
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Sorghum for grain or seed												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	1,594 3,923	286,851 809,579	193 486	37,603 123,473	54 80	10,597 39,232	1,307 3,396	232,714 722,623	128 170	11,277 25,804	241 489	50,682 86,863
<b>2018 DATA</b>													
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	41	22,346	-	-	-	-	-	34	5,346	-	-	24	20,026
Arkansas .....	38	2,865	-	-	-	-	-	26	2,105	17	835	-	-
California .....	7	1,750	-	-	-	-	-	7	1,750	-	-	-	-
Colorado .....	174	15,935	31	1,180	45	5,940	77	8,145	24	648	97	7,790	
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia .....	30	3,419	23	2,898	-	-	30	3,419	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Illinois .....	5	250	-	-	-	-	5	250	-	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	490	86,970	35	4,577	1	(D)	475	86,640	18	615	14	3,360	
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	24	3,681	3	300	-	-	24	3,681	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana .....	16	1,824	-	-	-	-	-	-	-	-	16	1,824	
Nebraska .....	110	5,077	5	465	-	-	94	4,755	-	-	30	350	
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	73	5,982	5	1,000	-	-	66	5,954	7	28	-	-	
New York .....	-	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	92	12,353	4	748	-	-	66	12,327	26	26	-	-	
Oregon .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	484	123,669	87	26,435	8	(D)	393	97,612	36	9,125	60	17,332	
Utah .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	-	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming .....	10	730	-	-	-	-	10	730	-	-	-	-	
<b>Water Resources Regions</b>													
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....	30	3,419	23	2,898	-	-	30	3,419	-	-	-	-	
Region 04 Great Lakes .....	24	3,681	3	300	-	-	24	3,681	-	-	-	-	
Region 05 Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	5	250	-	-	-	-	5	250	-	-	-	-	
Region 08 Lower Mississippi .....	16	955	-	-	-	-	16	955	5	75	-	-	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	243	22,975	5	465	-	-	211	20,829	-	-	46	2,174	
Region 11 Arkansas-White-Red .....	911	181,709	118	25,590	46	6,797	797	172,243	92	2,774	64	10,985	
Region 12 Texas-Gulf .....	225	48,474	39	7,350	8	3,800	145	23,142	24	8,400	60	17,332	
Region 13 Rio Grande .....	45	1,127	5	1,000	-	-	38	1,099	7	28	-	-	
Region 14 Upper Colorado .....	47	165	-	-	-	-	-	-	-	-	47	165	
Region 15 Lower Colorado .....	41	22,346	-	-	-	-	34	5,346	-	-	24	20,026	
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 18 California .....	7	1,750	-	-	-	-	7	1,750	-	-	-	-	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Wheat for grain or seed											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 8,760	2,311,703	1,859	619,104	562	241,876	5,042	1,423,482	712	165,315	3,669	826,783
	2013 12,974	3,197,501	2,290	732,345	413	147,167	8,296	2,176,732	1,203	265,325	4,430	873,083
<b>2018 DATA</b>												
Alabama .....	26	2,915	-	-	-	-	26	2,915	-	-	-	-
Alaska .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-
Arizona .....	170	76,229	72	33,066	37	9,853	63	21,149	4	2,040	126	64,507
Arkansas .....	5	5,000	-	-	-	-	5	5,000	-	-	-	-
California .....	674	207,599	107	28,349	35	9,544	313	87,395	126	41,205	399	142,588
Colorado .....	521	75,935	114	13,612	13	1,716	368	63,210	27	354	185	17,283
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	101	10,572	5	1,000	5	1,000	95	8,172	-	-	6	2,400
Florida .....	-	-	-	-	-	-	-	-	-	-	-	-
Georgia .....	102	22,020	24	4,200	-	-	102	22,020	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	1,906	597,386	370	158,668	125	52,350	625	305,475	207	54,725	1,318	241,006
Illinois .....	65	5,904	18	1,260	-	-	47	5,004	18	900	-	-
Indiana .....	25	5,150	-	-	-	-	25	5,150	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	976	261,493	184	51,207	17	3,588	947	258,848	17	1,928	30	1,665
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	29	4,719	-	-	-	-	28	(D)	1	(D)	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	125	17,673	-	-	-	-	125	(D)	2	(D)	-	-
Minnesota .....	51	10,040	-	-	-	-	51	10,040	-	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Missouri .....	122	40,257	-	-	-	-	106	36,577	16	3,680	-	-
Montana .....	555	145,394	149	45,160	45	13,600	48	7,053	43	16,657	488	121,972
Nebraska .....	370	64,530	114	32,598	5	12,500	333	62,275	-	-	39	2,255
Nevada .....	28	19,698	16	833	-	-	7	4,323	-	-	21	15,375
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	12	2,217	-	-	-	-	11	(D)	1	(D)	-	-
New Mexico .....	177	41,372	41	12,590	34	10,540	108	25,838	34	102	40	15,952
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	28	1,850	-	-	-	-	28	1,850	-	-	-	-
North Dakota .....	167	41,094	6	(D)	5	(D)	74	8,380	-	-	97	33,914
Ohio .....	14	1,370	-	-	-	-	1	(D)	13	(D)	-	-
Oklahoma .....	325	103,858	96	45,347	68	39,419	286	87,378	14	7,730	25	8,750
Oregon .....	269	53,972	41	15,065	21	6,373	81	11,520	81	14,260	162	32,316
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	19	3,650	-	-	-	-	19	3,650	7	1,225	-	-
South Dakota .....	47	7,434	19	2,470	-	-	42	5,434	-	-	5	2,000
Tennessee .....	14	700	-	-	-	-	14	700	-	-	-	-
Texas .....	832	260,803	226	74,528	58	21,392	792	257,623	55	11,980	24	2,024
Utah .....	434	30,674	8	880	4	3,664	8	1,760	31	1,286	403	28,588
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	4	1,324	-	-	-	-	-	-	4	1,324	-	-
Washington .....	445	166,293	213	93,138	78	53,427	207	86,635	5	2,360	242	77,298
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	21	1,189	2	(D)	2	(D)	21	1,189	-	-	-	-
Wyoming .....	100	21,380	34	3,933	10	2,010	35	2,999	6	1,491	59	16,890
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	146	18,832	5	(D)	5	(D)	134	(D)	6	1,874	6	(D)
Region 03 South Atlantic-Gulf .....	149	27,520	24	4,200	-	-	149	27,520	7	1,225	-	-
Region 04 Great Lakes .....	143	20,543	-	-	-	-	133	19,475	12	1,068	-	-
Region 05 Ohio .....	31	3,122	-	-	-	-	28	2,672	3	450	-	-
Region 06 Tennessee .....	26	2,915	-	-	-	-	26	2,915	-	-	-	-
Region 07 Upper Mississippi .....	120	13,253	20	1,860	2	(D)	94	11,681	26	1,572	-	-
Region 08 Lower Mississippi .....	117	40,997	-	-	-	-	117	40,997	-	-	-	-
Region 09 Souris-Red-Rainy .....	17	6,070	1	(D)	-	-	17	6,070	-	-	-	-
Region 10 Missouri .....	1,593	342,703	362	91,828	62	28,110	873	159,434	48	18,878	712	166,471
Region 11 Arkansas-White-Red .....	1,778	570,204	423	157,929	115	58,679	1,645	539,053	56	19,530	138	23,585
Region 12 Texas-Gulf .....	431	56,317	86	11,720	28	5,720	391	53,797	40	1,320	20	1,200
Region 13 Rio Grande .....	120	21,022	82	17,080	34	10,540	86	20,920	34	102	9	4,360
Region 14 Upper Colorado .....	83	(D)	17	2,196	13	1,716	-	-	-	-	83	(D)
Region 15 Lower Colorado .....	173	79,858	75	36,695	38	12,242	65	22,389	4	2,040	127	66,896
Region 16 Great Basin .....	581	86,093	20	1,233	4	3,664	82	32,036	31	1,286	483	53,731
Region 17 Pacific Northwest .....	2,580	804,426	640	268,343	227	112,450	890	383,801	319	74,765	1,693	354,092
Region 18 California .....	671	203,970	104	24,720	34	7,155	311	86,155	126	41,205	398	140,199
Region 19 Alaska .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Soybeans for beans												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	21,316 21,755	8,215,031 7,413,276	1,224 1,173	383,511 263,701	597 569	204,007 187,665	19,508 20,080	7,594,411 6,858,900	2,970 2,739	604,100 613,234	1,428 1,510	224,447 175,358
<b>2018 DATA</b>													
Alabama .....		119	21,199	-	-	-	-	61	13,710	54	6,419	10	3,000
Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....		-	-	-	-	-	-	-	-	-	-	-	-
Arkansas .....		2,367	2,154,112	79	42,877	59	39,219	2,277	1,979,431	623	283,064	22	9,040
California .....		-	-	-	-	-	-	-	-	-	-	-	-
Colorado .....		84	13,428	38	5,376	1	(D)	84	13,428	-	-	-	-
Connecticut .....		-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....		314	62,087	12	9,036	13	9,079	313	57,770	17	3,453	6	1,614
Florida .....		30	3,060	-	-	-	-	27	2,700	-	-	3	360
Georgia .....		153	26,770	47	14,345	-	-	126	24,860	52	1,910	-	-
Hawaii .....		7	250	4	199	1	(D)	-	-	3	(D)	4	(D)
Idaho .....		2	(D)	-	-	-	-	-	-	-	-	2	(D)
Illinois .....		618	184,406	-	-	-	-	565	175,888	58	6,410	17	2,108
Indiana .....		848	175,327	18	450	9	450	783	158,253	85	14,124	37	2,950
Iowa .....		201	45,974	50	5,510	34	5,510	201	45,974	-	-	-	-
Kansas .....		1,683	390,288	177	51,224	98	18,151	1,464	360,473	151	13,690	180	20,710
Kentucky .....		54	21,848	1	(D)	1	(D)	43	12,956	14	9,636	-	-
Louisiana .....		638	418,548	7	9,100	21	12,544	622	388,658	115	34,320	13	3,640
Maine .....		-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....		247	44,447	26	3,269	26	3,269	226	36,509	73	12,423	4	800
Massachusetts .....		-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....		809	192,450	50	18,362	49	17,320	760	161,011	259	32,202	19	2,760
Minnesota .....		891	104,194	60	10,284	-	-	839	97,762	56	4,238	23	2,821
Mississippi .....		993	1,053,930	21	17,185	19	13,255	949	1,006,770	184	64,630	-	-
Missouri .....		1,139	640,311	11	12,900	11	6,900	1,025	614,258	162	36,013	-	-
Montana .....		23	4,078	8	2,040	8	2,040	-	-	4	520	19	3,558
Nebraska .....		7,821	2,202,453	451	147,652	205	55,219	7,445	2,096,348	623	32,081	814	109,379
Nevada .....		-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....		-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....		143	12,269	-	-	-	-	79	6,304	68	6,265	-	-
New Mexico .....		10	(D)	-	-	-	-	-	-	-	-	10	(D)
New York .....		-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....		103	6,614	-	-	-	-	31	2,850	72	3,764	-	-
North Dakota .....		248	58,653	41	8,818	5	2,500	177	40,434	55	7,498	31	11,471
Ohio .....		42	4,745	-	-	-	-	14	2,246	27	(D)	1	(D)
Oklahoma .....		166	62,313	30	8,436	30	8,436	121	48,043	29	6,520	29	7,750
Oregon .....		-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....		16	80	16	(D)	-	-	16	80	16	80	-	-
Rhode Island .....		-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....		148	18,156	25	250	-	-	113	15,228	17	3,553	25	250
South Dakota .....		420	97,467	20	8,956	2	(D)	332	60,230	23	3,055	70	34,382
Tennessee .....		312	80,717	6	2,520	-	-	305	77,297	7	3,420	-	-
Texas .....		133	29,032	9	2,320	-	-	83	23,694	20	2,000	30	3,338
Utah .....		-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....		-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....		67	9,749	-	-	-	-	-	-	67	9,749	-	-
Washington .....		-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....		-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....		445	73,832	17	2,046	5	576	427	71,246	36	720	37	1,866
Wyoming .....		22	2,200	-	-	-	-	-	-	-	-	22	2,200
<b>Water Resources Regions</b>													
Region 01 New England .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....		787	128,632	54	12,385	39	12,348	634	100,663	241	31,970	10	2,414
Region 03 South Atlantic-Gulf .....		536	71,995	72	14,595	-	-	335	52,521	212	19,983	28	610
Region 04 Great Lakes .....		1,138	255,751	71	18,848	52	17,356	1,069	220,317	287	34,190	38	4,767
Region 05 Ohio .....		568	142,249	1	(D)	10	726	521	126,935	67	15,808	1	(D)
Region 06 Tennessee .....		67	17,009	6	(D)	-	-	35	9,365	27	(D)	10	3,000
Region 07 Upper Mississippi .....		2,089	385,280	52	7,542	2	(D)	1,880	351,552	219	29,153	91	7,135
Region 08 Lower Mississippi .....		4,595	3,951,114	107	69,162	99	65,018	4,499	3,727,613	799	335,892	12	6,045
Region 09 Souris-Red-Rainy .....		230	42,570	56	10,898	-	-	145	31,802	105	10,835	4	(D)
Region 10 Missouri .....		9,518	2,564,114	593	175,281	256	75,414	8,791	2,365,791	811	59,959	1,107	179,254
Region 11 Arkansas-White-Red .....		1,701	651,431	208	71,805	138	32,587	1,561	606,598	199	59,905	81	16,831
Region 12 Texas-Gulf .....		68	4,592	-	-	-	-	38	1,254	-	-	30	3,338
Region 13 Rio Grande .....		10	(D)	-	-	-	-	-	-	-	-	10	(D)
Region 14 Upper Colorado .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 16 Great Basin .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....		2	(D)	-	-	-	-	-	-	-	-	2	(D)
Region 18 California .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 19 Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....		7	250	4	199	1	(D)	-	-	3	(D)	4	(D)

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Beans, dry edible											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2,275	416,608	546	115,139	198	38,593	1,053	209,978	211	17,040	1,265	204,990
2013	2,793	433,590	356	109,391	137	50,067	903	222,123	292	38,259	1,836	204,574
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	9	7,274	1	(D)	-	-	3	(D)	-	-	8	3,072
Arkansas .....	-	-	-	-	-	-	-	-	-	-	-	-
California .....	244	40,176	112	21,781	19	5,679	155	16,858	38	1,922	148	30,101
Colorado .....	141	18,913	49	8,148	5	(D)	83	15,913	14	(D)	44	(D)
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	27	270	27	270	-	-	27	270	-	-	-	-
Georgia .....	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	641	77,397	57	(D)	26	7,245	43	5,857	52	4,731	559	66,809
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	13	8,210	-	-	4	1,440	13	8,210	-	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	32	32	-	-	-	-	29	29	32	32	-	-
Maryland .....	4	420	4	420	-	-	4	420	-	-	-	-
Massachusetts .....	28	28	-	-	-	-	-	-	-	-	28	28
Michigan .....	111	18,223	-	-	-	-	102	14,758	12	2,124	9	1,665
Minnesota .....	130	49,311	34	23,944	4	4,000	126	46,846	27	2,705	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-
Montana .....	24	3,089	16	2,080	-	-	-	-	4	477	20	2,612
Nebraska .....	414	103,771	96	25,950	26	4,840	241	50,484	14	(D)	237	56,517
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	2	(D)	1	(D)	-	-	-	-	-	-	2	(D)
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	63	21,260	-	-	-	-	59	20,540	-	-	4	720
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	-	-	-	-	-	-	-	-	-	-	-	-
Oregon .....	35	4,827	1	(D)	-	-	2	(D)	7	(D)	26	4,320
Pennsylvania .....	24	24	-	-	-	-	22	(D)	-	-	2	(D)
Rhode Island .....	9	9	-	-	-	-	9	9	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	1	(D)	-	-	1	(D)	-	-	1	(D)	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	11	1,110	5	620	-	-	6	(D)	-	-	5	(D)
Utah .....	4	208	-	-	-	-	-	-	-	-	4	208
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	202	27,673	120	13,133	92	12,007	61	(D)	1	(D)	140	20,326
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	11	8,548	2	(D)	-	-	11	8,548	-	-	-	-
Wyoming .....	95	19,440	21	1,302	21	1,302	57	6,628	9	2,781	29	10,031
<b>Water Resources Regions</b>												
Region 01 New England .....	69	69	-	-	-	-	38	38	32	32	28	28
Region 02 Mid-Atlantic .....	6	422	4	420	-	-	4	(D)	-	-	2	(D)
Region 03 South Atlantic-Gulf .....	27	270	27	(D)	-	-	27	270	-	-	-	-
Region 04 Great Lakes .....	133	18,245	-	-	-	-	124	14,780	12	2,124	9	(D)
Region 05 Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	129	51,899	32	23,539	4	4,000	129	51,234	19	665	-	-
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	71	26,500	4	2,800	-	-	67	24,700	8	2,040	-	-
Region 10 Missouri .....	675	154,416	182	37,480	57	9,662	393	81,205	39	5,244	321	71,897
Region 11 Arkansas-White-Red .....	2	(D)	-	-	-	-	2	(D)	-	-	-	-
Region 12 Texas-Gulf .....	10	920	5	620	-	-	5	300	-	-	5	620
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 14 Upper Colorado .....	15	(D)	1	(D)	-	-	-	-	-	-	15	(D)
Region 15 Lower Colorado .....	9	7,274	1	(D)	-	-	3	(D)	-	-	8	3,072
Region 16 Great Basin .....	4	208	-	-	-	-	-	-	-	-	4	208
Region 17 Pacific Northwest .....	881	110,047	178	25,622	118	19,252	106	13,579	63	5,013	725	91,455
Region 18 California .....	244	40,176	112	21,781	19	5,679	155	16,858	38	1,922	148	30,101
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Rice												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018	3,813	2,370,113	279	143,997	134	78,359	2,812	1,689,334	902	378,735	958	500,941
	2013	5,613	3,132,894	464	179,944	381	147,285	3,529	1,843,682	1,367	544,887	2,103	998,106
<b>2018 DATA</b>													
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas .....	1,715	1,190,434	74	25,392	53	20,368	1,635	1,054,205	518	232,505	34	5,910	
California .....	837	393,275	154	70,039	66	33,961	178	66,860	142	66,352	723	322,658	
Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-	
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-	
Florida .....	16	(D)	-	-	-	-	-	-	8	(D)	8	18,999	
Georgia .....	-	-	-	-	-	-	-	-	-	-	-	-	
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-	
Idaho .....	-	-	-	-	-	-	-	-	-	-	-	-	
Illinois .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-	
Indiana .....	-	-	-	-	-	-	-	-	-	-	-	-	
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-	
Kansas .....	-	-	-	-	-	-	-	-	-	-	-	-	
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-	
Louisiana .....	561	282,375	26	3,536	-	-	473	232,287	153	45,759	26	15,002	
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-	
Maryland .....	-	-	-	-	-	-	-	-	-	-	-	-	
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-	
Michigan .....	-	-	-	-	-	-	-	-	-	-	-	-	
Minnesota .....	-	-	-	-	-	-	-	-	-	-	-	-	
Mississippi .....	148	99,888	-	-	-	-	146	96,228	49	(D)	-	-	
Missouri .....	257	173,652	10	21,000	-	-	257	173,636	8	16	-	-	
Montana .....	-	-	-	-	-	-	-	-	-	-	-	-	
Nebraska .....	-	-	-	-	-	-	-	-	-	-	-	-	
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-	
New Mexico .....	-	-	-	-	-	-	-	-	-	-	-	-	
New York .....	-	-	-	-	-	-	-	-	-	-	-	-	
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-	
North Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-	
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-	
Oklahoma .....	-	-	-	-	-	-	-	-	-	-	-	-	
Oregon .....	-	-	-	-	-	-	-	-	-	-	-	-	
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-	
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-	
South Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-	
Tennessee .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-	
Texas .....	277	206,790	15	24,030	15	24,030	121	(D)	24	19,000	167	138,372	
Utah .....	-	-	-	-	-	-	-	-	-	-	-	-	
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-	
Washington .....	-	-	-	-	-	-	-	-	-	-	-	-	
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-	
Wisconsin .....	-	-	-	-	-	-	-	-	-	-	-	-	
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Water Resources Regions</b>													
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....	16	(D)	-	-	-	-	-	-	8	4,000	8	(D)	
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 05 Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-	
Region 08 Lower Mississippi .....	2,279	1,456,107	100	28,928	53	20,368	2,128	1,282,463	634	237,280	50	19,432	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 11 Arkansas-White-Red .....	403	290,592	10	21,000	-	-	384	274,243	94	52,103	10	(D)	
Region 12 Texas-Gulf .....	277	206,790	15	24,030	15	24,030	121	(D)	24	19,000	167	138,372	
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 18 California .....	837	393,275	154	70,039	66	33,961	178	66,860	142	66,352	723	322,658	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-	

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Other small grains (barley, oats, rye, etc.)											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States ..... 2018 2013	5,767 6,258	1,026,289 1,209,527	677 801	147,936 167,846	289 203	68,478 63,353	1,621 2,125	370,265 487,333	948 812	157,088 140,103	3,606 3,903	566,757 640,456
<b>2018 DATA</b>												
Alabama .....	4	8	-	-	-	-	-	-	4	4	4	8
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	130	13,912	19	3,115	17	(D)	41	2,442	17	1,680	89	11,470
Arkansas .....	-	-	-	-	-	-	-	-	-	-	-	-
California .....	551	127,718	50	5,009	45	4,645	177	46,361	143	43,400	426	88,956
Colorado .....	366	81,378	82	25,818	45	21,628	211	66,491	29	1,332	151	16,283
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	10	1,300	-	-	-	-	4	100	-	-	6	1,200
Florida .....	56	9,630	-	-	-	-	53	9,270	-	-	3	360
Georgia .....	25	732	-	-	-	-	25	732	-	-	-	-
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	1,580	388,697	167	34,628	102	20,014	388	115,859	272	59,732	1,017	214,166
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	35	2,342	-	-	-	-	17	2,288	18	54	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	10	4,135	6	2,535	-	-	10	4,135	-	-	-	-
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	31	1,351	-	-	-	-	31	1,351	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	11	507	-	-	-	-	2	(D)	9	(D)	-	-
Minnesota .....	27	2,020	-	-	-	-	27	2,020	-	-	-	-
Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	-	-	-	-	-	-	-
Montana .....	537	141,966	57	33,322	10	9,292	2	(D)	65	(D)	490	130,147
Nebraska .....	84	7,930	18	4,380	-	-	68	6,718	-	-	20	2,232
Nevada .....	137	13,163	36	3,716	7	966	57	7,880	-	-	80	5,283
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....	79	9,507	11	5,358	-	-	12	7,158	34	204	33	2,145
New York .....	3	9	-	-	-	-	-	-	3	9	-	-
North Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota .....	15	4,100	5	1,100	5	1,100	10	3,100	5	750	5	1,000
Ohio .....	23	690	-	-	-	-	-	-	23	690	-	-
Oklahoma .....	22	22,590	-	-	-	-	22	22,590	-	-	-	-
Oregon .....	181	18,081	-	-	-	-	37	5,215	79	5,516	65	7,350
Pennsylvania .....	22	176	-	-	-	-	-	-	22	176	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	28	4,091	19	2,356	-	-	27	(D)	-	-	1	(D)
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	168	46,444	39	4,580	-	-	117	38,044	51	8,400	-	-
Utah .....	947	45,301	92	5,640	20	(D)	108	14,415	93	11,196	777	27,250
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	210	22,136	12	2,727	9	1,767	111	6,330	32	1,652	67	14,154
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	33	1,777	-	-	-	-	33	1,777	-	-	-	-
Wyoming .....	442	54,598	64	13,652	29	7,560	31	1,727	49	11,124	372	43,747
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	66	2,836	-	-	-	-	35	1,451	25	185	6	1,200
Region 03 South Atlantic-Gulf .....	85	10,370	-	-	-	-	78	10,002	4	4	7	368
Region 04 Great Lakes .....	21	(D)	-	-	-	-	12	(D)	9	315	-	-
Region 05 Ohio .....	58	3,032	-	-	-	-	17	2,288	41	744	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	49	2,697	-	-	-	-	49	2,697	-	-	-	-
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-
Region 10 Missouri .....	1,156	213,627	161	51,266	62	18,900	236	25,063	79	21,144	864	171,210
Region 11 Arkansas-White-Red .....	137	42,669	26	4,940	-	-	90	35,115	-	-	60	7,554
Region 12 Texas-Gulf .....	94	32,755	20	2,300	-	-	54	29,855	40	2,900	-	-
Region 13 Rio Grande .....	153	67,629	51	25,593	18	17,080	107	61,355	49	6,948	9	2,054
Region 14 Upper Colorado .....	377	17,247	79	7,322	-	-	23	2,645	51	752	303	13,850
Region 15 Lower Colorado .....	159	14,980	21	4,075	17	(D)	43	3,402	44	1,788	89	11,470
Region 16 Great Basin .....	941	80,846	81	7,076	34	(D)	188	32,495	69	11,178	718	44,733
Region 17 Pacific Northwest .....	1,893	406,196	190	41,315	113	25,241	513	117,204	390	66,850	1,100	223,202
Region 18 California .....	577	129,798	48	4,049	45	4,645	175	45,401	147	44,280	450	91,116
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage)											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 48,697	6,165,406	4,191	822,568	1,516	422,141	12,313	2,154,456	6,460	828,537	32,974	3,469,156
.....	2013 46,181	5,512,871	3,213	620,206	1,514	277,656	14,257	2,216,445	5,276	817,582	29,652	2,927,186
<b>2018 DATA</b>												
Alabama .....	25	2,000	-	-	-	-	-	-	-	-	25	2,000
Alaska .....	1	(D)	-	-	-	-	-	(D)	-	-	-	-
Arizona .....	824	304,152	100	86,115	44	30,894	255	102,494	58	15,411	622	231,572
Arkansas .....	10	360	-	-	-	-	-	10	360	-	-	-
California .....	2,544	701,813	232	126,065	147	85,328	1,322	334,150	458	109,835	1,336	375,011
Colorado .....	6,749	592,838	619	51,029	147	21,640	985	168,049	832	70,336	5,245	385,884
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	28	162	6	30	-	-	22	132	-	-	6	30
Florida .....	-	-	-	-	-	-	-	-	-	-	-	-
Georgia .....	57	1,145	-	-	-	-	23	575	34	570	-	-
Hawaii .....	3	27	-	-	-	-	-	-	3	27	-	-
Idaho .....	7,361	856,511	466	55,029	125	27,702	1,236	267,817	970	106,128	5,520	498,002
Illinois .....	-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....	55	2,966	-	-	-	-	55	2,966	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	646	156,569	89	35,768	82	49,323	589	150,239	32	2,490	52	9,404
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-	-	-	-	-	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	5	350	-	-	-	-	4	(D)	1	(D)	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	228	12,180	40	1,920	-	-	146	8,410	102	3,870	-	-
Minnesota .....	302	21,055	-	-	-	-	261	19,355	-	-	41	1,700
Mississippi .....	12	222	-	-	-	-	-	-	6	132	6	90
Missouri .....	23	476	-	-	-	-	-	-	16	464	7	14
Montana .....	4,836	872,353	255	77,922	41	1,958	446	42,942	752	233,332	3,858	598,776
Nebraska .....	2,584	325,052	136	29,865	30	15,230	1,998	223,004	197	22,524	621	85,682
Nevada .....	1,090	332,309	230	100,572	63	37,194	443	210,865	196	28,134	549	108,425
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	7	175	-	-	-	-	-	-	7	175	-	-
New Mexico .....	3,712	135,448	267	23,344	101	10,718	768	60,119	474	5,909	2,788	80,989
New York .....	2	(D)	-	-	-	-	-	-	2	(D)	-	-
North Carolina .....	12	84	-	-	-	-	-	-	12	84	-	-
North Dakota .....	176	9,538	31	2,170	-	-	99	4,915	2	(D)	79	4,827
Ohio .....	26	1,110	-	-	-	-	3	420	23	690	-	-
Oklahoma .....	243	34,640	51	9,430	-	-	177	18,727	66	15,913	25	8,000
Oregon .....	2,634	331,194	153	31,913	41	9,777	680	136,198	434	44,425	1,678	154,715
Pennsylvania .....	23	288	-	-	-	-	1	(D)	22	(D)	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota .....	347	45,734	-	-	-	-	120	15,347	23	2,760	204	27,627
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	621	56,268	143	16,341	79	7,241	436	48,497	58	(D)	223	7,156
Utah .....	7,724	611,229	617	50,284	349	67,283	813	160,460	872	53,107	6,295	408,334
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	2,569	278,089	423	63,903	121	23,150	833	76,982	333	14,315	1,561	192,254
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	224	23,936	29	1,396	-	-	224	23,936	-	-	-	-
Wyoming .....	2,994	454,316	304	59,472	146	34,703	373	77,262	465	95,250	2,233	288,664
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	63	975	6	30	-	-	27	(D)	30	(D)	6	30
Region 03 South Atlantic-Gulf .....	106	3,451	-	-	-	-	23	575	52	786	31	2,090
Region 04 Great Lakes .....	371	27,192	50	2,670	-	-	287	22,702	104	4,590	-	-
Region 05 Ohio .....	23	(D)	-	-	-	-	-	-	23	(D)	-	-
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	399	26,174	19	646	-	-	373	25,400	-	-	26	774
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	121	17,607	-	-	-	-	83	9,867	16	6,800	22	940
Region 10 Missouri .....	11,483	1,680,634	751	171,032	299	59,403	3,708	449,224	1,333	283,444	7,084	967,192
Region 11 Arkansas-White-Red .....	1,754	305,005	187	51,337	124	54,012	792	193,667	231	26,083	834	104,299
Region 12 Texas-Gulf .....	476	34,330	159	14,251	94	6,458	357	30,340	20	900	119	3,090
Region 13 Rio Grande .....	3,218	172,691	172	21,512	85	14,040	813	112,273	469	16,482	2,336	75,511
Region 14 Upper Colorado .....	7,082	430,590	692	40,645	54	8,500	149	3,740	893	68,810	6,179	362,575
Region 15 Lower Colorado .....	1,093	337,052	118	97,103	45	37,807	336	110,739	142	15,987	726	255,651
Region 16 Great Basin .....	6,776	849,809	680	137,003	368	94,462	1,210	372,089	791	66,206	5,142	436,221
Region 17 Pacific Northwest .....	13,080	1,574,264	1,099	164,512	296	64,049	2,831	487,332	1,891	222,784	9,029	887,540
Region 18 California .....	2,648	704,820	258	121,827	151	83,410	1,323	335,781	462	114,635	1,440	373,243
Region 19 Alaska .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-
Region 20 Hawaii .....	3	27	-	-	-	-	-	-	3	27	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All other hay (dry hay, greenchop, and silage)											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 25,402	3,263,946	2,348	408,310	667	111,137	7,074	1,077,251	4,672	750,536	15,157	1,611,602
.....	2013 28,142	3,300,889	2,167	394,785	340	58,107	7,966	1,123,754	5,578	803,159	16,207	1,604,734
<b>2018 DATA</b>												
Alabama .....	50	425	-	-	-	-	25	375	25	50	-	-
Alaska .....	4	713	-	(D)	-	-	4	713	-	-	-	-
Arizona .....	251	44,101	56	14,170	1	(D)	119	14,597	35	3,586	155	30,412
Arkansas .....	93	7,205	5	(D)	-	-	27	1,285	66	5,920	-	-
California .....	1,961	557,566	208	93,873	129	48,195	777	260,095	392	99,482	1,248	314,691
Colorado .....	3,917	362,160	150	22,659	1	(D)	499	58,803	770	115,774	2,776	199,708
Connecticut .....	-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	179	35,676	-	-	-	-	109	6,489	62	7,737	8	21,450
Georgia .....	214	20,251	-	-	-	-	108	15,655	83	4,276	24	720
Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....	1,701	156,806	81	6,892	43	1,030	123	33,570	400	27,074	1,236	98,379
Illinois .....	12	1,800	-	-	-	-	12	1,800	-	-	-	-
Indiana .....	9	540	-	-	-	-	9	(D)	9	(D)	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	355	47,827	8	4,020	-	-	325	45,697	33	3,675	19	3,450
Kentucky .....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....	49	2,506	-	-	-	-	14	280	35	2,226	-	-
Maine .....	-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....	41	1,133	-	-	-	-	-	-	41	1,133	-	-
Massachusetts .....	-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....	31	2,284	-	-	-	-	12	120	19	2,164	-	-
Missouri .....	72	4,160	-	-	-	-	24	1,328	48	2,832	8	480
Montana .....	2,035	332,932	192	23,780	57	2,065	106	7,297	462	122,311	1,474	203,324
Nebraska .....	829	94,336	80	14,736	14	3,052	690	85,572	90	6,331	99	5,630
Nevada .....	417	150,331	72	16,142	15	8,327	155	39,799	167	82,675	186	33,671
New Hampshire .....	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....	2	(D)	-	-	-	-	2	(D)	2	(D)	-	-
New Mexico .....	1,957	101,446	143	19,704	71	8,055	751	70,756	112	7,126	1,251	32,120
New York .....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....	92	3,036	-	-	-	-	-	-	92	3,036	-	-
North Dakota .....	63	3,707	-	-	-	-	63	3,707	-	-	-	-
Ohio .....	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....	280	44,201	68	10,225	-	-	226	39,595	28	3,306	26	1,300
Oregon .....	3,363	276,496	237	14,945	70	538	476	47,604	676	75,456	2,272	154,312
Pennsylvania .....	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....	76	1,445	-	-	-	-	51	1,045	-	-	25	400
South Dakota .....	84	20,349	19	8,569	-	-	1	(D)	-	-	84	19,737
Tennessee .....	21	1,680	-	-	-	-	21	1,680	-	-	-	-
Texas .....	2,341	275,863	480	70,470	121	18,800	1,676	245,446	221	22,564	529	13,233
Utah .....	1,924	133,745	152	14,382	27	(D)	174	16,930	255	10,403	1,650	109,565
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	1,204	149,317	231	53,489	97	19,851	327	40,049	204	10,973	764	99,017
West Virginia .....	20	(D)	-	-	-	-	20	(D)	-	-	-	-
Wisconsin .....	4	1,440	1	(D)	-	-	4	1,440	-	-	-	-
Wyoming .....	1,751	428,427	164	18,284	21	420	144	34,403	345	130,251	1,323	270,003
<b>Water Resources Regions</b>												
Region 01 New England .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....	43	1,155	-	-	-	-	2	(D)	43	1,155	-	-
Region 03 South Atlantic-Gulf .....	617	63,067	-	-	-	-	305	23,684	256	17,213	57	22,570
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 05 Ohio .....	32	1,820	-	-	-	-	32	1,820	-	-	-	-
Region 06 Tennessee .....	25	50	-	-	-	-	-	-	25	50	-	-
Region 07 Upper Mississippi .....	29	2,220	1	(D)	-	-	21	1,875	17	345	-	-
Region 08 Lower Mississippi .....	84	3,276	-	-	-	-	49	2,210	35	1,066	-	-
Region 09 Souris-Red-Rainy .....	31	2,077	-	-	-	-	31	2,077	-	-	-	-
Region 10 Missouri .....	4,788	710,252	396	62,389	68	4,889	1,380	145,095	726	202,602	2,806	368,903
Region 11 Arkansas-White-Red .....	1,475	233,157	198	58,168	32	3,240	845	193,929	225	22,756	424	22,682
Region 12 Texas-Gulf .....	2,040	219,664	361	40,555	89	15,560	1,434	194,767	250	27,874	450	7,673
Region 13 Rio Grande .....	1,630	71,023	124	9,178	38	3,930	601	31,373	71	1,333	1,135	51,348
Region 14 Upper Colorado .....	3,185	364,806	96	(D)	1	(D)	143	(D)	656	127,496	2,518	221,173
Region 15 Lower Colorado .....	409	52,440	89	18,295	34	(D)	186	20,082	50	3,766	231	33,086
Region 16 Great Basin .....	2,117	297,058	219	29,159	42	8,678	329	68,724	429	73,623	1,593	165,298
Region 17 Pacific Northwest .....	6,818	667,792	650	84,935	234	22,067	865	102,234	1,492	169,480	4,639	396,977
Region 18 California .....	2,075	573,376	213	95,238	129	48,195	847	267,165	397	101,777	1,304	321,892
Region 19 Alaska .....	4	713	1	(D)	-	-	4	713	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Peanuts												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	1,701 1,605	460,155 371,634	126 106	27,220 20,650	108 67	29,124 12,623	1,427 1,342	417,239 329,190	428 379	60,826 51,821	6 23	600 2,889
<b>2018 DATA</b>													
Alabama .....		85	18,150	-	-	-	-	70	15,585	29	10,360	-	-
Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....		-	-	-	-	-	-	-	-	-	-	-	-
Arkansas .....		43	18,553	5	(D)	-	-	43	17,503	7	1,050	-	-
California .....		3	3	3	3	-	-	3	3	-	-	-	-
Colorado .....		-	-	-	-	-	-	-	-	-	-	-	-
Connecticut .....		-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....		-	-	-	-	-	-	-	-	-	-	-	-
Florida .....		164	55,617	33	4,362	3	3,615	164	55,617	-	-	-	-
Georgia .....		849	247,135	12	6,822	55	13,343	692	213,792	279	39,498	6	600
Hawaii .....		-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....		-	-	-	-	-	-	-	-	-	-	-	-
Illinois .....		-	-	-	-	-	-	-	-	-	-	-	-
Indiana .....		-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....		-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....		-	-	-	-	-	-	-	-	-	-	-	-
Kentucky .....		-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....		19	3,040	-	-	-	-	6	960	13	2,080	-	-
Maine .....		-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....		-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....		-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....		-	-	-	-	-	-	-	-	-	-	-	-
Minnesota .....		-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....		11	1,425	-	-	-	-	11	1,425	-	-	-	-
Missouri .....		-	-	-	-	-	-	-	-	-	-	-	-
Montana .....		-	-	-	-	-	-	-	-	-	-	-	-
Nebraska .....		-	-	-	-	-	-	-	-	-	-	-	-
Nevada .....		-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....		-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....		-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....		24	4,272	1	(D)	-	-	24	4,272	-	-	-	-
New York .....		-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....		54	2,306	-	-	-	-	-	-	54	2,306	-	-
North Dakota .....		-	-	-	-	-	-	-	-	-	-	-	-
Ohio .....		-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....		17	2,265	-	-	-	-	17	2,265	-	-	-	-
Oregon .....		-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....		-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....		-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....		124	17,791	-	-	-	-	111	16,241	13	1,550	-	-
South Dakota .....		-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....		22	22	-	-	-	-	-	-	22	22	-	-
Texas .....		286	89,576	72	14,306	50	12,166	286	89,576	11	3,960	-	-
Utah .....		-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....		-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....		-	-	-	-	-	-	-	-	-	-	-	-
Washington .....		-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....		-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....		-	-	-	-	-	-	-	-	-	-	-	-
Wyoming .....		-	-	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>													
Region 01 New England .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....		1,276	340,999	45	11,184	58	16,958	1,037	301,235	375	53,714	6	600
Region 04 Great Lakes .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 05 Ohio .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 06 Tennessee .....		22	22	-	-	-	-	-	-	22	22	-	-
Region 07 Upper Mississippi .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 08 Lower Mississippi .....		56	19,265	5	(D)	-	-	43	17,185	13	2,080	-	-
Region 09 Souris-Red-Rainy .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 11 Arkansas-White-Red .....		54	(D)	-	-	-	-	54	(D)	7	1,050	-	-
Region 12 Texas-Gulf .....		289	91,251	72	14,306	50	12,166	289	91,251	11	3,960	-	-
Region 13 Rio Grande .....		1	(D)	1	(D)	-	-	1	(D)	-	-	-	-
Region 14 Upper Colorado .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 16 Great Basin .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 18 California .....		3	3	3	3	-	-	3	3	-	-	-	-
Region 19 Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....		-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Cotton												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	6,918 6,804	3,697,167 2,954,457	1,394 1,663	751,823 595,950	498 284	302,550 84,809	5,766 5,856	3,181,982 2,558,510	896 716	242,212 163,429	951 971	469,060 380,937
<b>2018 DATA</b>													
Alabama .....		199	52,608	-	-	-	-	137	34,438	55	13,882	39	8,994
Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....		277	164,846	116	71,957	58	31,640	121	67,130	45	25,286	177	109,754
Arkansas .....		410	386,089	17	10,541	17	10,541	396	375,049	31	11,440	-	-
California .....		461	254,785	165	92,049	82	37,890	284	154,592	107	40,526	293	168,912
Colorado .....		-	-	-	-	-	-	-	-	-	-	-	-
Connecticut .....		-	-	-	-	-	-	-	-	-	-	-	-
Delaware .....		-	-	-	-	-	-	-	-	-	-	-	-
Florida .....		31	(D)	4	4,068	-	-	31	(D)	-	-	-	-
Georgia .....		1,041	463,450	107	37,664	78	23,760	840	398,273	330	51,745	24	18,600
Hawaii .....		-	-	-	-	-	-	-	-	-	-	-	-
Idaho .....		-	-	-	-	-	-	-	-	-	-	-	-
Illinois .....		1	(D)	-	-	-	-	1	(D)	-	-	-	-
Indiana .....		-	-	-	-	-	-	-	-	-	-	-	-
Iowa .....		-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....		127	40,974	15	7,036	4	3,872	124	40,254	-	-	3	720
Kentucky .....		-	-	-	-	-	-	-	-	-	-	-	-
Louisiana .....		75	33,908	7	2,450	7	2,450	75	31,248	14	2,660	-	-
Maine .....		-	-	-	-	-	-	-	-	-	-	-	-
Maryland .....		-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....		-	-	-	-	-	-	-	-	-	-	-	-
Michigan .....		-	-	-	-	-	-	-	-	-	-	-	-
Minnesota .....		-	-	-	-	-	-	-	-	-	-	-	-
Mississippi .....		235	209,107	-	-	-	-	203	193,449	43	29,094	-	-
Missouri .....		204	208,092	-	-	-	-	204	208,092	10	12,000	-	-
Montana .....		-	-	-	-	-	-	-	-	-	-	-	-
Nebraska .....		-	-	-	-	-	-	-	-	-	-	-	-
Nevada .....		-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire .....		-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....		-	-	-	-	-	-	-	-	-	-	-	-
New Mexico .....		230	51,304	37	5,442	-	-	140	39,967	-	-	91	11,588
New York .....		-	-	-	-	-	-	-	-	-	-	-	-
North Carolina .....		101	14,202	-	-	-	-	11	3,100	92	11,102	-	-
North Dakota .....		-	-	-	-	-	-	-	-	-	-	-	-
Ohio .....		-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma .....		250	113,902	85	36,775	3	540	185	83,382	4	1,280	65	29,240
Oregon .....		-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania .....		-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island .....		-	-	-	-	-	-	-	-	-	-	-	-
South Carolina .....		199	39,558	-	-	-	-	187	33,598	16	6,095	-	-
South Dakota .....		-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....		93	23,539	-	-	-	-	71	23,517	22	22	-	-
Texas .....		2,974	1,632,965	841	483,841	249	191,857	2,746	1,488,265	117	36,870	259	121,252
Utah .....		-	-	-	-	-	-	-	-	-	-	-	-
Vermont .....		-	-	-	-	-	-	-	-	-	-	-	-
Virginia .....		10	400	-	-	-	-	10	190	10	210	-	-
Washington .....		-	-	-	-	-	-	-	-	-	-	-	-
West Virginia .....		-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....		-	-	-	-	-	-	-	-	-	-	-	-
Wyoming .....		-	-	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>													
Region 01 New England .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 02 Mid-Atlantic .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 03 South Atlantic-Gulf .....		1,504	570,825	111	41,732	78	23,760	1,154	466,416	495	89,340	27	21,228
Region 04 Great Lakes .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 05 Ohio .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 06 Tennessee .....		131	(D)	-	-	-	-	68	(D)	56	7,634	36	6,366
Region 07 Upper Mississippi .....		1	(D)	-	-	-	-	1	(D)	-	-	-	-
Region 08 Lower Mississippi .....		950	844,580	24	12,991	24	12,991	930	829,140	72	41,276	-	-
Region 09 Souris-Red-Rainy .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 10 Missouri .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 11 Arkansas-White-Red .....		1,059	522,693	302	129,051	71	22,362	991	491,453	28	7,680	68	29,960
Region 12 Texas-Gulf .....		2,309	1,270,679	621	386,684	180	173,307	2,105	1,147,051	74	30,280	216	100,028
Region 13 Rio Grande .....		226	47,646	55	17,359	5	600	112	15,237	19	190	134	32,812
Region 14 Upper Colorado .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....		285	169,313	121	75,287	58	31,640	121	67,130	45	25,286	185	114,221
Region 16 Great Basin .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 17 Pacific Northwest .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 18 California .....		453	250,318	160	88,719	82	37,890	284	154,592	107	40,526	285	164,445
Region 19 Alaska .....		-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....		-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Land in vegetables												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	23,087 24,157	3,127,705 2,993,600	3,695 3,366	1,251,019 1,045,264	1,456 1,192	605,283 574,574	13,757 15,012	1,709,434 1,843,498	5,542 5,427	437,063 433,528	6,069 6,375	1,135,408 1,062,561
<b>2018 DATA</b>													
Alabama .....		229	14,532	8	8	25	125	151	5,278	53	9,129	25	125
Alaska .....		70	375	2	(D)	-	-	55	365	5	11	11	4
Arizona .....		202	133,733	7	74,486	22	44,915	58	32,014	39	8,797	139	112,181
Arkansas .....		143	14,993	15	161	-	-	81	14,786	28	161	38	46
California .....		2,015	975,424	765	529,867	242	188,181	1,153	506,090	256	87,631	997	486,039
Colorado .....		475	52,390	12	24,376	8	5,724	230	48,010	94	2,886	222	4,324
Connecticut .....		191	693	4	80	4	80	104	388	90	311	-	-
Delaware .....		79	14,293	10	747	5	401	76	13,643	5	928	-	-
Florida .....		741	172,039	189	40,558	157	34,280	727	119,187	37	38,561	36	14,475
Georgia .....		467	77,134	23	8,694	-	-	366	55,846	123	21,158	29	1,710
Hawaii .....		337	5,055	50	648	9	334	35	(D)	7	(D)	297	4,221
Idaho .....		945	317,115	254	109,882	95	47,766	370	116,473	159	31,767	534	169,807
Illinois .....		379	22,988	38	2,457	-	-	336	22,661	75	707	5	8
Indiana .....		404	37,099	123	15,290	30	9,188	319	33,308	71	(D)	18	(D)
Iowa .....		214	4,727	29	211	5	20	158	2,758	43	1,934	18	40
Kansas .....		172	3,036	-	-	-	-	114	2,945	11	22	58	(D)
Kentucky .....		493	3,821	162	852	36	334	43	181	309	2,521	163	1,119
Louisiana .....		101	18,798	10	20	-	-	57	18,715	13	26	31	57
Maine .....		462	15,979	23	2,000	7	1,930	299	548	249	13,085	12	2,417
Maryland .....		408	19,262	22	814	13	724	323	15,865	114	5,672	-	-
Massachusetts .....		364	2,971	39	51	-	-	225	1,699	136	2,229	44	44
Michigan .....		974	121,194	102	3,148	1	(D)	787	98,471	230	23,495	39	122
Minnesota .....		418	55,436	39	22,638	8	4,020	329	53,858	97	1,899	14	28
Mississippi .....		198	5,602	11	28	6	18	150	5,324	34	252	35	(D)
Missouri .....		608	6,848	131	680	52	272	334	4,836	235	1,606	120	568
Montana .....		271	7,532	10	1,142	8	82	141	307	73	674	105	6,621
Nebraska .....		201	21,317	42	20,642	15	20,484	184	21,264	-	-	17	53
Nevada .....		34	3,622	4	(D)	4	(D)	8	(D)	14	35	12	(D)
New Hampshire .....		219	1,313	4	40	-	-	172	525	46	514	41	505
New Jersey .....		737	31,376	93	4,087	28	273	530	24,951	231	7,240	59	562
New Mexico .....		764	14,459	8	10,230	5	1,250	363	7,622	100	387	446	11,712
New York .....		713	18,612	52	737	3	45	377	6,496	311	10,062	159	3,588
North Carolina .....		648	53,854	102	512	45	198	314	3,901	324	49,774	109	687
North Dakota .....		62	22,404	1	(D)	-	-	23	16,058	6	8,858	39	61
Ohio .....		654	10,557	59	1,265	32	1,025	279	5,427	314	4,490	145	728
Oklahoma .....		336	7,041	15	15	-	-	224	6,304	75	688	37	49
Oregon .....		1,220	117,103	106	35,919	85	36,039	661	40,321	222	9,530	406	67,252
Pennsylvania .....		1,131	26,369	259	1,997	119	539	714	21,851	376	4,333	126	620
Rhode Island .....		99	1,348	8	48	-	-	84	401	17	55	15	902
South Carolina .....		496	42,781	79	8,338	4	4	407	37,209	49	6,632	59	143
South Dakota .....		94	355	-	-	-	-	62	(D)	7	28	34	262
Tennessee .....		335	3,929	50	210	22	154	86	(D)	134	245	115	(D)
Texas .....		705	128,652	174	77,318	86	69,690	450	66,029	99	48,446	161	16,758
Utah .....		402	4,302	81	513	54	486	75	482	34	(D)	392	3,942
Vermont .....		232	1,505	34	61	-	-	111	295	106	594	37	637
Virginia .....		468	12,751	45	603	23	115	209	4,333	192	8,400	67	18
Washington .....		1,244	292,946	211	144,465	122	119,228	744	70,184	87	8,516	489	216,076
West Virginia .....		149	5,798	3	6	50	44	34	388	83	5,405	40	6
Wisconsin .....		703	200,869	114	96,807	16	13,980	597	195,638	119	5,131	21	304
Wyoming .....		81	1,372	10	1,250	10	1,250	28	36	10	1,250	53	1,336
<b>Water Resources Regions</b>													
Region 01 New England .....		1,434	23,068	78	2,219	11	2,010	953	3,793	551	16,332	137	4,269
Region 02 Mid-Atlantic .....		2,826	113,785	407	7,974	142	1,833	1,908	82,191	938	34,953	204	1,004
Region 03 South Atlantic-Gulf .....		2,754	361,043	396	57,863	248	34,572	2,143	222,436	557	124,957	303	17,198
Region 04 Great Lakes .....		2,064	165,170	252	13,794	26	2,367	1,358	129,656	675	33,496	262	4,552
Region 05 Ohio .....		1,619	42,465	308	11,221	162	10,244	579	32,487	811	5,565	356	4,538
Region 06 Tennessee .....		372	1,493	89	600	34	322	109	425	165	859	98	209
Region 07 Upper Mississippi .....		1,524	261,276	195	116,378	26	16,438	1,246	252,815	284	8,545	63	416
Region 08 Lower Mississippi .....		273	45,308	23	(D)	-	-	194	45,008	38	193	45	107
Region 09 Souris-Red-Rainy .....		105	10,108	4	7,529	-	-	34	9,528	23	822	51	88
Region 10 Missouri .....		1,150	66,341	190	42,252	74	23,007	681	52,866	273	12,163	353	5,341
Region 11 Arkansas-White-Red .....		732	27,964	23	8,172	5	7,793	494	25,966	119	770	154	1,274
Region 12 Texas-Gulf .....		672	63,080	146	20,418	64	13,900	429	48,448	79	446	169	16,766
Region 13 Rio Grande .....		590	83,729	35	58,921	29	54,010	298	35,051	141	51,197	310	5,543
Region 14 Upper Colorado .....		323	6,596	2	(D)	-	-	24	(D)	30	(D)	276	6,526
Region 15 Lower Colorado .....		244	144,729	75	85,031	22	44,915	93	32,824	39	8,797	146	122,366
Region 16 Great Basin .....		407	17,489	91	7,149	64	5,922	83	2,341	41	278	375	15,235
Region 17 Pacific Northwest .....		3,581	724,193	569	286,528	298	199,435	1,890	227,122	510	49,963	1,465	449,896
Region 18 California .....		2,010	964,439	760	519,322	242	188,181	1,151	505,290	256	87,631	994	475,854
Region 19 Alaska .....		70	375	2	(D)	-	-	55	365	5	11	11	4
Region 20 Hawaii .....		337	5,055	50	648	9	334	35	(D)	7	(D)	297	4,221

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Sweet corn											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 5,476	285,749	708	110,117	234	41,535	3,058	167,972	1,562	32,385	1,060	87,579
	2013 5,923	321,992	582	101,058	151	30,281	3,335	198,173	1,704	54,934	1,283	83,306
<b>2018 DATA</b>												
Alabama .....	66	629	-	-	-	-	41	(D)	25	(D)	-	-
Alaska .....	10	1	-	-	-	-	10	1	-	-	-	-
Arizona .....	16	16	-	-	-	-	-	-	-	-	16	16
Arkansas .....	9	18	4	8	-	-	5	10	4	8	-	-
California .....	205	19,166	72	11,595	13	2,939	154	7,420	10	1,546	57	11,973
Colorado .....	144	3,050	-	-	8	(D)	84	758	-	-	64	2,292
Connecticut .....	71	92	-	-	-	-	1	(D)	70	(D)	-	-
Delaware .....	55	10,184	7	1,160	7	1,160	52	9,584	4	878	-	-
Florida .....	141	20,610	54	2,165	27	5	131	(D)	1	(D)	9	10,000
Georgia .....	114	23,965	47	8,790	24	24	114	23,965	-	-	-	-
Hawaii .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-
Idaho .....	196	3,178	-	-	-	-	50	(D)	67	(D)	79	2,291
Illinois .....	64	6,268	1	(D)	-	-	64	6,268	-	-	-	-
Indiana .....	94	5,461	9	1,201	8	1,200	74	5,253	19	(D)	1	(D)
Iowa .....	45	1,676	-	-	-	-	45	1,676	-	-	-	-
Kansas .....	49	86	-	-	-	-	45	86	-	-	4	(D)
Kentucky .....	59	306	2	(D)	2	(D)	6	8	31	278	22	20
Louisiana .....	63	168	-	-	-	-	37	141	13	26	13	1
Maine .....	126	1,163	3	(Z)	-	-	47	10	113	1,156	-	-
Maryland .....	175	12,555	62	4,896	-	-	121	9,966	82	2,589	-	-
Massachusetts .....	77	482	-	-	-	-	-	-	77	482	-	-
Michigan .....	233	1,469	-	-	-	-	169	(D)	64	(D)	-	-
Minnesota .....	181	17,942	23	5,028	-	-	162	17,752	19	190	-	-
Mississippi .....	75	164	-	-	-	-	56	148	23	23	12	8
Missouri .....	86	228	11	66	11	66	36	119	42	101	8	8
Montana .....	57	83	10	34	6	9	25	35	13	4	25	44
Nebraska .....	61	233	-	-	-	-	57	229	-	-	4	4
Nevada .....	17	5	3	2	3	2	-	-	14	3	3	2
New Hampshire .....	9	152	-	-	-	-	-	-	8	(D)	1	(D)
New Jersey .....	158	3,617	50	560	-	-	50	1,687	50	1,473	59	457
New Mexico .....	176	120	-	-	-	-	33	3	33	17	110	101
New York .....	238	3,504	22	18	-	-	102	454	134	2,996	26	117
North Carolina .....	170	347	26	3	-	-	89	61	81	281	27	8
North Dakota .....	40	18	-	-	-	-	5	8	-	-	35	10
Ohio .....	201	2,815	23	230	-	-	102	1,599	57	1,198	43	36
Oklahoma .....	53	2,343	26	2,340	-	-	53	2,343	-	-	-	-
Oregon .....	344	21,363	1	(D)	1	(D)	207	6,981	41	3,038	107	11,344
Pennsylvania .....	292	2,684	16	401	3	313	150	1,490	141	1,081	3	117
Rhode Island .....	13	77	-	-	-	-	12	(D)	-	-	1	(D)
South Carolina .....	144	948	-	-	-	-	114	869	30	79	-	-
South Dakota .....	36	257	-	-	-	-	-	-	7	14	29	243
Tennessee .....	136	679	29	(D)	22	33	1	(D)	85	(D)	50	42
Texas .....	69	2,881	19	13	-	-	8	2,700	39	162	22	19
Utah .....	95	341	27	27	27	27	34	28	27	27	61	313
Vermont .....	25	97	4	6	-	-	4	24	16	(D)	5	9
Virginia .....	124	4,638	22	110	-	-	31	35	71	4,601	22	2
Washington .....	432	60,256	83	(D)	54	(D)	277	(D)	19	(D)	142	47,960
West Virginia .....	3	3	-	-	-	-	3	3	-	-	-	-
Wisconsin .....	228	49,107	52	26,200	18	4,518	196	47,472	32	1,635	-	-
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	304	2,011	3	(Z)	-	-	64	(D)	272	1,828	2	(D)
Region 02 Mid-Atlantic .....	819	34,844	177	7,125	10	1,473	432	22,820	357	11,731	62	574
Region 03 South Atlantic-Gulf .....	727	46,747	127	10,958	51	29	545	29,153	183	7,602	42	10,011
Region 04 Great Lakes .....	469	11,335	33	3,370	15	(D)	286	8,069	172	3,179	35	150
Region 05 Ohio .....	388	6,581	36	1,453	10	1,204	138	5,675	169	883	82	41
Region 06 Tennessee .....	116	74	29	34	22	33	22	11	43	27	51	36
Region 07 Upper Mississippi .....	492	69,485	47	28,864	3	(D)	446	67,642	37	1,810	9	33
Region 08 Lower Mississippi .....	61	744	4	8	-	-	38	704	17	34	6	6
Region 09 Souris-Red-Rainy .....	37	10	-	-	-	-	2	(D)	-	-	35	10
Region 10 Missouri .....	324	3,821	19	76	17	75	188	1,150	51	116	89	2,555
Region 11 Arkansas-White-Red .....	144	2,429	26	2,340	8	1	107	2,404	-	-	37	25
Region 12 Texas-Gulf .....	69	2,881	19	13	-	-	8	2,700	39	162	22	19
Region 13 Rio Grande .....	76	(D)	-	-	-	-	-	-	33	17	43	(D)
Region 14 Upper Colorado .....	80	81	-	-	-	-	-	-	-	-	80	81
Region 15 Lower Colorado .....	49	19	-	-	-	-	33	3	-	-	16	16
Region 16 Great Basin .....	112	346	30	29	30	29	34	28	41	30	64	315
Region 17 Pacific Northwest .....	993	84,827	86	44,251	55	31,233	550	19,813	138	3,420	328	61,595
Region 18 California .....	205	19,166	72	11,595	13	2,939	154	7,420	10	1,546	57	11,973
Region 19 Alaska .....	10	1	-	-	-	-	10	1	-	-	-	-
Region 20 Hawaii .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Tomatoes in the open											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 8,879	288,114	1,246	162,695	433	40,017	4,984	147,928	2,269	45,702	2,061	128,300
	2013 10,496	358,985	1,487	154,006	380	101,448	6,929	193,759	1,990	36,394	2,172	187,987
<b>2018 DATA</b>												
Alabama .....	104	1,174	-	-	25	125	79	174	25	1,000	-	-
Alaska .....	12	2	-	-	-	-	3	1	-	-	9	1
Arizona .....	16	2	-	-	-	-	-	-	16	2	-	-
Arkansas .....	63	170	9	48	-	-	33	124	18	43	12	3
California .....	1,007	240,734	247	147,449	45	27,628	550	109,718	93	37,965	516	126,734
Colorado .....	186	104	-	-	-	-	79	13	23	7	84	84
Connecticut .....	127	73	-	-	-	-	71	65	56	8	-	-
Delaware .....	8	5	4	4	-	-	8	5	-	-	-	-
Florida .....	181	21,795	56	7,281	56	7,276	181	21,795	-	-	-	-
Georgia .....	98	141	-	-	-	-	94	41	4	100	-	-
Hawaii .....	34	(D)	-	-	-	-	-	-	-	-	34	(D)
Idaho .....	151	49	-	-	-	-	95	36	24	2	34	11
Illinois .....	135	157	20	95	-	-	112	151	38	17	-	-
Indiana .....	160	2,427	67	75	22	2	116	2,292	29	136	16	2
Iowa .....	83	(D)	5	5	-	-	65	(D)	-	-	18	2
Kansas .....	73	81	-	-	-	-	44	56	11	11	29	(D)
Kentucky .....	264	346	143	243	31	49	15	22	205	286	44	38
Louisiana .....	60	69	10	10	-	-	37	53	-	-	23	16
Maine .....	105	23	7	7	-	-	82	9	51	(D)	3	(D)
Maryland .....	170	503	29	128	29	128	86	378	93	125	-	-
Massachusetts .....	261	226	39	39	-	-	137	103	96	118	28	6
Michigan .....	509	5,508	43	781	-	-	418	2,540	91	2,968	-	-
Minnesota .....	100	76	-	-	-	-	81	73	19	4	-	-
Mississippi .....	135	209	6	12	11	10	98	144	29	55	24	52
Missouri .....	267	204	71	82	26	26	139	141	112	48	32	(D)
Montana .....	102	38	4	4	6	2	39	4	51	19	35	27
Nebraska .....	73	37	-	-	-	-	73	37	-	-	-	-
Nevada .....	21	4	3	3	3	2	2	(D)	14	(D)	5	2
New Hampshire .....	16	14	8	11	7	7	14	(D)	1	(D)	1	(D)
New Jersey .....	333	1,905	109	555	28	195	227	1,431	93	435	36	41
New Mexico .....	323	163	-	-	-	-	140	(D)	67	(D)	190	103
New York .....	337	500	55	129	22	2	163	105	145	360	29	35
North Carolina .....	204	550	30	354	12	168	131	69	73	478	27	5
North Dakota .....	38	9	-	-	-	-	5	2	-	-	33	7
Ohio .....	325	1,029	47	127	-	-	81	653	156	312	111	63
Oklahoma .....	227	296	36	36	25	13	165	116	50	175	12	5
Oregon .....	372	271	-	-	-	-	194	191	84	35	94	45
Pennsylvania .....	344	761	49	478	7	17	181	391	95	356	72	14
Rhode Island .....	30	100	9	54	-	-	29	(D)	1	(D)	1	(D)
South Carolina .....	176	4,808	12	4,320	12	4,320	151	4,758	-	-	25	50
South Dakota .....	41	13	-	-	-	-	31	12	-	-	12	1
Tennessee .....	262	277	42	42	22	4	85	227	106	32	71	18
Texas .....	250	204	20	20	-	-	114	108	40	60	96	36
Utah .....	106	186	-	-	-	-	7	1	27	27	72	158
Vermont .....	25	16	5	5	-	-	16	(D)	14	15	-	-
Virginia .....	235	1,755	22	220	-	-	33	(D)	135	(D)	67	11
Washington .....	285	111	-	-	-	-	199	92	3	(Z)	83	19
West Virginia .....	92	32	3	3	27	14	2	(D)	50	25	40	(D)
Wisconsin .....	310	273	36	75	17	31	279	239	31	35	-	-
Wyoming .....	43	46	-	-	-	-	-	-	-	-	43	46
<b>Water Resources Regions</b>												
Region 01 New England .....	543	439	63	111	7	7	335	236	207	185	33	21
Region 02 Mid-Atlantic .....	1,125	5,001	217	1,384	62	335	633	3,659	439	1,287	89	57
Region 03 South Atlantic-Gulf .....	856	28,215	92	11,631	99	11,730	698	26,934	109	1,230	92	96
Region 04 Great Lakes .....	1,006	6,652	159	1,000	37	23	670	3,342	253	3,251	88	64
Region 05 Ohio .....	811	2,722	238	433	82	69	183	1,935	440	702	211	85
Region 06 Tennessee .....	274	732	54	378	34	172	74	221	124	495	76	16
Region 07 Upper Mississippi .....	557	943	25	108	12	11	458	834	97	112	26	(D)
Region 08 Lower Mississippi .....	132	325	19	58	5	1	87	271	15	15	30	40
Region 09 Souris-Red-Rainy .....	35	7	-	-	-	-	2	(D)	-	-	33	7
Region 10 Missouri .....	470	304	70	81	19	25	277	162	96	48	130	111
Region 11 Arkansas-White-Red .....	365	398	39	39	28	14	250	155	70	220	56	33
Region 12 Texas-Gulf .....	238	187	20	20	-	-	102	91	40	60	96	36
Region 13 Rio Grande .....	223	109	-	-	-	-	107	(D)	67	51	123	52
Region 14 Upper Colorado .....	154	(D)	-	-	-	-	-	-	23	7	131	(D)
Region 15 Lower Colorado .....	53	605	2	(D)	-	-	35	603	16	2	2	(D)
Region 16 Great Basin .....	125	190	3	(D)	3	2	9	2	41	28	75	160
Region 17 Pacific Northwest .....	861	441	-	-	-	-	513	322	139	45	211	75
Region 18 California .....	1,005	240,134	245	146,849	45	27,628	548	109,118	93	37,965	516	126,734
Region 19 Alaska .....	12	2	-	-	-	-	3	1	-	-	9	1
Region 20 Hawaii .....	34	(D)	-	-	-	-	-	-	-	-	34	(D)

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Lettuce and romaine											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 4,589	277,616	581	155,144	98	53,276	2,801	156,588	1,070	40,288	959	98,421
	2013 5,052	264,154	373	96,254	60	43,498	3,306	151,658	768	8,094	1,158	109,915
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	33	49	-	-	-	-	22	48	3	(D)	9	1
Arizona .....	43	44,363	31	33,462	21	19,523	9	1,041	-	-	38	44,362
Arkansas .....	20	26	8	21	4	(D)	-	-	6	22	14	4
California .....	563	198,895	144	119,244	33	33,726	370	148,537	57	15,598	185	49,124
Colorado .....	134	33	-	-	-	-	80	15	23	2	31	15
Connecticut .....	88	28	-	-	-	-	45	24	46	7	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-	-	-
Florida .....	112	25,620	-	-	-	-	104	435	3	22,545	5	2,640
Georgia .....	67	14	-	-	-	-	67	14	-	-	-	-
Hawaii .....	85	328	-	-	-	-	1	(D)	7	35	77	288
Idaho .....	87	18	-	-	-	-	57	13	26	3	6	2
Illinois .....	79	99	-	-	-	-	62	98	32	23	-	-
Indiana .....	76	94	43	12	-	-	43	12	17	80	16	2
Iowa .....	18	2	-	-	-	-	-	-	-	-	18	2
Kansas .....	19	2	-	-	-	-	15	2	-	-	4	(D)
Kentucky .....	76	57	44	28	-	-	-	-	46	30	30	27
Louisiana .....	36	5	-	-	-	-	13	1	-	-	23	3
Maine .....	177	55	14	26	3	9	153	36	55	20	3	(D)
Maryland .....	80	36	-	-	-	-	41	14	39	22	-	-
Massachusetts .....	203	1,055	39	7	-	-	107	32	68	1,018	28	6
Michigan .....	101	2,012	-	-	-	-	101	2,012	-	-	-	-
Minnesota .....	52	21	-	-	-	-	34	18	18	4	-	-
Mississippi .....	55	45	-	-	-	-	49	44	16	16	6	1
Missouri .....	62	25	-	-	-	-	42	22	12	2	8	1
Montana .....	103	33	6	1	6	1	40	5	55	23	33	22
Nebraska .....	58	14	9	(D)	-	-	58	14	-	-	-	-
Nevada .....	19	2	3	1	3	1	-	-	14	1	5	1
New Hampshire .....	7	7	7	-	-	-	-	-	-	-	7	7
New Jersey .....	145	2,052	51	619	-	-	109	1,978	45	572	13	52
New Mexico .....	101	1,653	5	1,635	-	-	55	1,647	-	-	58	1,645
New York .....	185	93	44	4	-	-	94	45	88	42	3	6
North Carolina .....	127	32	7	1	-	-	81	24	46	7	27	5
North Dakota .....	9	5	-	-	-	-	5	4	-	-	4	(Z)
Ohio .....	89	37	2	(D)	-	-	18	16	16	16	71	21
Oklahoma .....	29	4	-	-	-	-	27	(D)	-	-	2	(D)
Oregon .....	360	200	-	-	-	-	178	49	87	20	95	131
Pennsylvania .....	73	48	8	5	2	(D)	57	34	12	13	6	3
Rhode Island .....	29	41	8	24	-	-	29	41	-	-	-	-
South Carolina .....	48	8	-	-	-	-	34	7	-	-	14	1
South Dakota .....	12	2	-	-	-	-	9	1	-	-	12	2
Tennessee .....	49	5	28	3	-	-	-	-	42	4	7	1
Texas .....	113	90	20	20	-	-	62	49	20	20	31	22
Utah .....	27	27	-	-	-	-	-	-	27	27	-	-
Vermont .....	57	59	-	-	-	-	40	28	19	32	2	(D)
Virginia .....	143	90	22	4	-	-	32	13	89	75	22	2
Washington .....	314	155	9	5	-	-	256	132	12	6	46	17
West Virginia .....	29	14	29	14	26	13	23	12	6	2	-	-
Wisconsin .....	196	65	-	-	-	-	178	63	18	2	-	-
Wyoming .....	1	(D)	-	-	-	-	1	(D)	-	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	521	1,203	68	64	3	9	346	135	178	1,060	38	16
Region 02 Mid-Atlantic .....	493	2,234	104	631	2	(D)	312	2,068	188	663	17	55
Region 03 South Atlantic-Gulf .....	377	25,686	7	1	-	-	303	491	65	22,568	52	2,648
Region 04 Great Lakes .....	294	2,117	46	5	-	-	211	2,065	55	34	28	18
Region 05 Ohio .....	289	235	75	42	26	13	63	39	146	173	96	39
Region 06 Tennessee .....	62	17	28	3	-	-	12	12	21	2	29	3
Region 07 Upper Mississippi .....	316	183	18	9	-	-	251	176	62	27	18	2
Region 08 Lower Mississippi .....	52	45	4	20	-	-	33	23	4	20	15	3
Region 09 Souris-Red-Rainy .....	24	4	-	-	-	-	2	(D)	18	4	4	(Z)
Region 10 Missouri .....	226	65	15	2	6	(D)	160	41	25	12	73	25
Region 11 Arkansas-White-Red .....	93	20	4	1	4	1	67	(D)	2	(D)	24	6
Region 12 Texas-Gulf .....	113	90	20	20	-	-	62	49	20	20	31	22
Region 13 Rio Grande .....	101	1,653	5	1,635	-	-	55	1,647	-	-	58	1,645
Region 14 Upper Colorado .....	36	12	-	-	-	-	-	-	23	2	13	10
Region 15 Lower Colorado .....	45	44,363	31	33,462	21	19,523	9	1,041	-	-	40	44,362
Region 16 Great Basin .....	44	29	3	1	3	1	-	-	41	28	3	1
Region 17 Pacific Northwest .....	822	388	9	5	-	-	522	199	155	39	149	156
Region 18 California .....	563	198,895	144	119,244	33	33,726	370	148,537	57	15,598	185	49,124
Region 19 Alaska .....	33	49	-	-	-	-	22	48	3	(D)	9	1
Region 20 Hawaii .....	85	328	-	-	-	-	1	(D)	7	35	77	288

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Potatoes, excluding sweet potatoes												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	5,361 5,596	866,288 903,297	914 864	417,732 446,114	466 492	211,425 256,388	3,095 3,727	457,307 592,169	1,220 1,054	66,273 100,654	1,371 1,406	352,375 282,442
<b>2018 DATA</b>													
Alabama .....		22	33	-	-	-	-	22	33	-	-	-	-
Alaska .....		41	203	-	-	-	-	30	202	-	-	11	2
Arizona .....		22	3,109	16	1,808	-	-	21	(D)	-	-	-	(D)
Arkansas .....		12	5	8	3	4	1	-	-	4	2	8	3
California .....		252	25,442	72	20,733	47	14,793	96	2,739	25	22	157	23,430
Colorado .....		171	46,579	12	23,724	8	5,724	102	46,488	16	2,800	67	91
Connecticut .....		13	4	-	-	-	-	-	-	13	4	-	-
Delaware .....		1	(D)	-	-	-	-	1	(D)	1	(D)	-	-
Florida .....		81	4,608	27	5	27	5	81	4,608	-	-	-	-
Georgia .....		99	113	-	-	-	-	99	113	-	-	-	-
Hawaii .....		33	17	-	-	-	-	-	-	-	-	33	17
Idaho .....		576	296,665	231	119,252	65	49,606	261	110,519	88	30,894	318	155,762
Illinois .....		82	(D)	1	(D)	-	-	65	(D)	32	(D)	-	-
Indiana .....		69	(D)	1	(D)	-	-	19	6	33	20	17	(D)
Iowa .....		40	21	-	-	-	-	22	18	-	-	18	4
Kansas .....		50	2,381	-	-	-	-	36	2,377	-	-	14	4
Kentucky .....		42	68	5	7	3	3	7	5	31	60	4	2
Louisiana .....		13	1	-	-	-	-	13	1	-	-	-	-
Maine .....		238	9,195	12	1,904	4	1,900	112	18	125	6,777	3	2,400
Maryland .....		77	364	4	4	4	4	27	14	50	350	-	-
Massachusetts .....		67	359	28	(D)	-	-	28	(D)	39	(D)	-	-
Michigan .....		232	46,712	2	(D)	-	-	171	43,668	65	3,044	-	-
Minnesota .....		89	18,783	8	13,518	-	-	52	17,512	40	1,601	-	-
Mississippi .....		13	10	-	-	-	-	13	10	-	-	-	-
Missouri .....		104	2,028	20	3	2	(D)	61	2,016	35	12	8	1
Montana .....		152	6,923	12	1,083	6	31	50	15	34	500	91	6,420
Nebraska .....		79	20,530	24	20,485	15	20,484	79	20,530	-	-	-	-
Nevada .....		21	(D)	4	(D)	4	(D)	1	(D)	14	1	6	3
New Hampshire .....		-	-	-	-	-	-	-	-	-	-	-	-
New Jersey .....		86	1,272	13	4	-	-	62	740	4	530	23	2
New Mexico .....		141	(D)	1	(D)	-	-	66	10	33	17	42	(D)
New York .....		177	3,140	-	-	-	-	55	1,139	123	1,881	2	(D)
North Carolina .....		132	54	-	-	-	-	105	40	27	8	27	8
North Dakota .....		48	22,294	6	6,529	5	1,250	17	16,005	4	8,852	31	9
Ohio .....		99	170	2	(D)	-	-	43	147	18	20	54	19
Oklahoma .....		65	31	11	1	-	-	63	(D)	-	-	2	(D)
Oregon .....		344	41,695	18	15,436	18	15,436	183	3,786	47	42	120	37,867
Pennsylvania .....		143	1,078	50	50	48	50	102	336	40	538	9	256
Rhode Island .....		17	812	-	-	-	-	12	12	-	-	5	800
South Carolina .....		60	(D)	1	(D)	-	-	60	(D)	1	(D)	-	-
South Dakota .....		19	5	-	-	-	-	9	1	-	-	12	4
Tennessee .....		72	12	29	7	22	7	-	-	43	4	29	7
Texas .....		134	22,010	49	13,284	30	13,280	110	22,001	19	4	5	5
Utah .....		102	145	27	54	27	54	34	55	27	81	68	64
Vermont .....		60	71	2	(D)	-	-	45	(D)	13	(D)	5	3
Virginia .....		145	3,378	-	-	-	-	39	2,193	83	1,183	23	2
Washington .....		480	166,613	144	96,292	91	82,521	329	46,943	35	5,822	158	115,671
West Virginia .....		50	17	23	9	23	9	26	12	24	5	-	-
Wisconsin .....		295	84,234	51	46,251	13	(D)	265	83,968	34	266	-	-
Wyoming .....		1	(D)	-	-	-	-	1	(D)	-	-	-	-
<b>Water Resources Regions</b>													
Region 01 New England .....		346	10,391	40	1,907	4	1,900	159	62	181	7,129	8	3,200
Region 02 Mid-Atlantic .....		459	7,084	69	59	52	54	263	3,836	181	3,291	27	8
Region 03 South Atlantic-Gulf .....		422	22,887	28	(D)	27	5	372	22,805	51	577	27	8
Region 04 Great Lakes .....		487	58,728	29	12,417	12	12	286	53,941	185	4,398	27	628
Region 05 Ohio .....		265	(D)	31	19	26	12	95	(D)	126	106	60	(D)
Region 06 Tennessee .....		97	27	29	7	22	7	23	15	22	2	52	10
Region 07 Upper Mississippi .....		410	97,644	30	58,282	1	(D)	313	96,703	97	942	18	4
Region 08 Lower Mississippi .....		36	2,011	4	2	-	-	30	2,008	4	(D)	2	(D)
Region 09 Souris-Red-Rainy .....		57	9,942	4	7,529	-	-	8	9,479	21	784	31	9
Region 10 Missouri .....		373	56,182	65	40,734	32	22,730	234	49,230	43	9,349	125	(D)
Region 11 Arkansas-White-Red .....		123	18,854	17	7,792	6	7,791	115	18,850	-	-	8	4
Region 12 Texas-Gulf .....		131	5,556	47	5,494	28	5,490	107	5,547	19	4	5	5
Region 13 Rio Grande .....		103	26,782	4	(D)	4	(D)	63	26,763	47	2,817	7	3
Region 14 Upper Colorado .....		68	(D)	1	(D)	-	-	-	-	-	-	68	(D)
Region 15 Lower Colorado .....		55	3,112	16	1,808	-	-	54	(D)	-	-	1	(D)
Region 16 Great Basin .....		132	11,583	37	6,688	37	5,488	35	(D)	41	(D)	83	9,666
Region 17 Pacific Northwest .....		1,471	501,719	391	227,231	168	143,963	812	161,256	177	36,767	621	306,030
Region 18 California .....		252	25,442	72	20,733	47	14,793	96	2,739	25	22	157	23,430
Region 19 Alaska .....		41	203	-	-	-	-	30	202	-	-	11	2
Region 20 Hawaii .....		33	17	-	-	-	-	-	-	-	-	33	17

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All berries												
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>						
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers		
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	
United States .....	2018 2013	11,562 12,763	219,254 227,651	1,859 2,307	61,560 68,040	955 1,040	41,033 41,018	6,929 7,830	136,303 126,613	3,002 3,480	70,367 87,666	2,256 2,514	27,230 24,769
<b>2018 DATA</b>													
Alabama .....		144	549	25	3	-	-	119	524	25	25	-	-
Alaska .....		50	14	3	1	-	-	38	12	4	1	9	1
Arizona .....		16	832	16	832	-	-	16	832	-	-	-	-
Arkansas .....		125	417	14	60	4	4	74	286	19	48	37	93
California .....		934	50,685	401	39,287	224	28,115	645	41,866	51	820	350	9,334
Colorado .....		158	208	8	11	-	-	40	6	26	48	94	153
Connecticut .....		128	176	-	-	-	-	71	50	57	126	-	-
Delaware .....		9	32	-	-	-	-	9	32	1	(D)	-	-
Florida .....		668	13,328	210	3,851	81	3,132	615	13,274	53	54	-	-
Georgia .....		532	16,859	116	2,854	-	-	470	15,425	127	2,122	4	2
Hawaii .....		52	42	-	-	-	-	-	-	17	17	35	25
Idaho .....		166	190	24	30	-	-	39	11	62	122	67	57
Illinois .....		93	1,023	41	96	-	-	57	935	32	86	4	2
Indiana .....		168	721	27	381	7	1	101	561	67	160	-	-
Iowa .....		94	464	-	-	-	-	76	462	-	-	18	2
Kansas .....		39	34	-	-	-	-	15	27	10	2	14	5
Kentucky .....		107	140	23	3	5	1	59	114	42	24	6	3
Louisiana .....		107	333	13	65	-	-	94	305	13	26	13	(D)
Maine .....		355	8,460	6	(D)	-	-	229	(D)	161	5,814	59	472
Maryland .....		93	145	13	40	13	40	54	63	48	83	-	-
Massachusetts .....		530	11,642	156	2,230	287	5,509	31	(D)	466	9,665	47	1,898
Michigan .....		582	12,096	41	795	-	-	502	11,883	100	513	-	-
Minnesota .....		63	436	-	-	-	-	26	375	37	61	-	-
Mississippi .....		102	619	7	14	7	14	83	607	-	-	19	13
Missouri .....		277	398	28	52	17	31	200	351	42	(D)	46	42
Montana .....		151	106	-	-	-	-	126	99	23	(D)	2	(D)
Nebraska .....		77	161	-	-	-	-	77	161	-	-	-	-
Nevada .....		3	(Z)	3	(Z)	3	(Z)	-	-	-	-	3	(Z)
New Hampshire .....		190	535	11	75	7	(D)	113	232	74	287	3	17
New Jersey .....		243	15,473	59	3,512	8	1,260	182	13,086	5	2,337	59	51
New Mexico .....		90	44	-	-	-	-	49	8	-	-	41	36
New York .....		197	1,800	8	111	25	71	81	253	68	1,424	75	155
North Carolina .....		373	12,768	7	4	7	4	142	850	219	11,906	39	39
North Dakota .....		35	21	-	-	-	-	4	2	-	-	31	19
Ohio .....		200	350	15	153	9	135	77	108	75	231	48	11
Oklahoma .....		66	146	11	1	-	-	36	4	-	-	30	142
Oregon .....		1,360	20,229	145	4,516	70	1,151	699	10,588	219	3,867	478	5,850
Pennsylvania .....		341	783	77	183	5	33	202	485	138	300	6	8
Rhode Island .....		39	159	9	(D)	1	(D)	38	57	8	(D)	-	-
South Carolina .....		94	210	26	26	26	26	94	210	-	-	-	-
South Dakota .....		-	-	-	-	-	-	-	-	-	-	-	-
Tennessee .....		193	230	42	6	-	-	22	44	107	66	64	121
Texas .....		369	1,380	59	182	-	-	264	1,147	63	310	62	24
Utah .....		99	234	41	200	-	-	41	200	-	-	68	214
Vermont .....		136	568	2	(D)	-	-	85	438	77	(D)	-	-
Virginia .....		214	438	44	198	22	22	147	214	45	222	22	2
Washington .....		999	14,766	64	1,236	80	1,253	570	11,223	157	1,740	327	2,378
West Virginia .....		126	185	39	58	42	40	28	6	58	97	40	82
Wisconsin .....		375	28,825	25	369	5	25	189	1,005	206	27,496	36	5,976
Wyoming .....		-	-	-	-	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>													
Region 01 New England .....		1,301	21,380	182	2,424	295	5,674	537	8,597	796	16,031	109	2,387
Region 02 Mid-Atlantic .....		844	17,238	176	3,868	48	1,355	599	14,016	222	3,162	65	99
Region 03 South Atlantic-Gulf .....		1,911	44,325	391	6,751	121	3,176	1,524	30,914	421	14,075	62	54
Region 04 Great Lakes .....		1,019	17,026	110	1,411	44	223	712	12,771	270	4,692	98	124
Region 05 Ohio .....		587	876	107	167	47	41	161	283	313	495	113	98
Region 06 Tennessee .....		124	198	21	2	-	-	11	(D)	69	(D)	44	112
Region 07 Upper Mississippi .....		539	27,853	42	462	2	(D)	321	2,534	179	24,740	58	5,980
Region 08 Lower Mississippi .....		188	452	4	30	-	-	154	414	9	33	25	5
Region 09 Souris-Red-Rainy .....		70	79	-	-	-	-	2	(D)	37	61	31	19
Region 10 Missouri .....		333	328	28	40	9	7	245	269	41	(D)	58	47
Region 11 Arkansas-White-Red .....		305	966	42	120	12	28	200	619	72	222	72	244
Region 12 Texas-Gulf .....		334	1,010	59	182	-	-	232	807	40	180	62	24
Region 13 Rio Grande .....		51	256	-	-	-	-	28	242	-	-	23	14
Region 14 Upper Colorado .....		97	163	-	-	-	-	-	-	-	-	97	163
Region 15 Lower Colorado .....		53	843	16	832	-	-	49	839	-	-	4	4
Region 16 Great Basin .....		98	230	44	200	3	(D)	41	200	-	-	67	210
Region 17 Pacific Northwest .....		2,672	35,290	233	5,782	150	2,404	1,430	21,920	461	5,733	874	8,287
Region 18 California .....		934	50,685	401	39,287	224	28,115	645	41,866	51	820	350	9,334
Region 19 Alaska .....		50	14	3	1	-	-	38	12	4	1	9	2
Region 20 Hawaii .....		52	42	-	-	-	-	-	-	17	17	35	25

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Land in orchards, vineyards, and nut trees											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 52,959	5,021,860	15,498	2,637,957	4,489	992,013	31,660	3,245,887	4,809	360,275	23,685	2,136,981
.....	2013 52,018	3,662,131	8,646	1,457,326	2,795	573,598	29,106	2,446,547	3,747	307,541	26,282	1,463,421
<b>2018 DATA</b>												
Alabama .....	111	681	-	-	-	-	61	306	25	300	25	75
Alaska .....	30	12	-	(D)	-	-	29	(D)	2	(D)	-	-
Arizona .....	761	77,091	208	33,652	39	7,881	308	32,567	51	237	421	44,325
Arkansas .....	93	3,668	4	40	-	-	29	1,940	49	1,663	20	65
California .....	30,750	3,703,045	12,862	2,295,643	3,574	851,889	19,191	2,494,486	2,124	246,261	14,979	1,630,376
Colorado .....	908	3,849	8	11	-	-	104	257	84	444	722	3,148
Connecticut .....	125	330	-	-	-	-	112	238	13	92	-	-
Delaware .....	5	(D)	-	-	-	-	5	(D)	1	(D)	-	-
Florida .....	3,102	411,470	843	146,771	243	60,418	2,853	338,747	217	43,331	153	45,385
Georgia .....	867	116,664	158	40,236	29	4,361	821	111,879	71	4,785	-	-
Hawaii .....	746	8,780	74	(D)	5	(D)	39	1,659	109	571	599	6,550
Idaho .....	506	1,675	4	(Z)	20	540	182	192	68	300	261	1,184
Illinois .....	17	5	-	-	-	-	17	5	-	-	-	-
Indiana .....	29	1,227	4	110	-	-	27	(D)	2	(D)	-	-
Iowa .....	65	140	-	-	-	-	26	79	18	54	21	7
Kansas .....	40	61	-	-	-	-	15	3	10	28	15	30
Kentucky .....	28	(D)	-	-	-	-	-	-	26	(D)	2	(D)
Louisiana .....	121	495	13	13	-	-	121	495	-	-	-	-
Maine .....	76	296	3	21	-	-	67	(D)	40	191	6	(D)
Maryland .....	36	241	-	-	-	-	16	201	20	40	-	-
Massachusetts .....	92	1,534	-	-	-	-	48	1,336	38	196	6	2
Michigan .....	367	24,360	21	1,134	-	-	347	24,276	21	84	-	-
Minnesota .....	96	751	-	-	-	-	96	751	-	-	-	-
Mississippi .....	57	3,634	5	2	5	2	51	3,632	6	12	6	(D)
Missouri .....	176	3,768	-	-	-	-	154	3,725	16	54	15	15
Montana .....	421	1,684	-	-	23	(D)	201	557	71	139	172	1,034
Nebraska .....	56	229	-	-	-	-	56	229	-	-	-	-
Nevada .....	57	157	-	-	-	-	33	118	17	37	10	4
New Hampshire .....	19	269	-	-	-	-	8	224	12	164	-	-
New Jersey .....	81	2,861	-	-	-	-	51	1,599	7	1,260	23	2
New Mexico .....	2,900	61,630	243	6,334	100	2,231	2,065	56,304	133	199	1,661	31,327
New York .....	239	8,050	51	1,150	9	255	104	2,718	81	2,813	57	2,519
North Carolina .....	203	1,566	27	(D)	-	-	150	1,305	53	261	-	-
North Dakota .....	33	14	-	-	-	-	-	-	2	(D)	31	(D)
Ohio .....	106	1,295	9	180	-	-	26	611	67	621	33	62
Oklahoma .....	86	129	11	4	-	-	86	129	-	-	-	-
Oregon .....	2,228	90,320	250	13,791	40	2,989	938	24,440	353	8,078	960	57,804
Pennsylvania .....	281	4,164	-	-	-	-	165	1,877	144	2,308	-	-
Rhode Island .....	18	81	-	-	-	-	18	81	4	4	-	-
South Carolina .....	200	8,552	52	754	26	52	148	4,622	29	6,172	25	50
South Dakota .....	31	85	-	-	-	-	24	78	-	-	9	8
Tennessee .....	66	416	-	-	22	374	22	374	44	42	-	-
Texas .....	2,413	80,157	285	26,883	129	19,522	1,662	32,228	238	1,909	653	47,396
Utah .....	517	13,980	12	3,808	4	392	82	9,354	68	5,571	391	5,885
Vermont .....	44	356	-	-	-	-	3	(D)	39	225	2	(D)
Virginia .....	47	218	-	-	-	-	46	(D)	1	(D)	-	-
Washington .....	3,594	381,210	330	62,928	203	39,859	1,020	90,414	374	31,332	2,386	259,619
West Virginia .....	2	(D)	2	(D)	-	-	2	(D)	-	-	-	-
Wisconsin .....	67	291	18	90	18	90	31	111	36	180	-	-
Wyoming .....	46	48	-	-	-	-	-	-	25	37	21	11
<b>Water Resources Regions</b>												
Region 01 New England .....	383	2,662	3	21	-	-	278	2,030	135	752	12	5
Region 02 Mid-Atlantic .....	490	10,370	4	(D)	-	-	322	6,516	174	3,958	23	(D)
Region 03 South Atlantic-Gulf .....	4,478	540,314	1,080	187,788	298	64,831	4,022	458,237	401	54,861	209	45,512
Region 04 Great Lakes .....	569	29,327	71	1,703	24	270	353	24,287	138	2,439	82	2,601
Region 05 Ohio .....	156	2,248	30	921	3	(D)	55	938	109	1,249	12	61
Region 06 Tennessee .....	103	687	-	-	22	374	81	676	22	11	-	-
Region 07 Upper Mississippi .....	280	2,398	-	-	-	-	226	2,250	37	146	18	4
Region 08 Lower Mississippi .....	176	6,819	22	55	5	2	157	6,682	14	123	5	15
Region 09 Souris-Red-Rainy .....	35	15	-	-	-	-	2	(D)	2	(D)	31	(D)
Region 10 Missouri .....	409	1,028	8	11	-	-	229	805	37	(D)	155	149
Region 11 Arkansas-White-Red .....	645	4,424	11	4	-	-	369	2,224	43	1,544	238	656
Region 12 Texas-Gulf .....	2,044	64,074	266	25,496	110	19,512	1,493	29,133	199	1,651	434	34,309
Region 13 Rio Grande .....	2,846	65,622	262	7,721	119	2,241	2,033	47,967	172	457	1,658	43,756
Region 14 Upper Colorado .....	783	3,726	-	-	-	-	27	(D)	70	(D)	686	3,234
Region 15 Lower Colorado .....	883	94,269	232	40,316	39	7,881	375	49,450	78	264	449	44,594
Region 16 Great Basin .....	476	14,054	12	3,808	4	392	81	9,384	58	5,581	364	5,922
Region 17 Pacific Northwest .....	6,699	474,713	584	76,720	286	43,434	2,300	115,501	885	39,869	3,751	319,545
Region 18 California .....	30,728	3,696,321	12,838	2,288,979	3,574	851,889	19,189	2,488,086	2,124	246,261	14,959	1,630,052
Region 19 Alaska .....	30	12	1	(D)	-	-	29	(D)	2	(D)	-	-
Region 20 Hawaii .....	746	8,780	74	(D)	5	(D)	39	1,659	109	571	599	6,550

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Nursery and other horticultural crops (see text)											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States ..... 2018 2013	15,623 (NA)	581,936 (NA)	1,443 (NA)	70,297 (NA)	497 (NA)	36,335 (NA)	10,044 (NA)	360,058 (NA)	2,752 (NA)	119,916 (NA)	4,260 (NA)	131,836 (NA)
<b>2018 DATA</b>												
Alabama .....	185	21,002	15	111	4	40	103	12,872	71	7,006	39	1,637
Alaska .....	85	199	14	45	-	-	66	148	13	40	9	14
Arizona .....	87	5,457	8	1,702	2	(D)	64	3,680	1	(D)	29	2,597
Arkansas .....	97	6,157	-	-	-	-	58	4,644	26	355	23	1,170
California .....	1,951	74,259	624	44,477	221	26,742	1,027	34,096	155	6,152	977	42,361
Colorado .....	417	12,869	39	914	29	496	100	8,496	44	1,850	290	3,131
Connecticut .....	146	3,294	15	90	30	210	102	2,180	91	1,771	4	95
Delaware .....	22	1,665	1	(D)	1	(D)	15	1,587	4	(D)	4	8
Florida .....	2,039	85,141	109	1,109	32	773	1,913	69,510	193	8,771	17	9,091
Georgia .....	356	21,221	18	579	-	-	297	17,256	49	3,402	31	648
Hawaii .....	483	1,582	61	316	4	35	7	80	32	79	448	1,423
Idaho .....	401	28,628	11	3,026	13	2,822	115	2,526	45	2,434	266	23,695
Illinois .....	217	10,815	15	28	-	-	128	8,780	77	2,354	27	24
Indiana .....	159	3,469	27	50	6	3	110	1,812	31	1,585	21	90
Iowa .....	122	2,692	1	(D)	1	(D)	53	1,279	40	1,315	40	110
Kansas .....	120	3,388	15	1,332	4	4	74	2,434	22	1,097	40	47
Kentucky .....	167	1,092	34	43	5	5	29	37	25	253	117	802
Louisiana .....	152	3,446	-	-	-	-	127	2,344	23	832	13	(D)
Maine .....	141	3,069	8	14	-	-	120	1,255	44	1,675	10	139
Maryland .....	149	9,875	9	(D)	1	(D)	119	8,368	16	906	19	641
Massachusetts .....	219	1,960	-	-	-	-	193	1,057	19	593	19	310
Michigan .....	453	22,221	2	(D)	-	-	408	16,235	133	6,767	26	39
Minnesota .....	197	4,480	2	(D)	4	11	163	4,214	22	554	17	162
Mississippi .....	82	5,273	-	-	-	-	45	755	36	4,507	6	11
Missouri .....	217	3,955	30	91	1	(D)	139	2,763	65	1,338	32	101
Montana .....	77	766	-	-	-	-	52	172	-	-	29	597
Nebraska .....	122	2,476	4	168	-	-	108	2,255	-	-	30	222
Nevada .....	17	671	8	112	4	100	7	520	-	-	12	191
New Hampshire .....	212	385	40	42	-	-	130	221	45	126	38	38
New Jersey .....	492	17,831	1	(D)	-	-	408	13,116	115	6,103	62	62
New Mexico .....	159	1,570	9	630	-	-	41	1,283	66	231	69	746
New York .....	556	11,663	46	1,174	24	1,020	298	7,465	122	3,722	195	498
North Carolina .....	462	8,611	-	-	-	-	291	3,661	202	4,987	16	82
North Dakota .....	6	(D)	-	-	-	-	2	(D)	1	(D)	4	19
Ohio .....	333	9,272	20	246	9	9	223	5,091	80	4,235	57	75
Oklahoma .....	171	14,794	6	113	4	8	98	10,427	31	2,916	50	1,455
Oregon .....	1,079	53,291	41	3,352	13	(D)	638	28,365	281	13,585	293	11,583
Pennsylvania .....	542	1,999	68	191	11	24	409	1,359	72	456	89	196
Rhode Island .....	34	1,426	-	-	-	-	25	1,075	5	690	5	(D)
South Carolina .....	260	18,039	24	1,880	17	130	182	14,181	64	4,043	52	311
South Dakota .....	40	893	1	(D)	1	(D)	27	556	4	6	11	331
Tennessee .....	207	8,145	2	(D)	2	(D)	83	3,617	95	4,425	66	161
Texas .....	532	46,750	29	2,235	9	249	413	35,651	93	10,331	87	8,776
Utah .....	141	2,518	13	184	1	(D)	21	(D)	9	288	130	1,353
Vermont .....	60	141	5	5	5	5	34	85	18	46	15	(D)
Virginia .....	325	3,806	11	(D)	10	10	217	2,201	60	1,613	64	53
Washington .....	738	27,845	35	4,055	7	(D)	429	9,973	51	2,282	311	15,908
West Virginia .....	62	152	-	-	-	-	32	103	9	28	44	44
Wisconsin .....	322	11,485	22	1,256	22	1,256	298	9,215	52	2,572	7	8
Wyoming .....	10	(D)	-	-	-	-	3	(D)	-	-	-	-
<b>Water Resources Regions</b>												
Region 01 New England .....	769	10,178	63	146	30	210	581	5,805	206	4,877	82	749
Region 02 Mid-Atlantic .....	1,658	44,340	86	1,538	45	1,065	1,233	33,571	312	12,284	278	1,070
Region 03 South Atlantic-Gulf .....	3,337	155,435	166	3,679	49	903	2,794	115,084	577	31,835	174	11,758
Region 04 Great Lakes .....	974	31,314	38	1,476	15	1,255	771	19,443	247	12,756	162	343
Region 05 Ohio .....	720	13,490	111	595	23	49	302	5,256	200	7,214	269	1,141
Region 06 Tennessee .....	261	7,454	1	(D)	5	60	149	5,995	94	1,527	49	139
Region 07 Upper Mississippi .....	830	27,924	38	(D)	18	27	612	23,172	179	5,408	74	308
Region 08 Lower Mississippi .....	170	6,675	-	-	-	-	149	5,599	22	814	12	(D)
Region 09 Souris-Red-Rainy .....	15	92	-	-	-	-	10	78	2	(D)	3	(D)
Region 10 Missouri .....	554	16,326	47	1,063	11	458	375	12,263	80	3,750	164	1,193
Region 11 Arkansas-White-Red .....	451	23,077	12	1,438	4	(D)	216	16,526	109	3,709	149	2,861
Region 12 Texas-Gulf .....	509	46,205	29	2,235	6	240	388	35,311	90	10,121	92	8,781
Region 13 Rio Grande .....	93	1,732	9	630	3	9	49	1,534	35	(D)	26	702
Region 14 Upper Colorado .....	294	3,230	28	113	23	46	11	11	12	52	271	3,167
Region 15 Lower Colorado .....	112	5,907	25	2,140	16	(D)	68	3,684	1	(D)	50	3,043
Region 16 Great Basin .....	116	3,230	19	296	3	123	28	1,405	9	288	100	1,585
Region 17 Pacific Northwest .....	2,260	109,730	87	10,433	33	4,486	1,212	41,002	377	18,301	886	51,017
Region 18 California .....	1,932	73,817	609	44,039	209	26,418	1,023	34,092	155	6,152	962	41,923
Region 19 Alaska .....	85	199	14	45	-	-	66	148	13	40	9	14
Region 20 Hawaii .....	483	1,582	61	316	4	35	7	80	32	79	448	1,423

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All other crops <sup>2</sup> (see text)											
	Farms	Irrigated acres harvested	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 7,006	1,783,325	1,178	311,472	485	116,943	3,368	624,442	1,435	366,646	2,781	861,828
	2013 26,309	2,320,822	2,789	329,982	884	140,989	15,576	1,113,366	5,029	351,632	8,450	1,006,583
<b>2018 DATA</b>												
Alabama .....	-	-	-	-	-	-	-	-	-	-	-	-
Alaska .....	2	(D)	-	-	-	-	1	(D)	2	(D)	-	-
Arizona .....	132	30,180	31	4,405	-	-	69	24,551	7	362	85	19,691
Arkansas .....	16	53	2	(D)	-	-	7	44	-	-	9	9
California .....	590	179,469	123	35,129	6	2,139	331	65,225	121	35,745	280	113,079
Colorado .....	456	36,649	163	15,280	66	6,816	191	20,250	27	54	238	16,345
Connecticut .....	93	817	-	-	-	-	87	432	5	(D)	1	(D)
Delaware .....	5	(D)	1	(D)	-	-	1	(D)	-	-	4	8
Florida .....	183	419,337	-	-	-	-	145	(D)	14	(D)	25	204,431
Georgia .....	37	9,808	-	-	-	-	33	9,804	4	4	-	-
Hawaii .....	102	201	-	-	-	-	-	-	3	3	99	198
Idaho .....	664	207,665	98	39,821	23	15,767	240	64,964	49	9,875	494	134,046
Illinois .....	69	23,587	34	18,622	-	-	69	23,587	-	-	-	-
Indiana .....	132	30,639	18	1,710	-	-	114	29,479	1	(D)	18	(D)
Iowa .....	21	1,734	17	1,462	-	-	21	1,734	-	-	-	-
Kansas .....	102	44,828	18	12,489	-	-	102	44,828	-	-	-	-
Kentucky .....	76	1,126	2	(D)	-	-	21	(D)	29	398	27	(D)
Louisiana .....	13	13	-	-	-	-	-	-	-	-	13	13
Maine .....	38	210	3	3	-	-	30	69	8	141	-	-
Maryland .....	36	1,242	-	-	-	-	7	523	29	719	-	-
Massachusetts .....	136	772	-	-	10	380	58	88	50	656	28	28
Michigan .....	113	3,756	30	555	21	105	93	2,998	31	1,208	-	-
Minnesota .....	17	7,900	-	-	-	-	3	5,100	14	2,800	-	-
Mississippi .....	16	(D)	-	-	-	-	10	10	-	-	6	(D)
Missouri .....	46	612	20	(D)	18	36	21	(D)	25	(D)	-	-
Montana .....	369	67,616	26	10,102	13	2,476	33	592	8	3,525	333	63,504
Nebraska .....	427	106,368	125	36,001	20	10,300	406	100,816	16	(D)	33	9,552
Nevada .....	58	21,962	20	4,625	5	6,075	23	18,312	-	-	35	3,650
New Hampshire .....	32	36	-	-	-	-	32	36	-	-	-	-
New Jersey .....	81	1,311	7	350	-	-	61	727	7	350	13	234
New Mexico .....	222	8,234	36	6,662	34	2,040	45	2,539	33	33	144	5,662
New York .....	222	2,623	32	225	-	-	93	328	123	2,220	6	75
North Carolina .....	253	10,072	-	-	-	-	20	1,307	237	9,957	8	8
North Dakota .....	81	28,698	-	-	-	-	5	5,040	-	-	80	26,298
Ohio .....	23	276	23	276	23	276	-	-	23	276	-	-
Oklahoma .....	65	12,605	14	5,480	-	-	52	7,925	-	-	13	4,680
Oregon .....	773	205,147	49	22,209	74	17,930	383	64,408	244	76,994	220	65,105
Pennsylvania .....	192	2,270	81	1,580	46	(D)	69	1,503	128	772	-	-
Rhode Island .....	11	14	-	-	-	-	11	14	-	-	-	-
South Carolina .....	66	1,730	-	-	-	-	52	1,716	-	-	14	14
South Dakota .....	24	5,564	1	(D)	1	(D)	22	(D)	1	(D)	1	(D)
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	223	59,826	13	15,320	3	2,400	160	24,660	19	760	48	34,650
Utah .....	114	3,271	27	135	27	135	28	1,285	27	27	87	2,694
Vermont .....	7	51	-	-	-	-	6	8	5	(D)	-	-
Virginia .....	92	1,803	-	-	-	-	22	418	70	1,385	-	-
Washington .....	444	196,991	144	73,884	75	45,220	177	61,593	37	21,919	307	119,749
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	10	(D)	10	50	10	50	10	50	10	50	-	-
Wyoming .....	122	45,491	10	3,030	10	3,030	4	1,892	28	10,600	112	34,979
<b>Water Resources Regions</b>												
Region 01 New England .....	315	1,896	3	3	10	380	222	643	68	1,209	29	(D)
Region 02 Mid-Atlantic .....	387	6,548	71	2,261	46	98	183	3,397	192	2,914	17	242
Region 03 South Atlantic-Gulf .....	647	442,766	-	-	-	-	282	45,678	325	193,829	53	204,459
Region 04 Great Lakes .....	230	5,121	69	(D)	31	155	152	3,334	93	2,212	6	75
Region 05 Ohio .....	212	24,142	64	2,078	23	276	73	22,475	95	867	45	900
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 07 Upper Mississippi .....	150	36,537	51	20,084	-	-	133	(D)	18	(D)	-	-
Region 08 Lower Mississippi .....	30	(D)	2	(D)	-	-	21	(D)	-	-	9	(D)
Region 09 Souris-Red-Rainy .....	15	4,400	-	-	-	-	1	(D)	14	(D)	-	-
Region 10 Missouri .....	1,319	292,550	330	67,732	101	23,680	694	140,405	50	15,515	629	145,570
Region 11 Arkansas-White-Red .....	253	65,891	17	16,304	-	-	179	59,788	8	40	70	6,307
Region 12 Texas-Gulf .....	166	42,936	13	15,320	3	2,400	103	7,770	19	760	44	34,406
Region 13 Rio Grande .....	189	4,298	35	2,529	34	2,040	45	2,539	33	33	111	1,726
Region 14 Upper Colorado .....	140	5,560	25	(D)	24	48	-	-	27	54	113	5,506
Region 15 Lower Colorado .....	134	30,680	33	4,905	-	-	69	24,551	7	362	87	20,191
Region 16 Great Basin .....	152	27,294	47	4,760	32	6,210	58	19,947	27	27	102	8,055
Region 17 Pacific Northwest .....	1,975	612,779	297	135,920	175	79,517	821	190,689	333	109,388	1,089	321,557
Region 18 California .....	588	178,969	121	34,629	6	2,139	331	65,225	121	35,745	278	112,579
Region 19 Alaska .....	2	(D)	-	-	-	-	1	(D)	2	(D)	-	-
Region 20 Hawaii .....	102	201	-	-	-	-	-	-	3	3	99	198

See footnote(s) at end of table.

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**Table 37. Chemigation and Water Source for Selected Crops in the Open and Irrigated Pastureland: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Irrigated pastureland, all types											
	Farms	Irrigated acres	Chemigation				Water source <sup>1</sup>					
			Commercial fertilizer		Pesticide application		Ground water from wells		On-farm surface water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
United States .....	2018 51,644	4,004,854	1,792	112,226	510	14,626	10,964	807,532	7,836	1,038,599	35,358	2,241,043
	2013 42,733	3,034,409	658	63,553	108	6,557	9,860	585,071	5,619	931,158	29,526	1,655,905
<b>2018 DATA</b>												
Alabama .....	7	128	-	-	-	-	3	120	-	-	4	8
Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Arizona .....	1,117	28,650	82	1,915	-	-	423	18,380	32	1,056	711	10,877
Arkansas .....	57	10,456	-	-	-	-	23	886	29	9,560	5	10
California .....	5,237	699,056	106	4,124	23	92	1,875	217,865	793	196,118	3,197	331,518
Colorado .....	5,243	407,293	110	12,514	24	120	385	40,518	902	89,454	4,188	288,337
Connecticut .....	3	60	-	-	-	-	3	(D)	3	(D)	-	-
Delaware .....	22	110	-	-	-	-	22	110	-	-	-	-
Florida .....	583	33,841	8	1,200	-	-	518	16,048	53	393	15	17,580
Georgia .....	164	7,751	-	-	-	-	86	3,284	78	4,467	-	-
Hawaii .....	213	3,895	-	-	-	-	-	-	3	(D)	210	(D)
Idaho .....	8,552	450,482	136	6,073	42	266	1,106	59,428	1,239	132,440	6,651	263,165
Illinois .....	17	85	-	-	-	-	17	85	-	-	-	-
Indiana .....	36	162	-	-	-	-	18	54	18	108	-	-
Iowa .....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas .....	33	9,271	14	868	-	-	33	9,271	-	-	-	-
Kentucky .....	26	52	-	-	-	-	-	-	26	52	-	-
Louisiana .....	27	4,910	-	-	-	-	13	3,510	14	1,400	-	-
Maine .....	59	59	-	-	-	-	59	59	29	29	-	-
Maryland .....	8	(D)	-	-	-	-	8	(D)	-	-	-	-
Massachusetts .....	28	336	-	-	-	-	-	-	28	336	-	-
Michigan .....	50	5,550	20	5,200	-	-	10	250	40	5,300	-	-
Minnesota .....	19	228	-	-	-	-	19	228	-	-	-	-
Mississippi .....	26	525	-	-	-	-	7	(D)	6	(D)	13	(D)
Missouri .....	125	16,576	18	108	-	-	51	12,900	58	3,348	16	328
Montana .....	4,090	507,345	88	6,428	101	2,497	391	6,948	612	189,565	3,156	310,901
Nebraska .....	772	73,612	60	11,295	16	96	506	50,599	60	805	225	22,536
Nevada .....	776	137,136	29	1,440	30	2,400	219	18,614	234	68,175	376	53,474
New Hampshire .....	11	18	-	-	-	-	11	18	-	-	-	-
New Jersey .....	58	760	22	616	-	-	58	760	-	-	-	-
New Mexico .....	3,216	99,552	223	6,157	68	238	775	27,233	444	12,874	2,174	60,106
New York .....	23	23	-	-	-	-	23	23	-	-	-	-
North Carolina .....	94	5,796	-	-	-	-	27	1,080	67	4,716	-	-
North Dakota .....	-	-	-	-	-	-	-	-	-	-	-	-
Ohio .....	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Oklahoma .....	229	69,960	25	125	25	125	151	61,890	27	1,145	51	6,925
Oregon .....	5,949	344,462	232	5,505	48	480	1,069	52,811	1,079	75,388	3,952	216,263
Pennsylvania .....	24	376	-	-	-	-	-	-	24	376	-	-
Rhode Island .....	10	(D)	-	-	-	-	10	(D)	-	-	-	-
South Carolina .....	140	4,669	-	-	-	-	115	3,469	51	2,552	-	-
South Dakota .....	108	8,681	-	-	-	-	-	-	41	4,215	86	4,466
Tennessee .....	-	-	-	-	-	-	-	-	-	-	-	-
Texas .....	2,193	223,515	176	25,319	99	7,770	1,530	132,409	176	34,879	546	58,227
Utah .....	6,324	255,176	162	2,079	-	-	480	11,645	680	28,126	5,420	217,987
Vermont .....	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Washington .....	3,545	139,408	241	12,953	30	522	808	36,562	437	12,715	2,518	95,517
West Virginia .....	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin .....	19	399	-	-	-	-	19	399	-	-	-	-
Wyoming .....	2,407	454,414	40	8,307	4	20	93	20,017	549	157,737	1,844	279,591
<b>Water Resources Regions</b>												
Region 01 New England .....	111	483	-	-	-	-	83	117	60	395	-	-
Region 02 Mid-Atlantic .....	135	1,277	22	616	-	-	111	901	24	376	-	-
Region 03 South Atlantic-Gulf .....	984	52,584	8	1,200	-	-	726	23,886	255	(D)	32	(D)
Region 04 Great Lakes .....	52	5,606	20	5,200	-	-	10	250	42	5,356	-	-
Region 05 Ohio .....	28	54	-	-	-	-	-	-	28	54	-	-
Region 06 Tennessee .....	23	115	-	-	-	-	23	115	-	-	-	-
Region 07 Upper Mississippi .....	99	1,194	-	-	-	-	73	766	26	428	-	-
Region 08 Lower Mississippi .....	58	5,357	-	-	-	-	39	3,947	14	1,400	5	10
Region 09 Souris-Red-Rainy .....	23	437	-	-	-	-	23	437	-	-	-	-
Region 10 Missouri .....	6,420	789,649	217	37,010	73	1,725	1,075	102,726	1,002	262,836	4,550	429,719
Region 11 Arkansas-White-Red .....	1,178	212,768	83	13,057	45	2,125	494	128,841	216	41,824	488	44,103
Region 12 Texas-Gulf .....	1,913	165,828	132	13,255	79	5,770	1,347	103,243	121	6,259	484	56,326
Region 13 Rio Grande .....	2,618	113,609	189	6,055	34	204	722	21,898	450	18,281	1,652	80,841
Region 14 Upper Colorado .....	6,703	570,461	139	1,249	34	34	92	3,571	997	152,020	5,867	417,173
Region 15 Lower Colorado .....	1,469	37,676	82	1,915	-	-	491	21,835	142	5,193	885	12,311
Region 16 Great Basin .....	5,004	295,090	110	1,926	30	2,400	657	38,906	626	85,185	3,929	178,527
Region 17 Pacific Northwest .....	19,000	959,158	684	26,619	192	2,276	2,989	119,955	2,995	228,214	13,830	618,766
Region 18 California .....	5,613	789,613	106	4,124	23	92	2,009	236,138	835	217,468	3,426	382,452
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	213	3,895	-	-	-	-	-	-	3	(D)	210	(D)

<sup>1</sup> Column totals may exceed total farms and acres of crop because more than one water source could be reported.

<sup>2</sup> 2013 data include nursery and other horticultural crops grown in the open.

**Table 38. Selected Crops Irrigated and Harvested in the Open and Irrigated Pastureland by Primary Method of Water Distribution – United States: 2018**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Irrigated crop	All methods		Pressure systems		Gravity systems					
	Farms	Acres	Farms	Acres	Farms	Acres				
Corn for grain or seed .....	31,828	11,610,238	26,186	10,052,218	5,642	1,558,020				
Corn for silage or greenchop .....	7,930	1,648,789	4,654	991,891	3,276	656,898				
Sorghum for grain or seed .....	1,594	286,851	1,220	228,197	374	58,654				
Wheat for grain or seed .....	8,760	2,311,703	6,363	1,831,164	2,397	480,539				
Soybeans for beans .....	21,316	8,215,031	16,326	4,496,694	4,990	3,718,337				
Beans, dry edible .....	2,275	416,608	1,558	328,169	717	88,439				
Rice .....	3,813	2,370,113	33	10,600	3,780	2,359,513				
Other small grains (barley, oats, rye, etc.) .....	5,767	1,026,289	3,372	713,678	2,395	312,611				
Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) .....	48,697	6,165,406	25,263	3,790,205	23,434	2,375,201				
All other hay (dry hay, greenchop, and silage) .....	25,402	3,263,946	11,877	1,212,542	13,525	2,051,404				
Peanuts .....	1,701	460,155	1,629	447,984	72	12,171				
Cotton .....	6,918	3,697,167	4,709	2,325,716	2,209	1,371,451				
Land in vegetables .....	23,087	3,127,705	20,405	2,741,028	2,682	386,677				
Selected vegetables:										
Sweet corn .....	5,476	285,749	4,725	262,282	751	23,468				
Tomatoes in the open .....	8,879	288,114	7,793	249,269	1,086	38,846				
Lettuce and romaine .....	4,589	277,616	4,230	217,153	359	60,464				
Potatoes, excluding sweet potatoes .....	5,361	866,288	4,881	846,915	480	19,373				
All berries .....	11,562	219,254	10,850	211,611	712	7,643				
Land in orchards, vineyards, and nut trees .....	52,959	5,021,860	45,031	4,655,112	7,928	366,748				
Nursery and other horticultural crops (see text) .....	15,623	581,936	14,971	539,945	652	41,991				
All other crops (see text) .....	7,006	1,783,325	5,229	967,090	1,777	816,235				
Irrigated pastureland, all types .....	51,644	4,004,854	19,940	998,032	31,704	3,006,822				
	Pressure irrigation distribution systems <sup>1</sup>									
Irrigated crop	Hand move		Solid or permanent set		Side roll or wheel line		Big gun		Low-flow irrigation (drip, trickle, or micro sprinklers)	
	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>
Corn for grain or seed .....	0.3	(Z)	0.5	0.1	0.7	0.4	1.4	0.3	0.7	0.3
Corn for silage or greenchop .....	1.1	(Z)	0.2	0.4	0.8	0.3	4.0	1.8	0.8	0.3
Sorghum for grain or seed .....	1.6	(Z)	2.1	1.6	0.2	0.1	0.3	(Z)	2.3	0.9
Wheat for grain or seed .....	1.3	0.9	0.6	0.3	7.1	4.9	0.4	0.1	0.7	0.9
Soybeans for beans .....	-	-	0.2	(Z)	0.2	0.1	1.0	0.2	0.9	0.2
Beans, dry edible .....	4.1	0.5	0.3	(Z)	7.8	6.0	1.1	0.5	8.4	4.3
Rice .....	-	-	(Z)	(D)	0.3	(D)	-	-	-	-
Other small grains (barley, oats, rye, etc.) .....	3.0	0.6	0.7	0.5	14.3	6.1	0.2	(Z)	0.3	0.3
Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) .....	5.5	1.0	1.0	0.2	16.2	10.7	1.3	0.4	0.2	0.6
All other hay (dry hay, greenchop, and silage) .....	7.4	0.8	2.4	0.4	8.7	4.4	4.6	1.7	1.1	0.4
Peanuts .....	-	-	-	-	1.4	0.4	0.4	1.8	4.5	0.1
Cotton .....	-	-	1.0	1.0	0.9	0.3	0.5	0.4	4.7	2.7
Land in vegetables .....	14.1	1.4	4.5	5.0	1.4	2.0	3.3	2.9	50.2	30.3
Selected vegetables:										
Sweet corn .....	17.4	2.2	5.9	1.7	1.1	0.8	10.2	5.3	33.1	9.6
Tomatoes in the open .....	14.2	2.0	2.5	0.6	0.2	(Z)	1.8	0.1	62.8	80.8
Lettuce and romaine .....	18.5	3.4	5.8	10.4	0.3	(Z)	1.4	8.9	58.0	40.3
Potatoes, excluding sweet potatoes .....	17.3	0.9	5.0	1.5	3.1	5.8	3.4	0.8	42.8	0.9
All berries .....	13.3	1.7	14.9	38.8	0.3	(Z)	1.3	2.8	57.3	50.0
Land in orchards, vineyards, and nut trees .....	3.6	0.5	11.4	10.3	0.2	(Z)	0.2	(Z)	65.5	78.5
Nursery and other horticultural crops (see text) .....	23.5	5.2	15.6	13.5	1.7	5.8	3.1	9.8	39.6	19.6
All other crops (see text) .....	9.3	1.5	2.9	2.0	4.2	3.3	6.5	3.8	20.0	5.5
Irrigated pastureland, all types .....	11.9	1.8	5.1	0.5	7.2	4.9	3.5	1.7	0.8	0.2

See footnote(s) at end of table.

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**Table 38. Selected Crops Irrigated and Harvested in the Open and Irrigated Pastureland by Primary Method of Water Distribution – United States: 2018 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Irrigated crop	Pressure irrigation distribution systems <sup>1</sup> - con.									
	Center pivot and linear move tower systems								Other pressure systems	
	Less than 15 psi		15 to 29 psi		30 to 59 psi		60 psi or more			
	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>
Corn for grain or seed .....	3.4	3.5	22.5	25.6	46.8	52.3	5.7	4.0	0.3	0.1
Corn for silage or greenchop .....	2.6	3.4	18.8	23.0	23.1	24.8	6.2	5.9	1.2	0.2
Sorghum for grain or seed .....	13.9	13.3	39.1	47.1	16.7	16.3	0.3	0.2	-	-
Wheat for grain or seed .....	6.6	5.4	24.5	30.1	26.6	31.6	4.3	4.9	0.6	0.2
Soybeans for beans .....	2.3	1.4	17.0	12.3	48.9	37.4	5.8	3.2	0.2	(Z)
Beans, dry edible .....	1.0	2.0	12.2	20.1	29.4	41.9	4.1	3.3	0.1	0.1
Rice .....	0.3	0.1	-	-	-	-	-	-	0.2	0.2
Other small grains (barley, oats, rye, etc.) .....	1.9	3.2	13.2	19.3	18.8	34.7	4.5	3.7	1.5	1.2
Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) .....	1.8	2.6	7.8	15.4	14.5	26.2	2.6	3.7	0.9	0.6
All other hay (dry hay, greenchop, and silage) .....	2.9	4.0	7.4	12.2	8.9	11.7	1.5	1.1	1.8	0.5
Peanuts .....	8.0	3.3	35.3	33.5	42.1	55.9	4.1	2.4	-	-
Cotton .....	12.0	12.1	29.0	29.6	18.4	15.7	1.7	1.1	-	-
Land in vegetables .....	1.2	1.1	3.0	11.0	5.0	27.6	2.0	4.9	3.5	1.4
Selected vegetables:										
Sweet corn .....	0.6	0.1	4.5	16.9	7.7	39.8	4.5	13.7	1.4	1.6
Tomatoes in the open .....	0.7	(Z)	1.6	0.1	0.5	1.2	0.7	1.1	2.7	0.4
Lettuce and romaine .....	0.1	(Z)	1.4	0.3	1.1	9.0	0.8	2.4	4.8	3.5
Potatoes, excluding sweet potatoes .....	0.9	1.4	4.6	26.9	8.9	51.1	2.4	8.3	2.7	0.1
All berries .....	-	-	0.6	0.2	0.9	0.5	0.4	0.2	4.9	2.4
Land in orchards, vineyards, and nut trees .....	(Z)	(Z)	0.1	0.2	0.2	0.1	0.1	(Z)	3.8	3.0
Nursery and other horticultural crops (see text) .....	0.4	0.9	1.7	11.9	2.3	18.8	0.5	1.8	7.5	5.3
All other crops (see text) .....	1.0	0.7	12.4	15.4	14.8	20.6	2.3	1.2	1.2	0.3
Irrigated pastureland, all types .....	0.7	1.0	1.9	5.0	3.6	7.2	1.1	1.5	2.9	1.1
Irrigated crop	Gravity irrigation distribution systems <sup>1</sup>									
	Down rows or furrows from unlined open ditches		Down rows or furrows from lined open ditches		Down rows or furrows from poly pipe, lay-flat tubing, or above or underground pipe		Controlled flooding within field borders from unlined open ditches			
	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>
Corn for grain or seed .....	3.1	1.2	1.3	0.5	12.1	10.6	0.7	0.8	0.8	0.8
Corn for silage or greenchop .....	8.7	7.0	5.0	4.7	11.2	8.2	4.9	4.6	4.6	4.6
Sorghum for grain or seed .....	3.8	2.5	3.6	(D)	12.5	11.3	0.4	(D)	(D)	(D)
Wheat for grain or seed .....	5.2	5.7	5.2	2.9	6.3	3.1	6.1	4.6	4.6	4.6
Soybeans for beans .....	1.0	0.6	(Z)	(Z)	21.5	43.7	0.2	0.2	0.2	0.2
Beans, dry edible .....	10.6	8.1	10.7	4.7	7.2	5.6	0.9	0.8	0.8	0.8
Rice .....	2.2	1.4	0.5	0.3	5.5	4.0	37.0	36.4	36.4	36.4
Other small grains (barley, oats, rye, etc.) .....	5.1	3.4	3.4	2.6	7.3	3.9	14.0	12.9	12.9	12.9
Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) .....	8.2	4.8	3.2	2.6	9.1	4.4	14.5	15.8	15.8	15.8
All other hay (dry hay, greenchop, and silage) .....	8.2	6.8	1.4	2.4	5.7	3.3	18.8	29.8	29.8	29.8
Peanuts .....	-	-	-	-	2.8	2.0	-	-	-	-
Cotton .....	5.7	5.5	4.7	5.1	17.3	24.3	1.5	1.2	1.2	1.2
Land in vegetables .....	3.2	4.7	1.5	3.8	4.0	2.9	0.9	0.2	0.2	0.2
Selected vegetables:										
Sweet corn .....	5.7	1.1	2.3	1.2	3.0	0.8	0.3	1.6	1.6	1.6
Tomatoes in the open .....	4.5	10.2	0.6	(Z)	3.7	3.2	1.1	(Z)	(Z)	(Z)
Lettuce and romaine .....	3.1	4.2	1.4	11.0	1.5	4.6	0.2	(D)	(D)	(D)
Potatoes, excluding sweet potatoes .....	2.6	1.4	0.6	(Z)	2.9	0.8	0.4	(Z)	(Z)	(Z)
All berries .....	1.1	0.1	-	-	2.2	0.2	0.4	1.4	1.4	1.4
Land in orchards, vineyards, and nut trees .....	2.8	0.7	0.5	0.4	3.6	1.9	2.7	0.7	0.7	0.7
Nursery and other horticultural crops (see text) .....	0.7	0.7	0.7	3.5	1.8	1.2	0.2	0.2	0.2	0.2
All other crops (see text) .....	8.7	9.7	4.6	3.8	5.8	4.9	3.2	26.4	26.4	26.4
Irrigated pastureland, all types .....	6.9	4.8	1.7	2.5	5.4	2.5	15.4	23.3	23.3	23.3

See footnote(s) at end of table.

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**Table 38. Selected Crops Irrigated and Harvested in the Open and Irrigated Pastureland by Primary Method of Water Distribution – United States: 2018 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Irrigated crop	Gravity irrigation distribution systems <sup>1</sup> - con.									
	Controlled flooding within field borders from lined open ditches		Controlled flooding within field borders from poly pipe, lay-flat tubing, or above ground pipe		Controlled flooding within field borders from underground pipe		Uncontrolled flooding of rangeland, pastureland, etc. including open discharge from well or pump		Other gravity systems	
	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>	Percent of farms	Percent of acres <sup>2</sup>
Corn for grain or seed .....	0.1	(Z)	0.3	0.2	0.1	0.1	-	-	-	-
Corn for silage or greenchop .....	1.7	1.8	0.7	0.4	8.7	12.6	-	-	0.6	0.6
Sorghum for grain or seed .....	0.4	5.2	0.7	0.4	2.1	0.2	-	-	-	-
Wheat for grain or seed .....	2.5	2.7	0.6	0.3	1.3	1.3	0.2	(D)	(Z)	(D)
Soybeans for beans .....	-	-	0.3	0.3	0.3	0.3	-	-	-	-
Beans, dry edible .....	1.5	1.5	-	-	0.6	0.6	-	-	-	-
Rice .....	3.0	2.6	23.3	25.1	26.4	28.6	0.4	0.1	0.8	1.0
Other small grains (barley, oats, rye, etc.) .....	4.2	1.9	1.4	0.5	3.5	3.5	1.9	1.7	0.8	0.1
Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) .....	4.8	5.6	2.0	1.2	2.2	2.3	2.7	1.4	1.4	0.5
All other hay (dry hay, greenchop, and silage) .....	3.6	3.5	3.5	1.4	2.4	4.8	8.2	10.3	1.5	0.5
Peanuts .....	-	-	-	-	-	-	1.5	0.6	-	-
Cotton .....	0.5	0.3	0.8	0.4	0.8	(Z)	0.4	0.1	0.3	0.1
Land in vegetables .....	0.2	0.3	0.6	0.1	(Z)	(D)	0.1	(Z)	1.1	0.3
Selected vegetables:										
Sweet corn .....	0.1	(D)	1.1	0.8	-	-	-	-	1.2	(D)
Tomatoes in the open .....	-	-	1.0	(Z)	-	-	0.1	(Z)	1.4	(Z)
Lettuce and romaine .....	(Z)	(D)	-	-	-	-	-	-	1.6	(Z)
Potatoes, excluding sweet potatoes .....	-	-	0.6	(Z)	-	-	0.1	(Z)	1.8	(Z)
All berries .....	0.6	0.8	0.7	(Z)	0.2	1.0	(Z)	(Z)	0.8	(Z)
Land in orchards, vineyards, and nut trees .....	1.5	1.2	0.5	0.4	2.5	1.9	0.4	0.1	0.5	(Z)
Nursery and other horticultural crops (see text) .....	(Z)	0.8	0.1	0.8	-	-	0.1	(Z)	0.4	(Z)
All other crops (see text) .....	1.1	0.4	0.1	(Z)	0.7	0.3	0.7	0.1	0.5	0.2
Irrigated pastureland, all types .....	2.2	1.8	2.3	1.0	2.1	3.6	23.3	34.7	2.0	0.9

<sup>1</sup> Percentages are calculated across all methods by irrigated crop and primary method. Data not comparable to previous farm and ranch irrigation survey published data.

<sup>2</sup> The sum of percent acres irrigated across systems for a crop may not add to 100 percent.



**Table 39. Water Management Practices Used by Producers with Gravity Systems for Acres in the Open: 2018 and 2013**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	All farms	Acres irrigated <sup>1</sup>	Any water management practice used <sup>2</sup> (see text)		Water management practice used <sup>2</sup> (see text)	
			Farms	Acres irrigated	Tailwater pits, diking, time limits, or alternative row irrigation	
					Farms	Acres irrigated
United States .....2018	85,888	20,187,048	25,799	7,274,584	16,720	2,834,636
.....2013	85,159	21,504,684	33,629	9,851,730	20,990	4,205,281
<b>2018 DATA</b>						
Alabama .....	94	12,046	63	4,328	50	(D)
Alaska .....	23	89	1	(D)	1	(D)
Arizona .....	2,347	837,762	891	580,162	368	132,971
Arkansas .....	2,667	3,891,251	958	1,546,902	511	600,643
California .....	13,717	3,888,723	5,385	1,609,987	3,339	690,058
Colorado .....	11,185	1,098,563	2,420	222,860	1,961	183,278
Connecticut .....	115	246	-	-	-	-
Delaware .....	12	(D)	4	4	-	-
Florida .....	455	532,796	77	35,260	36	7,830
Georgia .....	210	2,143	34	57	23	46
Hawaii .....	416	2,449	7	42	-	-
Idaho .....	8,759	836,989	2,709	275,697	2,040	142,584
Illinois .....	27	(D)	-	-	-	-
Indiana .....	25	1,188	-	-	-	-
Iowa .....	29	50	18	18	18	18
Kansas .....	777	66,053	324	36,471	247	25,634
Kentucky .....	63	2,992	-	-	-	-
Louisiana .....	1,318	975,326	426	395,480	153	105,605
Maine .....	55	145	3	6	-	-
Maryland .....	92	268	-	-	-	-
Massachusetts .....	238	6,593	29	836	28	(D)
Michigan .....	61	81	20	40	-	-
Minnesota .....	35	2,829	-	-	-	-
Mississippi .....	1,019	1,373,391	437	710,985	112	115,599
Missouri .....	825	810,544	283	384,666	91	54,382
Montana .....	5,415	1,226,780	1,091	214,136	729	114,641
Nebraska .....	5,064	661,385	2,339	293,210	1,942	210,998
Nevada .....	1,464	449,388	477	146,960	196	48,635
New Hampshire .....	82	117	21	21	21	21
New Jersey .....	97	3,140	45	182	-	-
New Mexico .....	7,861	266,460	2,596	94,286	1,184	26,477
New York .....	236	3,225	23	46	-	-
North Carolina .....	133	1,534	54	1,296	54	1,296
North Dakota .....	152	45,395	54	25,482	36	16,482
Ohio .....	83	817	10	(D)	8	(D)
Oklahoma .....	239	69,649	99	39,816	76	19,405
Oregon .....	3,727	514,953	942	105,300	869	87,210
Pennsylvania .....	108	9,919	26	38,021	5	9,500
Rhode Island .....	9	44	5	40	-	-
South Carolina .....	120	2,856	25	75	25	75
South Dakota .....	318	37,027	46	8,534	41	6,174
Tennessee .....	99	11,906	50	5,514	22	1,100
Texas .....	3,092	768,512	736	155,081	417	59,895
Utah .....	6,953	519,157	1,468	111,864	987	55,020
Vermont .....	39	121	25	25	25	25
Virginia .....	35	1,355	22	22	-	-
Washington .....	1,420	109,225	391	47,743	296	25,440
West Virginia .....	43	64	-	-	-	-
Wisconsin .....	59	244	18	18	-	-
Wyoming .....	4,476	1,140,460	1,147	183,085	809	91,198
<b>Water Resources Regions</b>						
Region 01 New England .....	502	7,168	58	903	49	(D)
Region 02 Mid-Atlantic .....	398	15,197	54	38,186	5	(D)
Region 03 South Atlantic-Gulf .....	1,018	552,869	218	42,484	146	11,243
Region 04 Great Lakes .....	329	3,739	117	(D)	33	(D)
Region 05 Ohio .....	222	4,363	22	22	-	-
Region 06 Tennessee .....	112	1,173	85	522	52	(D)
Region 07 Upper Mississippi .....	160	17,178	26	5,858	18	18
Region 08 Lower Mississippi .....	5,017	6,394,647	1,860	2,723,294	819	850,521
Region 09 Souris-Red-Rainy .....	20	2,812	-	-	-	-
Region 10 Missouri .....	16,620	2,796,501	5,253	768,213	3,996	466,026
Region 11 Arkansas-White-Red .....	3,252	977,653	1,061	427,821	635	94,611
Region 12 Texas-Gulf .....	2,599	648,791	570	135,407	310	44,878
Region 13 Rio Grande .....	7,010	377,496	2,198	83,218	1,042	30,577
Region 14 Upper Colorado .....	9,795	1,075,608	2,216	182,997	1,677	151,512
Region 15 Lower Colorado .....	2,786	893,052	950	620,977	377	145,121
Region 16 Great Basin .....	6,938	910,097	1,713	232,593	1,069	87,160
Region 17 Pacific Northwest .....	14,792	1,599,329	3,947	439,252	3,111	263,045
Region 18 California .....	13,879	3,906,837	5,443	1,572,619	3,380	679,928
Region 19 Alaska .....	23	89	1	(D)	1	(D)
Region 20 Hawaii .....	416	2,449	7	42	-	-

See footnote(s) at end of table.

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**Table 39. Water Management Practices Used by Producers with Gravity Systems for Acres in the Open: 2018 and 2013 (continued)**

[Excludes area under protection and institutional, research, and experimental farms. For meaning of abbreviations and symbols see introductory text.]

Geographic area	Water management practice used <sup>2</sup> (see text) - con.						
	Surge flow or cablegation, mulch, or other types of row covers (see text)		Precision-leveling or zero-grading		Shorter furrow length, PAM, or special furrow practices		
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	
United States .....	2018 2013	1,600 3,227	223,608 506,395	9,070 10,157	3,417,886 3,898,913	3,572 6,435	798,454 1,241,141
<b>2018 DATA</b>							
Alabama .....		11	33	2	(D)	11	(D)
Alaska .....		-	-	-	-	-	-
Arizona .....		34	1,364	604	404,328	91	41,499
Arkansas .....		43	25,711	641	777,337	156	143,211
California .....		275	21,400	2,709	730,305	629	168,224
Colorado .....		156	10,893	278	14,645	285	14,044
Connecticut .....		-	-	-	-	-	-
Delaware .....		4	4	-	-	-	-
Florida .....		9	7,020	50	20,410	-	-
Georgia .....		11	11	-	-	-	-
Hawaii .....		1	(D)	-	-	6	(D)
Idaho .....		84	4,261	305	24,473	872	104,379
Illinois .....		-	-	-	-	-	-
Indiana .....		-	-	-	-	-	-
Iowa .....		-	-	-	-	-	-
Kansas .....		19	2,528	77	6,784	19	1,525
Kentucky .....		-	-	-	-	-	-
Louisiana .....		6	600	348	251,585	31	37,690
Maine .....		-	-	3	3	3	3
Maryland .....		-	-	-	-	-	-
Massachusetts .....		-	-	1	(D)	-	-
Michigan .....		20	40	-	-	-	-
Minnesota .....		-	-	-	-	-	-
Mississippi .....		54	30,022	378	489,721	72	75,643
Missouri .....		47	29,823	232	269,595	37	30,866
Montana .....		35	2,246	325	77,575	91	19,674
Nebraska .....		365	45,565	152	9,336	189	27,311
Nevada .....		-	-	306	98,098	32	227
New Hampshire .....		-	-	-	-	-	-
New Jersey .....		45	68	23	46	45	68
New Mexico .....		46	4,595	1,401	50,272	212	12,942
New York .....		23	46	-	-	-	-
North Carolina .....		-	-	-	-	-	-
North Dakota .....		-	-	18	9,000	-	-
Ohio .....		2	(D)	-	-	-	-
Oklahoma .....		-	-	58	9,034	44	11,377
Oregon .....		2	(D)	48	(D)	71	4,458
Pennsylvania .....		26	9,521	5	9,500	5	9,500
Rhode Island .....		-	-	-	-	5	40
South Carolina .....		-	-	-	-	-	-
South Dakota .....		-	-	27	2,360	-	-
Tennessee .....		27	1,664	23	1,460	5	1,290
Texas .....		80	5,527	223	81,698	109	7,961
Utah .....		-	-	624	51,959	164	4,885
Vermont .....		-	-	-	-	-	-
Virginia .....		22	22	-	-	-	-
Washington .....		27	(D)	26	(D)	164	17,525
West Virginia .....		-	-	-	-	-	-
Wisconsin .....		18	18	-	-	-	-
Wyoming .....		108	16,632	183	11,166	224	64,089
<b>Water Resources Regions</b>							
Region 01 New England .....		-	-	4	(D)	8	43
Region 02 Mid-Atlantic .....		54	9,572	28	(D)	50	9,568
Region 03 South Atlantic-Gulf .....		26	7,061	58	24,144	6	36
Region 04 Great Lakes .....		84	(D)	-	-	-	-
Region 05 Ohio .....		22	22	-	-	-	-
Region 06 Tennessee .....		33	407	-	-	11	(D)
Region 07 Upper Mississippi .....		-	-	8	5,840	-	-
Region 08 Lower Mississippi .....		134	86,988	1,408	1,534,798	235	250,987
Region 09 Souris-Red-Rainy .....		-	-	-	-	-	-
Region 10 Missouri .....		589	70,944	776	114,423	583	116,820
Region 11 Arkansas-White-Red .....		9	422	425	268,470	248	64,318
Region 12 Texas-Gulf .....		60	5,507	184	78,501	89	6,521
Region 13 Rio Grande .....		25	4,370	1,236	46,451	79	1,820
Region 14 Upper Colorado .....		118	7,125	400	14,527	336	9,833
Region 15 Lower Colorado .....		34	1,364	651	422,806	96	51,686
Region 16 Great Basin .....		-	-	782	143,035	92	2,398
Region 17 Pacific Northwest .....		136	8,255	407	42,550	1,083	125,402
Region 18 California .....		275	21,400	2,703	712,292	650	158,999
Region 19 Alaska .....		-	-	-	-	-	-
Region 20 Hawaii .....		1	(D)	-	-	6	(D)

<sup>1</sup> Multiple systems covering the same acreage are counted each time they cover the acres. This includes multiple systems of the same type.

<sup>2</sup> More than one technique may have been used on an irrigated acre during the survey year.

**Table 40. Irrigated Horticultural Operations: 2018 and 2013**

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

Geographic area	Operations	Area in the open			Area under protection		
		Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated
United States .....	2018 33,848	15,623	699,068	581,936	24,876	1,525,130,873	1,525,130,873
	2013 34,569	16,923	629,548	524,227	24,829	1,407,631,360	1,405,381,805
<b>2018 DATA</b>							
Alabama .....	400	185	21,371	21,002	313	22,691,124	22,691,124
Alaska .....	263	85	209	199	208	2,112,835	2,112,835
Arizona .....	171	87	5,457	5,457	127	11,974,228	11,974,228
Arkansas .....	224	97	7,082	6,157	157	4,050,788	4,050,788
California .....	2,857	1,951	74,347	74,259	1,697	328,881,801	328,881,801
Colorado .....	710	417	13,042	12,869	380	14,421,673	14,421,673
Connecticut .....	491	146	5,544	3,294	455	37,531,652	37,531,652
Delaware .....	56	22	1,865	1,665	44	2,339,000	2,339,000
Florida .....	2,746	2,039	88,800	85,141	1,346	286,871,042	286,871,042
Georgia .....	575	356	21,298	21,221	334	20,312,514	20,312,514
Hawaii .....	895	483	1,828	1,582	569	30,119,031	30,119,031
Idaho .....	667	401	29,750	28,628	336	4,346,935	4,346,935
Illinois .....	532	217	22,186	10,815	434	50,054,950	50,054,950
Indiana .....	515	159	9,848	3,469	435	9,841,976	9,841,976
Iowa .....	410	122	3,019	2,692	379	11,823,816	11,823,816
Kansas .....	272	120	7,759	3,388	210	8,776,130	8,776,130
Kentucky .....	780	167	1,259	1,092	686	9,068,660	9,068,660
Louisiana .....	341	152	3,606	3,446	274	12,058,977	12,058,977
Maine .....	614	141	3,069	3,069	558	6,785,654	6,785,654
Maryland .....	458	149	9,885	9,875	383	10,812,493	10,812,493
Massachusetts .....	564	219	1,986	1,960	434	6,586,132	6,586,132
Michigan .....	1,456	453	41,503	22,221	1,205	86,902,965	86,902,965
Minnesota .....	489	197	10,784	4,480	420	18,144,370	18,144,370
Mississippi .....	249	82	6,018	5,273	203	4,289,424	4,289,424
Missouri .....	725	217	6,393	3,955	639	10,912,436	10,912,436
Montana .....	309	77	766	766	265	2,265,336	2,265,336
Nebraska .....	290	122	2,644	2,476	236	3,026,039	3,026,039
Nevada .....	67	17	671	671	54	358,536	358,536
New Hampshire .....	485	212	406	385	431	8,274,578	8,274,578
New Jersey .....	808	492	19,719	17,831	574	45,713,398	45,713,398
New Mexico .....	315	159	1,570	1,570	179	4,076,540	4,076,540
New York .....	1,476	556	11,963	11,650	1,244	52,378,469	52,378,469
North Carolina .....	1,081	462	22,698	8,611	807	28,491,080	28,491,080
North Dakota .....	39	6	(D)	(D)	37	526,745	526,745
Ohio .....	1,058	333	22,190	9,272	905	37,618,396	37,618,396
Oklahoma .....	367	171	16,994	14,794	234	4,338,472	4,338,472
Oregon .....	1,778	1,079	54,550	53,291	1,020	64,333,453	64,333,453
Pennsylvania .....	1,772	542	4,665	1,999	1,568	72,735,326	72,735,326
Rhode Island .....	151	34	1,512	1,426	134	1,855,229	1,855,229
South Carolina .....	368	260	19,741	18,039	241	5,365,322	5,365,322
South Dakota .....	87	40	1,217	893	73	2,325,959	2,325,959
Tennessee .....	732	207	13,700	8,145	617	10,823,843	10,823,843
Texas .....	1,059	532	51,818	46,750	686	81,189,374	81,189,374
Utah .....	340	141	2,678	2,518	226	11,147,052	11,147,052
Vermont .....	403	60	181	141	389	4,577,962	4,577,962
Virginia .....	804	325	7,971	3,806	696	24,913,206	24,913,206
Washington .....	1,235	738	30,174	27,845	856	29,307,707	29,307,707
West Virginia .....	332	62	192	152	306	2,804,956	2,804,956
Wisconsin .....	938	322	12,875	11,485	783	13,742,493	13,742,493
Wyoming .....	94	10	(D)	(D)	89	1,230,796	1,230,796
<b>Water Resources Regions</b>							
Region 01 New England .....	2,409	769	12,566	10,178	2,110	62,320,465	62,320,465
Region 02 Mid-Atlantic .....	4,094	1,658	48,804	44,340	3,378	179,232,386	179,232,386
Region 03 South Atlantic-Gulf .....	5,218	3,337	178,485	155,435	3,119	363,677,616	363,677,616
Region 04 Great Lakes .....	3,248	974	52,688	31,314	2,801	138,040,985	138,040,985
Region 05 Ohio .....	2,809	720	38,932	13,490	2,423	50,237,208	50,237,208
Region 06 Tennessee .....	793	261	7,454	7,454	635	14,692,612	14,692,612
Region 07 Upper Mississippi .....	2,105	830	47,472	27,924	1,773	81,170,356	81,170,356
Region 08 Lower Mississippi .....	556	170	6,974	6,675	471	15,576,031	15,576,031
Region 09 Souris-Red-Rainy .....	55	15	298	92	47	1,004,028	1,004,028
Region 10 Missouri .....	1,477	554	23,383	16,326	1,220	36,318,201	36,318,201
Region 11 Arkansas-White-Red .....	916	451	26,084	23,077	594	10,134,679	10,134,679
Region 12 Texas-Gulf .....	1,011	509	51,273	46,205	649	75,432,738	75,432,738
Region 13 Rio Grande .....	257	93	1,732	1,732	199	11,098,640	11,098,640
Region 14 Upper Colorado .....	543	294	3,244	3,230	273	3,879,584	3,879,584
Region 15 Lower Colorado .....	205	112	5,907	5,907	140	12,175,428	12,175,428
Region 16 Great Basin .....	278	116	3,390	3,230	186	10,055,408	10,055,408
Region 17 Pacific Northwest .....	3,864	2,260	114,441	109,730	2,370	97,211,841	97,211,841
Region 18 California .....	2,852	1,932	73,905	73,817	1,711	330,640,801	330,640,801
Region 19 Alaska .....	263	85	209	199	208	2,112,835	2,112,835
Region 20 Hawaii .....	895	483	1,828	1,582	569	30,119,031	30,119,031

**Table 41. Irrigated Horticultural Operations by Selected Crops Irrigated: 2018 and 2013**

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

Geographic area	Floriculture and bedding crops					
	In the open			Under protection		
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated
United States .....	2018 5,427	32,703	30,448	12,439	737,445,195	737,445,195
.....	2013 5,379	31,803	30,719	12,918	748,461,106	746,215,251
<b>2018 DATA</b>						
Alabama .....	32	136	136	187	9,143,192	9,143,192
Alaska .....	69	175	165	140	1,084,950	1,084,950
Arizona .....	11	(D)	(D)	11	970,020	970,020
Arkansas .....	27	50	50	60	1,980,720	1,980,720
California .....	743	10,974	10,951	745	149,670,511	149,670,511
Colorado .....	99	155	154	173	8,610,181	8,610,181
Connecticut .....	88	984	607	227	27,063,544	27,063,544
Delaware .....	8	(D)	(D)	34	1,758,640	1,758,640
Florida .....	544	6,075	6,063	636	151,432,403	151,432,403
Georgia .....	82	(D)	(D)	157	7,168,434	7,168,434
Hawaii .....	281	882	705	383	20,738,012	20,738,012
Idaho .....	74	62	62	122	2,598,343	2,598,343
Illinois .....	60	1,047	395	236	11,074,720	11,074,720
Indiana .....	62	(D)	(D)	299	5,047,576	5,047,576
Iowa .....	69	(D)	(D)	188	9,804,570	9,804,570
Kansas .....	47	226	36	106	5,990,234	5,990,234
Kentucky .....	77	95	80	292	4,057,832	4,057,832
Louisiana .....	12	13	13	102	2,898,365	2,898,365
Maine .....	63	91	91	279	1,561,990	1,561,990
Maryland .....	87	379	372	170	5,183,791	5,183,791
Massachusetts .....	64	345	345	283	3,783,640	3,783,640
Michigan .....	80	1,166	1,166	727	72,301,820	72,301,820
Minnesota .....	51	62	50	260	13,919,680	13,919,680
Mississippi .....	11	14	14	86	1,999,090	1,999,090
Missouri .....	142	175	175	275	6,916,872	6,916,872
Montana .....	29	(D)	(D)	156	1,600,262	1,600,262
Nebraska .....	38	33	24	115	1,557,938	1,557,938
Nevada .....	4	(Z)	(Z)	14	(D)	(D)
New Hampshire .....	103	129	129	264	4,661,757	4,661,757
New Jersey .....	319	1,759	1,451	298	13,395,758	13,395,758
New Mexico .....	17	(D)	(D)	27	(D)	(D)
New York .....	338	1,315	1,315	661	31,561,174	31,561,174
North Carolina .....	154	189	189	372	12,920,764	12,920,764
North Dakota .....	2	(D)	(D)	22	322,872	322,872
Ohio .....	127	487	487	511	18,597,169	18,597,169
Oklahoma .....	47	68	59	120	1,325,270	1,325,270
Oregon .....	247	1,624	1,274	345	12,050,095	12,050,095
Pennsylvania .....	246	235	230	783	28,779,066	28,779,066
Rhode Island .....	14	14	14	55	754,570	754,570
South Carolina .....	43	162	149	141	5,062,644	5,062,644
South Dakota .....	10	(D)	(D)	48	1,904,499	1,904,499
Tennessee .....	55	586	586	330	6,321,642	6,321,642
Texas .....	95	257	256	428	28,343,192	28,343,192
Utah .....	21	59	59	76	7,421,360	7,421,360
Vermont .....	33	35	29	127	1,724,690	1,724,690
Virginia .....	147	278	278	333	10,173,819	10,173,819
Washington .....	283	1,243	1,197	403	11,572,689	11,572,689
West Virginia .....	38	(D)	(D)	139	1,145,584	1,145,584
Wisconsin .....	131	126	104	473	7,762,741	7,762,741
Wyoming .....	3	2	2	20	282,486	282,486
<b>Water Resources Regions</b>						
Region 01 New England .....	345	1,579	1,198	1,129	38,320,101	38,320,101
Region 02 Mid-Atlantic .....	866	3,605	3,284	1,694	76,449,582	76,449,582
Region 03 South Atlantic-Gulf .....	893	6,677	6,652	1,527	189,468,417	189,468,417
Region 04 Great Lakes .....	389	1,948	1,948	1,505	93,648,761	93,648,761
Region 05 Ohio .....	244	811	796	1,234	28,123,293	28,123,293
Region 06 Tennessee .....	102	102	102	363	4,637,034	4,637,034
Region 07 Upper Mississippi .....	311	1,302	604	1,013	34,658,878	34,658,878
Region 08 Lower Mississippi .....	24	32	32	214	4,525,435	4,525,435
Region 09 Souris-Red-Rainy .....	2	(D)	(D)	35	(D)	(D)
Region 10 Missouri .....	256	461	262	638	26,415,555	26,415,555
Region 11 Arkansas-White-Red .....	115	188	180	271	3,854,581	3,854,581
Region 12 Texas-Gulf .....	95	257	256	424	28,345,976	28,345,976
Region 13 Rio Grande .....	17	(D)	(D)	26	(D)	(D)
Region 14 Upper Colorado .....	24	38	38	42	1,062,120	1,062,120
Region 15 Lower Colorado .....	25	(D)	(D)	22	1,128,220	1,128,220
Region 16 Great Basin .....	23	(D)	(D)	59	6,756,440	6,756,440
Region 17 Pacific Northwest .....	615	2,940	2,544	978	26,910,557	26,910,557
Region 18 California .....	731	10,650	10,627	742	149,572,711	149,572,711
Region 19 Alaska .....	69	175	165	140	1,084,950	1,084,950
Region 20 Hawaii .....	281	882	705	383	20,738,012	20,738,012

--continued

**Table 41. Irrigated Horticultural Operations by Selected Crops Irrigated: 2018 and 2013 (continued)**

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

Geographic area	Nursery crops					
	In the open			Under protection		
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated
United States .....	2018 8,333	245,928	198,995	5,262	503,183,006	503,183,006
	2013 9,777	253,173	202,121	5,810	418,306,593	418,303,593
<b>2018 DATA</b>						
Alabama .....	117	4,393	4,241	121	12,246,118	12,246,118
Alaska .....	15	(D)	(D)	69	185,990	185,990
Arizona .....	68	3,013	3,013	61	(D)	(D)
Arkansas .....	32	107	105	30	470,070	470,070
California .....	866	19,828	19,764	612	89,962,112	89,962,112
Colorado .....	184	3,359	3,289	38	861,450	861,450
Connecticut .....	75	3,737	2,260	47	7,537,200	7,537,200
Delaware .....	11	713	(D)	6	(D)	(D)
Florida .....	1,414	29,157	29,156	650	124,921,748	124,921,748
Georgia .....	216	3,249	3,249	104	9,348,140	9,348,140
Hawaii .....	245	694	635	127	3,635,920	3,635,920
Idaho .....	116	4,664	4,074	94	1,128,220	1,128,220
Illinois .....	121	12,810	5,480	102	35,698,590	35,698,590
Indiana .....	51	1,185	714	65	462,780	462,780
Iowa .....	33	447	357	36	825,580	825,580
Kansas .....	57	1,124	1,043	44	1,502,760	1,502,760
Kentucky .....	83	899	761	58	463,080	463,080
Louisiana .....	142	2,265	2,150	93	5,933,412	5,933,412
Maine .....	35	474	474	29	211,050	211,050
Maryland .....	59	4,157	4,154	87	2,712,280	2,712,280
Massachusetts .....	150	1,613	1,587	36	460,996	460,996
Michigan .....	264	19,887	10,523	169	9,599,994	9,599,994
Minnesota .....	126	2,217	1,401	57	(D)	(D)
Mississippi .....	43	654	654	42	830,024	830,024
Missouri .....	40	1,718	962	71	867,550	867,550
Montana .....	25	(D)	(D)	53	127,646	127,646
Nebraska .....	71	1,490	1,341	54	196,780	196,780
Nevada .....	5	21	21	6	(D)	(D)
New Hampshire .....	103	240	227	45	575,400	575,400
New Jersey .....	256	10,691	10,041	126	30,128,776	30,128,776
New Mexico .....	59	789	789	17	666,332	666,332
New York .....	255	7,421	7,121	183	9,721,448	9,721,448
North Carolina .....	315	10,977	3,280	208	10,754,022	10,754,022
North Dakota .....	6	(D)	(D)	7	(D)	(D)
Ohio .....	201	9,585	6,986	111	8,930,387	8,930,387
Oklahoma .....	84	752	690	54	1,045,561	1,045,561
Oregon .....	654	29,902	29,082	360	40,060,694	40,060,694
Pennsylvania .....	270	3,355	1,461	196	20,707,560	20,707,560
Rhode Island .....	17	137	134	31	416,000	416,000
South Carolina .....	195	10,468	10,159	39	109,520	109,520
South Dakota .....	19	350	26	16	156,000	156,000
Tennessee .....	151	6,904	1,349	181	3,007,137	3,007,137
Texas .....	325	11,587	11,446	251	39,293,616	39,293,616
Utah .....	82	399	399	22	536,760	536,760
Vermont .....	37	102	69	40	40,700	40,700
Virginia .....	165	5,574	2,744	79	7,336,552	7,336,552
Washington .....	315	9,683	9,101	185	12,669,712	12,669,712
West Virginia .....	28	93	93	14	218,376	218,376
Wisconsin .....	125	2,836	1,634	132	2,923,278	2,923,278
Wyoming .....	7	(D)	(D)	4	9,300	9,300
<b>Water Resources Regions</b>						
Region 01 New England .....	384	6,231	4,712	188	9,200,646	9,200,646
Region 02 Mid-Atlantic .....	849	25,610	24,101	530	69,070,324	69,070,324
Region 03 South Atlantic-Gulf .....	2,251	61,172	50,582	1,082	151,962,268	151,962,268
Region 04 Great Lakes .....	432	28,062	16,632	387	19,893,572	19,893,572
Region 05 Ohio .....	429	14,264	5,577	371	7,433,962	7,433,962
Region 06 Tennessee .....	166	615	615	145	6,176,880	6,176,880
Region 07 Upper Mississippi .....	423	18,303	8,843	275	36,363,746	36,363,746
Region 08 Lower Mississippi .....	132	2,227	2,112	100	6,520,356	6,520,356
Region 09 Souris-Red-Rainy .....	13	(D)	(D)	11	(D)	(D)
Region 10 Missouri .....	198	4,982	3,885	163	3,247,769	3,247,769
Region 11 Arkansas-White-Red .....	196	1,618	1,553	148	2,092,811	2,092,811
Region 12 Texas-Gulf .....	305	11,048	10,907	239	38,770,896	38,770,896
Region 13 Rio Grande .....	67	1,040	1,040	28	1,184,052	1,184,052
Region 14 Upper Colorado .....	139	2,199	2,199	17	148,600	148,600
Region 15 Lower Colorado .....	79	3,139	3,139	65	(D)	(D)
Region 16 Great Basin .....	53	(D)	(D)	17	402,560	402,560
Region 17 Pacific Northwest .....	1,098	44,329	42,338	679	52,575,972	52,575,972
Region 18 California .....	859	19,710	19,646	621	91,348,112	91,348,112
Region 19 Alaska .....	15	(D)	(D)	69	185,990	185,990
Region 20 Hawaii .....	245	694	635	127	3,635,920	3,635,920

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**Table 41. Irrigated Horticultural Operations by Selected Crops Irrigated: 2018 and 2013 (continued)**

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

Geographic area	Propagative materials						
	In the open			Under protection			
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated	
United States .....	2018 2013	1,614 667	79,509 12,235	78,401 11,014	4,566 2,505	121,086,223 68,709,465	121,086,223 68,709,465
<b>2018 DATA</b>							
Alabama .....		8	6	6	83	1,003,368	1,003,368
Alaska .....		1	(D)	(D)	23	31,660	31,660
Arizona .....		-	-	-	3	(D)	(D)
Arkansas .....		8	4	4	25	160,150	160,150
California .....		218	17,450	17,450	284	49,211,958	49,211,958
Colorado .....		55	178	173	59	235,142	235,142
Connecticut .....		4	252	240	125	1,438,000	1,438,000
Delaware .....		1	(D)	(D)	2	(D)	(D)
Florida .....		200	2,015	2,014	246	10,262,055	10,262,055
Georgia .....		47	(D)	(D)	107	4,195,326	4,195,326
Hawaii .....		38	16	16	15	55,654	55,654
Idaho .....		170	22,048	22,048	24	236,538	236,538
Illinois .....		33	1,025	1,025	120	1,128,180	1,128,180
Indiana .....		46	429	232	108	1,370,340	1,370,340
Iowa .....		24	(D)	(D)	51	1,782,480	1,782,480
Kansas .....		19	2	2	77	303,000	303,000
Kentucky .....		11	49	43	112	597,140	597,140
Louisiana .....		14	18	18	67	2,924,900	2,924,900
Maine .....		61	1,973	1,973	158	1,341,900	1,341,900
Maryland .....		7	7	7	66	(D)	(D)
Massachusetts .....		-	-	-	41	735,840	735,840
Michigan .....		20	40	40	287	7,621,940	7,621,940
Minnesota .....		22	27	27	46	(D)	(D)
Mississippi .....		-	-	-	51	606,670	606,670
Missouri .....		20	15	12	155	125,896	125,896
Montana .....		16	12	12	15	(D)	(D)
Nebraska .....		19	14	4	44	85,076	85,076
Nevada .....		-	-	-	2	(D)	(D)
New Hampshire .....		-	-	-	65	376,224	376,224
New Jersey .....		2	(D)	(D)	80	201,304	201,304
New Mexico .....		34	(D)	(D)	15	8,024	8,024
New York .....		5	55	55	299	5,412,280	5,412,280
North Carolina .....		31	122	122	182	3,148,364	3,148,364
North Dakota .....		-	-	-	2	(D)	(D)
Ohio .....		18	(D)	(D)	136	4,867,150	4,867,150
Oklahoma .....		3	3	3	45	(D)	(D)
Oregon .....		145	18,273	18,273	199	4,504,796	4,504,796
Pennsylvania .....		9	1	1	122	236,592	236,592
Rhode Island .....		-	-	-	38	149,468	149,468
South Carolina .....		7	21	21	59	172,350	172,350
South Dakota .....		3	177	177	9	4,300	4,300
Tennessee .....		36	46	46	83	479,270	479,270
Texas .....		11	45	45	95	7,218,916	7,218,916
Utah .....		-	-	-	26	543,760	543,760
Vermont .....		5	1	1	70	392,750	392,750
Virginia .....		79	(D)	(D)	186	2,918,631	2,918,631
Washington .....		143	13,268	12,395	234	1,068,356	1,068,356
West Virginia .....		1	(D)	(D)	81	712,522	712,522
Wisconsin .....		20	12	12	140	907,316	907,316
Wyoming .....		-	-	-	4	8,800	8,800
<b>Water Resources Regions</b>							
Region 01 New England .....		65	2,225	2,213	429	4,047,432	4,047,432
Region 02 Mid-Atlantic .....		71	780	780	532	(D)	(D)
Region 03 South Atlantic-Gulf .....		291	2,697	2,695	743	20,562,593	20,562,593
Region 04 Great Lakes .....		77	(D)	(D)	605	18,262,762	18,262,762
Region 05 Ohio .....		36	382	179	330	3,280,696	3,280,696
Region 06 Tennessee .....		56	43	43	142	403,278	403,278
Region 07 Upper Mississippi .....		103	1,785	1,785	364	(D)	(D)
Region 08 Lower Mississippi .....		14	(D)	(D)	106	3,270,160	3,270,160
Region 09 Souris-Red-Rainy .....		-	-	-	3	(D)	(D)
Region 10 Missouri .....		94	242	225	218	510,830	510,830
Region 11 Arkansas-White-Red .....		23	17	17	126	(D)	(D)
Region 12 Texas-Gulf .....		11	45	45	95	7,218,916	7,218,916
Region 13 Rio Grande .....		2	(D)	(D)	11	(D)	(D)
Region 14 Upper Colorado .....		46	(D)	(D)	49	527,140	527,140
Region 15 Lower Colorado .....		-	-	-	3	(D)	(D)
Region 16 Great Basin .....		-	-	-	21	(D)	(D)
Region 17 Pacific Northwest .....		468	53,599	52,725	467	5,839,154	5,839,154
Region 18 California .....		218	17,450	17,450	284	49,211,958	49,211,958
Region 19 Alaska .....		1	(D)	(D)	23	31,660	31,660
Region 20 Hawaii .....		38	16	16	15	55,654	55,654

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**Table 41. Irrigated Horticultural Operations by Selected Crops Irrigated: 2018 and 2013 (continued)**

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

Geographic area	Food crops grown under protection			Mushroom crops under protection		
	Operations	Square feet	Square feet irrigated	Operations	Square feet	Square feet irrigated
United States .....	2018 10,423	158,209,476	158,209,476	458	29,599,460	29,599,460
	2013 7,029	136,608,782	136,608,782	410	23,476,222	23,475,522
<b>2018 DATA</b>						
Alabama .....	49	312,876	312,876	-	-	-
Alaska .....	124	878,961	878,961	4	1,250	1,250
Arizona .....	56	6,667,500	6,667,500	-	-	-
Arkansas .....	77	1,210,848	1,210,848	11	11,200	11,200
California .....	340	45,966,740	45,966,740	63	5,782,100	5,782,100
Colorado .....	199	2,312,550	2,312,550	9	2,616,800	2,616,800
Connecticut .....	135	1,222,908	1,222,908	-	-	-
Delaware .....	11	308,040	308,040	3	(D)	(D)
Florida .....	109	959,324	959,324	-	-	-
Georgia .....	123	601,590	601,590	-	-	-
Hawaii .....	146	5,689,445	5,689,445	-	-	-
Idaho .....	211	500,034	500,034	3	600	600
Illinois .....	206	(D)	(D)	1	(D)	(D)
Indiana .....	184	3,038,580	3,038,580	-	-	-
Iowa .....	181	1,268,466	1,268,466	17	85,000	85,000
Kansas .....	105	992,176	992,176	-	-	-
Kentucky .....	393	4,328,328	4,328,328	-	-	-
Louisiana .....	69	302,300	302,300	-	-	-
Maine .....	361	3,762,344	3,762,344	3	65,340	65,340
Maryland .....	180	1,306,946	1,306,946	29	1,208,430	1,208,430
Massachusetts .....	167	1,605,656	1,605,656	-	-	-
Michigan .....	377	3,366,024	3,366,024	20	12,000	12,000
Minnesota .....	205	2,433,660	2,433,660	-	-	-
Mississippi .....	107	678,680	678,680	13	212,460	212,460
Missouri .....	428	3,249,038	3,249,038	8	680	680
Montana .....	178	500,192	500,192	1	(D)	(D)
Nebraska .....	120	1,186,245	1,186,245	-	-	-
Nevada .....	41	(D)	(D)	2	(D)	(D)
New Hampshire .....	282	3,099,413	3,099,413	22	440	440
New Jersey .....	200	1,982,924	1,982,924	21	6,300	6,300
New Mexico .....	145	2,006,740	2,006,740	19	(D)	(D)
New York .....	585	4,963,947	4,963,947	44	964,920	964,920
North Carolina .....	184	1,651,330	1,651,330	37	29,800	29,800
North Dakota .....	20	203,848	203,848	-	-	-
Ohio .....	332	5,293,890	5,293,890	-	-	-
Oklahoma .....	91	765,980	765,980	1	(D)	(D)
Oregon .....	336	6,544,532	6,544,532	17	916,880	916,880
Pennsylvania .....	762	7,941,632	7,941,632	81	15,400,640	15,400,640
Rhode Island .....	88	461,191	461,191	8	96,000	96,000
South Carolina .....	50	1,194,532	1,194,532	-	-	-
South Dakota .....	29	265,160	265,160	-	-	-
Tennessee .....	258	1,245,744	1,245,744	-	-	-
Texas .....	207	5,958,302	5,958,302	-	-	-
Utah .....	152	2,838,972	2,838,972	-	-	-
Vermont .....	282	2,665,842	2,665,842	8	2,600	2,600
Virginia .....	356	4,484,204	4,484,204	-	-	-
Washington .....	463	4,364,196	4,364,196	6	120	120
West Virginia .....	241	789,314	789,314	-	-	-
Wisconsin .....	385	2,420,006	2,420,006	-	-	-
Wyoming .....	73	829,410	829,410	7	100,800	100,800
<b>Water Resources Regions</b>						
Region 01 New England .....	1,115	10,936,032	10,936,032	36	163,880	163,880
Region 02 Mid-Atlantic .....	1,551	14,262,649	14,262,649	178	17,620,090	17,620,090
Region 03 South Atlantic-Gulf .....	655	4,386,396	4,386,396	50	242,260	242,260
Region 04 Great Lakes .....	1,240	12,577,063	12,577,063	25	12,500	12,500
Region 05 Ohio .....	1,138	11,889,677	11,889,677	-	-	-
Region 06 Tennessee .....	252	3,705,370	3,705,370	-	-	-
Region 07 Upper Mississippi .....	870	7,231,312	7,231,312	18	(D)	(D)
Region 08 Lower Mississippi .....	133	1,250,080	1,250,080	5	10,000	10,000
Region 09 Souris-Red-Rainy .....	30	89,800	89,800	-	-	-
Region 10 Missouri .....	673	6,479,517	6,479,517	22	118,280	118,280
Region 11 Arkansas-White-Red .....	304	2,704,596	2,704,596	7	(D)	(D)
Region 12 Texas-Gulf .....	174	721,590	721,590	-	-	-
Region 13 Rio Grande .....	148	6,036,520	6,036,520	11	2,608,100	2,608,100
Region 14 Upper Colorado .....	212	2,125,424	2,125,424	10	10,000	10,000
Region 15 Lower Colorado .....	61	6,706,500	6,706,500	-	-	-
Region 16 Great Basin .....	127	2,871,408	2,871,408	2	(D)	(D)
Region 17 Pacific Northwest .....	1,125	11,229,596	11,229,596	27	918,600	918,600
Region 18 California .....	345	46,437,540	46,437,540	63	5,782,100	5,782,100
Region 19 Alaska .....	124	878,961	878,961	4	1,250	1,250
Region 20 Hawaii .....	146	5,689,445	5,689,445	-	-	-

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**Table 41. Irrigated Horticultural Operations by Selected Crops Irrigated: 2018 and 2013 (continued)**

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

Geographic area	Sod in the open			Cultivated Christmas trees and short rotation woody crops in the open		
	Operations	Acres	Acres irrigated	Operations	Acres	Acres irrigated
United States .....	1,087	312,992	260,974	888	15,794	10,783
2013 .....	976	266,521	234,963	1,177	54,297	38,395
<b>2018 DATA</b>						
Alabama .....	60	16,699	16,619	-	-	-
Alaska .....	1	(D)	(D)	-	-	-
Arizona .....	6	1,791	1,791	-	-	-
Arkansas .....	32	6,872	5,978	4	46	17
California .....	61	23,751	23,751	208	2,126	2,126
Colorado .....	95	8,979	8,919	12	96	96
Connecticut .....	-	-	-	26	572	188
Delaware .....	1	(D)	(D)	5	(D)	39
Florida .....	82	49,733	46,088	26	442	442
Georgia .....	56	17,127	17,058	24	270	262
Hawaii .....	28	176	166	4	60	60
Idaho .....	35	2,296	2,296	39	147	147
Illinois .....	19	7,137	3,904	6	18	12
Indiana .....	25	8,090	2,420	1	(D)	(D)
Iowa .....	12	1,875	1,650	3	6	6
Kansas .....	20	6,400	2,300	4	8	8
Kentucky .....	2	(D)	(D)	2	(D)	(D)
Louisiana .....	4	1,250	1,230	10	60	35
Maine .....	4	(D)	(D)	3	(D)	(D)
Maryland .....	16	5,343	5,343	-	-	-
Massachusetts .....	-	-	-	11	28	28
Michigan .....	37	9,552	7,239	88	5,106	3,253
Minnesota .....	13	5,670	2,530	13	2,368	472
Mississippi .....	33	5,350	4,605	-	-	-
Missouri .....	18	4,223	2,760	6	263	47
Montana .....	2	(D)	(D)	16	(D)	(D)
Nebraska .....	19	1,099	1,099	4	8	8
Nevada .....	8	650	650	-	-	-
New Hampshire .....	-	-	-	-	-	-
New Jersey .....	18	5,823	5,593	15	140	140
New Mexico .....	1	(D)	(D)	42	192	192
New York .....	11	3,155	3,155	-	-	-
North Carolina .....	16	11,411	5,021	-	-	-
North Dakota .....	-	-	-	-	-	-
Ohio .....	23	12,107	1,788	1	(D)	(D)
Oklahoma .....	33	16,077	13,948	10	94	94
Oregon .....	23	3,860	3,860	112	893	803
Pennsylvania .....	1	(D)	(D)	24	(D)	(D)
Rhode Island .....	5	1,321	1,238	5	40	40
South Carolina .....	22	8,929	7,549	28	161	161
South Dakota .....	6	687	687	2	(D)	(D)
Tennessee .....	17	6,165	6,165	-	-	-
Texas .....	95	39,184	34,693	21	(D)	59
Utah .....	43	1,746	1,586	11	446	446
Vermont .....	1	(D)	(D)	4	(D)	(D)
Virginia .....	2	(D)	(D)	-	-	-
Washington .....	15	4,160	4,160	81	1,333	993
West Virginia .....	1	(D)	(D)	-	-	-
Wisconsin .....	64	9,359	9,233	17	429	419
Wyoming .....	1	(D)	(D)	-	-	-
<b>Water Resources Regions</b>						
Region 01 New England .....	9	1,832	1,749	47	660	276
Region 02 Mid-Atlantic .....	49	17,197	15,964	24	289	187
Region 03 South Atlantic-Gulf .....	248	105,545	93,256	78	873	865
Region 04 Great Lakes .....	79	11,599	9,260	90	5,266	3,413
Region 05 Ohio .....	55	22,870	6,841	25	97	97
Region 06 Tennessee .....	25	6,694	6,694	-	-	-
Region 07 Upper Mississippi .....	69	22,646	15,828	34	2,732	780
Region 08 Lower Mississippi .....	23	4,691	4,507	2	(D)	(D)
Region 09 Souris-Red-Rainy .....	-	-	-	2	(D)	(D)
Region 10 Missouri .....	86	17,360	11,857	29	292	76
Region 11 Arkansas-White-Red .....	65	23,773	20,894	73	482	428
Region 12 Texas-Gulf .....	95	39,184	34,693	15	65	53
Region 13 Rio Grande .....	1	(D)	(D)	-	-	-
Region 14 Upper Colorado .....	70	(D)	(D)	3	(D)	(D)
Region 15 Lower Colorado .....	6	1,791	1,791	-	-	-
Region 16 Great Basin .....	45	2,502	2,342	11	446	446
Region 17 Pacific Northwest .....	72	10,114	10,114	243	2,390	1,959
Region 18 California .....	61	23,751	23,751	208	2,126	2,126
Region 19 Alaska .....	1	(D)	(D)	-	-	-
Region 20 Hawaii .....	28	176	166	4	60	60

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**Table 41. Irrigated Horticultural Operations by Selected Crops Irrigated: 2018 and 2013 (continued)**

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

Geographic area	Other horticultural crops					
	In the open			Under protection		
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated
United States .....	2018 363	2,341	2,335	297	3,106,647	3,106,647
	2013 624	7,386	7,015	588	12,405,176	12,405,176
<b>2018 DATA</b>						
Alabama .....	-	-	-	8	60,000	60,000
Alaska .....	-	-	-	-	-	-
Arizona .....	2	(D)	(D)	12	1,293,240	1,293,240
Arkansas .....	6	3	3	5	217,800	217,800
California .....	83	216	216	11	52,000	52,000
Colorado .....	44	244	238	17	5,485	5,485
Connecticut .....	-	-	-	15	270,000	270,000
Delaware .....	-	-	-	-	-	-
Florida .....	78	1,378	1,378	23	53,912	53,912
Georgia .....	8	(D)	(D)	-	-	-
Hawaii .....	-	-	-	-	-	-
Idaho .....	-	-	-	-	-	-
Illinois .....	-	-	-	-	-	-
Indiana .....	-	-	-	8	48,400	48,400
Iowa .....	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-
Kentucky .....	-	-	-	-	-	-
Louisiana .....	-	-	-	-	-	-
Maine .....	3	1	1	8	27,330	27,330
Maryland .....	-	-	-	1	(D)	(D)
Massachusetts .....	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-
Minnesota .....	-	-	-	-	-	-
Mississippi .....	-	-	-	-	-	-
Missouri .....	-	-	-	18	16,200	16,200
Montana .....	8	(D)	(D)	4	(D)	(D)
Nebraska .....	-	-	-	-	-	-
Nevada .....	-	-	-	-	-	-
New Hampshire .....	11	30	30	-	-	-
New Jersey .....	3	(D)	(D)	-	-	-
New Mexico .....	6	(D)	(D)	17	112,400	112,400
New York .....	19	18	18	-	-	-
North Carolina .....	-	-	-	-	-	-
North Dakota .....	-	-	-	-	-	-
Ohio .....	-	-	-	16	14,400	14,400
Oklahoma .....	-	-	-	13	93,000	93,000
Oregon .....	-	-	-	34	290,100	290,100
Pennsylvania .....	24	2	2	-	-	-
Rhode Island .....	-	-	-	-	-	-
South Carolina .....	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-
Tennessee .....	-	-	-	-	-	-
Texas .....	16	252	252	37	482,500	482,500
Utah .....	30	29	29	27	16,200	16,200
Vermont .....	-	-	-	23	46,000	46,000
Virginia .....	-	-	-	-	-	-
Washington .....	-	-	-	-	-	-
West Virginia .....	-	-	-	-	-	-
Wisconsin .....	22	84	84	-	-	-
Wyoming .....	-	-	-	-	-	-
<b>Water Resources Regions</b>						
Region 01 New England .....	14	30	30	23	297,330	297,330
Region 02 Mid-Atlantic .....	43	24	24	1	(D)	(D)
Region 03 South Atlantic-Gulf .....	86	1,384	1,384	31	113,912	113,912
Region 04 Great Lakes .....	3	(D)	(D)	39	60,400	60,400
Region 05 Ohio .....	-	-	-	8	48,400	48,400
Region 06 Tennessee .....	-	-	-	-	-	-
Region 07 Upper Mississippi .....	22	84	84	-	-	-
Region 08 Lower Mississippi .....	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-
Region 10 Missouri .....	20	27	21	37	24,225	24,225
Region 11 Arkansas-White-Red .....	9	6	6	18	310,800	310,800
Region 12 Texas-Gulf .....	16	252	252	37	482,500	482,500
Region 13 Rio Grande .....	6	(D)	(D)	17	(D)	(D)
Region 14 Upper Colorado .....	56	245	245	27	16,200	16,200
Region 15 Lower Colorado .....	2	(D)	(D)	12	1,293,240	1,293,240
Region 16 Great Basin .....	-	-	-	-	-	-
Region 17 Pacific Northwest .....	3	(D)	(D)	36	291,400	291,400
Region 18 California .....	83	216	216	11	52,000	52,000
Region 19 Alaska .....	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	-	-

**Table 42. Irrigation for Nursery and Other Horticultural Crops Grown in the Open: 2018 and 2013**

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

Geographic area	All methods									
	Operations	Acres irrigated <sup>1</sup>	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 15,623	581,936	248,964,239	10,004	124,786,036	2,570	40,130,335	4,223	84,047,868	
2013	16,923	524,227	204,811,499	10,870	118,480,920	3,127	28,856,886	4,516	57,473,694	
<b>2018 DATA</b>										
Alabama .....	185	21,002	6,545,304	95	2,454,231	62	3,710,043	39	381,030	
Alaska .....	85	199	44,825	66	34,016	13	5,836	9	4,973	
Arizona .....	87	5,457	4,664,981	62	(D)	1	(D)	29	2,352,179	
Arkansas .....	97	6,157	1,240,351	64	812,402	23	189,223	23	238,725	
California .....	1,951	74,259	54,996,039	1,023	20,548,782	143	3,472,356	976	30,974,901	
Colorado .....	417	12,869	8,985,930	102	5,387,245	41	1,019,335	293	2,579,350	
Connecticut .....	146	3,294	831,196	102	266,662	63	528,465	4	36,069	
Delaware .....	22	1,665	83,380	15	58,160	4	24,439	4	782	
Florida .....	2,039	85,141	25,205,065	1,913	21,684,875	190	1,764,516	16	1,755,674	
Georgia .....	356	21,221	7,219,443	293	6,683,080	49	505,781	27	30,582	
Hawaii .....	483	1,582	447,326	7	34,233	32	27,666	448	385,427	
Idaho .....	401	28,628	25,338,146	120	1,732,777	43	1,514,945	261	22,090,424	
Illinois .....	217	10,815	2,591,244	124	2,126,476	72	460,694	27	4,073	
Indiana .....	159	3,469	1,162,448	110	418,533	31	701,718	21	42,197	
Iowa .....	122	2,692	577,976	53	240,954	35	322,747	40	14,274	
Kansas .....	120	3,388	1,082,928	71	234,410	22	844,058	40	4,460	
Kentucky .....	167	1,092	150,997	29	4,236	25	52,129	117	94,632	
Louisiana .....	152	3,446	729,149	127	508,098	23	(D)	13	(D)	
Maine .....	141	3,069	477,828	120	199,072	44	255,327	10	23,430	
Maryland .....	149	9,875	2,582,540	119	2,219,021	16	168,847	19	194,671	
Massachusetts .....	219	1,960	271,920	193	181,391	19	49,833	19	40,697	
Michigan .....	453	22,221	8,159,558	405	5,772,880	132	2,356,178	26	30,500	
Minnesota .....	197	4,480	1,236,846	163	931,400	22	295,145	15	10,301	
Mississippi .....	82	5,273	596,182	45	122,210	36	473,184	6	788	
Missouri .....	217	3,955	771,113	139	571,654	61	181,525	32	17,933	
Montana .....	77	766	430,240	52	46,196	-	-	29	384,044	
Nebraska .....	122	2,476	525,776	108	514,833	-	-	30	10,943	
Nevada .....	17	671	632,387	7	547,430	-	-	12	84,957	
New Hampshire .....	212	385	50,959	130	23,444	42	14,155	41	13,360	
New Jersey .....	492	17,831	3,107,970	395	2,477,894	97	587,086	62	42,990	
New Mexico .....	159	1,570	654,401	41	405,074	66	75,272	70	174,056	
New York .....	556	11,663	2,592,754	301	802,713	106	1,719,627	174	70,414	
North Carolina .....	462	8,611	1,897,061	291	931,509	202	956,003	16	9,549	
North Dakota .....	6	(D)	(D)	2	(D)	1	(D)	4	4,134	
Ohio .....	333	9,272	1,441,338	223	737,900	78	684,826	56	18,612	
Oklahoma .....	171	14,794	4,724,857	98	3,403,098	31	781,610	50	540,150	
Oregon .....	1,079	53,291	25,637,414	634	10,688,473	278	8,750,689	288	6,198,253	
Pennsylvania .....	542	1,999	207,524	407	114,818	53	77,525	89	15,180	
Rhode Island .....	34	1,426	137,415	25	72,760	5	(D)	5	(D)	
South Carolina .....	260	18,039	3,816,431	168	2,957,432	61	793,436	52	65,562	
South Dakota .....	40	893	186,886	27	97,418	4	1,090	9	88,378	
Tennessee .....	207	8,145	1,379,207	83	423,397	95	930,192	66	25,618	
Texas .....	532	46,750	27,147,463	413	19,641,391	62	3,491,668	90	4,014,404	
Utah .....	141	2,518	1,877,629	21	(D)	9	(D)	130	1,257,783	
Vermont .....	60	141	38,787	39	20,544	13	(D)	15	(D)	
Virginia .....	325	3,806	617,680	217	252,005	60	357,148	64	8,526	
Washington .....	738	27,845	13,867,728	429	3,257,457	44	995,825	306	9,614,446	
West Virginia .....	62	152	36,277	32	(D)	9	(D)	44	(D)	
Wisconsin .....	322	11,485	1,825,483	298	1,535,945	52	289,537	-	-	
Wyoming .....	10	(D)	(D)	3	(D)	-	-	7	(D)	
<b>Water Resources Regions</b>										
Region 01 New England .....	769	10,178	1,778,079	581	746,875	175	908,388	85	122,816	
Region 02 Mid-Atlantic .....	1,658	44,340	8,828,203	1,218	5,745,402	275	2,804,599	278	278,203	
Region 03 South Atlantic-Gulf .....	3,337	155,435	43,820,509	2,768	33,609,130	562	7,969,190	169	2,242,190	
Region 04 Great Lakes .....	974	31,314	9,493,553	776	6,290,826	225	3,115,046	141	87,681	
Region 05 Ohio .....	720	13,490	3,058,914	302	1,010,766	198	1,870,632	268	177,516	
Region 06 Tennessee .....	261	7,454	1,876,465	149	1,528,205	94	334,785	49	13,475	
Region 07 Upper Mississippi .....	830	27,924	6,081,994	608	4,867,596	166	1,185,007	72	29,390	
Region 08 Lower Mississippi .....	170	6,675	1,472,841	149	1,254,201	22	(D)	12	(D)	
Region 09 Souris-Red-Rainy .....	15	92	39,634	10	(D)	2	(D)	3	(D)	
Region 10 Missouri .....	554	16,326	7,646,551	372	5,333,138	77	1,872,217	165	441,195	
Region 11 Arkansas-White-Red .....	451	23,077	6,891,674	222	4,982,670	105	1,092,432	149	816,572	
Region 12 Texas-Gulf .....	509	46,205	27,026,494	388	19,577,284	59	3,434,644	95	4,014,566	
Region 13 Rio Grande .....	93	1,732	724,226	49	441,407	35	(D)	27	(D)	
Region 14 Upper Colorado .....	294	3,230	2,931,436	13	(D)	12	(D)	271	2,869,372	
Region 15 Lower Colorado .....	112	5,907	4,816,112	66	(D)	1	(D)	50	2,503,179	
Region 16 Great Basin .....	116	3,230	2,292,549	28	791,896	9	375,380	100	1,125,273	
Region 17 Pacific Northwest .....	2,260	109,730	64,845,143	1,213	15,714,006	365	11,261,458	871	37,869,679	
Region 18 California .....	1,932	73,817	54,847,711	1,019	20,548,652	143	3,472,356	961	30,826,704	
Region 19 Alaska .....	85	199	44,825	66	34,016	13	5,836	9	4,973	
Region 20 Hawaii .....	483	1,582	447,326	7	34,233	32	27,666	448	385,427	

See footnote(s) at end of table.

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**Table 42. Irrigation for Nursery and Other Horticultural Crops Grown in the Open: 2018 and 2013 (continued)**

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

Geographic area	Operations	Acres irrigated	Gallons applied (1,000)	Hand watered					
				Water source					
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)	
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)
United States .....	2018 3,240	7,681	2,576,043	1,929	1,365,528	435	336,417	1,025	874,098
	2013 4,652	7,107	1,904,879	2,805	748,392	534	219,914	1,631	936,573
<b>2018 DATA</b>									
Alabama .....	19	111	7,269	4	1,303	-	-	15	5,966
Alaska .....	10	14	5,029	7	(D)	1	(D)	2	(D)
Arizona .....	10	(D)	(D)	6	(D)	-	-	4	10,427
Arkansas .....	21	31	(D)	19	(D)	-	-	2	(D)
California .....	434	1,777	(D)	198	(D)	32	(D)	236	327,323
Colorado .....	34	36	7,389	16	(D)	2	(D)	18	(D)
Connecticut .....	29	397	27,175	-	-	29	(D)	1	(D)
Delaware .....	3	7	(D)	3	(D)	-	-	-	-
Florida .....	236	305	44,752	236	44,752	-	-	-	-
Georgia .....	38	98	(D)	21	9,721	9	(D)	8	(D)
Hawaii .....	135	160	(D)	-	-	-	-	135	(D)
Idaho .....	19	209	142,000	13	7,716	-	-	13	134,284
Illinois .....	27	115	20,056	18	8,977	5	9,776	4	1,303
Indiana .....	21	(D)	(D)	21	(D)	1	(D)	-	-
Iowa .....	44	36	6,639	9	3,039	13	2,778	22	822
Kansas .....	35	(D)	5,120	15	2,969	10	815	10	1,336
Kentucky .....	49	56	(D)	9	(D)	5	(D)	37	(D)
Louisiana .....	19	57	(D)	13	8,825	5	(D)	1	(D)
Maine .....	63	69	16,926	55	11,090	3	(D)	5	(D)
Maryland .....	20	14	3,271	20	3,271	-	-	-	-
Massachusetts .....	6	9	1,955	-	-	-	-	6	1,955
Michigan .....	16	15	9,966	16	9,966	-	-	-	-
Minnesota .....	107	69	15,401	97	14,822	-	-	10	579
Mississippi .....	6	10	688	-	-	-	-	6	688
Missouri .....	43	38	9,861	32	6,146	12	(D)	7	(D)
Montana .....	25	(D)	18,644	18	(D)	-	-	7	(D)
Nebraska .....	33	38	11,834	28	11,562	-	-	5	272
Nevada .....	2	(D)	(D)	-	-	-	-	2	(D)
New Hampshire .....	41	37	1,244	41	1,244	-	-	-	-
New Jersey .....	137	554	19,565	115	17,854	25	721	22	990
New Mexico .....	56	92	(D)	14	(D)	33	(D)	16	4,236
New York .....	178	276	105,612	88	11,737	69	91,673	46	2,202
North Carolina .....	133	86	(D)	95	(D)	42	4,345	8	68
North Dakota .....	2	(D)	(D)	-	-	-	-	2	(D)
Ohio .....	106	97	9,656	59	5,574	9	650	47	3,432
Oklahoma .....	10	17	6,757	4	3,910	2	(D)	4	(D)
Oregon .....	170	753	220,984	63	34,247	61	16,544	46	170,192
Pennsylvania .....	167	107	(D)	149	11,538	-	-	18	(D)
Rhode Island .....	15	8	1,626	11	1,587	-	-	4	39
South Carolina .....	21	21	1,458	6	1,140	8	(D)	7	(D)
South Dakota .....	28	(D)	(D)	18	(D)	4	(D)	6	(D)
Tennessee .....	36	23	3,112	14	1,647	-	-	22	1,465
Texas .....	85	190	45,205	58	34,148	6	8,554	23	2,503
Utah .....	17	71	66,311	8	10,427	-	-	17	55,883
Vermont .....	30	29	10,398	13	2,520	9	(D)	13	(D)
Virginia .....	125	109	7,827	61	3,920	10	54	54	3,853
Washington .....	247	349	(D)	136	49,543	27	(D)	87	(D)
West Virginia .....	26	15	(D)	3	(D)	3	30	20	(D)
Wisconsin .....	99	127	(D)	99	(D)	-	-	-	-
Wyoming .....	7	7	(D)	-	-	-	-	7	(D)
<b>Water Resources Regions</b>									
Region 01 New England .....	159	524	51,640	108	14,464	32	24,568	20	12,609
Region 02 Mid-Atlantic .....	427	832	(D)	305	(D)	76	(D)	71	(D)
Region 03 South Atlantic-Gulf .....	450	591	78,982	345	65,278	45	6,544	60	7,160
Region 04 Great Lakes .....	232	258	41,796	183	27,612	30	9,586	49	4,597
Region 05 Ohio .....	193	183	20,909	75	(D)	14	(D)	115	11,979
Region 06 Tennessee .....	83	77	9,495	49	(D)	24	(D)	22	(D)
Region 07 Upper Mississippi .....	260	419	88,092	209	67,679	23	19,207	29	1,206
Region 08 Lower Mississippi .....	17	(D)	7,208	10	(D)	-	-	7	(D)
Region 09 Souris-Red-Rainy .....	2	(D)	(D)	-	-	-	-	2	(D)
Region 10 Missouri .....	164	155	46,245	98	26,164	24	2,351	52	17,731
Region 11 Arkansas-White-Red .....	64	101	26,842	42	(D)	7	(D)	15	(D)
Region 12 Texas-Gulf .....	85	190	45,205	58	34,148	6	8,554	23	2,503
Region 13 Rio Grande .....	56	92	(D)	14	(D)	33	(D)	16	4,236
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....	10	(D)	(D)	6	(D)	-	-	4	10,427
Region 16 Great Basin .....	19	71	(D)	8	(D)	-	-	19	(D)
Region 17 Pacific Northwest .....	440	1,315	(D)	214	94,113	88	(D)	148	(D)
Region 18 California .....	434	1,777	(D)	198	(D)	32	(D)	236	327,323
Region 19 Alaska .....	10	14	5,029	7	(D)	1	(D)	2	(D)
Region 20 Hawaii .....	135	160	(D)	-	-	-	-	135	(D)

See footnote(s) at end of table.

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**Table 42. Irrigation for Nursery and Other Horticultural Crops Grown in the Open: 2018 and 2013 (continued)**

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

Geographic area	Gravity irrigation									
	Operations	Acres irrigated	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 697	41,763	33,243,475	170	5,593,208	111	2,255,028	446	25,395,239	
	2013 601	28,818	13,758,030	215	5,155,314	122	1,495,733	314	7,106,983	
<b>2018 DATA</b>										
Alabama .....	-	-	-	-	-	-	-	-	-	
Alaska .....	22	36	(D)	16	(D)	2	(D)	4	(D)	
Arizona .....	8	(D)	1,402,543	4	(D)	1	(D)	5	(D)	
Arkansas .....	2	(D)	(D)	2	(D)	-	-	-	-	
California .....	105	3,844	2,850,822	29	1,559,743	6	(D)	74	(D)	
Colorado .....	149	2,988	2,507,264	20	(D)	7	(D)	124	1,927,775	
Connecticut .....	-	-	-	-	-	-	-	-	-	
Delaware .....	4	6	791	4	791	-	-	-	-	
Florida .....	12	5,913	2,316,678	6	2,046,752	3	102,765	3	167,162	
Georgia .....	-	-	-	-	-	-	-	-	-	
Hawaii .....	9	71	(D)	-	-	1	(D)	9	(D)	
Idaho .....	150	19,401	19,087,293	6	(D)	3	(D)	144	18,823,017	
Illinois .....	-	-	-	-	-	-	-	-	-	
Indiana .....	6	(D)	(D)	6	(D)	-	-	-	-	
Iowa .....	-	-	-	-	-	-	-	-	-	
Kansas .....	-	-	-	-	-	-	-	-	-	
Kentucky .....	2	(D)	(D)	-	-	-	-	2	(D)	
Louisiana .....	10	674	(D)	10	(D)	-	-	-	-	
Maine .....	3	6	1,955	3	1,955	-	-	-	-	
Maryland .....	7	35	1,400	7	1,400	-	-	-	-	
Massachusetts .....	6	6	1,200	6	1,200	-	-	-	-	
Michigan .....	-	-	-	-	-	-	-	-	-	
Minnesota .....	-	-	-	-	-	-	-	-	-	
Mississippi .....	-	-	-	-	-	-	-	-	-	
Missouri .....	8	4	2,607	8	1,303	8	1,303	-	-	
Montana .....	11	22	6,843	6	(D)	-	-	5	(D)	
Nebraska .....	8	52	6,000	4	5,200	-	-	4	800	
Nevada .....	-	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	-	
New Mexico .....	93	956	382,679	18	(D)	66	(D)	19	(D)	
New York .....	-	-	-	-	-	-	-	-	-	
North Carolina .....	-	-	-	-	-	-	-	-	-	
North Dakota .....	2	(D)	(D)	2	(D)	-	-	-	-	
Ohio .....	-	-	-	-	-	-	-	-	-	
Oklahoma .....	-	-	-	-	-	-	-	-	-	
Oregon .....	11	610	342,810	-	-	4	310,210	7	32,599	
Pennsylvania .....	-	-	-	-	-	-	-	-	-	
Rhode Island .....	5	40	1,629	5	1,629	-	-	-	-	
South Carolina .....	-	-	-	-	-	-	-	-	-	
South Dakota .....	-	-	-	-	-	-	-	-	-	
Tennessee .....	-	-	-	-	-	-	-	-	-	
Texas .....	32	3,908	2,162,426	3	14,725	6	639,044	23	1,508,658	
Utah .....	12	88	108,617	-	-	-	-	12	108,617	
Vermont .....	-	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	-	
Washington .....	16	1,793	1,832,409	3	(D)	2	(D)	11	1,830,840	
West Virginia .....	2	(D)	(D)	-	-	2	(D)	-	-	
Wisconsin .....	-	-	-	-	-	-	-	-	-	
Wyoming .....	2	(D)	(D)	2	(D)	-	-	-	-	
<b>Water Resources Regions</b>										
Region 01 New England .....	14	52	4,784	14	4,784	-	-	-	-	
Region 02 Mid-Atlantic .....	11	41	(D)	11	(D)	-	-	-	-	
Region 03 South Atlantic-Gulf .....	12	5,913	2,316,678	6	2,046,752	3	102,765	3	167,162	
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	-	
Region 05 Ohio .....	10	(D)	2,933	6	(D)	2	(D)	2	(D)	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	-	-	-	-	-	-	-	-	-	
Region 08 Lower Mississippi .....	12	738	209,491	12	209,491	-	-	-	-	
Region 09 Souris-Red-Rainy .....	2	(D)	(D)	2	(D)	-	-	-	-	
Region 10 Missouri .....	49	819	547,590	34	539,355	13	2,062	12	6,174	
Region 11 Arkansas-White-Red ....	45	195	62,661	-	-	33	(D)	12	(D)	
Region 12 Texas-Gulf .....	32	3,908	2,162,426	3	14,725	6	639,044	23	1,508,658	
Region 13 Rio Grande .....	45	816	365,605	10	(D)	35	(D)	10	152,987	
Region 14 Upper Colorado .....	126	2,184	1,930,580	8	3,389	-	-	118	1,927,191	
Region 15 Lower Colorado .....	8	(D)	1,402,543	4	(D)	1	(D)	5	(D)	
Region 16 Great Basin .....	12	88	(D)	-	-	-	-	12	(D)	
Region 17 Pacific Northwest .....	183	21,816	21,264,466	15	265,254	9	312,756	162	20,686,456	
Region 18 California .....	105	3,844	2,850,822	29	1,559,743	6	(D)	74	(D)	
Region 19 Alaska .....	22	36	(D)	16	(D)	2	(D)	4	(D)	
Region 20 Hawaii .....	9	71	(D)	-	-	1	(D)	9	(D)	

See footnote(s) at end of table.

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**Table 42. Irrigation for Nursery and Other Horticultural Crops Grown in the Open: 2018 and 2013 (continued)**

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

Geographic area	Sprinkler									
	Operations	Acres irrigated	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States ..... 2018	6,885	420,087	169,280,443	4,405	90,596,696	1,506	34,007,386	1,648	44,676,360	
..... 2013	9,147	361,685	135,078,044	6,092	90,235,447	2,102	23,364,935	1,891	21,477,662	
<b>2018 DATA</b>										
Alabama .....	137	18,484	5,754,530	71	1,742,196	54	3,681,102	23	331,232	
Alaska .....	6	(D)	(D)	6	(D)	1	(D)	-	-	
Arizona .....	15	1,359	1,610,287	5	61,450	-	-	10	1,548,837	
Arkansas .....	58	5,933	1,175,514	38	753,987	14	(D)	13	(D)	
California .....	599	42,864	32,373,693	283	7,222,498	78	1,721,907	348	23,429,288	
Colorado .....	171	9,484	6,386,812	45	4,812,933	24	962,450	119	611,429	
Connecticut .....	111	2,556	718,249	97	(D)	29	498,667	3	(D)	
Delaware .....	8	1,432	(D)	5	(D)	4	24,439	-	(D)	
Florida .....	1,334	64,207	19,980,363	1,208	17,281,615	163	1,634,885	13	1,063,862	
Georgia .....	191	18,449	6,512,171	169	6,081,041	24	415,675	7	15,455	
Hawaii .....	169	632	137,959	6	(D)	-	-	166	(D)	
Idaho .....	108	7,462	5,321,136	32	1,112,236	32	1,479,489	52	2,729,411	
Illinois .....	125	5,774	1,200,373	69	928,924	39	269,493	18	1,955	
Indiana .....	44	2,938	1,057,858	14	(D)	23	677,954	8	(D)	
Iowa .....	32	1,717	352,891	21	222,822	6	124,638	10	5,431	
Kansas .....	34	3,146	1,056,609	26	213,365	12	843,244	-	-	
Kentucky .....	74	355	88,965	-	-	10	40,623	64	48,342	
Louisiana .....	110	2,519	488,374	96	277,642	18	(D)	7	(D)	
Maine .....	62	2,175	310,194	18	39,450	41	248,745	7	22,000	
Maryland .....	84	8,227	2,466,899	65	2,117,681	11	(D)	12	(D)	
Massachusetts .....	71	1,356	196,473	51	126,332	8	31,399	13	38,742	
Michigan .....	226	16,020	6,221,787	159	3,851,402	111	2,339,885	26	30,500	
Minnesota .....	71	3,604	1,063,084	44	763,745	20	(D)	8	(D)	
Mississippi .....	64	4,919	554,447	23	99,163	36	455,184	5	100	
Missouri .....	42	3,014	638,483	32	503,760	12	(D)	1	(D)	
Montana .....	28	685	391,042	15	(D)	-	-	17	(D)	
Nebraska .....	39	1,427	380,741	39	380,741	-	-	-	-	
Nevada .....	10	650	(D)	5	(D)	-	-	7	(D)	
New Hampshire .....	14	60	5,067	7	2,200	5	1,890	3	978	
New Jersey .....	289	15,322	2,562,939	227	1,955,382	61	565,557	40	42,000	
New Mexico .....	37	(D)	(D)	3	(D)	-	-	35	(D)	
New York .....	124	7,744	1,881,105	74	303,242	12	1,566,296	38	11,568	
North Carolina .....	265	6,755	1,258,704	160	317,468	124	941,060	8	176	
North Dakota .....	1	(D)	(D)	-	-	-	-	1	(D)	
Ohio .....	122	7,525	1,157,018	55	567,009	71	578,279	18	11,731	
Oklahoma .....	40	14,204	4,586,688	27	3,325,527	12	(D)	6	(D)	
Oregon .....	580	42,916	21,181,111	310	8,302,043	155	7,478,914	194	5,400,154	
Pennsylvania .....	109	844	75,352	92	(D)	17	(D)	1	(D)	
Rhode Island .....	18	1,375	133,459	9	68,843	5	(D)	5	(D)	
South Carolina .....	148	10,848	2,741,280	101	2,056,579	40	(D)	25	(D)	
South Dakota .....	13	870	183,721	8	94,773	2	(D)	3	(D)	
Tennessee .....	96	6,642	999,684	23	386,870	66	593,269	36	19,545	
Texas .....	207	37,932	23,100,069	180	18,231,719	30	2,503,639	24	2,364,710	
Utah .....	97	1,862	1,188,770	13	(D)	9	(D)	86	579,350	
Vermont .....	33	104	23,764	18	(D)	9	(D)	6	1,629	
Virginia .....	158	3,059	441,750	112	161,680	37	279,173	22	896	
Washington .....	330	19,011	8,522,270	191	2,963,571	25	964,206	140	4,594,493	
West Virginia .....	6	(D)	(D)	2	(D)	4	(D)	-	-	
Wisconsin .....	174	10,839	1,724,177	150	1,434,640	52	289,537	-	-	
Wyoming .....	1	(D)	(D)	1	(D)	-	-	-	-	
<b>Water Resources Regions</b>										
Region 01 New England .....	283	7,549	1,366,104	183	435,940	90	841,308	35	88,855	
Region 02 Mid-Atlantic .....	687	35,273	7,330,952	526	4,483,578	128	2,596,307	91	251,067	
Region 03 South Atlantic-Gulf .....	2,095	121,152	35,935,728	1,713	26,952,301	417	7,525,075	76	1,458,352	
Region 04 Great Lakes .....	367	23,840	7,347,877	264	4,309,240	173	3,007,594	28	31,043	
Region 05 Ohio .....	269	9,461	2,254,514	67	765,297	131	1,390,417	112	98,801	
Region 06 Tennessee .....	126	5,683	1,229,843	37	889,616	64	(D)	36	(D)	
Region 07 Upper Mississippi .....	358	20,255	4,151,586	254	3,377,108	81	763,789	31	10,690	
Region 08 Lower Mississippi .....	135	5,754	1,204,541	117	991,359	22	(D)	9	(D)	
Region 09 Souris-Red-Rainy .....	7	(D)	(D)	6	17,604	-	-	1	(D)	
Region 10 Missouri .....	200	13,521	6,822,150	130	4,577,329	34	1,852,753	61	392,068	
Region 11 Arkansas-White-Red .....	109	21,256	6,499,548	70	4,816,768	32	957,227	17	725,553	
Region 12 Texas-Gulf .....	209	37,934	23,095,732	177	18,227,219	30	2,503,639	29	2,364,873	
Region 13 Rio Grande .....	5	(D)	293,483	3	(D)	2	(D)	1	(D)	
Region 14 Upper Colorado .....	139	988	982,521	2	(D)	2	(D)	137	929,570	
Region 15 Lower Colorado .....	31	1,583	1,664,626	5	61,450	-	-	26	1,603,176	
Region 16 Great Basin .....	70	2,556	1,597,163	18	778,862	9	375,380	56	442,920	
Region 17 Pacific Northwest .....	1,033	69,318	35,009,606	538	12,397,671	212	9,922,609	400	12,689,327	
Region 18 California .....	587	42,648	32,321,961	283	7,222,498	78	1,721,907	336	23,377,556	
Region 19 Alaska .....	6	(D)	(D)	6	(D)	1	(D)	-	-	
Region 20 Hawaii .....	169	632	137,959	6	(D)	-	-	166	(D)	

See footnote(s) at end of table.

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**Table 42. Irrigation for Nursery and Other Horticultural Crops Grown in the Open: 2018 and 2013 (continued)**

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

Geographic area	Drip, trickle, or low-flow micro irrigation									
	Operations	Acres irrigated	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 6,905	114,111	41,804,062	4,794	26,803,114	773	3,485,449	1,649	11,515,498	
.....	2013 6,461	131,006	53,326,941	4,360	21,809,523	966	3,567,399	1,633	27,950,019	
<b>2018 DATA</b>										
Alabama .....	72	2,610	783,505	39	710,731	11	28,942	22	43,833	
Alaska .....	47	116	21,460	37	14,644	9	(D)	3	(D)	
Arizona .....	56	1,537	(D)	46	494,767	-	-	13	(D)	
Arkansas .....	42	129	18,544	19	12,322	9	(D)	14	(D)	
California .....	1,129	26,385	17,256,869	689	11,282,266	43	650,346	468	5,324,256	
Colorado .....	119	365	84,465	43	40,912	22	(D)	56	(D)	
Connecticut .....	69	432	85,772	65	(D)	21	(D)	2	(D)	
Delaware .....	9	224	(D)	5	(D)	-	-	4	782	
Florida .....	600	14,887	2,863,272	595	2,311,756	31	26,866	4	524,650	
Georgia .....	153	2,671	693,612	128	592,318	18	(D)	12	(D)	
Hawaii .....	262	773	274,620	7	(D)	31	(D)	224	228,245	
Idaho .....	151	1,612	787,718	82	(D)	10	(D)	69	403,712	
Illinois .....	98	4,962	1,370,815	62	1,188,575	36	181,426	5	815	
Indiana .....	94	431	90,584	72	56,954	9	(D)	13	(D)	
Iowa .....	55	940	218,038	18	14,685	27	195,332	11	8,021	
Kansas .....	49	137	7,379	25	4,256	-	-	30	3,124	
Kentucky .....	102	682	55,733	20	(D)	15	(D)	69	41,250	
Louisiana .....	37	220	56,653	24	(D)	7	(D)	6	3,519	
Maine .....	88	840	148,753	82	146,576	1	(D)	5	(D)	
Maryland .....	67	1,639	110,970	55	96,670	6	(D)	7	(D)	
Massachusetts .....	142	589	72,292	142	53,858	11	18,434	-	-	
Michigan .....	271	6,187	1,927,805	270	1,911,513	21	16,293	-	-	
Minnesota .....	73	825	158,361	66	152,833	2	(D)	5	(D)	
Mississippi .....	22	344	41,047	22	23,047	5	18,000	-	-	
Missouri .....	144	900	120,162	86	60,445	39	44,196	24	15,522	
Montana .....	32	40	13,710	30	(D)	-	-	2	(D)	
Nebraska .....	72	959	127,201	67	117,330	-	-	21	9,872	
Nevada .....	7	21	(D)	2	(D)	-	-	5	(D)	
New Hampshire .....	163	288	44,648	88	20,000	38	12,266	38	12,382	
New Jersey .....	133	2,192	525,467	120	504,659	14	20,808	-	-	
New Mexico .....	6	18	5,865	6	5,865	-	-	-	-	
New York .....	302	3,538	562,048	187	487,735	25	17,669	90	56,644	
North Carolina .....	118	1,786	(D)	82	(D)	36	10,598	8	9,305	
North Dakota .....	1	(D)	(D)	-	-	1	(D)	1	(D)	
Ohio .....	168	2,084	274,664	134	165,317	13	105,897	23	3,450	
Oklahoma .....	123	573	131,413	67	73,661	19	(D)	40	(D)	
Oregon .....	384	9,018	3,892,510	284	2,352,183	58	945,020	56	595,307	
Pennsylvania .....	385	1,072	119,639	267	(D)	45	(D)	80	(D)	
Rhode Island .....	6	7	701	6	701	-	-	-	-	
South Carolina .....	94	7,158	1,072,715	64	898,735	13	156,227	20	17,753	
South Dakota .....	1	(D)	(D)	1	(D)	-	-	-	-	
Tennessee .....	124	1,550	376,412	52	34,880	58	336,923	15	4,608	
Texas .....	253	4,771	1,839,763	208	1,360,800	32	340,431	26	138,532	
Utah .....	19	497	513,932	-	-	-	-	19	513,932	
Vermont .....	18	28	4,625	16	(D)	7	(D)	2	(D)	
Virginia .....	147	692	168,103	117	86,404	24	77,921	10	3,778	
Washington .....	268	6,704	3,358,451	172	(D)	3	(D)	102	3,112,497	
West Virginia .....	34	120	31,332	30	24,494	3	1,950	24	4,888	
Wisconsin .....	95	547	(D)	95	(D)	-	-	-	-	
Wyoming .....	1	(D)	(D)	-	-	-	-	1	(D)	
<b>Water Resources Regions</b>										
Region 01 New England .....	478	2,174	355,550	393	291,686	71	42,512	47	21,352	
Region 02 Mid-Atlantic .....	814	8,550	1,368,303	634	1,224,633	89	(D)	126	(D)	
Region 03 South Atlantic-Gulf .....	1,075	28,163	5,487,844	940	4,543,822	124	334,805	63	609,216	
Region 04 Great Lakes .....	517	7,667	2,103,880	435	1,953,974	41	97,865	66	52,041	
Region 05 Ohio .....	384	3,787	736,567	183	(D)	72	434,890	133	(D)	
Region 06 Tennessee .....	117	1,708	637,127	77	(D)	28	2,327	13	(D)	
Region 07 Upper Mississippi .....	342	7,317	1,841,907	246	1,422,402	83	402,012	20	17,494	
Region 08 Lower Mississippi .....	36	168	51,601	30	(D)	2	(D)	4	(D)	
Region 09 Souris-Red-Rainy .....	4	42	(D)	2	(D)	2	(D)	-	-	
Region 10 Missouri .....	250	1,807	218,065	187	177,791	20	15,052	66	25,223	
Region 11 Arkansas-White-Red .....	268	1,490	300,295	120	(D)	48	(D)	109	(D)	
Region 12 Texas-Gulf .....	228	4,224	1,723,132	186	1,301,193	29	283,407	26	138,532	
Region 13 Rio Grande .....	22	277	(D)	22	(D)	-	-	-	-	
Region 14 Upper Colorado .....	31	58	18,335	3	1,955	10	3,770	18	12,610	
Region 15 Lower Colorado .....	77	1,763	(D)	50	494,897	-	-	30	(D)	
Region 16 Great Basin .....	21	515	520,449	2	(D)	-	-	19	(D)	
Region 17 Pacific Northwest .....	822	17,354	8,050,083	555	2,956,969	71	981,110	229	4,112,005	
Region 18 California .....	1,110	26,159	17,160,274	685	11,282,136	43	650,346	453	5,227,791	
Region 19 Alaska .....	47	116	21,460	37	14,644	9	(D)	3	(D)	
Region 20 Hawaii .....	262	773	274,620	7	(D)	31	(D)	224	228,245	

See footnote(s) at end of table.

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**Table 42. Irrigation for Nursery and Other Horticultural Crops Grown in the Open: 2018 and 2013 (continued)**

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

Geographic area	Subirrigation (including hydroponic)									
	Operations	Acres irrigated	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States ..... 2018	91	5,125	2,060,216	53	427,490	8	46,054	30	1,586,673	
..... 2013	79	2,153	743,605	46	532,244	19	208,905	16	2,456	
<b>2018 DATA</b>										
Alabama .....	-	-	-	-	-	-	-	-	-	
Alaska .....	-	-	-	-	-	-	-	-	-	
Arizona .....	1	(D)	(D)	1	(D)	-	-	-	-	
Arkansas .....	1	(D)	(D)	1	(D)	-	-	-	-	
California .....	52	4,396	(D)	28	(D)	-	-	24	(D)	
Colorado .....	-	-	-	-	-	-	-	-	-	
Connecticut .....	-	-	-	-	-	-	-	-	-	
Delaware .....	-	-	-	-	-	-	-	-	-	
Florida .....	-	-	-	-	-	-	-	-	-	
Georgia .....	4	8	(D)	-	-	-	-	4	(D)	
Hawaii .....	-	-	-	-	-	-	-	-	-	
Idaho .....	-	-	-	-	-	-	-	-	-	
Illinois .....	-	-	-	-	-	-	-	-	-	
Indiana .....	-	-	-	-	-	-	-	-	-	
Iowa .....	5	3	408	5	408	-	-	-	-	
Kansas .....	15	(D)	13,820	15	13,820	-	-	-	-	
Kentucky .....	-	-	-	-	-	-	-	-	-	
Louisiana .....	-	-	-	-	-	-	-	-	-	
Maine .....	-	-	-	-	-	-	-	-	-	
Maryland .....	-	-	-	-	-	-	-	-	-	
Massachusetts .....	-	-	-	-	-	-	-	-	-	
Michigan .....	-	-	-	-	-	-	-	-	-	
Minnesota .....	-	-	-	-	-	-	-	-	-	
Mississippi .....	-	-	-	-	-	-	-	-	-	
Missouri .....	-	-	-	-	-	-	-	-	-	
Montana .....	-	-	-	-	-	-	-	-	-	
Nebraska .....	-	-	-	-	-	-	-	-	-	
Nevada .....	-	-	-	-	-	-	-	-	-	
New Hampshire .....	-	-	-	-	-	-	-	-	-	
New Jersey .....	-	-	-	-	-	-	-	-	-	
New Mexico .....	-	-	-	-	-	-	-	-	-	
New York .....	3	135	43,990	-	-	3	43,990	-	-	
North Carolina .....	-	-	-	-	-	-	-	-	-	
North Dakota .....	-	-	-	-	-	-	-	-	-	
Ohio .....	-	-	-	-	-	-	-	-	-	
Oklahoma .....	-	-	-	-	-	-	-	-	-	
Oregon .....	-	-	-	-	-	-	-	-	-	
Pennsylvania .....	2	(D)	(D)	-	-	2	(D)	-	-	
Rhode Island .....	-	-	-	-	-	-	-	-	-	
South Carolina .....	3	12	978	3	978	-	-	-	-	
South Dakota .....	-	-	-	-	-	-	-	-	-	
Tennessee .....	-	-	-	-	-	-	-	-	-	
Texas .....	-	-	-	-	-	-	-	-	-	
Utah .....	-	-	-	-	-	-	-	-	-	
Vermont .....	-	-	-	-	-	-	-	-	-	
Virginia .....	-	-	-	-	-	-	-	-	-	
Washington .....	5	16	(D)	-	-	3	(D)	2	(D)	
West Virginia .....	-	-	-	-	-	-	-	-	-	
Wisconsin .....	-	-	-	-	-	-	-	-	-	
Wyoming .....	-	-	-	-	-	-	-	-	-	
<b>Water Resources Regions</b>										
Region 01 New England .....	-	-	-	-	-	-	-	-	-	
Region 02 Mid-Atlantic .....	2	(D)	(D)	-	-	2	(D)	-	-	
Region 03 South Atlantic-Gulf .....	7	(D)	1,278	3	978	-	-	4	300	
Region 04 Great Lakes .....	-	-	-	-	-	-	-	-	-	
Region 05 Ohio .....	3	135	43,990	-	-	3	43,990	-	-	
Region 06 Tennessee .....	-	-	-	-	-	-	-	-	-	
Region 07 Upper Mississippi .....	5	3	408	5	408	-	-	-	-	
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	-	-	
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	-	-	-	-	
Region 10 Missouri .....	5	35	12,500	5	12,500	-	-	-	-	
Region 11 Arkansas-White-Red .....	11	43	2,328	11	2,328	-	-	-	-	
Region 12 Texas-Gulf .....	-	-	-	-	-	-	-	-	-	
Region 13 Rio Grande .....	-	-	-	-	-	-	-	-	-	
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	-	
Region 15 Lower Colorado .....	1	(D)	(D)	1	(D)	-	-	-	-	
Region 16 Great Basin .....	-	-	-	-	-	-	-	-	-	
Region 17 Pacific Northwest .....	5	16	(D)	-	-	3	(D)	2	(D)	
Region 18 California .....	52	4,396	(D)	28	(D)	-	-	24	(D)	
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	
Region 20 Hawaii .....	-	-	-	-	-	-	-	-	-	

<sup>1</sup> The same area can be irrigated by more than one method. Overlapped irrigation is not counted twice.

**Table 43. Irrigation for Nursery, Greenhouse, and Other Horticultural Crops Grown Under Protection: 2018 and 2013**

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

Geographic area	All methods									
	Operations	Square feet irrigated <sup>1</sup>	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 24,876	1,525,130,873	15,704,320	16,362	9,912,941	3,564	1,909,476	6,310	3,881,903	
	2013 24,829	1,405,381,805	17,870,533	14,661	10,474,182	3,114	3,493,459	8,490	3,902,891	
<b>2018 DATA</b>										
Alabama .....	313	22,691,124	103,119	204	44,064	58	14,144	98	44,912	
Alaska .....	208	2,112,835	14,418	152	12,900	53	1,286	20	233	
Arizona .....	127	11,974,228	237,527	59	212,410	-	-	71	25,117	
Arkansas .....	157	4,050,788	25,230	71	6,463	22	2,011	77	16,756	
California .....	1,697	328,881,801	4,703,858	927	2,974,859	139	242,883	812	1,486,116	
Colorado .....	380	14,421,673	177,729	155	77,744	44	3,873	202	96,111	
Connecticut .....	455	37,531,652	402,831	361	206,145	85	(D)	28	(D)	
Delaware .....	44	2,339,000	5,908	40	5,876	-	-	4	32	
Florida .....	1,346	286,871,042	2,221,415	1,286	2,034,909	77	67,394	29	119,113	
Georgia .....	334	20,312,514	169,196	219	72,284	61	85,400	61	11,512	
Hawaii .....	569	30,119,031	322,731	8	16,723	65	14,825	500	291,183	
Idaho .....	336	4,346,935	62,808	191	45,320	35	691	140	16,798	
Illinois .....	434	50,054,950	280,622	335	113,847	85	159,758	48	7,017	
Indiana .....	435	9,841,976	106,681	325	46,412	32	32,642	89	27,626	
Iowa .....	379	11,823,816	83,257	237	19,464	69	17,105	136	46,688	
Kansas .....	210	8,776,130	58,944	88	20,745	38	8,274	109	29,925	
Kentucky .....	686	9,068,660	53,949	188	12,036	175	13,782	373	28,131	
Louisiana .....	274	12,058,977	46,973	190	14,827	36	25,282	68	6,864	
Maine .....	558	6,785,654	33,875	484	28,438	66	(D)	19	(D)	
Maryland .....	383	10,812,493	114,299	347	94,646	41	19,319	23	335	
Massachusetts .....	434	6,586,132	66,158	294	54,094	80	(D)	101	(D)	
Michigan .....	1,205	86,902,965	1,062,814	938	749,642	58	27,100	225	286,072	
Minnesota .....	420	18,144,370	286,126	326	196,133	60	33,920	43	56,073	
Mississippi .....	203	4,289,424	11,034	141	8,458	4	(D)	64	(D)	
Missouri .....	639	10,912,436	105,773	447	52,832	148	10,786	116	42,155	
Montana .....	265	2,265,336	20,871	205	14,174	18	2,190	54	4,507	
Nebraska .....	236	3,026,039	27,541	208	23,536	-	-	37	(D)	
Nevada .....	54	358,536	1,873	30	1,636	-	-	24	237	
New Hampshire .....	431	8,274,578	90,784	258	74,423	98	5,423	82	10,939	
New Jersey .....	574	45,713,398	434,989	472	356,670	93	76,144	53	2,174	
New Mexico .....	179	4,076,540	27,991	91	8,403	34	(D)	61	(D)	
New York .....	1,244	52,378,469	357,639	836	120,754	265	14,258	232	222,628	
North Carolina .....	807	28,491,080	441,111	581	84,829	177	327,950	89	28,332	
North Dakota .....	37	526,745	2,892	15	1,008	3	(D)	20	(D)	
Ohio .....	905	37,618,396	410,236	550	161,468	189	151,932	210	96,835	
Oklahoma .....	234	4,338,472	21,774	146	5,951	30	10,724	85	5,100	
Oregon .....	1,020	64,333,453	931,860	656	548,039	153	96,267	245	287,554	
Pennsylvania .....	1,568	72,735,326	281,214	1,219	207,822	233	26,435	192	46,957	
Rhode Island .....	134	1,855,229	14,047	102	9,812	27	311	20	3,923	
South Carolina .....	241	5,365,322	19,596	195	16,637	22	2,385	45	575	
South Dakota .....	73	2,325,959	32,841	28	13,763	13	442	34	18,636	
Tennessee .....	617	10,823,843	181,752	154	24,099	192	68,293	301	89,359	
Texas .....	686	81,189,374	776,321	401	618,478	117	60,323	236	97,519	
Utah .....	226	11,147,052	182,962	11	108,897	-	-	216	74,065	
Vermont .....	389	4,577,962	35,866	237	16,324	66	13,219	97	6,323	
Virginia .....	696	24,913,206	183,681	497	67,365	126	101,400	78	14,916	
Washington .....	856	29,307,707	286,518	598	145,110	43	9,737	248	131,670	
West Virginia .....	306	2,804,956	15,518	129	5,973	84	2,041	99	7,505	
Wisconsin .....	783	13,742,493	155,444	710	153,398	23	1,610	54	436	
Wyoming .....	89	1,230,796	11,722	20	3,103	27	1,517	42	7,102	
<b>Water Resources Regions</b>										
Region 01 New England .....	2,110	62,320,465	615,776	1,565	379,760	359	161,457	280	74,558	
Region 02 Mid-Atlantic .....	3,378	179,232,386	1,025,976	2,737	774,469	538	190,876	316	60,631	
Region 03 South Atlantic-Gulf .....	3,119	363,677,616	2,956,783	2,506	2,260,270	371	488,243	399	208,270	
Region 04 Great Lakes .....	2,801	138,040,985	1,681,343	2,013	950,881	330	188,331	546	542,131	
Region 05 Ohio .....	2,423	50,237,208	494,258	1,134	184,167	547	150,160	852	159,932	
Region 06 Tennessee .....	635	14,692,612	105,058	311	32,505	188	29,783	148	42,770	
Region 07 Upper Mississippi .....	1,773	81,170,356	742,500	1,391	403,633	206	207,733	291	131,134	
Region 08 Lower Mississippi .....	471	15,576,031	81,105	294	22,629	38	26,329	179	32,147	
Region 09 Souris-Red-Rainy .....	47	1,004,028	17,185	10	15,317	22	121	15	1,746	
Region 10 Missouri .....	1,220	36,318,201	342,827	782	159,437	174	20,975	324	162,414	
Region 11 Arkansas-White-Red ....	594	10,134,679	65,123	347	25,538	79	14,240	235	25,344	
Region 12 Texas-Gulf .....	649	75,432,738	581,124	356	423,271	117	60,323	244	97,530	
Region 13 Rio Grande .....	199	11,098,640	220,081	123	205,824	34	867	49	13,390	
Region 14 Upper Colorado .....	273	3,879,584	46,753	15	1,632	59	2,363	213	42,758	
Region 15 Lower Colorado .....	140	12,175,428	240,813	62	215,002	-	-	81	25,811	
Region 16 Great Basin .....	186	10,055,408	156,393	41	110,533	-	-	146	45,861	
Region 17 Pacific Northwest .....	2,370	97,211,841	1,283,271	1,591	746,184	245	108,680	643	428,408	
Region 18 California .....	1,711	330,640,801	4,710,802	924	2,972,267	139	242,883	829	1,495,652	
Region 19 Alaska .....	208	2,112,835	14,418	152	12,900	53	1,286	20	233	
Region 20 Hawaii .....	569	30,119,031	322,731	8	16,723	65	14,825	500	291,183	

See footnote(s) at end of table.

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**Table 43. Irrigation for Nursery, Greenhouse, and Other Horticultural Crops Grown Under Protection: 2018 and 2013 (continued)**

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

Geographic area	Operations	Square feet irrigated	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 13,757	363,119,112	2,573,838	8,851	1,514,171	1,694	227,700	3,828	831,966	
	2013 15,343	313,362,469	3,215,983	8,646	1,715,730	1,451	269,693	5,867	1,230,560	
<b>2018 DATA</b>										
Alabama .....	183	11,719,294	50,283	109	11,141	30	3,884	63	35,259	
Alaska .....	110	932,094	3,233	78	2,620	29	(D)	18	(D)	
Arizona .....	45	3,044,708	20,001	28	(D)	-	-	20	(D)	
Arkansas .....	90	1,825,804	13,906	39	(D)	10	(D)	46	10,307	
California .....	944	68,020,132	639,616	478	376,448	54	40,284	502	222,884	
Colorado .....	239	7,677,575	50,325	98	(D)	9	(D)	136	26,136	
Connecticut .....	352	8,731,420	71,211	263	48,495	62	(D)	27	(D)	
Delaware .....	29	1,619,920	3,540	25	3,524	-	-	4	16	
Florida .....	199	3,172,364	(D)	196	(D)	3	(D)	-	-	
Georgia .....	152	3,524,468	13,982	104	4,716	-	-	48	9,266	
Hawaii .....	185	3,189,159	10,478	-	-	32	(D)	153	(D)	
Idaho .....	172	1,261,122	7,950	94	7,305	26	112	59	532	
Illinois .....	291	5,314,350	77,922	216	63,284	72	13,969	33	670	
Indiana .....	218	3,703,784	25,810	165	(D)	11	(D)	51	7,187	
Iowa .....	254	5,793,588	43,883	136	16,470	49	16,091	92	11,322	
Kansas .....	114	2,290,930	23,752	44	2,449	24	1,052	60	20,251	
Kentucky .....	263	3,342,520	16,597	70	4,344	32	2,632	169	9,622	
Louisiana .....	133	1,194,665	3,451	98	2,852	5	(D)	38	(D)	
Maine .....	301	1,924,528	9,547	237	7,500	52	1,260	15	787	
Maryland .....	160	3,578,318	28,170	144	27,374	13	(D)	16	(D)	
Massachusetts .....	219	2,224,240	21,669	118	(D)	40	(D)	91	6,086	
Michigan .....	745	48,525,966	236,744	553	153,850	57	(D)	151	(D)	
Minnesota .....	296	5,067,948	56,694	218	(D)	41	912	42	(D)	
Mississippi .....	69	1,223,520	(D)	56	3,100	-	-	13	(D)	
Missouri .....	271	3,806,295	18,175	179	11,037	40	(D)	72	(D)	
Montana .....	200	978,730	10,616	176	6,907	14	(D)	18	(D)	
Nebraska .....	162	1,422,199	15,420	134	(D)	-	-	37	(D)	
Nevada .....	31	268,736	1,024	22	944	-	-	9	80	
New Hampshire .....	230	3,734,600	37,414	153	26,680	6	(D)	78	(D)	
New Jersey .....	291	4,149,252	8,331	211	5,540	53	616	53	2,174	
New Mexico .....	32	587,580	17,091	21	(D)	-	-	18	(D)	
New York .....	899	19,838,579	93,503	581	54,972	197	3,547	167	34,984	
North Carolina .....	524	8,714,995	78,947	357	24,803	106	(D)	69	(D)	
North Dakota .....	33	350,745	2,397	11	512	3	(D)	20	(D)	
Ohio .....	685	11,618,035	86,729	450	47,760	101	(D)	176	(D)	
Oklahoma .....	135	533,870	3,822	60	1,805	14	(D)	72	(D)	
Oregon .....	505	10,334,762	85,795	334	60,274	53	1,784	127	23,737	
Pennsylvania .....	900	34,547,794	108,300	743	85,401	82	1,398	79	21,501	
Rhode Island .....	108	651,896	4,708	81	(D)	7	(D)	20	(D)	
South Carolina .....	158	2,431,082	8,183	115	5,473	22	2,385	42	324	
South Dakota .....	52	1,551,399	25,049	21	(D)	4	(D)	27	17,862	
Tennessee .....	358	6,140,643	70,851	59	6,441	99	9,669	201	54,741	
Texas .....	419	19,995,076	162,788	245	126,386	75	7,706	156	28,695	
Utah .....	128	4,095,000	56,535	2	(D)	-	-	127	(D)	
Vermont .....	150	900,808	4,645	80	3,194	10	(D)	71	(D)	
Virginia .....	333	6,540,399	41,344	216	33,148	65	7,000	54	1,196	
Washington .....	561	10,821,673	82,763	386	40,070	33	3,887	165	38,806	
West Virginia .....	158	538,786	6,361	49	2,371	55	1,691	54	2,299	
Wisconsin .....	641	9,092,435	76,539	587	76,103	-	-	54	436	
Wyoming .....	30	571,326	7,956	11	(D)	4	(D)	15	4,844	
<b>Water Resources Regions</b>										
Region 01 New England .....	1,247	17,496,508	148,369	885	102,716	167	(D)	236	(D)	
Region 02 Mid-Atlantic .....	1,943	50,710,518	193,934	1,543	160,983	265	9,650	199	23,301	
Region 03 South Atlantic-Gulf .....	1,112	30,782,453	(D)	758	81,472	152	55,188	251	(D)	
Region 04 Great Lakes .....	1,750	68,621,087	336,245	1,223	215,417	212	30,025	395	90,803	
Region 05 Ohio .....	1,320	19,806,020	145,664	675	62,650	223	(D)	453	(D)	
Region 06 Tennessee .....	439	6,139,332	53,806	207	14,417	103	3,390	130	35,999	
Region 07 Upper Mississippi .....	1,276	23,842,260	226,350	976	158,529	126	29,109	233	38,713	
Region 08 Lower Mississippi .....	229	3,045,695	(D)	145	5,845	5	(D)	105	21,331	
Region 09 Souris-Red-Rainy .....	47	603,508	(D)	10	(D)	22	27	15	1,746	
Region 10 Missouri .....	710	13,068,659	127,953	436	53,606	58	2,363	231	71,984	
Region 11 Arkansas-White-Red .....	338	3,301,748	23,190	185	(D)	38	(D)	145	12,932	
Region 12 Texas-Gulf .....	384	19,727,000	158,363	202	121,951	75	7,706	164	28,706	
Region 13 Rio Grande .....	64	3,382,760	21,366	54	8,182	-	-	17	13,184	
Region 14 Upper Colorado .....	129	1,095,820	23,274	-	-	7	94	122	23,180	
Region 15 Lower Colorado .....	54	3,205,908	22,806	31	(D)	-	-	26	(D)	
Region 16 Great Basin .....	99	3,446,256	(D)	24	(D)	-	-	76	29,874	
Region 17 Pacific Northwest .....	1,372	22,672,555	180,102	944	111,206	126	6,155	349	62,741	
Region 18 California .....	949	68,049,772	638,670	475	373,856	54	40,284	510	224,531	
Region 19 Alaska .....	110	932,094	3,233	78	2,620	29	(D)	18	(D)	
Region 20 Hawaii .....	185	3,189,159	10,478	-	-	32	(D)	153	(D)	

See footnote(s) at end of table.

--continued

**Table 43. Irrigation for Nursery, Greenhouse, and Other Horticultural Crops Grown Under Protection: 2018 and 2013 (continued)**

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

Geographic area	Operations	Square feet irrigated	Gallons applied (1,000)	Gravity irrigation						
				Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 2013	657 294	7,041,997 4,783,177	43,954 49,201	288 119	21,421 17,680	240 120	9,423 7,026	145 89	13,110 24,495
<b>2018 DATA</b>										
Alabama .....		11	4,400	16	-	-	11	16	-	-
Alaska .....		1	(D)	(D)	-	-	1	(D)	-	-
Arizona .....		32	512,000	(D)	-	-	-	-	32	(D)
Arkansas .....		-	-	-	-	-	-	-	-	-
California .....		36	229,820	2,661	24	2,202	3	389	16	69
Colorado .....		2	(D)	(D)	2	(D)	2	(D)	-	-
Connecticut .....		1	(D)	(D)	1	(D)	-	-	-	-
Delaware .....		-	-	-	-	-	-	-	-	-
Florida .....		-	-	-	-	-	-	-	-	-
Georgia .....		23	40,250	69	-	-	23	69	-	-
Hawaii .....		39	352,440	(D)	-	-	-	-	39	(D)
Idaho .....		-	-	-	-	-	-	-	-	-
Illinois .....		5	4,500	60	-	-	5	60	-	-
Indiana .....		-	-	-	-	-	-	-	-	-
Iowa .....		18	720,000	360	-	-	-	-	18	360
Kansas .....		-	-	-	-	-	-	-	-	-
Kentucky .....		65	1,273,080	1,052	2	(D)	63	(D)	-	-
Louisiana .....		-	-	-	-	-	-	-	-	-
Maine .....		9	227,448	(D)	6	(D)	6	1,220	-	-
Maryland .....		26	98,280	(D)	26	(D)	-	-	-	-
Massachusetts .....		-	-	-	-	-	-	-	-	-
Michigan .....		2	(D)	(D)	2	(D)	-	-	-	-
Minnesota .....		-	-	-	-	-	-	-	-	-
Mississippi .....		-	-	-	-	-	-	-	-	-
Missouri .....		10	48,000	1,035	8	(D)	2	(D)	2	(D)
Montana .....		2	(D)	(D)	2	(D)	-	-	2	(D)
Nebraska .....		-	-	-	-	-	-	-	-	-
Nevada .....		-	-	-	-	-	-	-	-	-
New Hampshire .....		33	59,400	398	-	-	33	398	-	-
New Jersey .....		-	-	-	-	-	-	-	-	-
New Mexico .....		-	-	-	-	-	-	-	-	-
New York .....		38	157,888	656	22	496	16	160	-	-
North Carolina .....		9	4,050	32	9	32	-	-	-	-
North Dakota .....		-	-	-	-	-	-	-	-	-
Ohio .....		-	-	-	-	-	-	-	-	-
Oklahoma .....		-	-	-	-	-	-	-	-	-
Oregon .....		14	23,100	20	7	(D)	7	(D)	-	-
Pennsylvania .....		45	195,240	5,857	24	369	21	5,489	-	-
Rhode Island .....		4	(D)	(D)	4	(D)	-	-	-	-
South Carolina .....		7	4,550	182	-	-	-	-	7	182
South Dakota .....		-	-	-	-	-	-	-	-	-
Tennessee .....		93	404,064	2,634	64	2,376	29	258	-	-
Texas .....		19	152,000	475	19	475	-	-	-	-
Utah .....		1	(D)	(D)	-	-	-	-	1	(D)
Vermont .....		30	108,560	(D)	25	528	5	(D)	-	-
Virginia .....		10	15,000	(D)	-	-	10	(D)	-	-
Washington .....		7	3,500	21	-	-	-	-	7	21
West Virginia .....		6	17,250	167	3	(D)	3	(D)	-	-
Wisconsin .....		38	66,500	294	38	294	-	-	-	-
Wyoming .....		21	457,380	(D)	-	-	-	-	21	(D)
<b>Water Resources Regions</b>										
Region 01 New England .....		69	1,956,808	15,255	33	(D)	39	(D)	-	-
Region 02 Mid-Atlantic .....		73	348,520	5,774	26	(D)	47	(D)	-	-
Region 03 South Atlantic-Gulf .....		50	53,250	300	9	(D)	34	85	7	(D)
Region 04 Great Lakes .....		56	161,488	1,308	51	1,301	5	6	-	-
Region 05 Ohio .....		121	1,441,394	1,831	48	(D)	73	(D)	-	-
Region 06 Tennessee .....		43	253,000	2,022	21	(D)	22	(D)	-	-
Region 07 Upper Mississippi .....		69	827,000	1,514	46	1,094	5	(D)	18	(D)
Region 08 Lower Mississippi .....		-	-	-	-	-	-	-	-	-
Region 09 Souris-Red-Rainy .....		-	-	-	-	-	-	-	-	-
Region 10 Missouri .....		4	13,934	299	2	(D)	4	(D)	2	(D)
Region 11 Arkansas-White-Red .....		-	-	-	-	-	-	-	-	-
Region 12 Texas-Gulf .....		19	152,000	475	19	475	-	-	-	-
Region 13 Rio Grande .....		-	-	-	-	-	-	-	-	-
Region 14 Upper Colorado .....		21	457,380	1,711	-	-	-	-	21	1,711
Region 15 Lower Colorado .....		32	512,000	(D)	-	-	-	-	32	(D)
Region 16 Great Basin .....		1	(D)	(D)	-	-	-	-	1	(D)
Region 17 Pacific Northwest .....		23	31,400	59	9	(D)	7	(D)	9	35
Region 18 California .....		36	229,820	2,661	24	2,202	3	389	16	69
Region 19 Alaska .....		1	(D)	(D)	-	-	1	(D)	-	-
Region 20 Hawaii .....		39	352,440	(D)	-	-	-	-	39	(D)

See footnote(s) at end of table.

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**Table 43. Irrigation for Nursery, Greenhouse, and Other Horticultural Crops Grown Under Protection: 2018 and 2013 (continued)**

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

Geographic area	Operations	Square feet irrigated	Gallons applied (1,000)	Sprinkler						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....2018	5,767	700,588,139	6,941,578	4,101	4,663,549	705	1,165,342	1,340	1,112,687	
.....2013	6,296	765,106,427	9,856,896	3,773	5,621,632	1,094	2,652,278	1,975	1,582,985	
<b>2018 DATA</b>										
Alabama .....	147	14,180,158	43,795	112	27,214	28	9,800	35	6,781	
Alaska .....	44	277,540	2,470	26	2,342	16	(D)	2	(D)	
Arizona .....	37	1,739,770	17,660	12	(D)	-	-	25	(D)	
Arkansas .....	37	591,106	4,541	18	(D)	6	(D)	15	3,151	
California .....	393	79,179,960	923,271	253	618,204	9	98,991	194	206,076	
Colorado .....	65	4,689,807	53,877	21	18,649	5	1,499	42	33,729	
Connecticut .....	101	14,825,064	217,781	39	57,168	62	(D)	18	(D)	
Delaware .....	4	159,120	(D)	4	(D)	-	-	-	(D)	
Florida .....	908	248,565,422	2,039,502	848	1,854,580	77	(D)	29	(D)	
Georgia .....	99	10,987,500	124,821	86	47,441	15	77,290	4	90	
Hawaii .....	167	7,521,465	80,044	4	(D)	2	(D)	163	61,620	
Idaho .....	48	980,320	13,500	45	11,580	-	-	23	1,920	
Illinois .....	118	33,652,240	168,884	87	25,259	32	141,825	18	1,800	
Indiana .....	74	2,598,340	34,696	58	13,833	8	(D)	15	(D)	
Iowa .....	55	3,315,885	21,844	20	545	-	-	35	21,299	
Kansas .....	16	1,219,760	6,965	-	-	3	4,200	13	2,765	
Kentucky .....	38	945,332	6,290	4	(D)	3	(D)	31	(D)	
Louisiana .....	154	9,765,412	38,222	103	(D)	31	24,682	40	(D)	
Maine .....	56	(D)	(D)	46	(D)	12	(D)	1	(D)	
Maryland .....	119	7,706,581	70,394	119	(D)	3	(D)	-	-	
Massachusetts .....	1	(D)	(D)	-	-	1	(D)	-	-	
Michigan .....	338	40,608,251	658,040	269	538,499	-	-	83	119,541	
Minnesota .....	81	5,609,692	63,888	80	59,212	4	(D)	4	(D)	
Mississippi .....	72	1,779,844	3,694	57	3,448	4	(D)	11	(D)	
Missouri .....	58	3,017,408	28,376	19	405	19	2,968	20	25,003	
Montana .....	68	601,008	3,701	54	(D)	10	1,665	12	(D)	
Nebraska .....	24	383,000	7,041	24	7,041	-	-	-	(D)	
Nevada .....	-	-	-	-	-	-	-	-	-	
New Hampshire .....	46	1,592,684	10,671	46	(D)	1	(D)	-	-	
New Jersey .....	159	20,678,726	288,890	159	236,626	4	52,263	-	-	
New Mexico .....	22	(D)	(D)	2	(D)	-	-	20	(D)	
New York .....	260	25,926,158	154,414	189	34,451	22	291	49	119,671	
North Carolina .....	305	13,350,232	201,305	230	49,217	45	130,472	39	21,616	
North Dakota .....	-	-	-	-	-	-	-	-	-	
Ohio .....	120	20,866,875	213,895	97	(D)	32	126,437	2	(D)	
Oklahoma .....	82	(D)	(D)	54	(D)	12	(D)	17	(D)	
Oregon .....	330	45,468,234	726,886	227	434,065	59	92,409	67	200,412	
Pennsylvania .....	172	7,361,172	78,126	146	71,524	5	6,474	21	128	
Rhode Island .....	29	391,981	2,466	26	(D)	-	-	3	(D)	
South Carolina .....	66	2,058,308	10,218	66	10,218	-	-	-	-	
South Dakota .....	19	467,983	4,337	10	3,626	2	(D)	7	(D)	
Tennessee .....	168	5,416,200	106,219	25	14,379	72	58,068	100	33,772	
Texas .....	173	35,916,434	283,486	64	190,365	68	52,600	62	40,521	
Utah .....	36	3,477,376	47,233	3	(D)	-	-	34	(D)	
Vermont .....	15	602,560	(D)	11	122	1	(D)	3	(D)	
Virginia .....	133	8,576,012	68,268	99	(D)	14	45,490	22	(D)	
Washington .....	160	5,012,514	52,434	102	37,277	7	3,317	58	11,839	
West Virginia .....	13	(D)	7,289	3	2,775	6	(D)	4	(D)	
Wisconsin .....	129	4,248,367	33,184	129	32,748	4	435	-	-	
Wyoming .....	8	93,556	992	5	(D)	1	(D)	2	(D)	
<b>Water Resources Regions</b>										
Region 01 New England .....	234	17,251,849	234,085	157	70,887	77	(D)	22	(D)	
Region 02 Mid-Atlantic .....	647	58,371,869	520,733	587	406,339	23	(D)	46	(D)	
Region 03 South Atlantic-Gulf .....	1,508	284,568,108	2,407,227	1,340	1,984,102	150	276,946	96	146,179	
Region 04 Great Lakes .....	570	71,915,389	999,507	443	640,586	40	125,599	114	233,322	
Region 05 Ohio .....	319	13,697,773	175,657	164	56,539	89	64,588	104	54,530	
Region 06 Tennessee .....	182	7,407,092	34,935	98	(D)	40	17,753	55	(D)	
Region 07 Upper Mississippi .....	335	43,131,529	269,414	255	90,049	36	141,927	67	37,437	
Region 08 Lower Mississippi .....	179	10,499,136	42,832	109	11,864	29	25,043	63	5,925	
Region 09 Souris-Red-Rainy .....	4	96,000	(D)	4	(D)	-	-	-	-	
Region 10 Missouri .....	158	9,933,948	85,867	82	(D)	30	(D)	49	47,757	
Region 11 Arkansas-White-Red .....	148	2,553,502	(D)	76	(D)	22	6,202	51	(D)	
Region 12 Texas-Gulf .....	161	35,655,074	275,666	52	182,545	68	52,600	62	40,521	
Region 13 Rio Grande .....	28	1,151,960	12,739	18	12,618	-	-	10	121	
Region 14 Upper Colorado .....	25	226,943	4,864	-	-	-	-	25	4,864	
Region 15 Lower Colorado .....	41	1,779,770	18,140	12	(D)	-	-	29	(D)	
Region 16 Great Basin .....	32	3,437,376	46,753	3	(D)	-	-	30	(D)	
Region 17 Pacific Northwest .....	583	50,545,856	791,517	418	483,944	74	97,338	149	210,235	
Region 18 California .....	402	80,565,960	927,579	253	618,204	9	98,991	203	210,384	
Region 19 Alaska .....	44	277,540	2,470	26	2,342	16	(D)	2	(D)	
Region 20 Hawaii .....	167	7,521,465	80,044	4	(D)	2	(D)	163	61,620	

See footnote(s) at end of table.

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**Table 43. Irrigation for Nursery, Greenhouse, and Other Horticultural Crops Grown Under Protection: 2018 and 2013 (continued)**

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

Geographic area	Operations	Square feet irrigated	Gallons applied (1,000)	Drip, trickle, or low-flow micro irrigation						
				Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 11,244	607,028,935	5,585,522	7,487	3,504,316	1,702	309,073	2,583	1,772,133	
	2013 7,772	391,127,621	4,217,443	5,266	2,860,055	1,082	372,360	1,972	985,028	
<b>2018 DATA</b>										
Alabama .....	93	4,993,332	9,024	70	5,708	8	444	23	2,872	
Alaska .....	93	979,977	(D)	57	7,938	35	634	17	(D)	
Arizona .....	38	6,840,740	191,435	28	186,798	-	-	10	4,638	
Arkansas .....	74	2,294,978	(D)	32	2,875	4	(D)	38	3,298	
California .....	730	223,385,752	2,917,986	388	1,847,430	89	102,314	326	968,242	
Colorado .....	132	4,098,859	68,290	52	32,346	32	2,171	64	33,773	
Connecticut .....	156	15,915,768	96,123	151	82,767	6	(D)	2	(D)	
Delaware .....	21	559,960	(D)	17	(D)	-	-	4	16	
Florida .....	389	41,640,705	155,054	385	(D)	-	-	4	(D)	
Georgia .....	185	4,534,346	26,123	133	15,926	24	8,040	29	2,157	
Hawaii .....	215	19,900,642	219,195	6	(D)	33	(D)	176	206,849	
Idaho .....	142	2,548,771	40,544	78	25,870	12	579	60	14,095	
Illinois .....	242	12,744,000	33,705	192	25,254	20	3,904	30	4,547	
Indiana .....	265	4,558,532	(D)	209	25,663	23	13,390	35	(D)	
Iowa .....	165	3,979,623	9,622	116	(D)	1	(D)	49	6,307	
Kansas .....	112	5,270,280	28,226	49	18,296	14	3,022	60	6,909	
Kentucky .....	420	4,614,572	26,267	132	6,956	121	8,882	206	10,429	
Louisiana .....	76	507,100	(D)	51	(D)	5	(D)	20	3,228	
Maine .....	306	3,000,985	11,195	246	9,398	59	1,641	12	156	
Maryland .....	188	3,459,394	(D)	168	8,766	40	(D)	7	(D)	
Massachusetts .....	296	4,362,652	42,342	258	40,770	39	(D)	10	(D)	
Michigan .....	512	29,281,657	165,270	379	(D)	24	(D)	112	102,942	
Minnesota .....	121	5,898,026	70,779	98	69,607	18	(D)	6	(D)	
Mississippi .....	108	1,552,220	3,649	62	1,910	-	-	46	1,739	
Missouri .....	500	8,085,249	58,077	347	40,500	113	7,178	92	10,399	
Montana .....	89	709,876	(D)	57	5,759	4	(D)	30	565	
Nebraska .....	102	349,640	(D)	102	(D)	-	-	-	-	
Nevada .....	29	219,880	848	11	692	-	-	18	156	
New Hampshire .....	232	5,560,242	36,638	162	31,476	59	(D)	11	(D)	
New Jersey .....	248	20,893,820	137,744	226	114,479	36	23,265	-	-	
New Mexico .....	134	2,141,400	4,864	66	(D)	34	(D)	34	3,048	
New York .....	654	25,276,800	94,448	431	23,647	127	2,828	139	67,972	
North Carolina .....	244	4,995,797	(D)	169	8,472	64	6,718	19	(D)	
North Dakota .....	5	216,000	495	5	495	-	-	-	-	
Ohio .....	400	9,031,806	107,479	167	(D)	138	(D)	118	69,179	
Oklahoma .....	156	3,022,416	(D)	111	(D)	26	(D)	45	(D)	
Oregon .....	412	12,623,687	117,816	267	53,002	32	1,410	113	63,405	
Pennsylvania .....	889	31,256,270	88,737	642	50,416	176	13,074	142	25,247	
Rhode Island .....	91	887,112	6,798	70	4,261	20	240	12	2,296	
South Carolina .....	35	877,890	1,014	25	946	-	-	10	68	
South Dakota .....	37	508,760	3,456	19	(D)	11	(D)	7	(D)	
Tennessee .....	123	574,800	2,048	71	904	29	298	30	846	
Texas .....	219	36,366,684	327,797	160	301,132	12	17	60	26,649	
Utah .....	93	3,592,519	(D)	10	(D)	-	-	83	10,558	
Vermont .....	288	3,403,938	26,328	180	9,961	60	13,040	59	3,328	
Virginia .....	303	10,404,907	65,111	220	(D)	52	41,932	34	(D)	
Washington .....	371	14,537,164	151,091	245	67,762	32	2,324	104	81,004	
West Virginia .....	155	853,710	1,527	57	505	29	(D)	72	(D)	
Wisconsin .....	321	3,573,963	44,933	302	43,757	19	1,175	-	-	
Wyoming .....	35	141,734	(D)	8	235	22	155	5	(D)	
<b>Water Resources Regions</b>										
Region 01 New England .....	1,169	30,776,155	197,250	948	171,742	185	10,257	73	15,252	
Region 02 Mid-Atlantic .....	1,712	74,043,785	283,219	1,397	198,875	290	54,899	179	29,445	
Region 03 South Atlantic-Gulf .....	1,090	59,204,836	(D)	867	187,640	96	(D)	145	11,661	
Region 04 Great Lakes .....	1,307	48,837,564	334,299	866	(D)	204	(D)	275	215,250	
Region 05 Ohio .....	1,287	23,243,675	163,013	564	63,907	315	47,853	460	51,253	
Region 06 Tennessee .....	120	3,212,718	12,075	67	3,347	45	(D)	8	(D)	
Region 07 Upper Mississippi .....	811	20,707,103	151,123	660	132,103	50	(D)	112	(D)	
Region 08 Lower Mississippi .....	176	1,697,480	10,280	122	4,919	4	470	68	4,891	
Region 09 Souris-Red-Rainy .....	22	131,720	(D)	2	(D)	20	93	-	-	
Region 10 Missouri .....	644	15,846,397	122,436	453	73,594	118	10,218	98	38,625	
Region 11 Arkansas-White-Red ....	312	5,583,459	28,815	189	12,981	44	6,455	118	9,380	
Region 12 Texas-Gulf .....	217	31,139,484	144,845	158	118,180	12	17	60	26,649	
Region 13 Rio Grande .....	117	6,104,160	184,841	61	183,890	34	867	22	84	
Region 14 Upper Colorado .....	135	2,106,441	16,903	15	1,632	52	2,269	82	13,003	
Region 15 Lower Colorado .....	38	6,840,740	191,435	28	186,798	-	-	10	4,638	
Region 16 Great Basin .....	85	3,319,699	71,645	21	69,086	-	-	64	2,559	
Region 17 Pacific Northwest .....	956	29,609,068	309,226	618	149,768	76	4,312	282	155,146	
Region 18 California .....	738	223,743,832	2,921,567	388	1,847,430	89	102,314	334	971,823	
Region 19 Alaska .....	93	979,977	(D)	57	7,938	35	634	17	(D)	
Region 20 Hawaii .....	215	19,900,642	219,195	6	(D)	33	(D)	176	206,849	

See footnote(s) at end of table.

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**Table 43. Irrigation for Nursery, Greenhouse, and Other Horticultural Crops Grown Under Protection: 2018 and 2013 (continued)**

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

Geographic area	Subirrigation (including hydroponic)									
	Operations	Square feet irrigated	Gallons applied (1,000)	Water source						
				Ground water from wells		On-farm surface water		Off-farm water (all suppliers)		
				Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	Operations	Gallons applied (1,000)	
United States .....	2018 2013	1,000 533	43,140,022 54,515,132	559,429 531,010	657 331	209,485 259,085	149 102	197,937 192,102	272 147	152,008 79,824
<b>2018 DATA</b>										
Alabama .....	-	-	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-	-	-
Arizona .....	3	30,000	(D)	-	-	-	-	-	3	(D)
Arkansas .....	2	(D)	(D)	-	-	-	-	-	-	-
California .....	54	13,015,288	220,325	47	130,575	7	(D)	905	19	88,845
Colorado .....	17	318,000	(D)	10	(D)	-	-	-	9	2,473
Connecticut .....	29	1,975,000	(D)	29	(D)	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	-	-	-
Florida .....	54	149,850	(D)	54	(D)	-	-	-	-	-
Georgia .....	22	1,474,000	4,200	22	4,200	-	-	-	-	-
Hawaii .....	64	803,410	(D)	-	-	-	-	-	64	(D)
Idaho .....	22	70,800	815	13	564	-	-	-	9	251
Illinois .....	5	70,000	50	5	50	-	-	-	-	-
Indiana .....	4	(D)	(D)	3	(D)	-	-	(D)	-	-
Iowa .....	45	274,000	7,549	20	(D)	1	(D)	(D)	25	7,400
Kansas .....	-	-	-	-	-	-	-	-	-	-
Kentucky .....	42	439,680	3,743	2	(D)	-	-	-	40	(D)
Louisiana .....	2	(D)	(D)	-	-	2	(D)	-	-	-
Maine .....	35	(D)	(D)	35	(D)	-	-	-	-	-
Maryland .....	1	(D)	(D)	1	(D)	1	(D)	-	-	-
Massachusetts .....	11	110,000	(D)	11	(D)	-	-	-	-	-
Michigan .....	21	573,511	(D)	19	(D)	-	-	-	2	(D)
Minnesota .....	39	3,520,712	94,765	23	(D)	19	32,836	-	1	(D)
Mississippi .....	-	-	-	-	-	-	-	-	-	-
Missouri .....	6	32,000	110	4	(D)	-	-	-	2	(D)
Montana .....	2	(D)	(D)	-	-	-	-	-	2	(D)
Nebraska .....	1	(D)	(D)	1	(D)	-	-	-	-	-
Nevada .....	3	1,500	2	-	-	-	-	-	3	2
New Hampshire .....	69	783,300	5,663	36	(D)	-	-	-	33	(D)
New Jersey .....	13	27,300	25	13	25	-	-	-	-	-
New Mexico .....	11	459,760	(D)	11	(D)	-	-	-	-	-
New York .....	88	5,569,260	14,618	87	7,187	23	7,432	-	-	-
North Carolina .....	43	4,556,500	(D)	19	2,304	12	(D)	-	12	473
North Dakota .....	-	-	-	-	-	-	-	-	-	-
Ohio .....	48	830,200	2,132	-	-	16	(D)	-	32	(D)
Oklahoma .....	-	-	-	-	-	-	-	-	-	-
Oregon .....	10	97,600	1,343	10	(D)	2	(D)	-	-	-
Pennsylvania .....	55	989,380	194	50	113	-	-	-	5	81
Rhode Island .....	8	(D)	(D)	8	9	8	(D)	-	-	-
South Carolina .....	-	-	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-	-	-
Tennessee .....	-	-	-	-	-	-	-	-	-	-
Texas .....	22	94,000	1,774	12	120	-	-	-	10	1,654
Utah .....	-	-	-	-	-	-	-	-	-	-
Vermont .....	23	131,100	2,519	23	2,519	-	-	-	-	-
Virginia .....	45	861,300	(D)	44	(D)	1	(D)	-	-	-
Washington .....	7	210,000	210	-	-	7	210	-	-	-
West Virginia .....	52	224,604	174	24	(D)	27	7	-	1	(D)
Wisconsin .....	21	722,300	495	21	495	-	-	-	-	-
Wyoming .....	1	(D)	(D)	-	-	1	(D)	-	-	-
<b>Water Resources Regions</b>										
Region 01 New England .....	152	4,869,643	20,817	119	(D)	8	(D)	-	33	(D)
Region 02 Mid-Atlantic .....	155	4,735,538	22,317	152	(D)	24	14,107	-	2	(D)
Region 03 South Atlantic-Gulf .....	151	6,381,170	(D)	127	(D)	12	(D)	-	12	473
Region 04 Great Lakes .....	100	4,011,053	9,984	65	(D)	2	(D)	-	33	2,756
Region 05 Ohio .....	91	1,202,488	8,094	3	(D)	43	(D)	-	45	(D)
Region 06 Tennessee .....	12	312,000	2,220	12	2,220	-	-	-	-	-
Region 07 Upper Mississippi .....	106	4,330,572	94,100	70	21,858	39	32,911	-	21	39,331
Region 08 Lower Mississippi .....	2	(D)	(D)	-	-	2	(D)	-	-	-
Region 09 Souris-Red-Rainy .....	1	(D)	(D)	1	(D)	-	-	-	-	-
Region 10 Missouri .....	22	1,221,200	6,271	7	(D)	1	(D)	-	16	(D)
Region 11 Arkansas-White-Red .....	12	94,000	(D)	8	(D)	2	(D)	-	2	(D)
Region 12 Texas-Gulf .....	22	94,000	1,774	12	120	-	-	-	10	1,654
Region 13 Rio Grande .....	11	459,760	1,135	11	1,135	-	-	-	-	-
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....	3	30,000	(D)	-	-	-	-	-	3	(D)
Region 16 Great Basin .....	3	1,500	(D)	-	-	-	-	-	3	(D)
Region 17 Pacific Northwest .....	39	378,400	2,368	23	(D)	9	(D)	-	9	251
Region 18 California .....	54	13,015,288	220,325	47	130,575	7	905	-	19	88,845
Region 19 Alaska .....	-	-	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	64	803,410	(D)	-	-	-	-	-	64	(D)

<sup>1</sup> The same area can be irrigated by more than one method. Overlapped irrigation is not counted twice.

**Table 44. Reasons for Discontinuing Irrigation on Horticultural Operations: 2018 and 2013**

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

Geographic area	Discontinued irrigation since previous census year			Reason for discontinuance <sup>1</sup>			
	Operations	Square feet under protection in previous census year <sup>2</sup>	Operations reporting discontinuance to be permanent	Sufficient soil moisture	Shortage of surface water	Shortage of ground water	Irrigation is uneconomical
United States ..... 2018	2,565	10,726,594	694	1,804	104	60	140
..... 2013	4,393	11,759,756	623	1,178	114	53	237
<b>2018 DATA</b>							
Alabama .....	8	163,200	1	8	-	-	-
Alaska .....	2	(D)	1	2	-	-	-
Arizona .....	-	-	-	-	-	-	-
Arkansas .....	26	19,160	-	9	-	1	-
California .....	81	62,052	16	34	12	-	-
Colorado .....	47	273,320	2	2	23	25	-
Connecticut .....	20	-	-	20	-	-	-
Delaware .....	8	3,870	-	3	-	-	-
Florida .....	84	66,000	-	68	-	-	-
Georgia .....	82	166,730	-	56	-	-	4
Hawaii .....	50	711,280	16	34	-	-	16
Idaho .....	24	34,416	7	2	8	2	-
Illinois .....	41	77,400	19	23	-	-	-
Indiana .....	35	36,864	16	35	-	-	-
Iowa .....	23	14,100	5	23	-	-	-
Kansas .....	-	-	-	-	-	-	-
Kentucky .....	100	821,384	46	53	6	-	18
Louisiana .....	39	51,070	10	39	-	-	-
Maine .....	11	137,530	-	8	-	-	-
Maryland .....	27	23,296	13	27	-	-	-
Massachusetts .....	70	168,000	-	70	-	-	-
Michigan .....	116	1,185,760	19	97	-	-	-
Minnesota .....	45	61,140	31	12	-	-	-
Mississippi .....	10	29,000	-	10	-	-	-
Missouri .....	25	41,728	19	20	4	-	-
Montana .....	5	50,360	-	-	-	-	-
Nebraska .....	13	2,160	4	4	-	-	-
Nevada .....	6	600	3	-	3	-	-
New Hampshire .....	7	2,400	3	7	-	-	-
New Jersey .....	69	-	-	69	-	-	-
New Mexico .....	24	1,200	18	-	6	-	-
New York .....	162	1,146,600	38	140	-	-	22
North Carolina .....	170	684,462	-	129	-	-	9
North Dakota .....	4	12,000	-	-	-	-	-
Ohio .....	202	871,220	54	137	-	-	-
Oklahoma .....	3	360	-	-	-	-	-
Oregon .....	106	90,200	8	45	9	-	17
Pennsylvania .....	281	1,641,136	123	235	-	-	-
Rhode Island .....	20	197,800	-	20	20	20	20
South Carolina .....	28	1,380,960	28	28	-	-	-
South Dakota .....	-	-	-	-	-	-	-
Tennessee .....	64	82,380	28	64	-	-	-
Texas .....	75	38,640	18	56	3	3	-
Utah .....	7	(D)	-	7	7	-	-
Vermont .....	6	3,200	6	6	-	-	2
Virginia .....	106	89,584	64	64	-	-	32
Washington .....	97	96,155	32	50	3	9	-
West Virginia .....	55	66,780	27	7	-	-	-
Wisconsin .....	81	94,200	19	81	-	-	-
Wyoming .....	-	-	-	-	-	-	-
<b>Water Resources Regions</b>							
Region 01 New England .....	128	505,730	3	125	20	20	20
Region 02 Mid-Atlantic .....	446	2,713,886	143	410	-	-	-
Region 03 South Atlantic-Gulf .....	378	2,207,562	61	263	-	-	45
Region 04 Great Lakes .....	303	1,413,760	66	268	-	-	24
Region 05 Ohio .....	443	2,152,184	158	252	6	-	18
Region 06 Tennessee .....	60	(D)	21	60	-	-	-
Region 07 Upper Mississippi .....	153	147,504	67	116	-	-	-
Region 08 Lower Mississippi .....	41	47,490	17	35	-	-	-
Region 09 Souris-Red-Rainy .....	14	42,000	14	-	-	-	-
Region 10 Missouri .....	80	351,568	25	25	14	16	-
Region 11 Arkansas-White-Red .....	56	82,800	-	25	17	8	-
Region 12 Texas-Gulf .....	70	18,640	18	51	3	3	-
Region 13 Rio Grande .....	18	-	18	-	-	-	-
Region 14 Upper Colorado .....	2	-	-	-	2	2	-
Region 15 Lower Colorado .....	-	-	-	-	-	-	-
Region 16 Great Basin .....	16	3,007	6	7	13	-	-
Region 17 Pacific Northwest .....	224	218,371	44	97	17	11	17
Region 18 California .....	81	62,052	16	34	12	-	-
Region 19 Alaska .....	2	(D)	1	2	-	-	-
Region 20 Hawaii .....	50	711,280	16	34	-	-	16

See footnote(s) at end of table.

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**Table 44. Reasons for Discontinuing Irrigation on Horticultural Operations: 2018 and 2013 (continued)**

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

Geographic area	Reason for discontinuance <sup>1</sup> - con.							
	Loss of water rights	Sold or leased water rights or annual water allocation	Sold or leased irrigated land or irrigated area under protection	Restrictions on water use	Converted to non-agricultural use	Converted to agricultural enterprise not requiring irrigation	Available surface water too salty	Other or unspecified
United States .....2018	23	22	45	51	112	209	25	481
.....2013	9	31	48	110	63	204	27	3,005
<b>2018 DATA</b>								
Alabama .....	-	-	-	-	-	-	-	-
Alaska .....	-	-	-	-	-	-	-	-
Arizona .....	-	-	-	-	-	-	-	-
Arkansas .....	-	-	-	-	-	-	-	16
California .....	-	-	-	4	4	23	-	27
Colorado .....	3	-	-	8	-	7	-	7
Connecticut .....	-	-	-	-	-	-	-	-
Delaware .....	-	-	-	-	-	-	-	5
Florida .....	-	-	-	-	-	-	-	42
Georgia .....	-	-	-	-	4	-	-	22
Hawaii .....	-	-	-	-	16	-	-	-
Idaho .....	-	2	2	-	6	5	-	3
Illinois .....	-	-	-	-	-	3	-	15
Indiana .....	-	-	-	-	-	-	-	-
Iowa .....	-	-	-	-	-	-	-	-
Kansas .....	-	-	-	-	-	-	-	-
Kentucky .....	-	-	-	-	12	18	-	30
Louisiana .....	-	-	-	-	-	-	-	11
Maine .....	-	-	-	-	-	-	-	3
Maryland .....	-	-	-	-	-	-	-	-
Massachusetts .....	-	-	-	-	-	-	-	-
Michigan .....	-	-	-	-	-	-	-	19
Minnesota .....	-	-	-	-	2	29	-	2
Mississippi .....	-	-	-	-	-	-	-	-
Missouri .....	-	-	-	-	-	1	-	-
Montana .....	-	-	-	-	-	-	5	-
Nebraska .....	-	-	-	-	-	-	-	9
Nevada .....	-	-	-	-	-	-	-	3
New Hampshire .....	-	-	-	-	-	-	-	-
New Jersey .....	-	-	-	-	-	-	-	22
New Mexico .....	-	-	-	-	18	9	-	-
New York .....	-	-	-	-	-	-	-	22
North Carolina .....	-	-	-	-	-	20	-	32
North Dakota .....	-	-	-	-	-	-	-	4
Ohio .....	-	-	15	-	-	41	-	9
Oklahoma .....	-	-	-	-	-	-	-	3
Oregon .....	-	-	8	9	-	16	-	20
Pennsylvania .....	-	-	-	-	21	-	-	49
Rhode Island .....	20	20	20	20	20	20	20	-
South Carolina .....	-	-	-	-	-	-	-	-
South Dakota .....	-	-	-	-	-	-	-	-
Tennessee .....	-	-	-	-	-	-	-	7
Texas .....	-	-	-	-	-	-	-	16
Utah .....	-	-	-	-	-	-	-	-
Vermont .....	-	-	-	-	-	-	-	2
Virginia .....	-	-	-	-	-	-	-	10
Washington .....	-	-	-	10	6	17	-	20
West Virginia .....	-	-	-	-	3	-	-	51
Wisconsin .....	-	-	-	-	-	-	-	-
Wyoming .....	-	-	-	-	-	-	-	-
<b>Water Resources Regions</b>								
Region 01 New England .....	20	20	20	20	20	20	20	3
Region 02 Mid-Atlantic .....	-	-	-	-	21	-	-	61
Region 03 South Atlantic-Gulf .....	-	-	-	-	4	20	-	96
Region 04 Great Lakes .....	-	-	-	-	-	16	-	21
Region 05 Ohio .....	-	-	15	-	15	43	-	137
Region 06 Tennessee .....	-	-	-	-	-	-	-	7
Region 07 Upper Mississippi .....	-	-	-	-	2	18	-	17
Region 08 Lower Mississippi .....	-	-	-	-	-	-	-	17
Region 09 Souris-Red-Rainy .....	-	-	-	-	-	14	-	-
Region 10 Missouri .....	3	-	-	8	-	8	5	20
Region 11 Arkansas-White-Red .....	-	-	-	-	-	-	-	13
Region 12 Texas-Gulf .....	-	-	-	-	-	-	-	16
Region 13 Rio Grande .....	-	-	-	-	18	9	-	-
Region 14 Upper Colorado .....	-	-	-	-	-	-	-	-
Region 15 Lower Colorado .....	-	-	-	-	-	-	-	-
Region 16 Great Basin .....	-	-	-	-	-	-	-	3
Region 17 Pacific Northwest .....	-	2	10	19	12	38	-	43
Region 18 California .....	-	-	-	4	4	23	-	27
Region 19 Alaska .....	-	-	-	-	-	-	-	-
Region 20 Hawaii .....	-	-	-	-	16	-	-	-

<sup>1</sup> Respondents could choose more than one reason for not irrigating.

<sup>2</sup> Square feet irrigated are totals for all irrigation on these operations. Data were acquired from the 2017 and 2012 Censuses of Agriculture results.

**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013**

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

Geographic area	All operations with irrigated horticulture					
	In the open			Under protection		
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated
United States .....	15,623	699,068	581,936	24,876	1,525,130,873	1,525,130,873
..... 2018						
..... 2013	16,923	629,548	524,227	24,829	1,407,631,360	1,405,381,805
<b>2018 DATA</b>						
Alabama .....	185	21,371	21,002	313	22,691,124	22,691,124
Alaska .....	85	209	199	208	2,112,835	2,112,835
Arizona .....	87	5,457	5,457	127	11,974,228	11,974,228
Arkansas .....	97	7,082	6,157	157	4,050,788	4,050,788
California .....	1,951	74,347	74,259	1,697	328,881,801	328,881,801
Colorado .....	417	13,042	12,869	380	14,421,673	14,421,673
Connecticut .....	146	5,544	3,294	455	37,531,652	37,531,652
Delaware .....	22	1,865	1,665	44	2,339,000	2,339,000
Florida .....	2,039	88,800	85,141	1,346	286,871,042	286,871,042
Georgia .....	356	21,298	21,221	334	20,312,514	20,312,514
Hawaii .....	483	1,828	1,582	569	30,119,031	30,119,031
Idaho .....	401	29,750	28,628	336	4,346,935	4,346,935
Illinois .....	217	22,186	10,815	434	50,054,950	50,054,950
Indiana .....	159	9,848	3,469	435	9,841,976	9,841,976
Iowa .....	122	3,019	2,692	379	11,823,816	11,823,816
Kansas .....	120	7,759	3,388	210	8,776,130	8,776,130
Kentucky .....	167	1,259	1,092	686	9,068,660	9,068,660
Louisiana .....	152	3,606	3,446	274	12,058,977	12,058,977
Maine .....	141	3,069	3,069	558	6,785,654	6,785,654
Maryland .....	149	9,885	9,875	383	10,812,493	10,812,493
Massachusetts .....	219	1,986	1,960	434	6,586,132	6,586,132
Michigan .....	453	41,503	22,221	1,205	86,902,965	86,902,965
Minnesota .....	197	10,784	4,480	420	18,144,370	18,144,370
Mississippi .....	82	6,018	5,273	203	4,289,424	4,289,424
Missouri .....	217	6,393	3,955	639	10,912,436	10,912,436
Montana .....	77	766	766	265	2,265,336	2,265,336
Nebraska .....	122	2,644	2,476	236	3,026,039	3,026,039
Nevada .....	17	671	671	54	358,536	358,536
New Hampshire .....	212	406	385	431	8,274,578	8,274,578
New Jersey .....	492	19,719	17,831	574	45,713,398	45,713,398
New Mexico .....	159	1,570	1,570	179	4,076,540	4,076,540
New York .....	556	11,963	11,663	1,244	52,378,469	52,378,469
North Carolina .....	462	22,698	8,611	807	28,491,080	28,491,080
North Dakota .....	6	(D)	(D)	37	526,745	526,745
Ohio .....	333	22,190	9,272	905	37,618,396	37,618,396
Oklahoma .....	171	16,994	14,794	234	4,338,472	4,338,472
Oregon .....	1,079	54,550	53,291	1,020	64,333,453	64,333,453
Pennsylvania .....	542	4,665	1,999	1,568	72,735,326	72,735,326
Rhode Island .....	34	1,512	1,426	134	1,855,229	1,855,229
South Carolina .....	260	19,741	18,039	241	5,365,322	5,365,322
South Dakota .....	40	1,217	893	73	2,325,959	2,325,959
Tennessee .....	207	13,700	8,145	617	10,823,843	10,823,843
Texas .....	532	51,818	46,750	686	81,189,374	81,189,374
Utah .....	141	2,678	2,518	226	11,147,052	11,147,052
Vermont .....	60	181	141	389	4,577,962	4,577,962
Virginia .....	325	7,971	3,806	696	24,913,206	24,913,206
Washington .....	738	30,174	27,845	856	29,307,707	29,307,707
West Virginia .....	62	192	152	306	2,804,956	2,804,956
Wisconsin .....	322	12,875	11,485	783	13,742,493	13,742,493
Wyoming .....	10	(D)	(D)	89	1,230,796	1,230,796
<b>Water Resources Regions</b>						
Region 01 New England .....	769	12,566	10,178	2,110	62,320,465	62,320,465
Region 02 Mid-Atlantic .....	1,658	48,804	44,340	3,378	179,232,386	179,232,386
Region 03 South Atlantic-Gulf .....	3,337	178,485	155,435	3,119	363,677,616	363,677,616
Region 04 Great Lakes .....	974	52,688	31,314	2,801	138,040,985	138,040,985
Region 05 Ohio .....	720	38,932	13,490	2,423	50,237,208	50,237,208
Region 06 Tennessee .....	261	7,454	7,454	635	14,692,612	14,692,612
Region 07 Upper Mississippi .....	830	47,472	27,924	1,773	81,170,356	81,170,356
Region 08 Lower Mississippi .....	170	6,974	6,675	471	15,576,031	15,576,031
Region 09 Souris-Red-Rainy .....	15	298	92	47	1,004,028	1,004,028
Region 10 Missouri .....	554	23,383	16,326	1,220	36,318,201	36,318,201
Region 11 Arkansas-White-Red .....	451	26,084	23,077	594	10,134,679	10,134,679
Region 12 Texas-Gulf .....	509	51,273	46,205	649	75,432,738	75,432,738
Region 13 Rio Grande .....	93	1,732	1,732	199	11,098,640	11,098,640
Region 14 Upper Colorado .....	294	3,244	3,230	273	3,879,584	3,879,584
Region 15 Lower Colorado .....	112	5,907	5,907	140	12,175,428	12,175,428
Region 16 Great Basin .....	116	3,390	3,230	186	10,055,408	10,055,408
Region 17 Pacific Northwest .....	2,260	114,441	109,730	2,370	97,211,841	97,211,841
Region 18 California .....	1,932	73,905	73,817	1,711	330,640,801	330,640,801
Region 19 Alaska .....	85	209	199	208	2,112,835	2,112,835
Region 20 Hawaii .....	483	1,828	1,582	569	30,119,031	30,119,031

--continued



**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$0 - \$9,999						
	In the open			Under protection			
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated	
United States .....2018	4,432	19,446	12,864	6,715	54,660,696	54,660,696	
.....2013	4,259	10,197	8,763	6,333	16,206,155	16,195,555	
<b>2018 DATA</b>							
Alabama .....	19	104	104	85	2,888,836	2,888,836	
Alaska .....	52	72	72	88	356,840	356,840	
Arizona .....	20	458	458	30	715,988	715,988	
Arkansas .....	22	(D)	(D)	57	988,148	988,148	
California .....	489	903	903	374	8,215,980	8,215,980	
Colorado .....	158	622	529	154	925,360	925,360	
Connecticut .....	25	6	6	81	889,960	889,960	
Delaware .....	7	(D)	(D)	6	97,120	97,120	
Florida .....	572	2,268	2,257	219	3,141,518	3,141,518	
Georgia .....	132	291	291	83	497,216	497,216	
Hawaii .....	180	312	298	236	1,902,079	1,902,079	
Idaho .....	138	623	623	139	365,999	365,999	
Illinois .....	59	104	44	28	83,000	83,000	
Indiana .....	24	6,576	906	79	235,256	235,256	
Iowa .....	17	(D)	(D)	92	919,316	919,316	
Kansas .....	43	225	35	37	58,050	58,050	
Kentucky .....	22	(D)	(D)	174	613,910	613,910	
Louisiana .....	43	82	82	72	1,094,600	1,094,600	
Maine .....	27	42	42	230	399,401	399,401	
Maryland .....	13	34	(D)	58	153,260	153,260	
Massachusetts .....	76	285	285	94	775,736	775,736	
Michigan .....	60	100	100	228	668,196	668,196	
Minnesota .....	50	(D)	42	123	193,990	193,990	
Mississippi .....	13	10	10	75	879,970	879,970	
Missouri .....	79	102	99	173	587,532	587,532	
Montana .....	44	83	83	155	513,940	513,940	
Nebraska .....	42	122	93	41	170,240	170,240	
Nevada .....	5	21	21	37	165,056	165,056	
New Hampshire .....	99	115	115	156	1,933,074	1,933,074	
New Jersey .....	88	99	99	129	922,216	922,216	
New Mexico .....	100	130	130	68	572,200	572,200	
New York .....	106	115	115	194	456,389	456,389	
North Carolina .....	98	57	57	175	1,653,328	1,653,328	
North Dakota .....	-	-	-	14	26,512	26,512	
Ohio .....	26	44	40	172	895,360	895,360	
Oklahoma .....	101	292	229	149	1,254,136	1,254,136	
Oregon .....	373	633	612	265	4,037,283	4,037,283	
Pennsylvania .....	158	185	185	442	3,241,416	3,241,416	
Rhode Island .....	-	-	-	25	304,285	304,285	
South Carolina .....	74	152	152	100	393,796	393,796	
South Dakota .....	10	(D)	(D)	26	62,235	62,235	
Tennessee .....	56	81	81	167	241,952	241,952	
Texas .....	156	1,524	1,524	218	1,631,585	1,631,585	
Utah .....	43	349	349	64	1,259,940	1,259,940	
Vermont .....	14	14	14	112	256,800	256,800	
Virginia .....	75	(D)	(D)	288	3,741,310	3,741,310	
Washington .....	314	1,672	1,270	370	2,223,329	2,223,329	
West Virginia .....	25	21	21	164	420,738	420,738	
Wisconsin .....	81	126	126	133	137,955	137,955	
Wyoming .....	4	6	6	36	498,360	498,360	
<b>Water Resources Regions</b>							
Region 01 New England .....	234	457	457	613	4,392,456	4,392,456	
Region 02 Mid-Atlantic .....	339	527	524	812	5,910,211	5,910,211	
Region 03 South Atlantic-Gulf .....	888	2,854	2,843	707	9,196,600	9,196,600	
Region 04 Great Lakes .....	107	136	132	632	2,166,295	2,166,295	
Region 05 Ohio .....	164	6,810	1,140	657	1,742,552	1,742,552	
Region 06 Tennessee .....	92	103	103	153	2,082,256	2,082,256	
Region 07 Upper Mississippi .....	219	297	225	305	1,333,954	1,333,954	
Region 08 Lower Mississippi .....	40	67	67	149	1,571,020	1,571,020	
Region 09 Souris-Red-Rainy .....	4	14	8	10	24,600	24,600	
Region 10 Missouri .....	171	555	240	294	1,071,539	1,071,539	
Region 11 Arkansas-White-Red .....	176	503	439	265	2,554,676	2,554,676	
Region 12 Texas-Gulf .....	158	1,526	1,526	195	1,624,869	1,624,869	
Region 13 Rio Grande .....	49	78	78	80	576,660	576,660	
Region 14 Upper Colorado .....	180	481	481	149	826,824	826,824	
Region 15 Lower Colorado .....	20	458	458	32	717,788	717,788	
Region 16 Great Basin .....	21	316	316	69	1,354,376	1,354,376	
Region 17 Pacific Northwest .....	849	2,976	2,554	895	7,039,121	7,039,121	
Region 18 California .....	489	903	903	374	8,215,980	8,215,980	
Region 19 Alaska .....	52	72	72	88	356,840	356,840	
Region 20 Hawaii .....	180	312	298	236	1,902,079	1,902,079	

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**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$10,000 - \$24,999						
	In the open			Under protection			
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated	
United States ..... 2018	1,817	9,454	8,009	3,285	31,177,977	31,177,977	
..... 2013	1,933	6,891	5,934	3,396	23,832,056	23,829,181	
<b>2018 DATA</b>							
Alabama .....	7	19	19	41	381,780	381,780	
Alaska .....	12	40	40	32	268,268	268,268	
Arizona .....	8	(D)	(D)	23	(D)	(D)	
Arkansas .....	5	(D)	(D)	22	214,576	214,576	
California .....	172	1,287	1,264	83	1,254,700	1,254,700	
Colorado .....	68	313	307	49	152,980	152,980	
Connecticut .....	-	-	-	98	148,288	148,288	
Delaware .....	2	(D)	(D)	5	149,800	149,800	
Florida .....	256	997	997	168	4,354,270	4,354,270	
Georgia .....	28	1,108	1,060	39	1,442,170	1,442,170	
Hawaii .....	124	176	176	128	1,774,260	1,774,260	
Idaho .....	54	144	144	67	139,878	139,878	
Illinois .....	3	6	6	39	304,020	304,020	
Indiana .....	48	130	75	77	886,448	886,448	
Iowa .....	-	-	-	82	441,600	441,600	
Kansas .....	15	61	61	43	250,360	250,360	
Kentucky .....	34	216	86	66	549,986	549,986	
Louisiana .....	18	128	103	57	388,665	388,665	
Maine .....	38	44	44	160	589,032	589,032	
Maryland .....	39	127	127	47	155,869	155,869	
Massachusetts .....	51	169	169	10	(D)	(D)	
Michigan .....	72	401	148	179	1,755,540	1,755,540	
Minnesota .....	9	908	(D)	50	157,200	157,200	
Mississippi .....	-	-	-	16	183,860	183,860	
Missouri .....	39	(D)	(D)	99	265,752	265,752	
Montana .....	12	12	12	22	144,840	144,840	
Nebraska .....	9	17	17	27	83,160	83,160	
Nevada .....	2	(D)	(D)	7	(D)	(D)	
New Hampshire .....	-	-	-	62	452,800	452,800	
New Jersey .....	13	13	13	79	2,015,988	2,015,988	
New Mexico .....	-	-	-	63	169,100	169,100	
New York .....	123	274	274	217	395,020	395,020	
North Carolina .....	25	61	61	138	1,264,400	1,264,400	
North Dakota .....	2	(D)	(D)	2	(D)	(D)	
Ohio .....	77	383	383	93	446,500	446,500	
Oklahoma .....	4	84	84	25	(D)	(D)	
Oregon .....	107	781	781	118	1,528,820	1,528,820	
Pennsylvania .....	18	(D)	(D)	96	4,122,820	4,122,820	
Rhode Island .....	-	-	-	27	35,810	35,810	
South Carolina .....	17	37	37	28	273,000	273,000	
South Dakota .....	5	9	3	2	(D)	(D)	
Tennessee .....	35	609	609	106	215,244	215,244	
Texas .....	46	249	249	62	582,849	582,849	
Utah .....	17	134	134	27	58,320	58,320	
Vermont .....	-	-	-	39	(D)	(D)	
Virginia .....	64	128	128	138	715,616	715,616	
Washington .....	104	209	187	90	1,174,980	1,174,980	
West Virginia .....	26	25	25	78	359,188	359,188	
Wisconsin .....	9	(D)	(D)	56	390,380	390,380	
Wyoming .....	-	-	-	3	4,416	4,416	
<b>Water Resources Regions</b>							
Region 01 New England .....	89	213	213	357	1,273,930	1,273,930	
Region 02 Mid-Atlantic .....	164	364	360	477	7,490,021	7,490,021	
Region 03 South Atlantic-Gulf .....	351	2,228	2,180	437	7,630,172	7,630,172	
Region 04 Great Lakes .....	233	950	697	463	2,628,880	2,628,880	
Region 05 Ohio .....	101	326	196	181	1,671,018	1,671,018	
Region 06 Tennessee .....	39	625	625	123	(D)	(D)	
Region 07 Upper Mississippi .....	17	974	47	149	1,000,420	1,000,420	
Region 08 Lower Mississippi .....	-	-	-	61	636,185	636,185	
Region 09 Souris-Red-Rainy .....	2	(D)	(D)	20	78,000	78,000	
Region 10 Missouri .....	74	88	76	218	698,228	698,228	
Region 11 Arkansas-White-Red .....	65	435	410	88	497,256	497,256	
Region 12 Texas-Gulf .....	40	228	228	62	582,849	582,849	
Region 13 Rio Grande .....	3	9	9	63	169,100	169,100	
Region 14 Upper Colorado .....	32	(D)	(D)	7	23,800	23,800	
Region 15 Lower Colorado .....	8	(D)	(D)	23	(D)	(D)	
Region 16 Great Basin .....	19	134	134	31	(D)	(D)	
Region 17 Pacific Northwest .....	272	1,140	1,118	282	2,875,118	2,875,118	
Region 18 California .....	172	1,287	1,264	83	1,254,700	1,254,700	
Region 19 Alaska .....	12	40	40	32	268,268	268,268	
Region 20 Hawaii .....	124	176	176	128	1,774,260	1,774,260	

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**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$25,000 - \$49,999						
	In the open			Under protection			
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated	
United States .....2018	1,298	8,977	6,634	2,659	29,658,532	29,658,532	
.....2013	1,831	11,457	8,967	2,733	28,811,959	28,811,959	
<b>2018 DATA</b>							
Alabama .....	4	160	80	-	-	-	
Alaska .....	13	(D)	(D)	20	98,886	98,886	
Arizona .....	-	-	-	16	192,000	192,000	
Arkansas .....	9	326	326	11	105,500	105,500	
California .....	171	437	435	152	1,595,440	1,595,440	
Colorado .....	65	732	732	17	91,156	91,156	
Connecticut .....	-	-	-	28	4,200	4,200	
Delaware .....	4	8	8	16	100,240	100,240	
Florida .....	121	1,084	1,084	157	4,740,892	4,740,892	
Georgia .....	40	69	61	11	165,000	165,000	
Hawaii .....	47	70	68	14	332,000	332,000	
Idaho .....	18	182	182	7	22,950	22,950	
Illinois .....	5	2	2	40	161,200	161,200	
Indiana .....	25	59	59	50	201,472	201,472	
Iowa .....	26	36	(D)	61	275,420	275,420	
Kansas .....	21	71	71	26	682,000	682,000	
Kentucky .....	32	74	51	118	1,179,956	1,179,956	
Louisiana .....	13	23	23	48	462,900	462,900	
Maine .....	9	(D)	(D)	32	127,462	127,462	
Maryland .....	3	(D)	(D)	54	340,600	340,600	
Massachusetts .....	39	67	67	28	16,800	16,800	
Michigan .....	39	78	78	188	1,687,640	1,687,640	
Minnesota .....	2	(D)	(D)	9	44,000	44,000	
Mississippi .....	6	101	101	38	299,120	299,120	
Missouri .....	23	(D)	(D)	127	1,234,512	1,234,512	
Montana .....	2	(D)	(D)	21	83,792	83,792	
Nebraska .....	9	5	5	27	69,948	69,948	
Nevada .....	4	(D)	(D)	2	(D)	(D)	
New Hampshire .....	13	13	13	9	37,500	37,500	
New Jersey .....	3	600	600	22	958,320	958,320	
New Mexico .....	-	-	-	-	-	-	
New York .....	22	22	22	156	1,169,180	1,169,180	
North Carolina .....	65	78	78	113	1,035,492	1,035,492	
North Dakota .....	-	-	-	2	(D)	(D)	
Ohio .....	48	1,460	195	188	1,265,208	1,265,208	
Oklahoma .....	8	114	114	2	(D)	(D)	
Oregon .....	65	945	945	121	1,390,860	1,390,860	
Pennsylvania .....	60	23	23	166	1,570,744	1,570,744	
Rhode Island .....	12	(D)	(D)	10	183,226	183,226	
South Carolina .....	19	79	79	7	(D)	(D)	
South Dakota .....	-	-	-	-	-	-	
Tennessee .....	28	49	49	105	682,850	682,850	
Texas .....	23	175	175	44	436,000	436,000	
Utah .....	27	331	331	37	127,500	127,500	
Vermont .....	18	(D)	(D)	47	1,124,950	1,124,950	
Virginia .....	52	561	81	31	223,488	223,488	
Washington .....	39	323	263	117	3,370,696	3,370,696	
West Virginia .....	3	12	12	54	393,510	393,510	
Wisconsin .....	43	324	51	102	1,254,852	1,254,852	
Wyoming .....	-	-	-	8	106,320	106,320	
<b>Water Resources Regions</b>							
Region 01 New England .....	75	139	136	108	376,688	376,688	
Region 02 Mid-Atlantic .....	92	1,188	708	305	3,668,784	3,668,784	
Region 03 South Atlantic-Gulf .....	230	1,532	1,444	272	5,602,430	5,602,430	
Region 04 Great Lakes .....	128	248	248	378	3,626,914	3,626,914	
Region 05 Ohio .....	80	1,478	190	408	2,922,122	2,922,122	
Region 06 Tennessee .....	61	92	92	144	1,067,342	1,067,342	
Region 07 Upper Mississippi .....	75	371	83	255	1,984,104	1,984,104	
Region 08 Lower Mississippi .....	16	30	30	55	720,720	720,720	
Region 09 Souris-Red-Rainy .....	-	-	-	2	(D)	(D)	
Region 10 Missouri .....	66	290	158	129	1,537,504	1,537,504	
Region 11 Arkansas-White-Red .....	31	470	470	58	535,800	535,800	
Region 12 Texas-Gulf .....	23	175	175	44	436,000	436,000	
Region 13 Rio Grande .....	-	-	-	-	-	-	
Region 14 Upper Colorado .....	46	909	909	32	104,700	104,700	
Region 15 Lower Colorado .....	6	4	4	16	192,000	192,000	
Region 16 Great Basin .....	18	(D)	(D)	9	(D)	(D)	
Region 17 Pacific Northwest .....	124	1,454	1,394	258	4,828,198	4,828,198	
Region 18 California .....	167	433	431	152	1,595,440	1,595,440	
Region 19 Alaska .....	13	(D)	(D)	20	98,886	98,886	
Region 20 Hawaii .....	47	70	68	14	332,000	332,000	

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**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$50,000 - \$99,999						
	In the open			Under protection			
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated	
United States ..... 2018	1,341	19,960	14,102	2,822	64,646,232	64,646,232	
..... 2013	1,522	13,904	9,500	2,999	55,510,219	55,510,219	
<b>2018 DATA</b>							
Alabama .....	19	372	372	66	746,624	746,624	
Alaska .....	3	30	30	8	81,135	81,135	
Arizona .....	9	17	17	6	498,240	498,240	
Arkansas .....	19	1,041	282	24	261,840	261,840	
California .....	212	6,360	6,351	172	22,545,940	22,545,940	
Colorado .....	5	195	195	28	503,300	503,300	
Connecticut .....	15	150	120	58	147,000	147,000	
Delaware .....	1	(D)	(D)	4	480,000	480,000	
Florida .....	234	1,835	1,835	86	4,222,640	4,222,640	
Georgia .....	28	225	225	86	2,412,970	2,412,970	
Hawaii .....	39	108	75	28	1,282,780	1,282,780	
Idaho .....	14	114	114	30	163,000	163,000	
Illinois .....	28	348	96	89	553,450	553,450	
Indiana .....	6	43	28	75	745,284	745,284	
Iowa .....	15	98	98	26	112,560	112,560	
Kansas .....	15	85	85	34	456,200	456,200	
Kentucky .....	22	44	36	120	801,512	801,512	
Louisiana .....	5	75	75	16	135,000	135,000	
Maine .....	11	83	83	24	268,700	268,700	
Maryland .....	20	(D)	(D)	86	971,936	971,936	
Massachusetts .....	5	50	50	74	446,720	446,720	
Michigan .....	33	33	33	145	5,597,400	5,597,400	
Minnesota .....	6	380	92	22	104,184	104,184	
Mississippi .....	5	70	50	14	205,440	205,440	
Missouri .....	16	153	153	81	883,408	883,408	
Montana .....	9	7	7	18	123,664	123,664	
Nebraska .....	13	30	30	18	83,160	83,160	
Nevada .....	-	-	-	3	600	600	
New Hampshire .....	-	-	-	70	1,525,000	1,525,000	
New Jersey .....	64	982	332	85	1,494,960	1,494,960	
New Mexico .....	-	-	-	10	81,000	81,000	
New York .....	22	22	22	89	1,153,160	1,153,160	
North Carolina .....	40	50	50	86	2,190,960	2,190,960	
North Dakota .....	3	(D)	(D)	5	64,625	64,625	
Ohio .....	48	130	90	171	2,531,163	2,531,163	
Oklahoma .....	5	9	9	14	35,880	35,880	
Oregon .....	84	738	663	72	1,815,390	1,815,390	
Pennsylvania .....	89	210	210	339	4,898,308	4,898,308	
Rhode Island .....	8	7	7	12	146,688	146,688	
South Carolina .....	8	4	4	8	19,136	19,136	
South Dakota .....	7	7	7	16	261,800	261,800	
Tennessee .....	14	14	14	49	541,625	541,625	
Texas .....	38	4,996	1,399	73	977,660	977,660	
Utah .....	12	42	42	10	60,300	60,300	
Vermont .....	9	17	9	55	222,400	222,400	
Virginia .....	-	-	-	18	144,000	144,000	
Washington .....	52	239	228	80	776,166	776,166	
West Virginia .....	5	(D)	(D)	6	106,920	106,920	
Wisconsin .....	26	431	431	113	764,404	764,404	
Wyoming .....	-	-	-	-	-	-	
<b>Water Resources Regions</b>							
Region 01 New England .....	43	298	264	242	2,538,908	2,538,908	
Region 02 Mid-Atlantic .....	180	1,153	499	469	6,029,988	6,029,988	
Region 03 South Atlantic-Gulf .....	313	2,446	2,446	315	9,345,770	9,345,770	
Region 04 Great Lakes .....	74	442	442	344	7,035,164	7,035,164	
Region 05 Ohio .....	90	315	252	488	6,841,546	6,841,546	
Region 06 Tennessee .....	23	47	47	52	683,000	683,000	
Region 07 Upper Mississippi .....	64	1,009	469	181	1,359,936	1,359,936	
Region 08 Lower Mississippi .....	15	150	130	39	235,500	235,500	
Region 09 Souris-Red-Rainy .....	2	(D)	(D)	4	64,000	64,000	
Region 10 Missouri .....	33	123	60	132	1,549,425	1,549,425	
Region 11 Arkansas-White-Red .....	29	1,125	366	47	557,420	557,420	
Region 12 Texas-Gulf .....	38	4,996	1,399	73	977,660	977,660	
Region 13 Rio Grande .....	-	-	-	10	81,000	81,000	
Region 14 Upper Colorado .....	5	195	195	7	52,500	52,500	
Region 15 Lower Colorado .....	21	341	341	6	498,240	498,240	
Region 16 Great Basin .....	12	(D)	(D)	13	60,900	60,900	
Region 17 Pacific Northwest .....	157	1,097	1,011	192	2,825,420	2,825,420	
Region 18 California .....	200	6,036	6,027	172	22,545,940	22,545,940	
Region 19 Alaska .....	3	30	30	8	81,135	81,135	
Region 20 Hawaii .....	39	108	75	28	1,282,780	1,282,780	

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**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$100,000 - \$249,999						
	In the open			Under protection			
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated	
United States .....2018	1,877	28,574	24,369	3,534	98,619,405	98,619,405	
.....2013	2,531	51,276	39,189	3,515	158,899,889	158,899,889	
<b>2018 DATA</b>							
Alabama .....	19	357	205	24	794,304	794,304	
Alaska .....	4	43	33	38	314,456	314,456	
Arizona .....	7	105	105	24	1,428,920	1,428,920	
Arkansas .....	3	60	(D)	8	58,000	58,000	
California .....	246	3,518	3,518	190	11,461,656	11,461,656	
Colorado .....	47	1,431	1,431	63	1,550,097	1,550,097	
Connecticut .....	9	27	14	-	-	-	
Delaware .....	-	-	-	1	(D)	(D)	
Florida .....	133	1,252	1,252	120	7,499,000	7,499,000	
Georgia .....	31	1,643	1,622	50	2,894,688	2,894,688	
Hawaii .....	44	355	355	53	9,703,400	9,703,400	
Idaho .....	21	709	687	47	719,160	719,160	
Illinois .....	26	1,835	1,598	20	1,135,900	1,135,900	
Indiana .....	37	277	177	76	594,620	594,620	
Iowa .....	3	75	75	22	329,750	329,750	
Kansas .....	5	5	5	16	472,800	472,800	
Kentucky .....	10	48	42	147	2,873,844	2,873,844	
Louisiana .....	23	405	355	32	(D)	(D)	
Maine .....	12	177	177	46	920,947	920,947	
Maryland .....	18	46	39	27	230,228	230,228	
Massachusetts .....	17	29	29	201	4,310,000	4,310,000	
Michigan .....	80	1,491	855	136	4,873,400	4,873,400	
Minnesota .....	18	186	74	67	1,275,320	1,275,320	
Mississippi .....	14	17	17	28	521,940	521,940	
Missouri .....	26	291	87	110	1,447,008	1,447,008	
Montana .....	2	(D)	(D)	18	183,000	183,000	
Nebraska .....	30	930	930	67	358,311	358,311	
Nevada .....	4	220	220	-	-	-	
New Hampshire .....	47	(D)	(D)	48	502,240	502,240	
New Jersey .....	56	118	118	87	12,307,170	12,307,170	
New Mexico .....	7	(D)	(D)	27	1,351,760	1,351,760	
New York .....	89	163	163	217	2,170,890	2,170,890	
North Carolina .....	99	1,101	192	80	1,469,300	1,469,300	
North Dakota .....	-	-	-	12	267,208	267,208	
Ohio .....	48	277	277	143	2,826,780	2,826,780	
Oklahoma .....	16	1,458	1,458	26	(D)	(D)	
Oregon .....	93	2,247	1,434	151	2,778,270	2,778,270	
Pennsylvania .....	107	116	116	202	3,886,076	3,886,076	
Rhode Island .....	4	10	10	34	597,600	597,600	
South Carolina .....	81	2,845	2,832	82	1,913,180	1,913,180	
South Dakota .....	2	(D)	(D)	2	(D)	(D)	
Tennessee .....	29	218	113	134	3,257,128	3,257,128	
Texas .....	107	3,270	2,661	108	2,599,300	2,599,300	
Utah .....	16	120	120	33	733,080	733,080	
Vermont .....	11	(D)	(D)	75	1,147,696	1,147,696	
Virginia .....	42	(D)	(D)	108	1,185,220	1,185,220	
Washington .....	61	427	415	102	1,024,000	1,024,000	
West Virginia .....	1	(D)	(D)	-	-	-	
Wisconsin .....	68	395	330	225	2,065,924	2,065,924	
Wyoming .....	4	(D)	(D)	7	152,700	152,700	
<b>Water Resources Regions</b>							
Region 01 New England .....	91	352	326	381	7,098,587	7,098,587	
Region 02 Mid-Atlantic .....	238	421	414	436	17,628,374	17,628,374	
Region 03 South Atlantic-Gulf .....	383	7,035	5,940	414	15,570,442	15,570,442	
Region 04 Great Lakes .....	151	1,637	968	366	7,356,130	7,356,130	
Region 05 Ohio .....	108	726	575	347	6,941,280	6,941,280	
Region 06 Tennessee .....	11	174	174	83	1,945,662	1,945,662	
Region 07 Upper Mississippi .....	123	2,771	2,137	307	3,465,378	3,465,378	
Region 08 Lower Mississippi .....	28	415	365	97	1,062,900	1,062,900	
Region 09 Souris-Red-Rainy .....	-	-	-	5	(D)	(D)	
Region 10 Missouri .....	90	2,305	2,221	205	3,242,515	3,242,515	
Region 11 Arkansas-White-Red .....	33	1,543	1,521	96	1,463,027	1,463,027	
Region 12 Texas-Gulf .....	95	3,030	2,421	96	2,076,580	2,076,580	
Region 13 Rio Grande .....	21	374	374	29	674,480	674,480	
Region 14 Upper Colorado .....	9	46	46	34	1,519,080	1,519,080	
Region 15 Lower Colorado .....	14	227	227	32	1,493,320	1,493,320	
Region 16 Great Basin .....	16	332	332	11	(D)	(D)	
Region 17 Pacific Northwest .....	175	3,383	2,536	314	4,620,430	4,620,430	
Region 18 California .....	243	3,404	3,404	190	11,461,656	11,461,656	
Region 19 Alaska .....	4	43	33	38	314,456	314,456	
Region 20 Hawaii .....	44	355	355	53	9,703,400	9,703,400	

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**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$250,000 - \$499,999					
	In the open			Under protection		
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated
United States .....	1,292	43,072	37,773	1,971	84,981,611	84,981,611
2018						
2013	1,615	51,028	39,878	2,180	131,388,617	131,388,617
<b>2018 DATA</b>						
Alabama .....	24	687	582	17	865,380	865,380
Alaska .....	-	-	-	3	110,250	110,250
Arizona .....	-	-	-	-	-	-
Arkansas .....	18	1,298	1,298	18	801,674	801,674
California .....	142	2,737	2,737	141	10,775,492	10,775,492
Colorado .....	9	1,264	1,204	9	289,800	289,800
Connecticut .....	19	297	285	63	2,195,200	2,195,200
Delaware .....	2	(D)	(D)	7	1,052,000	1,052,000
Florida .....	150	2,073	2,070	193	15,926,265	15,926,265
Georgia .....	24	800	800	23	1,044,900	1,044,900
Hawaii .....	20	253	225	17	1,697,882	1,697,882
Idaho .....	13	1,176	1,176	11	470,000	470,000
Illinois .....	34	4,045	3,311	101	2,438,640	2,438,640
Indiana .....	6	160	159	23	189,700	189,700
Iowa .....	23	(D)	23	39	289,360	289,360
Kansas .....	3	2	2	28	1,192,960	1,192,960
Kentucky .....	12	222	222	46	1,259,860	1,259,860
Louisiana .....	23	256	256	18	2,214,432	2,214,432
Maine .....	33	2,218	2,218	47	1,750,092	1,750,092
Maryland .....	10	412	412	14	75,460	75,460
Massachusetts .....	11	330	330	22	267,916	267,916
Michigan .....	37	1,962	1,962	87	5,987,920	5,987,920
Minnesota .....	37	894	614	54	1,270,520	1,270,520
Mississippi .....	21	1,107	1,107	13	271,250	271,250
Missouri .....	9	72	72	23	421,424	421,424
Montana .....	2	(D)	(D)	10	289,000	289,000
Nebraska .....	4	168	168	10	500,000	500,000
Nevada .....	-	-	-	-	-	-
New Hampshire .....	4	16	8	26	122,000	122,000
New Jersey .....	145	3,511	3,371	65	5,432,060	5,432,060
New Mexico .....	42	795	795	-	-	-
New York .....	69	1,781	1,781	142	1,728,640	1,728,640
North Carolina .....	34	266	266	119	3,394,040	3,394,040
North Dakota .....	-	-	-	-	-	-
Ohio .....	9	123	123	50	1,981,184	1,981,184
Oklahoma .....	8	1,938	1,584	-	-	-
Oregon .....	58	2,520	2,520	67	2,768,900	2,768,900
Pennsylvania .....	60	691	491	89	6,355,818	6,355,818
Rhode Island .....	2	(D)	(D)	20	421,620	421,620
South Carolina .....	3	180	180	7	301,000	301,000
South Dakota .....	9	919	601	9	(D)	(D)
Tennessee .....	8	18	18	15	1,009,584	1,009,584
Texas .....	13	1,642	1,642	53	1,139,400	1,139,400
Utah .....	8	(D)	(D)	7	77,000	77,000
Vermont .....	3	(D)	(D)	43	697,592	697,592
Virginia .....	41	2,576	146	41	1,590,000	1,590,000
Washington .....	41	1,330	1,064	34	903,720	903,720
West Virginia .....	1	(D)	(D)	1	(D)	(D)
Wisconsin .....	48	1,852	1,704	122	2,893,996	2,893,996
Wyoming .....	-	-	-	24	114,000	114,000
<b>Water Resources Regions</b>						
Region 01 New England .....	69	2,932	2,912	187	5,073,948	5,073,948
Region 02 Mid-Atlantic .....	313	6,596	6,056	227	14,234,668	14,234,668
Region 03 South Atlantic-Gulf .....	262	7,061	4,523	355	21,230,835	21,230,835
Region 04 Great Lakes .....	62	2,496	2,470	261	8,428,792	8,428,792
Region 05 Ohio .....	29	559	559	147	5,081,114	5,081,114
Region 06 Tennessee .....	5	516	516	27	972,000	972,000
Region 07 Upper Mississippi .....	136	6,295	5,346	293	5,938,744	5,938,744
Region 08 Lower Mississippi .....	32	1,018	1,018	31	2,903,702	2,903,702
Region 09 Souris-Red-Rainy .....	2	(D)	(D)	-	-	-
Region 10 Missouri .....	21	1,553	1,175	78	2,923,760	2,923,760
Region 11 Arkansas-White-Red .....	55	3,439	3,085	5	112,404	112,404
Region 12 Texas-Gulf .....	13	1,642	1,642	53	1,139,400	1,139,400
Region 13 Rio Grande .....	9	630	630	-	-	-
Region 14 Upper Colorado .....	2	(D)	(D)	23	94,000	94,000
Region 15 Lower Colorado .....	-	-	-	-	-	-
Region 16 Great Basin .....	8	(D)	(D)	7	(D)	(D)
Region 17 Pacific Northwest .....	112	5,026	4,760	108	3,679,620	3,679,620
Region 18 California .....	142	2,737	2,737	149	11,283,492	11,283,492
Region 19 Alaska .....	-	-	-	3	110,250	110,250
Region 20 Hawaii .....	20	253	225	17	1,697,882	1,697,882

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**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$500,000 - \$999,999						
	In the open			Under protection			
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated	
United States .....2018	1,174	93,078	81,449	1,233	98,080,974	98,080,974	
.....2013	1,296	84,533	68,448	1,577	154,899,992	154,899,992	
<b>2018 DATA</b>							
Alabama .....	34	2,508	2,476	38	5,890,600	5,890,600	
Alaska .....	1	(D)	(D)	16	427,000	427,000	
Arizona .....	2	(D)	(D)	2	(D)	(D)	
Arkansas .....	17	3,583	3,439	9	446,680	446,680	
California .....	141	5,865	5,865	127	22,380,820	22,380,820	
Colorado .....	22	2,992	2,979	7	21,000	21,000	
Connecticut .....	9	155	155	13	802,500	802,500	
Delaware .....	1	(D)	(D)	1	(D)	(D)	
Florida .....	166	4,162	4,162	77	12,726,896	12,726,896	
Georgia .....	31	2,639	2,639	9	387,000	387,000	
Hawaii .....	14	70	70	43	1,299,510	1,299,510	
Idaho .....	90	16,031	15,131	21	137,920	137,920	
Illinois .....	13	1,270	565	51	1,096,760	1,096,760	
Indiana .....	-	-	-	-	-	-	
Iowa .....	10	41	41	10	115,000	115,000	
Kansas .....	4	200	200	12	534,240	534,240	
Kentucky .....	33	614	614	10	472,592	472,592	
Louisiana .....	5	1,255	1,235	1	(D)	(D)	
Maine .....	4	(D)	(D)	10	551,120	551,120	
Maryland .....	13	2,853	2,853	35	530,120	530,120	
Massachusetts .....	16	328	328	2	(D)	(D)	
Michigan .....	81	8,739	6,876	81	6,176,120	6,176,120	
Minnesota .....	38	3,608	1,354	45	2,317,620	2,317,620	
Mississippi .....	12	1,695	970	11	1,091,524	1,091,524	
Missouri .....	6	370	370	-	-	-	
Montana .....	3	648	648	6	435,240	435,240	
Nebraska .....	-	-	-	33	225,740	225,740	
Nevada .....	1	(D)	(D)	-	-	-	
New Hampshire .....	34	35	35	41	1,668,100	1,668,100	
New Jersey .....	61	1,198	1,198	70	2,991,104	2,991,104	
New Mexico .....	-	-	-	-	-	-	
New York .....	12	2,589	2,289	36	2,668,300	2,668,300	
North Carolina .....	40	2,797	1,229	78	4,282,360	4,282,360	
North Dakota .....	1	(D)	(D)	2	(D)	(D)	
Ohio .....	43	1,262	870	47	3,262,520	3,262,520	
Oklahoma .....	17	3,202	2,304	11	272,000	272,000	
Oregon .....	57	5,523	5,523	38	2,326,800	2,326,800	
Pennsylvania .....	30	(D)	(D)	84	12,608,024	12,608,024	
Rhode Island .....	7	848	791	6	166,000	166,000	
South Carolina .....	15	3,780	2,400	-	-	-	
South Dakota .....	-	-	-	15	675,500	675,500	
Tennessee .....	7	350	350	21	1,365,000	1,365,000	
Texas .....	39	7,636	7,636	17	2,889,000	2,889,000	
Utah .....	1	(D)	(D)	29	2,703,040	2,703,040	
Vermont .....	3	(D)	(D)	15	(D)	(D)	
Virginia .....	1	(D)	(D)	23	156,500	156,500	
Washington .....	35	2,817	2,760	21	985,804	985,804	
West Virginia .....	-	-	-	1	(D)	(D)	
Wisconsin .....	2	(D)	(D)	3	31,200	31,200	
Wyoming .....	2	(D)	(D)	5	167,000	167,000	
<b>Water Resources Regions</b>							
Region 01 New England .....	71	1,655	1,598	75	3,271,720	3,271,720	
Region 02 Mid-Atlantic .....	114	7,076	6,456	239	18,614,080	18,614,080	
Region 03 South Atlantic-Gulf .....	278	15,775	12,070	173	18,515,856	18,515,856	
Region 04 Great Lakes .....	87	8,766	6,903	105	7,076,920	7,076,920	
Region 05 Ohio .....	76	1,946	1,554	67	3,730,800	3,730,800	
Region 06 Tennessee .....	26	2,126	2,126	52	6,708,600	6,708,600	
Region 07 Upper Mississippi .....	64	5,295	2,336	106	3,529,380	3,529,380	
Region 08 Lower Mississippi .....	14	3,251	3,087	7	738,604	738,604	
Region 09 Souris-Red-Rainy .....	1	(D)	(D)	2	(D)	(D)	
Region 10 Missouri .....	13	2,211	2,211	63	1,542,480	1,542,480	
Region 11 Arkansas-White-Red .....	35	5,574	4,676	19	760,000	760,000	
Region 12 Texas-Gulf .....	35	7,416	7,416	17	2,889,000	2,889,000	
Region 13 Rio Grande .....	1	(D)	(D)	-	-	-	
Region 14 Upper Colorado .....	15	1,213	1,200	14	935,760	935,760	
Region 15 Lower Colorado .....	2	(D)	(D)	5	(D)	(D)	
Region 16 Great Basin .....	4	488	488	22	1,788,280	1,788,280	
Region 17 Pacific Northwest .....	182	24,269	23,312	75	2,319,764	2,319,764	
Region 18 California .....	141	5,865	5,865	133	23,631,820	23,631,820	
Region 19 Alaska .....	1	(D)	(D)	16	427,000	427,000	
Region 20 Hawaii .....	14	70	70	43	1,299,510	1,299,510	

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**Table 45. Irrigated Horticultural Operations by Market Value of All Agricultural Products Sold: 2018 and 2013 (continued)**

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

Geographic area	\$1,000,000 or more					
	In the open			Under protection		
	Operations	Acres	Acres irrigated	Operations	Square feet	Square feet irrigated
United States ..... 2018	2,392	476,508	396,737	2,657	1,063,305,446	1,063,305,446
..... 2013	1,936	400,264	343,547	2,096	838,082,473	835,846,393
<b>2018 DATA</b>						
Alabama .....	59	17,163	17,163	42	11,123,600	11,123,600
Alaska .....	-	-	-	3	456,000	456,000
Arizona .....	41	4,750	4,750	26	9,035,780	9,035,780
Arkansas .....	4	(D)	(D)	8	1,174,370	1,174,370
California .....	378	53,240	53,185	458	250,651,773	250,651,773
Colorado .....	43	5,492	5,492	53	10,887,980	10,887,980
Connecticut .....	69	4,909	2,714	114	33,344,504	33,344,504
Delaware .....	5	1,379	1,379	4	438,840	438,840
Florida .....	407	75,129	71,484	326	234,259,561	234,259,561
Georgia .....	42	14,524	14,524	33	11,468,570	11,468,570
Hawaii .....	15	483	315	50	12,127,120	12,127,120
Idaho .....	53	10,771	10,571	14	2,328,028	2,328,028
Illinois .....	49	14,577	5,194	66	44,281,980	44,281,980
Indiana .....	13	2,603	2,065	55	6,989,196	6,989,196
Iowa .....	28	2,722	2,422	47	9,340,810	9,340,810
Kansas .....	14	7,111	2,930	14	5,129,520	5,129,520
Kentucky .....	2	(D)	(D)	5	1,317,000	1,317,000
Louisiana .....	22	1,382	1,317	30	7,390,080	7,390,080
Maine .....	7	210	210	9	2,178,900	2,178,900
Maryland .....	33	6,391	6,391	62	8,355,020	8,355,020
Massachusetts .....	4	728	702	3	(D)	(D)
Michigan .....	51	28,699	12,169	161	60,156,749	60,156,749
Minnesota .....	37	4,742	2,262	50	12,781,536	12,781,536
Mississippi .....	11	3,018	3,018	8	836,320	836,320
Missouri .....	19	5,219	3,119	26	6,072,800	6,072,800
Montana .....	3	6	6	15	491,860	491,860
Nebraska .....	15	1,374	1,235	13	1,535,480	1,535,480
Nevada .....	1	(D)	(D)	5	148,680	148,680
New Hampshire .....	15	13,198	(D)	19	2,033,864	2,033,864
New Jersey .....	62	13,198	12,100	37	19,591,580	19,591,580
New Mexico .....	10	(D)	(D)	11	1,902,480	1,902,480
New York .....	113	6,997	6,997	193	42,636,890	42,636,890
North Carolina .....	61	18,288	6,678	18	13,201,200	13,201,200
North Dakota .....	-	-	-	-	-	-
Ohio .....	34	18,511	7,294	41	24,409,681	24,409,681
Oklahoma .....	12	9,897	9,012	7	2,477,046	2,477,046
Oregon .....	242	41,163	40,813	188	47,687,130	47,687,130
Pennsylvania .....	20	3,323	861	150	36,052,120	36,052,120
Rhode Island .....	1	(D)	(D)	-	-	-
South Carolina .....	43	12,664	12,355	9	(D)	(D)
South Dakota .....	7	275	275	3	(D)	(D)
Tennessee .....	30	12,361	6,911	20	3,510,460	3,510,460
Texas .....	110	32,326	31,464	111	70,933,580	70,933,580
Utah .....	17	1,678	1,518	19	6,127,872	6,127,872
Vermont .....	2	(D)	(D)	3	(D)	(D)
Virginia .....	50	4,206	3,271	49	17,157,072	17,157,072
Washington .....	92	23,158	21,658	42	18,849,012	18,849,012
West Virginia .....	1	(D)	(D)	2	(D)	(D)
Wisconsin .....	45	9,507	8,603	29	6,203,782	6,203,782
Wyoming .....	-	-	-	6	188,000	188,000
<b>Water Resources Regions</b>						
Region 01 New England .....	97	6,520	4,273	147	38,294,228	38,294,228
Region 02 Mid-Atlantic .....	218	31,480	29,324	413	105,656,260	105,656,260
Region 03 South Atlantic-Gulf .....	632	139,553	123,989	446	276,585,511	276,585,511
Region 04 Great Lakes .....	132	38,014	19,454	252	99,721,890	99,721,890
Region 05 Ohio .....	72	26,772	9,024	128	21,306,776	21,306,776
Region 06 Tennessee .....	4	3,770	3,770	1	(D)	(D)
Region 07 Upper Mississippi .....	132	30,459	17,281	177	62,558,440	62,558,440
Region 08 Lower Mississippi .....	25	2,043	1,978	32	7,707,400	7,707,400
Region 09 Souris-Red-Rainy .....	4	(D)	(D)	4	(D)	(D)
Region 10 Missouri .....	86	16,259	10,186	101	23,752,750	23,752,750
Region 11 Arkansas-White-Red .....	27	12,995	12,110	16	3,654,096	3,654,096
Region 12 Texas-Gulf .....	107	32,260	31,398	109	65,706,380	65,706,380
Region 13 Rio Grande .....	10	(D)	(D)	17	9,597,400	9,597,400
Region 14 Upper Colorado .....	5	168	168	7	322,920	322,920
Region 15 Lower Colorado .....	41	4,750	4,750	26	9,035,780	9,035,780
Region 16 Great Basin .....	18	1,992	1,832	24	6,276,552	6,276,552
Region 17 Pacific Northwest .....	389	75,096	73,046	246	69,024,170	69,024,170
Region 18 California .....	378	53,240	53,185	458	250,651,773	250,651,773
Region 19 Alaska .....	-	-	-	3	456,000	456,000
Region 20 Hawaii .....	15	483	315	50	12,127,120	12,127,120



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# Appendix A.

## Statistical Methodology

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### THE SURVEY POPULATION

#### Sample Design

The target population for the 2018 Irrigation and Water Management Survey was composed of all farms irrigating in the reference year of 2018. From the 2017 Census of Agriculture, 198,368 records were identified as belonging to the general U.S. irrigation population on the basis of having irrigation activity on their farm or ranch. The target population was expanded to include any operations that had irrigated land in the past five years. Institutional, research, and experimental farms were excluded from the total number of irrigators that reported in the 2017 census.

The sample was drawn at a State level for all 50 States. This sample design targeted a U.S. level sample size of 35,000. A certainty stratum, with farms selected with probability one, was included for each State to ensure that the major irrigators in each State were sampled. The remaining strata were sampled systematically by irrigated acreage. The stratification boundaries varied among the States and were dependent on the distribution of total acres irrigated within the State. The stratified design ensured that the sample was reflective of the survey population and achieved the appropriate coefficients of variation (CV) levels at both the U.S. and State levels.

The final national sample size was 34,783 farms; 1,340 of these farms were selected from the certainty strata and the remaining 33,443 farms were systematically selected from the noncertainty strata. Table A provides the State sample counts for the survey, including acres associated with those counts, final reports processed and tabulated both unexpanded and expanded, and 2017 census counts.

### DATA COLLECTION

#### Method of Enumeration

The 2018 Irrigation and Water Management Survey was conducted using multiple data collection strategies. Data were collected by mail, Computer-Assisted Web Interviewing (CAWI) via the Internet, telephone enumeration, and personal enumeration. Enumeration methods used in the 2018 survey were similar to those used in the 2013 survey.

#### Report Form

A single 20-page report form was used for the survey, similar to the 2013 report form. The report form was mailed to all the producers in the sample that reported irrigation in the 2017 Census of Agriculture. See Appendix B for copies of the report form and instruction booklet and information regarding changes between the 2013 and 2018 report forms.

#### Report Form Mailings and Respondent Follow-up

The initial mailout took place in February 2019. Mail packets were mailed to 34,783 irrigators. The initial mail packets included a labeled report form, an instruction booklet, an instruction letter, and a return envelope. Mailout packet preparation, initial mailout, and one follow-up mailing to nonrespondents were handled by the U.S. Census Bureau's National Processing Center (NPC) in Jeffersonville, IN. Telephone follow-up from a NASS Data Collection Center began April 2019 to nonrespondents who were mailed a report form from NPC.

Data were collected for a select group of operations by the NASS regional field offices. To minimize the number of agency contacts, operations were included in this group if they were scheduled for contact by

NASS for other agricultural surveys. Report forms were labeled at NPC and sent to the regional field offices in November 2018. Regional field office staff collected data by personal enumeration or by phone from February 2019 through May 2019. For a description of the adjustment for nonresponse, see Estimation.

## REPORT FORM PROCESSING

### Data Capture

All report forms returned to NPC were immediately checked in, using bar codes printed on the mailing label, and removed from follow-up mailings. All report forms were reviewed prior to data keying to identify inconsistencies and to ensure that the data could be keyed. Major inconsistencies, respondent remarks, blank report forms, and large irrigation cases were reviewed by analysts and adjusted prior to data keying as needed. All forms with any data were scanned and an image was created for each page of a report form.

### Data Editing and Analysis

Data from each report form were processed through a computer edit which flagged missing or inconsistent entries. Each report with a flagged entry was reviewed by regional field office and/or headquarters statisticians. Action was required for any record with reported data that were clearly incorrect, for example, in some cases, respondents may have failed to provide all of the information requested, only indicating the presence of an item but not the amount. These items were tagged for machine imputation. After the initial edit, an imputation program supplied missing data and made adjustments based on responses of similarly sized farms within the same geographic area. Data entries by the computer edit process were reviewed and verified by analysts. Instances where imputed data failed edit checks were referred to statisticians for corrective action. The computer edit ensured the data on a report form were internally consistent.

Prior to publication, tabulated totals were reviewed to identify and resolve remaining irregularities. Comparisons were made with 2017 census data, 2013 Farm and Ranch Irrigation Survey data, and other available check data. The data were processed through a disclosure program to prevent data from

being published that could be sourced back to an individual operation.

## Imputation

Many data items in the 2018 Irrigation and Water Management Survey used nearest neighbor hot-deck imputation. Records were sorted by State and strata to increase likelihood that the nearest neighbor donor record was within the same State and stratum as the recipient record. Some exceptions are described below.

- Imputation for items related to ground water from wells used a combination of techniques to maintain relationships between other items in the record. Based on available data, imputation techniques were prioritized as listed directly below:
  - Other data in the record that referenced the same well.
  - Other wells on the same farm.
  - Nearest neighbor hot-deck imputation (accounts for missing information from similar records in the same data set).
- Imputation for items related to acres harvested in the open and pastureland was based on ratios created at the State by stratum level, State level, and U.S. level using good donor records.
  - Priority was given to the ratio based on the most similar contributors when there was a sufficient number of donors (i.e., first same State by stratum).
- Imputation for sections that required categorical or yes/no responses was based on the distributions of farms that responded to the item.

Items that were imputed:

- Quantity of water applied;
- Well and pump characteristics;
- Energy costs of well pumps;
- Individual crop yields and quantity of water used;
- Horticulture water sources and methods; and
- Acres associated with expenditures, maintenance, and repair costs.

## ESTIMATION

Data were summarized for the Nation as a whole, for

each of the 50 States, and for the geographic domains known as Water Resources Regions (WRR) (see Appendix B for a detailed description). The estimation methodology consisted of two weighting components that made up the total survey weight. The first component was the fully adjusted weight pulled in from the 2017 Census of Agriculture. This weight accounted for any list incompleteness and undercoverage from the 2017 census. The second component was the sampling rate used for the 2018 Irrigation and Water Management Survey. This expansion factor was the inverse of the selection probability for the sample farms in a stratum. This expansion factor was reweighted at the stratum level to account for whole-farm nonresponse. The nonresponse adjustment factor used to reweight the expansion factor was the ratio of the number of sample farms in a stratum to the number of sample farms that responded to the survey in that stratum. The assumption underlying this weighting approach to survey nonresponse was that survey respondents and nonrespondents within a stratum constitute a homogeneous population, thus allowing respondents to represent nonrespondents. An expanded data value for a sample record was obtained by multiplying the data value by the total 2018 Irrigation and Water Management Survey weight. State totals for a characteristic were estimated by summing the expanded data values from all responding sample records across all strata within the State. National estimates were obtained by summing across all States. The WRR estimates were obtained by summing the expanded data values for the portion of the sample falling into the WRR.

## RESPONDENT CONFIDENTIALITY

In keeping with the provisions of Title 7 of the United States Code, no data are published that would disclose information about the operations of an individual farm or ranch. All tabulated data are subjected to an extensive disclosure review prior to publication. Any tabulated item that identifies data reported by a respondent or allows a respondent's data to be accurately estimated or derived, was suppressed and coded with a 'D'. However, the number of farms reporting an item is not considered confidential information and is provided even though other information is withheld.

## DATA COMPARABILITY

The report form for the 2018 Irrigation and Water Management Survey was very similar to the report form for the 2013 Farm and Ranch Irrigation Survey. Only a small number of questions were either split, dropped, or reworded. The data are mostly comparable between 2013 and 2018. There are slight differences due to the target population now including those who irrigated in the past five years instead of just those who had irrigated the prior year. However, the population they represent is still the same, which is all active irrigators in 2018 in the U.S.

The differences between the 2018 Irrigation and Water Management Survey and the 2013 Farm and Ranch Irrigation Survey are as follows:

- Number of hours pumps were operational during the survey year was removed from 2018.
- Horticulture in the open was recorded under Other cropland during 2013 while it was recorded as its own commodity during 2018. Therefore, Other cropland is not comparable between 2018 and 2013.

Differences exist between the expanded results of the 2018 Irrigation and Water Management Survey and the published data from the 2017 Census of Agriculture. Some of these are as follows:

1. The survey includes data only for operations that irrigated sometime between 2013 and 2017 and 2018. Operations in some areas, especially the eastern States, may irrigate only when moisture is needed. Operations with irrigation capabilities may not irrigate depending on the amount of rainfall for a particular year or geographic area. The number of operations that irrigated in 2017 but discontinued irrigation in 2018 is tabulated in Table 27 for all farms and in Table 44 for horticultural operations by reason of discontinuance.
2. Some producers reported that they had been misclassified as irrigators and did not irrigate in either 2017 or 2018. Operations which indicated they had not irrigated in 2017 but had in the past five years were not counted as misclassified. In addition to errors in processing census data, some producers misreported or misinterpreted the questions. Most of the producers misreporting irrigation in the 2017 census reported irrigation of

small acreages of vegetables, fruits and nuts, tobacco, field crops, or berries.

since 2017, took control of an existing irrigating farm through sale, rental, or other arrangement).

3. Some respondents indicated they had retired, moved, sold or rented the land, etc., since 2017. These operations were dropped from processing because they were no longer farming. Special care was taken with large operations to ensure that they were not erroneously dropped due to reorganization or name change rather than discontinuing agricultural operations.
4. New irrigators in 2018 (not included in the 2017 census) did not have a chance for selection in the sample and, therefore, were excluded from the survey. It is believed that the impact of new irrigators is probably minimal. This conclusion is supported by comparisons between the 2012 and 2017 Censuses of Agriculture irrigation data which show little change in irrigated acres.

Overcoverage also existed in the frame because some operations were misclassified as irrigators and did not irrigate in 2017 or had either stopped farming or irrigating in 2018. Farms in the sample that fell into these groups were identified during the survey and estimates are provided covering their number and acres irrigated in the Data Comparability section, items 2 and 3.

### **Survey Response Rate**

The response rate is an indicator of the quality of data collection. It is generally assumed that if a response rate was close to 100 percent, the potential for nonresponse bias is small. Because this survey contains both farm and nonfarm records, the response rate is an indicator of replying to the survey data collection effort, but does not reflect whether those responding met the farm definition or had the items of interest for the survey. The response rate for the 2018 Irrigation and Water Management Survey is 64.4 percent. This compares to 69.8 percent for the 2013 Farm and Ranch Irrigation Survey.

Table B shows acres irrigated in the 2018 survey (expanded) compared with U.S. totals from the 2017 Census of Agriculture. The expanded survey accounts for 96.4 percent of all land reported as irrigated in the 2017 census and all irrigation characteristics associated with that land.

### **MEASURES OF PRECISION**

#### **MEASURES OF SURVEY QUALITY**

The statistics in this report are estimates derived from a sample survey. There are two types of errors possible in an estimate-based sample survey: sampling and nonsampling. Sampling errors are caused by observing only a piece of the population instead of the entire population. These errors are subject to sample-to-sample variation. Nonsampling errors include all other errors and can arise from many different sources. These sources may include respondent error, enumerator error, or incorrect data keying, editing, or imputing for missing data. Nonsampling error due to mail list incompleteness and duplication, as well as misclassification of records on the mail list, is referred to as coverage error.

Under the guidance of the Statistical Policy Office of the Office of Management and Budget (OMB), the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) provides data users with quality metrics for its published data series. The accuracy of data products may be evaluated through sampling and nonsampling error. The measurement of error due to sampling in the current period is evaluated by the coefficient of variation (CV) for each estimated item. Nonsampling error is evaluated by response rates and the percent of the estimate from respondents.

Undercoverage existed in the frame population to the extent that there were irrigated farms that either erroneously reported they were not irrigating on the 2017 census, started irrigating in 2018, or had succeeding irrigators in 2018 (i.e., a producer who,

**Coefficient of variation** is a measure of the relative amount of error associated with a sample estimate. Specifically, it is the standard error of a point estimate divided by that estimate, generally multiplied times 100 so that it can be reported as a percentage. This relative measure allows the reliability of a range of estimates to be compared. For example, the standard error is often larger for large population estimates than for small population estimates, but the large

population estimates may have a smaller CV, indicating a more reliable estimate. Every estimate for the 2018 Irrigation and Water Management Survey has a corresponding CV published with it. NASS has identified the following index to use when evaluating coefficient of variation for the 2018 Irrigation and Water Management Survey. The coefficient of variation is used as an indicator of the precision in the survey estimates and is reported for major survey items in Table C and Table D.

- **Low Reliability Estimate.** Coefficient of Variation (CV) 30 percent or higher. Caution

should be used when using this estimate in any form. Please consult NASS for more information or guidance.

- **Medium Reliability Estimate.** Coefficient of Variation (CV) between 15 percent and 29.9 percent
- **High Reliability Estimate.** Coefficient of Variation (CV) less than 15 percent.

**Table A. Irrigated Farms: 2018 Irrigation and Water Management Survey and the 2017 Census of Agriculture**

Geographic area	2018 Irrigation and Water Management Survey						2017 Census of Agriculture			
	Sample count		Final reports processed and tabulated				Published totals		Sample universe <sup>1</sup>	
			Unexpanded		Expanded					
	Farms	2017 census irrigated acres	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States .....	34,783	21,955,328	17,177	13,126,383	231,474	55,938,795	294,235	58,013,907	198,368	43,988,618
Alabama .....	254	65,832	119	54,611	1,069	163,338	1,891	142,001	1,372	121,835
Alaska .....	155	1,676	86	1,285	308	1,721	377	2,400	417	1,923
Arizona .....	560	435,419	262	324,665	3,054	945,570	4,808	910,883	2,517	758,535
Arkansas .....	1,838	2,665,768	777	1,483,354	3,173	4,246,491	4,475	4,855,143	3,500	3,858,092
California .....	4,661	3,400,265	2,583	1,986,818	42,093	8,408,282	52,362	7,833,593	31,307	6,199,928
Colorado .....	1,587	771,802	858	420,440	14,529	2,458,742	17,162	2,761,173	10,969	1,986,872
Connecticut .....	137	4,503	54	2,916	669	6,104	998	7,376	656	6,144
Delaware .....	129	76,545	74	53,139	521	201,305	612	163,255	432	125,185
Florida .....	954	958,264	433	719,122	7,615	1,331,739	11,228	1,519,379	7,240	1,385,135
Georgia .....	691	361,308	273	223,742	3,861	1,163,038	6,191	1,287,541	4,608	928,480
Hawaii .....	298	35,783	152	14,753	1,863	26,700	2,250	45,452	1,482	46,616
Idaho .....	1,821	1,594,524	1,077	924,795	14,867	3,393,063	15,597	3,398,266	9,353	2,609,651
Illinois .....	329	176,359	177	138,682	1,807	566,024	2,541	612,459	2,156	518,603
Indiana .....	359	128,509	210	106,079	2,039	582,661	2,836	555,443	2,268	449,277
Iowa .....	207	59,199	106	41,334	1,061	166,193	1,707	221,986	1,409	173,060
Kansas .....	781	781,207	393	500,357	4,249	2,386,816	5,141	2,503,386	3,904	1,887,854
Kentucky .....	355	55,601	150	34,914	1,188	58,234	2,030	83,859	1,834	78,189
Louisiana .....	542	350,475	185	188,810	1,862	1,072,033	3,102	1,235,752	2,371	899,045
Maine .....	254	27,174	138	23,136	990	35,695	1,420	32,312	877	30,154
Maryland .....	208	52,377	117	43,011	959	125,024	1,318	124,831	1,108	103,414
Massachusetts .....	183	9,311	85	6,747	1,335	19,311	1,696	23,928	1,193	18,705
Michigan .....	541	270,615	286	207,528	3,886	827,010	5,153	670,212	4,007	567,014
Minnesota .....	412	191,907	219	118,184	2,367	554,605	3,220	611,621	2,364	475,393
Mississippi .....	825	933,666	305	506,650	1,621	1,667,023	2,561	1,814,548	1,776	1,477,133
Missouri .....	805	596,492	375	272,957	2,705	1,429,074	3,523	1,529,155	2,922	1,178,685
Montana .....	1,020	617,118	570	329,705	8,887	2,140,162	9,941	2,061,236	6,564	1,434,050
Nebraska .....	2,391	2,312,733	1,064	1,087,187	13,013	7,666,152	16,112	8,588,389	10,871	5,711,548
Nevada .....	294	336,827	184	218,825	1,857	693,520	2,217	790,425	1,293	597,082
New Hampshire .....	110	953	61	923	731	3,218	618	2,207	407	1,573
New Jersey .....	273	51,621	142	36,452	1,585	89,941	1,980	86,819	1,619	78,259
New Mexico .....	682	220,119	374	175,993	10,093	675,330	10,745	626,034	5,652	483,785
New York .....	351	22,509	153	17,213	2,148	47,974	3,285	53,257	2,548	43,213
North Carolina .....	461	44,220	181	24,784	2,451	132,870	3,708	143,444	3,085	121,274
North Dakota .....	119	81,205	57	57,552	720	297,001	764	263,885	581	196,328
Ohio .....	382	29,036	168	17,361	1,601	39,258	2,935	50,665	2,412	44,666
Oklahoma .....	370	219,387	163	169,011	1,835	601,492	2,668	573,776	2,144	432,749
Oregon .....	1,667	654,725	875	371,957	13,794	1,579,108	16,291	1,664,921	11,417	1,378,226
Pennsylvania .....	469	11,612	216	9,087	2,766	40,596	3,904	32,139	3,026	24,177
Rhode Island .....	107	2,215	48	1,945	227	3,231	234	2,956	169	2,618
South Carolina .....	274	74,563	129	73,298	1,489	252,720	2,167	210,437	1,597	161,606
South Dakota .....	191	109,871	95	63,391	1,219	378,413	1,798	492,452	1,221	314,483
Tennessee .....	279	82,970	125	57,030	1,452	190,746	2,011	184,899	1,930	156,912
Texas .....	2,334	1,347,636	917	804,535	11,997	4,085,754	17,932	4,363,345	13,366	3,068,226
Utah .....	924	212,392	562	136,503	12,575	1,181,700	13,159	1,097,219	7,787	807,765
Vermont .....	153	1,950	87	1,041	573	3,022	672	3,017	439	2,412
Virginia .....	251	28,050	101	16,090	1,377	48,248	2,053	63,433	1,751	54,113
Washington .....	1,646	761,415	798	600,521	11,259	1,866,110	14,887	1,689,377	9,314	1,423,352
West Virginia .....	106	529	43	1,326	482	6,525	581	1,660	541	1,140
Wisconsin .....	403	186,494	205	190,679	2,127	518,312	3,284	454,362	2,686	418,657
Wyoming .....	640	540,597	365	265,945	5,525	1,561,596	6,090	1,567,599	3,906	1,172,482

<sup>1</sup> Excludes institutional, research, and experimental farms.

**Table B. Farms with Irrigation by Acres Irrigated: 2018 Irrigation and Water Management Survey compared with 2017 Census of Agriculture**

Item	2017 Census of Agriculture United States totals	2018 Irrigation and Water Management Survey		Item	2017 Census of Agriculture United States totals	2018 Irrigation and Water Management Survey	
		United States totals (expanded)	Percent of 2017 Census of Agriculture totals			United States totals (expanded)	Percent of 2017 Census of Agriculture totals
Farms .....	294,235	231,474	78.7	200 to 499 acres .....	26,787	24,749	92.4
acres .....	58,013,907	55,938,795	96.4	acres .....	8,390,366	7,669,292	91.4
1 to 49 acres .....	191,649	136,429	71.2	500 to 999 acres .....	15,172	13,790	90.9
acres .....	1,777,418	1,535,201	86.4	acres .....	10,507,125	9,503,359	90.4
50 to 99 acres .....	22,629	19,825	87.6	1,000 to 1,999 acres .....	9,285	9,170	98.8
acres .....	1,568,582	1,383,478	88.2	acres .....	12,575,750	12,245,392	97.4
100 to 199 acres .....	23,452	22,259	94.9	2,000 acres or more .....	5,261	5,252	99.8
acres .....	3,208,908	3,026,351	94.3	acres .....	19,985,758	20,575,722	103.0

**Table C. Coefficient of Variation (percent) for Selected General Irrigation Data: 2018**

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

Geographic area	Irrigated farms	Land in farms	Acres irrigated		Acre-feet applied	Energy expense for pumps	Expenditure expenses	Pumps, all types	Well pumps
			Total	Cropland harvested in the open					
United States .....	0.7	3.4	1.7	1.5	2.4	2.6	5.6	1.6	2.0
Alabama .....	7.3	14.5	16.0	16.1	24.0	28.2	43.3	13.0	(D)
Alaska .....	8.5	24.6	40.0	45.6	60.9	29.1	39.9	15.2	19.3
Arizona .....	3.3	21.7	11.4	11.9	13.8	24.9	27.2	16.9	20.2
Arkansas .....	2.3	3.2	3.6	3.7	4.7	6.5	28.9	4.6	4.5
California .....	1.2	10.9	5.2	4.1	5.6	4.0	10.3	3.2	3.2
Colorado .....	1.9	15.0	5.6	5.6	6.0	8.9	21.4	7.5	7.0
Connecticut .....	13.8	25.1	19.8	26.6	27.8	40.5	28.1	19.3	19.0
Delaware .....	7.4	19.3	13.7	13.8	19.8	61.1	43.4	13.0	12.7
Florida .....	3.7	23.3	12.3	13.1	13.0	9.7	22.7	6.9	7.5
Georgia .....	4.9	10.6	6.5	6.5	11.9	10.7	27.5	8.0	6.9
Hawaii .....	6.6	50.6	23.6	28.5	31.4	26.4	21.4	29.5	(D)
Idaho .....	1.9	9.6	5.7	5.1	6.6	6.1	23.2	3.6	6.5
Illinois .....	6.4	17.5	7.4	7.4	8.3	12.1	28.2	5.5	4.8
Indiana .....	5.7	9.7	7.0	7.0	11.8	12.2	49.2	9.4	10.7
Iowa .....	9.7	18.3	13.8	13.8	14.3	25.2	33.5	9.2	13.7
Kansas .....	3.3	6.7	4.0	4.1	5.6	6.4	16.9	4.7	4.8
Kentucky .....	10.9	17.3	14.2	14.4	11.5	18.2	34.5	17.6	15.4
Louisiana .....	5.7	8.9	7.7	7.9	12.5	15.2	32.0	9.3	9.2
Maine .....	12.1	30.1	24.0	20.4	28.2	26.0	35.8	5.7	10.3
Maryland .....	8.5	14.0	11.0	11.1	18.5	17.7	31.6	12.0	14.5
Massachusetts .....	7.3	23.4	15.6	17.6	28.6	30.9	42.2	11.5	20.3
Michigan .....	4.1	10.2	8.4	8.7	8.4	9.0	25.0	7.5	(D)
Minnesota .....	6.7	7.6	7.0	7.0	8.9	10.3	26.9	7.1	7.5
Mississippi .....	5.0	7.0	6.6	6.6	6.7	10.7	19.3	7.4	7.1
Missouri .....	3.3	5.6	5.7	6.1	8.0	10.3	18.7	7.5	7.3
Montana .....	3.7	13.4	5.1	4.9	8.4	6.4	28.4	9.4	15.4
Nebraska .....	2.1	5.3	2.4	2.3	3.3	3.4	12.3	1.9	2.3
Nevada .....	5.8	30.4	4.9	5.7	5.3	14.9	20.3	8.4	8.9
New Hampshire .....	8.5	21.5	25.0	25.7	35.4	34.1	44.6	19.8	24.6
New Jersey .....	6.2	14.6	6.7	6.7	10.3	14.3	46.5	6.9	(D)
New Mexico .....	2.9	38.7	10.5	14.1	14.7	16.1	23.4	6.6	7.1
New York .....	8.7	16.0	15.6	15.5	27.1	20.0	35.3	9.8	14.0
North Carolina .....	10.3	37.2	37.8	39.9	25.9	36.8	43.3	15.3	13.0
North Dakota .....	10.9	20.6	14.8	14.8	20.2	24.7	43.2	19.1	20.4
Ohio .....	9.6	17.8	10.7	11.6	13.1	12.8	42.4	11.6	14.8
Oklahoma .....	7.8	19.5	12.9	11.8	11.4	15.6	38.1	13.7	14.7
Oregon .....	2.4	14.2	6.3	7.2	7.0	7.2	9.2	3.8	6.7
Pennsylvania .....	5.1	8.3	37.0	40.2	76.1	23.1	67.6	8.4	8.4
Rhode Island .....	17.1	29.8	29.7	31.0	28.2	25.2	42.3	20.4	23.3
South Carolina .....	7.7	19.6	18.7	19.0	15.1	22.8	38.0	13.3	15.2
South Dakota .....	11.2	23.1	11.8	11.1	17.9	10.3	37.0	13.0	20.1
Tennessee .....	12.5	17.6	16.6	16.7	18.8	10.2	48.1	10.3	13.5
Texas .....	3.4	7.8	4.9	4.8	5.9	7.9	10.8	8.6	8.7
Utah .....	2.6	18.1	7.1	8.0	6.1	13.7	25.0	7.9	17.6
Vermont .....	16.4	28.0	16.2	20.8	33.6	29.4	33.8	20.9	22.3
Virginia .....	9.0	15.6	14.3	14.5	13.8	14.5	47.1	8.7	11.4
Washington .....	3.0	20.1	7.4	7.1	7.4	8.8	19.2	7.9	6.8
West Virginia .....	17.2	40.7	87.1	91.6	79.3	44.1	69.1	26.9	27.1
Wisconsin .....	4.1	11.0	9.4	9.4	16.5	13.4	26.3	9.3	10.6
Wyoming .....	3.6	11.2	6.4	5.8	7.8	15.1	28.2	9.1	17.6
<b>Water Resources Regions</b>									
Region 01 New England .....	5.5	12.5	9.6	8.5	12.6	16.9	17.8	7.6	10.4
Region 02 Mid-Atlantic .....	3.3	9.2	6.7	6.9	14.8	25.8	26.0	4.9	5.7
Region 03 South Atlantic-Gulf .....	2.1	10.4	4.8	5.1	7.6	6.5	16.4	4.4	4.4
Region 04 Great Lakes .....	3.2	6.6	8.3	8.5	7.3	8.0	20.2	4.7	6.6
Region 05 Ohio .....	7.5	12.5	14.4	14.2	21.1	18.2	25.0	10.7	15.2
Region 06 Tennessee .....	13.7	22.2	25.4	25.6	31.6	22.9	43.8	11.9	13.3
Region 07 Upper Mississippi .....	3.5	6.4	6.1	6.1	8.6	6.9	17.7	5.5	5.5
Region 08 Lower Mississippi .....	3.8	3.8	3.9	3.9	3.9	5.7	11.5	3.4	3.1
Region 09 Souris-Red-Rainy .....	12.2	22.5	20.3	20.4	19.9	20.6	49.1	18.9	(D)
Region 10 Missouri .....	2.1	6.0	2.3	2.4	2.8	3.4	11.2	2.7	2.9
Region 11 Arkansas-White-Red .....	4.9	9.0	3.6	3.3	4.5	5.3	19.8	2.5	2.8
Region 12 Texas-Gulf .....	2.9	9.9	4.1	4.7	7.0	8.1	12.6	11.2	11.4
Region 13 Rio Grande .....	3.8	33.6	10.9	11.3	9.3	9.1	17.1	9.8	11.5
Region 14 Upper Colorado .....	3.3	14.5	8.5	6.7	9.1	30.2	26.1	12.2	(D)
Region 15 Lower Colorado .....	5.4	26.1	10.8	11.3	13.7	23.3	22.0	15.1	17.8
Region 16 Great Basin .....	3.6	14.8	5.6	6.0	5.2	9.2	26.1	9.3	10.2
Region 17 Pacific Northwest .....	1.9	7.8	3.3	2.7	3.4	3.9	10.7	2.1	3.4
Region 18 California .....	1.3	10.8	5.4	4.4	5.9	4.1	10.4	3.2	3.2
Region 19 Alaska .....	8.5	24.6	40.0	45.6	60.9	29.1	39.9	15.2	19.3
Region 20 Hawaii .....	6.6	50.6	23.6	28.5	31.4	26.4	21.4	29.5	(D)

**Table D. Coefficient of Variation (percent) for Selected Horticultural Irrigation Data: 2018**

Geographic area	Irrigated horticultural operations	Irrigated area	
		Acres in the open	Square feet under protection
United States .....	1.2	5.8	8.4
Alabama .....	9.7	24.2	32.7
Alaska .....	11.1	18.7	29.2
Arizona .....	26.0	32.7	41.1
Arkansas .....	13.0	39.2	44.1
California .....	3.9	27.9	19.3
Colorado .....	7.0	20.7	29.3
Connecticut .....	14.2	34.0	38.8
Delaware .....	11.3	58.2	43.3
Florida .....	5.3	7.4	27.2
Georgia .....	11.5	21.0	25.8
Hawaii .....	14.1	26.0	28.8
Idaho .....	13.3	29.1	19.8
Illinois .....	9.8	26.8	61.4
Indiana .....	7.8	36.8	21.1
Iowa .....	13.5	40.6	21.3
Kansas .....	16.6	59.6	41.9
Kentucky .....	14.1	57.1	23.1
Louisiana .....	11.4	50.3	38.6
Maine .....	20.3	68.2	47.9
Maryland .....	10.9	22.7	26.9
Massachusetts .....	10.5	21.7	26.0
Michigan .....	9.0	22.2	39.9
Minnesota .....	8.0	34.7	22.3
Mississippi .....	7.8	49.6	18.4
Missouri .....	7.5	28.7	21.9
Montana .....	18.2	48.2	29.1
Nebraska .....	8.7	38.2	31.1
Nevada .....	24.9	70.8	41.6
New Hampshire .....	17.7	45.5	31.7
New Jersey .....	9.2	10.9	36.9
New Mexico .....	16.6	50.3	37.2
New York .....	9.0	23.8	32.0
North Carolina .....	9.0	26.1	28.2
North Dakota .....	29.7	(D)	44.0
Ohio .....	10.2	34.9	34.5
Oklahoma .....	17.0	19.0	35.4
Oregon .....	7.1	14.0	21.9
Pennsylvania .....	5.0	23.5	23.5
Rhode Island .....	21.7	36.0	22.0
South Carolina .....	15.3	21.2	34.6
South Dakota .....	12.9	74.8	67.6
Tennessee .....	15.6	34.9	20.0
Texas .....	8.5	27.3	44.1
Utah .....	20.4	40.7	23.0
Vermont .....	20.8	29.3	33.4
Virginia .....	9.4	36.7	16.7
Washington .....	8.1	13.2	30.4
West Virginia .....	17.7	49.5	39.6
Wisconsin .....	6.0	35.5	13.3
Wyoming .....	37.7	(D)	49.9
<b>Water Resources Regions</b>			
Region 01 New England .....	9.3	23.9	23.4
Region 02 Mid-Atlantic .....	4.7	12.5	17.1
Region 03 South Atlantic-Gulf .....	2.6	5.1	22.2
Region 04 Great Lakes .....	4.5	24.7	24.5
Region 05 Ohio .....	9.7	28.0	17.3
Region 06 Tennessee .....	17.7	31.5	36.4
Region 07 Upper Mississippi .....	6.0	18.0	38.9
Region 08 Lower Mississippi .....	14.2	28.3	31.2
Region 09 Souris-Red-Rainy .....	37.2	50.2	46.9
Region 10 Missouri .....	5.2	13.3	19.2
Region 11 Arkansas-White-Red .....	13.6	19.1	16.7
Region 12 Texas-Gulf .....	10.1	27.6	50.5
Region 13 Rio Grande .....	16.5	42.6	96.8
Region 14 Upper Colorado .....	18.0	41.1	36.5
Region 15 Lower Colorado .....	29.7	34.5	40.1
Region 16 Great Basin .....	13.7	27.3	23.0
Region 17 Pacific Northwest .....	6.4	8.3	22.4
Region 18 California .....	3.8	28.2	19.0
Region 19 Alaska .....	11.1	18.7	29.2
Region 20 Hawaii .....	14.1	26.0	28.8



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# Appendix B.

## General Explanation and Report Form

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### DEVELOPMENT OF THE REPORT FORM

Planning for the 2018 Irrigation and Water Management Survey (IWMS) started in 2014 with the closeout of the 2013 Farm and Ranch Irrigation Survey (FRIS). Extensive correspondence, discussions, and meetings took place with representatives of the Economic Research Service (ERS) regarding 2013 FRIS content. Evaluations from NASS staff of the 2013 FRIS were reviewed. The decision was made to continue with the single report form design to collect irrigation data from both farm and ranch producers alongside horticultural producers.

Under the leadership of the Methodology Division at NASS, a complete review of the 2013 FRIS was provided and cognitive testing was conducted. As a result, the findings and recommendations led to the following notable changes for the 2018 Irrigation and Water Management Survey.

#### Major Changes

The only major change was the report form title. Other changes included combining the water practices sections.

#### Other Changes

**Sections 1 and 2:** Include and exclude items were listed to gain the same improvements as the census of agriculture report forms. The horticultural area question was split to collect open acres separately from under protection areas.

**Section 3:** Items 4a to 4c were reordered to separate them from Number of wells. The reference text of “artesian wells” was removed to capture wells as “flowing wells that did not require a pump.” Removed the Total Hours Operated column in items 5 and 5a.

**Section 6:** Removed Average Hours Operated column.

**Section 9:** The non-irrigated crop questions were removed. This change was made for multiple reasons. With the improved data collected in Section 2, too many operations did not report their non-irrigated land properly in later sections, resulting in inconsistencies between cropland harvested in the open acreage and the sum of both acres irrigated and non-irrigated. The source of this inconsistency was incomplete data in the non-irrigated crop columns. Analysts were required to update a large number of records manually to synchronize the items. The data user was also confused as to what this data meant. Many data users mistook the non-irrigated yield in FRIS as being equivalent to the state’s non-irrigated yield when it was just the non-irrigated yields on irrigated farms only.

**Sections 9 and 10:** The All other crops grown in the open category was split to collect Horticulture in the open acres and All other non-horticulture crops grown separately.

### DATA CHANGES

Some history concerning the data changes from 2003, 2008, 2013, and 2018 are described here.

#### Publication Changes

**2003:** Data were published for irrigating farms and ranches and included data for horticultural operations that reported less than \$10,000 in sales in the 2002 Census of Agriculture. The 2003 FRIS table structure is similar to 2008 FRIS Chapter 1 tables.

**2008:** Two report forms were used – one for farm and ranch operations and another for horticultural operations with any sales in 2008. Data for farm and ranch operations were published in Chapter 1, Tables

1 through 43 (General Data). Horticultural operations data were published in Chapter 2, Tables 1 through 9 (Horticultural Operations Data). To bridge the 2003 tables with the 2008 Chapter 1 tables, the 2003 U.S. data were adjusted in the 2008 publication by removing data for horticultural operations with less than \$10,000 in sales.

**2013:** A single report form was used to collect data from irrigating farm and ranch operations and from horticultural operations with any level of sales. Data published in Tables 2 through 39 (Entire Farm Data) are for all irrigating operations – farms and ranches and horticultural operations combined. Data are not comparable between the 2013 and 2008 surveys because horticultural operations’ data were reported separately in 2008 (Chapter 2). The 2013 horticultural operations data in Tables 40 through 45 are comparable with their corresponding 2008 Chapter 2 tables. To provide a measure of comparability in the 2013 tables, the 2008 U.S. data were adjusted, where possible, to include the 2008 horticultural operations data. In many of the first 27 tables, 2008 U.S. data were omitted.

Several tables were affected by changes to the report form sections. Some tables that appeared in the 2008 FRIS were not published in the 2013 FRIS, including Chapter 1 tables 13, 24, 31, and 40 and Chapter 2 tables 5, 6, and 7. Table 3 was updated to reflect changes that were made to the land use categories in Section 2 of the FRIS report form; specifically the types of pasture – permanent, woodland pastured, and other pasture. The change was made to align FRIS with the 2012 census.

The subirrigation method of water distribution for acres in the open was not included on the 2013 FRIS report form. This change affected Tables 28, 31, 32, and 39. The data for this method are now reported in the Other gravity item. In 2008 data were collected for five categories of Uncontrolled flooding and Other gravity methods and were published in Table 7. Only data for the total acres of each of these conveyance systems were collected and published in 2013.

Wells capable of being used, irrigation water transfers, and other uses of irrigation water are no longer published. Crops with small acreages have high variability because of the sample size.

Sugarbeets, barley, and tobacco were removed as individual items in the field crops sections. Respondents reported these in the Other small grains or Other crops categories on the report form.

Water management practices for gravity irrigation were combined into four categories in Table 39.

**2018:** The title of the survey was changed from Farm and Ranch Irrigation Survey (FRIS) to Irrigation Water Management Survey (IWMS). The name of the survey changed because the name did not specify horticulture operations while the report form was designed to include all irrigators. Only a small number of changes were made to the combined report form to separate mixed values.

Horticulture in the open acreage was recorded under Other cropland on the 2013 report form and was recorded separately from Other cropland in 2018. This change affected tables 35, 36, and 38. Farm counts, acreage values, water application rates, and distribution methods for Other cropland are not comparable between 2013 and 2018.

## DEFINITIONS AND EXPLANATIONS

This section provides definitions and explanations of specific terms and phrases used on the report form or in the publication tables. Items in the publication tables that carry the note “see text” also are explained.

**Acre-foot of water.** An acre-foot of water is the quantity of water required to cover one acre to a depth of one foot. This is equivalent to 43,560 cubic feet or 325,851 gallons.

**Acres affected by irrigation interruption.** Acres or area irrigated that had a stoppage of irrigation for a period of time which resulted in an effect on crop yields. Reasons for stopping irrigation included water shortages, equipment failure, energy costs and shortages, water salinity levels, water costs, and changes in water access rights.

**Acres and quantity harvested.** If two or more crops were harvested from the same land during the year (double cropping), the acres were counted for each crop. Therefore, the total acres of all crops harvested

could exceed the acres of cropland harvested. An exception to this procedure was hay crops.

When more than one cutting of hay was taken from the same acres, the acres were counted only once, but the quantity harvested includes all cuttings. For interplanted crops or “skip-row” crops, acres were reported according to the portion of the field occupied, whether by a crop or whether it was idle land.

If a crop was interplanted in an orchard or vineyard and harvested, then the entire orchard or vineyard acreage was reported under land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees and the interplanted estimated crop acreage was reported under the appropriate crop.

Acres of land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees were included in cropland harvested whether the crop was harvested or not.

**Acres irrigated.** Acres or area irrigated are the acres of agricultural land to which water was applied by any artificial or controlled means such as sprinklers, flooding, furrows, ditches, gated pipe, hand watered, capillary mats, trough irrigation, ebb-and-flood irrigation, subirrigation, and spreader dikes including preplanted, partial, and supplemental irrigation. Land flooded was to be included as irrigated only if the water was diverted to agricultural land by dams, canals, or other works. Table 1 provides a comparison with the 2018 Irrigation and Water Management Survey data and the 2017 Census of Agriculture data.

**Acres irrigated affected by expenditure.** This is the number of acres which were affected by the reported cost of the expenditures. It is not comparable with Acres irrigated in the expenditure tables in the 2008 and earlier FRIS publications.

**Acres irrigated on farms with any hired or contract labor.** This is the total acres irrigated on the operation. On some operations, hired labor or contract labor were paid for work on all the acres in the operation. On other operations, hired labor or contract labor were paid for work on only part of the total acres irrigated in the operation.

**All other crops.** Data relate to any non-vegetable crops not having a specified code on the 2018 report form. Crops such as grass seed, sunflower seed, sugarcane, etc. were included in other field crops. Data are not comparable to 2013. Horticulture acres in the open had its own category in 2018.

**All other land.** This category includes farmsteads, buildings, livestock facilities, ponds, roads, ditches, wasteland, etc. It includes those acres in the farm operation not classified as cropland, woodland, pastureland, or rangeland.

**Any water management practice used.** See Water management practices used.

**Application of commercial fertilizers or pesticides in irrigation water.** This inquiry was intended to measure the number of farms and acres on which fertilizer and pesticides were distributed through irrigation systems.

**Area in the open - acres irrigated.** Acres in the open irrigated is the total area irrigated for horticultural crops grown in the open, whether harvested or not.

**Area under protection - square feet irrigated.** The total area used to grow horticultural crops under protection, whether harvested or not.

**Average operating pressure.** The average operating pressure for pumped wells was reported for up to three individual wells and as the average operating pressure for the remaining wells, if any. Artesian wells are not included as wells pumped. The average operating pressure was calculated using these reported data.

**Average pumping capacity.** The average pumping capacity for pumped wells was reported for up to three individual wells and as the average pumping capacity for the remaining wells, if any. Artesian wells are not included as wells pumped. The average pumping capacity was calculated using these reported data.

**Barriers to making improvements to reduce energy use or conserve water.** This item shows the barriers to implementing improvements that might reduce energy and/or conserve water. Respondents were asked to report for the period covering 2014 to 2018. The information was tabulated as reported. No

imputation was made for a blank response.

**Cropland harvested.** This category includes land from which crops were harvested and hay was cut, land used to grow short-rotation woody crops, and land in orchards, citrus groves, cultivated Christmas trees, vineyards, nurseries, and greenhouses. Land from which two or more crops were harvested was counted only once. Land in tapped maple trees was included in woodland.

**Cropland harvested in the open.** Acres that included harvested field crops and hay along with land used for vegetables, orchards, citrus groves, vineyards, berries, nuts, cultivated Christmas trees, short-rotation woody crops, nursery and other horticultural crops grown in the open. Does not include land used for growing horticultural crops under protection nor cropland reported as failed or used for cover crops.

**Cropland not harvested or grazed.** This category includes acreage which could have been used for crops without any additional improvement and which was not reported as cropland harvested or other pasture or grazing land that could have been used for crops without additional improvements. This category includes:

1. Land used for cover crops or soil improvement but not harvested or grazed.
2. Land in Federal or State conservation programs that was not hayed or grazed in 2018.
3. Land occupied with growing crops for harvest in 2019 or later years (except fruit or nuts in an orchard, grove, or vineyard or berries being maintained for production). Example is acreage planted in winter wheat for harvest in 2019 and no crop was harvested from these acres in 2018.
4. Land in summer fallow in 2018.
5. Land with crops that failed and no crop was harvested on the acreage in 2018.

**Crops unit of measurement.** Crop units were preprinted on the report forms and respondents were instructed to report crops in these units.

**Discharge capacity.** See Average operating pressure.

**Discharge operating pressure.** See Average pumping capacity.

**Estimated quantity of water applied.** Most water used for irrigation is not metered or measured accurately. The quantity of water data are based on the best estimates provided by irrigators. Generally, in areas with water shortages, such as southern California and Arizona, irrigators are more likely to provide actual quantities of water used than in Mountain States where water shortages may be less of a problem or precise measuring methods are not readily available. In the Mountain States where water from snow-melt is diverted for use in season, the amount of water used may be a rough estimate, seldom a measured figure.

**Expenditures for irrigation facilities and equipment.** There are six categories of expenditures. The expenditures purposes include; new expansion, water conservation, energy conservation, and scheduled replacement or maintenance. The expenditures are also grouped by primary source of funding.

**Farms using off-farm water.** Respondents were asked to report the amount (none, some, or all) of off-farm water supplied by the U.S. Bureau of Reclamation, other federal agencies, and all other suppliers. However, many respondents did not answer this question. Instead, the computer edit set the entry to unknown. The number of farms using water from the U.S. Bureau of Reclamation, other federal agencies, and all other suppliers may be understated.

**Flowing wells used.** Flowing or artesian wells are wells which flow freely and provide water used for irrigation without pumping during the irrigation season. All flowing or artesian wells were excluded from data for pumped wells.

**Gross value of agricultural products sold.** See Market value of agricultural products sold.

**Horticultural crops.** The horticultural data are published in the following categories:

*Cultivated Christmas trees and short rotation woody crops in the open.* Includes all trees to be cut in 2018 or later years. Irrigated live Christmas trees were reported in nursery crops.

*Floriculture and bedding crops.* Includes annual bedding/garden plants, herbaceous perennials, cut flowers and cut cultivated greens, foliage plants for indoor or patio use, potted flowering plants, and other floriculture type crops.

*Food crops grown under protection.* Includes all food crops that were grown in a greenhouse or under some sort of structure that regulated light, shade, temperature, etc. No food crops grown in open fields were reported for this crop type.

*Mushroom crops under protection.* Includes all mushroom species that were irrigated in 2018. Logs were converted to and reported in square feet.

*Nursery crops.* Includes deciduous shade and flowering trees, broadleaf and coniferous evergreens, live Christmas trees for sale as potted trees or balled and burlapped, fruit and nut trees and plants, ornamental grasses, palms for landscaping, shrubs, vines, aquatic plants, and other woody ornamentals.

*Propagative materials.* Includes dry bulbs, corms, tubers, and rhizomes; cuttings, seedlings, liners, and plugs; flower seeds; vegetable seeds; vegetable transplants; and tobacco transplants.

*Sod in the open.* Includes all irrigated sod, sprigs, or plugs.

*Other horticultural crops.* This category includes all crops that are primarily considered ornamental or horticultural and are not listed on the report form. Fruit, nut, and vegetable crops grown in the open are not considered horticultural crops.

**Institutional, research, and experimental farms.** In prior censuses of agriculture, data for these farms were combined with American Indian reservation farms into one category. However, in the 2018 Irrigation and Water Management Survey and the 2013 Farm and Ranch Irrigation Survey, only American Indian reservation farms were included in the sample while institutional, research, and

experimental farms were excluded.

**Irrigated farms.** Irrigated farms or ranches are those with any agricultural land irrigated by any artificial or controlled means in the specific calendar year. The acreage irrigated may vary from a very small portion of the total acreage in the farm or ranch to irrigation of all agricultural land in the farm or ranch. This includes reclaimed water and livestock lagoon wastewater distributed by sprinkler or flood systems.

**Irrigated land.** Irrigated land is defined as “all land watered by artificial or controlled means.” No attempt was made to define the degree or intensity of irrigation. Therefore, the data for irrigated land include land with as little as one-half inch of water applied as well as land with several acre-feet of water applied.

**Irrigation pumps.** The inventory data for number of irrigation pumps include well pumps and pumps other than well pumps used for irrigation on the operation.

**Land in farms.** The acreage designated as “land in farms” consists primarily of agricultural land used for crops, pasture, or grazing. It also includes woodland and wasteland not actually under cultivation or used for pasture or grazing, provided it was part of the farm producer’s total operation. Large acreages of woodland or wasteland held for nonagricultural purposes were removed from individual reports during the data review process. Land in farms includes idle cropland, cropland not harvested, and land in government conservation programs.

Land in farms is an operating unit concept and includes land owned and operated as well as land rented from others. Land used rent free was reported as land rented from others. All grazing land, except land used under government permits on a per-head basis (AUM), was included as land in farms provided it was part of a farm or ranch. Land under the exclusive use of a grazing association was reported by the grazing association and included as land in farms. All land in American Indian reservations used for growing crops or grazing livestock, or with the potential of grazing livestock, was included as land in farms. Land in reservations not reported by reservations, individual American Indians, or non-Native Americans was reported in the name of the

cooperative group that used the land. In some instances, an entire American Indian reservation was reported as one farm.

**Market value of agricultural products sold.** This category represents the gross market value before taxes and production expenses of all agricultural products sold or removed from the place during the survey year, regardless of who received the payment. It includes sales by the producers as well as the value of any shares received by partners, landlords, contractors, or others associated with the operation. It represents the sum of all crops, including nursery products, and livestock and poultry and their products. Market value of agricultural products sold does not include payments received for participation in federal farm programs. Also, it does not include income from farm-related sources such as customwork and other agricultural services, or income from nonfarm sources.

**North American Industry Classification System.**

The North American Industry Classification System (NAICS) classifies economic activities. It was jointly developed by Mexico, Canada, and the U.S. The NAICS makes it possible to produce comparable industrial statistics for Mexico, Canada, and the U.S. Farms were classified by NAICS code based on their 2017 census report(s). Establishments primarily engaged in crop production are classified in major group 111. Establishments primarily engaged in production of livestock and animal specialties are classified in major group 112. Establishments are further classified into the appropriate six-digit code for the commodity or commodities which account for one-half of the establishment's agricultural production.

**Nursery and other horticultural crops.** Nursery and horticultural crops grown in the open, such as floriculture, bedding crops, nursery crops, sod, propagative materials, cultivated Christmas trees, and short rotation woody crops.

**Nursery, greenhouse, and other horticulture under protection.** Includes crops grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection, and hoop houses. Crops that are covered only temporarily, such as for frost protection, are not considered as crops under protection. Includes

floriculture, bedding crops, nursery crops, propagative materials, food crops under protection, and mushrooms.

**Off-farm water supply.** Off-farm water supply is water from off-farm water suppliers, such as the U.S. Bureau of Reclamation; irrigation districts; mutual, private, cooperative, or neighborhood ditches; commercial companies; or community water systems. It includes reclaimed water from off-farm livestock facilities, municipal, industrial, and other reclaimed water sources

**On-farm surface supply.** On-farm surface supply is water from a surface source not controlled by a water supply organization. It includes sources such as streams, drainage ditches, lakes, ponds, reservoirs, and on-farm livestock lagoons on or adjacent to the operated land.

**Other drip, trickle, or low-flow micro systems.** This category is for any drip, trickle, or low-flow micro systems that were not included in the other three specific descriptions.

**Other or unspecified discontinuance.** This category is for any discontinuance reason that was not specified on the report form.

**Other pasture and grazing land that could have been used for crops without additional improvements.** This category includes land used only for pasture or grazing that could have been used for crops without additional improvement. Also included are acres of crops hogged or grazed but not harvested prior to grazing. However, cropland that was pastured before or after crops were harvested was included as harvested cropland rather than cropland for pasture or grazing.

**Other small grains (barley, oats, rye, etc.).** This category is not comparable with 2008 or earlier FRIS publications. In previous report forms, barley had its own specific code. In both 2013 and 2018 it did not have a specific code and is included with Other small grains.

**Other sprinkler systems.** Includes any sprinkler system that was not listed on the report form.

**Permanent pasture and rangeland.** This land use category encompasses grazing land that does not qualify as woodland pasture or cropland pasture. It may be irrigated or dry land. In some areas, it can be a high quality pasture that could not be cropped without improvements. In other areas, it is barely able to be grazed and is only marginally better than wasteland.

**Poly pipe (or other single-year use, lay-flat tubing).** Includes all short term surface tubing and pipes. Does not include permanent above ground or underground pipes.

**Primary source of funding assistance.** Respondents were instructed to only report the primary source of funding assistance for expenditures. Nonresponses to this item were summarized as “No funding assistance.”

**Pumps by average discharge operating pressure.** This category is the average pressure of pumps, other than well pumps, used on the operation.

**Pumps by average operating pressure.** See Average operating pressure.

**Reason for discontinuance of irrigation since 2017.** These data reflect the expanded number of operations that irrigated in 2017 but not in 2018 and the acres or area irrigated in the previous census year. The data also show the reason for discontinuance. Some respondents reported multiple reasons, while others gave no specific reason.

**Reclaimed water.** Reclaimed water is wastewater that has been treated for non-potable reuse purposes. Sources include municipal, industrial, off-farm livestock operations, and other reclaimed water sources. Water from off-farm livestock facilities, municipal, industrial, and other reclaimed water sources were reported as off-farm supplies. While reclaimed water from on-farm livestock facilities were reported as on-farm surface water.

**Recycled water.** Recycled water is the reuse of surface or ground water that has already been used to irrigate a crop on the operation. Recycled water use was reported as on-farm surface water.

**Scheduled by water supplier.** Producer’s decision to irrigate was determined by a third party, subject to delivery and availability conditions. Examples include water delivered by trucks or canals not controlled by the producer.

**Solar pumps.** The data were not published at the State level because of low data reliability at the State level. There are few operations with solar pumps in the population.

**Sources of irrigation information.** These data show which sources were used by farmers to help them make irrigation decisions. The information for this item was tabulated as reported. No imputation was made for a blank response.

**Sprinkler systems.** Center pivot systems are published as either high-pressure delivery with water delivered at 60 psi or more, medium pressure delivery with water delivered at 30 to 59 psi, or low pressure delivery with water delivered at less than 30 psi. Linear move tower and solid set or permanent systems are published as medium to high pressure at 30 psi or more or low pressure, less than 30 psi. The mechanical-move systems are further classified as either linear move, side roll, wheel move, or big gun where the sprinkler device is moved across the field either by self-propelled methods or by tractor.

Hand move systems include any distribution systems which are moved without mechanical assistance.

Other sprinkler systems include any other system not listed on the report form.

**Surge flow or cablegation, mulch, or other types of row covers.** In 2013 this was referred to as Surge flow or cablegation; the data are comparable. See Water management practices.

**Tailwater pits.** Irrigation water is captured after the initial application of irrigation water. The water drains into a collection pit and is returned through an irrigation system to irrigate the same field or other fields.

**Total cropland.** This category includes cropland harvested, cropland used only for pasture or grazing, cropland idle or used for cover crops or soil

improvement but not harvested and not pastured or grazed, cropland on which all crops failed or were abandoned, and cropland in cultivated summer fallow.

**USDA programs for water conservation and environmental improvements (CTA, EQIP, RCPP, WHIP, CIG).** These technical and financial resources include Conservation Technical Assistance, Environmental Quality Incentives Program, Regional Conservation Partnership Program, Wildlife Habitat Incentive Program, and Conservation Innovation Grants.

**Water management practices.** These practices refer to gravity irrigation systems only. The respondent reported whether they used any of the techniques listed on the report form and the number of acres on which they applied this technique. Some respondents answered “Yes” to the screening question, item 3 in Section 14, but did not indicate which technique they used or the number of acres for any technique. No imputation was made for a blank response.

**Water Resources Regions (WRR).** Data from FRIS were tabulated by WRR. Boundaries of these areas are shown on the map on page 1. Geographic descriptions of the areas used to approximate water resources region are as follows:

*01 New England Region.* The drainage within the United States that ultimately discharges into the Bay of Fundy and the Atlantic Ocean. These points of discharge are located within and between Maine and Connecticut; Long Island Sound and the St. Francis River, a tributary of the St. Lawrence River.

*02 Middle Atlantic Region.* The drainage within the United States that ultimately discharges into the Atlantic Ocean, whose point of discharge is located within and between New York and Virginia, and the Richelieu River, a tributary of the St. Lawrence River.

*03 South Atlantic-Gulf Region.* The drainage that ultimately discharges into the Atlantic Ocean, whose point of discharge is located within and between North Carolina and Florida; and the Gulf of Mexico, whose point of discharge is located within and between Florida and Mississippi, including the Pearl River.

*04 Great Lakes Region.* The drainage within the United States that discharges into the Great Lakes system, including the Lakes’ surfaces; and the St. Lawrence River as far east as, but excluding the Richelieu River.

*05 Ohio Region.* The drainage of the Ohio River, excluding that of the Tennessee River.

*06 Tennessee Region.* The drainage of the Tennessee River.

*07 Upper Mississippi Region.* The drainage of the Mississippi River above the mouth of the Ohio River, excluding drainage of the Missouri River above a point immediately below the mouth of the Gasconade River.

*08 Lower Mississippi River.* The drainage of the Mississippi River below the mouth of the Ohio River, but excluding the drainage of the Arkansas, White, and Red Rivers and above the points of highest backwater effects of the Mississippi River in those parts; and the coastal streams, other than the Mississippi River, that discharge into the Gulf of Mexico from the boundaries of, but excluding the Pearl and Sabine Rivers.

*09 Souris-Red-Rainy Region.* The drainage within the United States of the Souris, Red, and Rainy Rivers.

*10 Missouri Region.* The drainage within the United States of the Missouri River above a point immediately below the mouth of the Gasconade River and the Saskatchewan River.

*11 Arkansas-White-Red Region.* The drainage of the Arkansas River above the point of highest backwater effect of the Mississippi River, the Red River above the point of highest backwater effect of the Mississippi River, and the White River above the point of highest backwater effect of the Mississippi River near Peach Orchard Bluff, AR.

*12 Texas-Gulf Region.* The drainage that discharges into the Gulf of Mexico from and including Sabine Pass to, but excluding, the Rio Grande and the Lower Rio Grande Valley.

*13 Rio Grande Region.* The drainage within the



United States of the Rio Grande; the San Luis Valley, North Plains, San Augustine Plains, Mimbres, Estancia Jonado del Muerto, Tularosa, Salt, and various smaller closed basins; and the Lower Rio Grande Valley.

*14 Upper Colorado Region.* The drainage of the Colorado River above the Lee Ferry Compact Point, which is about 1 mile below the mouth of the Paria River; and the Great Divide closed basin.

*15 Lower Colorado Region.* The drainage within the United States of the Colorado River below the Lee Ferry Compact Point, which is about 1 mile below the mouth of the Paria River; the Rios Yaqui, Magdalena, Sonoita, and other lesser streams that ultimately discharge into the Gulf of California; and the Animas Valley, Wilcox Playa, El Dorado Valley, and other smaller closed basins.

*16 Great Basin Region.* The drainage of the Great Basin that ultimately discharges into Utah and Nevada.

*17 Pacific-Northwest Region.* The drainage within the United States that ultimately discharges into the Straits of Georgia and Juan de Fuca and the Pacific Ocean. The point of discharge is within Washington

and Oregon, including the Columbia River.

*18 California Region.* The drainage within the United States that ultimately discharges into the Pacific Ocean, whose point of discharge is within California, which includes the Central Valley; and that portion of the Great Basin and other closed basins in California.

*19 Alaska.* Entire State.

*20 Hawaii.* Entire State.

**Woodland not pastured.** These acres were included in All other land. Woodland includes natural or planted woodlots or timber tracts and cutover and deforested land with young growth which has or will have value for wood products and woodland pastured. Land planted for Christmas tree production and short rotation woody crops was reported in Cropland harvested.

**Woodland pastured.** This category includes all woodland used for pasture or grazing during the survey year. Woodland or forest land pastured under a per-head grazing permit was not counted as land in farms and, therefore, was not included in woodland pastured.

# 2018 IRRIGATION AND WATER MANAGEMENT SURVEY

Form Number: 18-A621  
(09/05/2018)



National Agricultural  
Statistics Service

Return your  
completed report to:

Census of Agriculture  
1201 East 10th Street  
Jeffersonville, IN 47132

18-A621

**OFFICE USE ONLY**

0010

*Make corrections to name, address, and ZIP Code if necessary.*

- **February 15, 2019** – Everyone, including nursery, greenhouse, and other horticultural crop producers, must return this form by this date.
- **www.agcounts.usda.gov** – Use this website to report via the Internet.
- Use **blue or black ballpoint pen** to complete this form.
- **Questions** – Call us toll-free at 1-888-424-7828. Thank you for your cooperation.

## SECTION 1 ACREAGE IN 2018

- Report land owned, rented, or used by you, your spouse, or the partnership, corporation, or organization printed above.
- Round to whole acres.
- Include ALL LAND, regardless of location or use – cropland, pastureland, rangeland, woodland, idle land, **greenhouses or other area under protection**, farmsteads, Conservation Reserve Program (CRP) land, etc.

		None		Number of Acres
1. All land owned .....	0025	<input type="checkbox"/>		<input style="width: 100%;" type="text"/>
2. All land rented or leased <b>from others</b> , including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include Federal, state and railroad land leased on a per-acre basis. Exclude leased land (e.g., private, Federal, state, railroad) used on a per-head or animal unit month (AUM) basis under a grazing permit .....	0026	<input type="checkbox"/>	+	<input style="width: 100%;" type="text"/>
3. All land rented or leased <b>to others</b> , including land worked on shares by others and land subleased .....	0027	<input type="checkbox"/>	-	<input style="width: 100%;" type="text"/>
4. <b>TOTAL ACRES</b> in this operation (Items 1 + 2 - 3 = <b>BOX A</b> ) .....	0028	=		<div style="border: 1px solid black; padding: 2px; text-align: center;"><b>BOX A</b></div> <input style="width: 100%;" type="text"/>

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: [www.nass.usda.gov/confidentiality](http://www.nass.usda.gov/confidentiality). Response to this survey is required by law under Title 7 USC 2204(g) Public Law 105-113.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB number is 0535-0234. The time required to complete this information collection is estimated to average 45 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

21308010

**SECTION 2 LAND IN 2018**

- Of the acres reported in **BOX A** on the previous page, report how all the land was used in column 1 below.
- If the same land had more than one use in 2018, report that land only one time in items 1 through 3.
- **Include area under protection.** Under protection includes crops grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection and hoop houses. Crops covered only temporarily, such as for frost protection, to be further grown in the open should not be included for area under protection.
- In column 2, include as irrigated any land to which partial, supplemental, or preplant irrigation water was applied.
- Irrigation is the application of water by any artificial or controlled means such as sprinklers, furrows and ditches, spreader dikes, flooding, hand watering, or subirrigation pipes. Include the area where lagoon waste water from livestock operations was distributed by a sprinkler or flood system.

**1. Cropland – Exclude cropland used only for pasture.**

	None	Column 1 Number of Acres	None	Column 2 Acres Reported in Column 1 that are Irrigated
a. Cropland harvested in the open – Include harvested field crops and hay; and land in vegetables, orchards, citrus groves, vineyards, berries, nuts, Christmas trees, short-rotation woody crops, nursery and other horticultural crops .....	<input type="checkbox"/>	0029	<input type="checkbox"/>	0030
b. Nursery, greenhouse, and other horticulture under protection – Include all area under protection. Round to the nearest whole acre .....	<input type="checkbox"/>	0077	<input type="checkbox"/>	0078
c. Cropland not harvested or grazed – Include cropland on which all crops failed, cropland idle, cropland used for cover crops or CRP, and cropland in summer fallow .....	<input type="checkbox"/>	0033	<input type="checkbox"/>	0034

**2. Pasture**

a. Permanent pasture and rangeland .....	<input type="checkbox"/>	0135	<input type="checkbox"/>	0136
b. Woodland pastured .....	<input type="checkbox"/>	0137		
c. Other pasture and grazing land (including rotational pasture) that could have been used for crops without additional improvements. ....	<input type="checkbox"/>	0107	<input type="checkbox"/>	0108

**3. All other land – Include land not reported above. Include woodland not pastured, farmsteads, home, buildings, livestock facilities, ponds, roads, wasteland, etc. ....**

0039

Total Acres on this Operation

Total Acres Irrigated

**4. TOTAL ACRES – Add acres in each column and enter the totals. ....**

BOX B		BOX C	
0041		0042	

(**BOX B** above should be the same as **BOX A** on page 1.)

**5. Was any area irrigated on this operation in 2018?**

- Include all irrigated land in the open and all area under protection.
- Irrigation is the application of water by any artificial or controlled means such as sprinklers, furrows and ditches, spreader dikes, flooding, hand watering, or subirrigation pipes. Include the area where lagoon waste water from livestock operations was distributed by a sprinkler or flood system.

0003 1  **Yes - Continue**                      3  **No - Go to Section 16 on page 20**

**6. What State had the majority of irrigated acres on this operation in 2018? .....**

0951 

State

**SECTION 3 GROUND WATER FROM WELLS**

1. Did this operation irrigate with ground water from wells on this operation in 2018?

0760

1  **Yes** - Continue

3  **No** - Go to Section 4

If exact amounts are not available, provide your best estimate for quantity of water applied. If total area irrigated in the open is less than one acre, report as one acre in item 2. If the wells are not on the operation, such as a municipal or rural water system, report this as off-farm water in Section 5.

2. Report acres in the open irrigated with ground water and amount of water applied in 2018. Include all irrigated crops, including nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials grown in the open and irrigated pastureland . . . . .

Acres in the Open Irrigated by Ground Water		Quantity of Ground Water Applied		Enter Code for Unit of Measure 1 = Total Acre-Feet 2 = Total Gallons 3 = Inches/Acre	
0444		0446		0447	

3. Report the area under protection irrigated with ground water in 2018. Under protection includes nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection and hoop houses . . . . .

None

Square Feet Under Protection Irrigated with Ground Water	
0455	

4. How many wells on this operation were used for irrigation in 2018? . . . . .

Number of Wells	
0460	

a. Of the (item 4) wells, how many used backflow prevention devices (check valves) and how many acres and/or square feet under protection were irrigated with these wells in 2018? . . . . .

None

Number of Wells		Acres in the Open		Square Feet Under Protection	
0770		0771		0679	

b. Of the (item 4) wells, how many had flow meters or other flow measurement devices and how many acres and/or square feet under protection were irrigated with these wells in 2018? . . . . .

0683		0772		0680	
------	--	------	--	------	--

c. Of the (item 4) wells, how many were free flowing wells that did not require a pump? . . . . .

0486	
------	--

5. Report for the first three primary wells pumped in 2018.

	Depth of Well (Feet)	Depth to Bowls or Impellers (Feet)	Depth to Water at Start of Irrigation Season (Feet)	Pump Capacity – Discharge From Well (GPM)	Operating Pressure at Well Head (PSI)	Horsepower of Engines or Motors, Including Electric (HP)
Well #1 . . . . .	0461	0463	0462	0464	0676	0761
Well #2 . . . . .	0465	0467	0466	0468	0677	0763
Well #3 . . . . .	0469	0471	0470	0472	0678	0765

a. Report averages for all other wells pumped in 2018. . . . .

	Average Depth of Well(s) (Feet)	Average Depth to Bowls or Impellers (Feet)	Average Depth to Water at Start of Irrigation Season (Feet)	Average Pump Capacity – Discharge From Well (GPM)	Average Operating Pressure at Well Head (PSI)	Average Horsepower of Engines or Motors, Including Electric (HP)
	0481	0483	0482	0484	0681	0767

6. For the wells used on this operation, what is the best description for the depth to water over the last five years? Mark (X) one.

0487

1  Depth to water did not change

2  Depth to water increased

3  Depth to water decreased

21308036

**SECTION 4 ON-FARM SURFACE WATER**

1. Did this operation irrigate with on-farm surface water, including recycled water and on-farm reclaimed water, in 2018?

**Recycled water** is reused surface or groundwater that was previously used to irrigate a crop (e.g. water from a tailwater reuse pit used for irrigation).

**On-farm reclaimed water** is on-farm livestock wastewater that has been treated for non-potable reuse purposes. (For the purposes of this irrigation survey, to be considered an irrigation application of reclaimed water, at least 0.5 inches of reclaimed water must be applied on the area during the growing season.)

0438 1  **Yes** - Continue 3  **No** - Go to Section 5

If exact amounts are not available, provide your best estimate for quantity of water applied. If total area irrigated in the open is less than one acre, report as one acre in item 2.

2. Report acres in the open irrigated with on-farm surface water and amount of water applied in 2018. Include irrigated nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials grown in the open and irrigated pastureland . . . . .

Acres in the Open Irrigated by On-Farm Surface Water		Quantity of On-Farm Surface Water Applied		Enter Code for Unit of Measure 1 = Total Acre-Feet 2 = Total Gallons 3 = Inches/Acre	
0449		0451		0452	

3. Report the area under protection irrigated with on-farm surface water in 2018. Under protection includes nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection and hoop houses . . . . .

None

Square Feet Under Protection Irrigated with On-Farm Surface Water	
0458	

4. Did this operation use **on-farm recycled water** to irrigate any crops, including horticultural crops, grown during 2018?

0600 1  **Yes** - Continue 3  **No** - Go to Item 5 below

a. How many acres in the open and square feet under protection were irrigated with **on-farm recycled water** during 2018? . . . . .

Acres in the Open		Square Feet Under Protection	
0601		0936	

5. Did this operation use **reclaimed water from on-farm livestock facilities** to irrigate any crops, including horticultural crops, grown during 2018? (For the purposes of this irrigation survey, to be considered an irrigation application of reclaimed water, at least 0.5 inches of reclaimed water must be applied on the area during the growing season. If this minimum amount is not met, mark (X) "No" below.)

0543 1  **Yes** - Continue 3  **No** - Go to Section 5

a. How many acres in the open and/or square feet under protection were irrigated with one or more applications of **reclaimed water from on-farm livestock facilities** during 2018? . . . . .

Acres in the Open		Square Feet Under Protection	
0587		0588	

b. How much **reclaimed water from on-farm livestock facilities** was used for irrigation during 2018? . . . . .

Acre-Feet		OR	Gallons	
0599			0561	

**SECTION 5 OFF-FARM WATER**

1. Did this operation irrigate with off-farm water in 2018?

**INCLUDE**

- acres in the open and area under protection irrigated with off-farm water from all suppliers
- all off-farm surface water, municipal (such as town or city) water, and rural water suppliers
- area irrigated with reclaimed water from off-farm sources such as treated municipal sewer water (blue water), industrial, off-farm livestock operations, or other off-farm sources

0457 1  **Yes** - Continue 3  **No** - Go to Section 6

If exact amounts are not available, provide your best estimate for quantity of water applied. If total area irrigated in the open is less than one acre, report as one acre in item 2.

2. Report acres in the open irrigated with off-farm water and amount of water applied in 2018. Include irrigated horticultural crops grown in the open and irrigated pastureland .....

Acres in the Open Irrigated by Off-Farm Water		Quantity of Off-Farm Water Applied		Enter Code for Unit of Measure 1 = Total Acre-Foot 2 = Total Gallons 3 = Inches/Acre	
0454		0968		0969	

3. Report the area under protection irrigated with off-farm water in 2018. Under protection includes nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection and hoop houses.....

Square Feet Under Protection Irrigated with Off-Farm Water	
None <input type="checkbox"/>	0428

4. Did you pay for the off-farm water received on this operation?  
0675 1  **Yes** - Report the total dollars paid for the off-farm water.....  
3  **No** - Continue

Dollars	
0456	\$ .....00

5. How much of this operation's off-farm water was supplied, delivered, or transferred through a project financed, constructed, or managed by –

- a. U.S. Bureau of Reclamation? Include reclamation water delivered through a local district. ....  
0664 1  None 2  Some 3  All
- b. Other Federal agencies such as the U.S. Army Corp of Engineers, Bureau of Indian Affairs, and USDA small watershed project? .....
- c. All other suppliers? Include <sup>1012</sup> town and city water. Specify: ..  
0666 1  None 2  Some 3  All

6. Did this operation use **reclaimed water from off-farm sources** such as municipal reclaimed water, industrial, off-farm livestock operations, or other off-farm sources to irrigate any crops in 2018? Off-farm reclaimed water is wastewater that has been treated for non-potable reuse purposes. (For the purposes of this irrigation survey, to be considered an irrigation application of reclaimed water, at least 0.5 inches of reclaimed water must be applied on the area during the growing season. If this minimum amount is not met, mark (X) "No" below.)

0602 1  **Yes** - Continue 3  **No** - Go to Section 6

a. How many acres in the open and/or square feet under protection were irrigated with one or more applications of **reclaimed water from off-farm sources** during 2018? .....

Acres in the Open		Square Feet Under Protection	
0597		0598	

b. How much **reclaimed water from off-farm sources** was used for irrigation during 2018?.....

Acre-Feet		Gallons	
0644		0645	

**OR**

c. What sources of reclaimed water were used on this operation in 2018? Mark (X) all that apply.

- 1001  Municipal 1002  Industrial  
1003  Off-farm livestock operation 1004  Other - Specify: 1005

21308051

**SECTION 6 PUMPS, OTHER THAN WELL PUMPS, USED FOR IRRIGATION**

1. Were any surface water source pumps used on this operation for irrigation during 2018?

0488 1  **Yes** - Continue

3  **No** - Go to Section 7

	None	Number of Pumps Used	Vertical Lift (Average Feet)	Discharge Capacity (Average GPM)	Discharge Operating Pressure (Average PSI)
		0490	0774	0491	0687
2. Tailwater pits (pits that hold water previously used for irrigation) . . . .	<input type="checkbox"/>	0492	0775	0493	0688
3. Ponds, lakes, reservoirs, rivers, canals, etc. . . . .	<input type="checkbox"/>	0494	0776	0777	0778
4. Relifting or boosting water within system (pumps providing additional lift, pressure, or lateral movement) . . . . .	<input type="checkbox"/>				

**SECTION 7 ENERGY EXPENSE FOR ALL WELL AND OTHER IRRIGATION PUMPS**

Report the energy expense by power source. Report the fuel used and power expense for pumping irrigation water for the well pumps reported in Section 3 and for other pumps reported in Section 6 above. Report energy expense for acres in the open and area under protection. If irrigated acres in the open were less than one acre, round to one acre. Include the cost of any additional charges such as the fuel adjustment charge or any other type of charge which was based on the amount of power or fuel purchased. Include landlord's share.

POWER SOURCE	None	Number of Wells and Other Pumps Used (Reported in Sections 3 & 6)	Cost of Energy Used to Power Pumps (Dollars)	Area Irrigated with Water Pumped from Wells		Area Irrigated with Pumped Surface Water (Both on- and off-farm)	
				Acres in the Open (Whole Acres)	Square Feet Under Protection	Acres in the Open (Whole Acres)	Square Feet Under Protection
		0495	0496	0497	0124	0781	0537
1. Electricity . . . . .	<input type="checkbox"/>		\$ .00				
		0498	0499	0500	0125	0782	0538
2. Natural gas . . . . .	<input type="checkbox"/>		\$ .00				
		0501	0502	0503	0126	0783	0539
3. LP gas, propane, or butane . . . . .	<input type="checkbox"/>		\$ .00				
		0504	0505	0506	0127	0784	0540
4. Diesel and biodiesel fuel . . . . .	<input type="checkbox"/>		\$ .00				
		0507	0508	0509	0128	0890	0541
5. Gasoline, ethanol, and blends . . . . .	<input type="checkbox"/>		\$ .00				
		0779		0780	0129	0786	0542
6. Solar and other pumps without direct energy expense . . . . .	<input type="checkbox"/>						

21308069

**SECTION 8 METHOD OF WATER DISTRIBUTION IN FIELDS IN THE OPEN**

1. Did this operation irrigate any fields in the open?

- Include acres of horticultural crops grown in the open or under natural shade.
- Exclude crops grown under protection: glass, rigid plastic, plastic film, including "tunnel" protection. (Methods for crops grown under protection will be reported in Section 12.)

0489 <sup>1</sup>  **Yes - Continue**                      <sup>3</sup>  **No - Go to Section 12**

Report acres irrigated by each type of FIELD distribution or delivery system listed below. If the same land was irrigated by more than one method of distribution, report acres irrigated by each method used. Report information for the field distribution system, NOT for the delivery system used to convey water from the source to the field, if different.

2. Gravity irrigation

None

Acres in the Open Irrigated by Gravity System (Field Water Conveyance System)					
Total	Unlined Open Ditch	Lined Open Ditch	Poly Pipe (or other single-year use, lay-flat tubing)	Above Ground Pipe (except poly pipe) <sup>1</sup>	Underground Pipe <sup>2</sup>
0855	0859	0857	0056	0057	0858
a. Down rows or furrows . . . . .	<input type="checkbox"/>				
0865	0869	0867	0066	0067	0868
b. Controlled flooding (between borders or within basins). . . . .	<input type="checkbox"/>				
0875					
c. Uncontrolled flooding (rangeland, pastureland, etc.)	<input type="checkbox"/>				
0885					
d. Other gravity systems . . . . .	<input type="checkbox"/>				

<sup>1</sup> Include gated pipe and riser or hydrant systems connected to above ground pipe.  
<sup>2</sup> Include riser or hydrant systems connected to underground pipe.

3. Sprinkler irrigation – Inlet pressure

None

Acres In the Open Irrigated by Sprinkler System			
Very Low Pressure (Under 15 PSI)	Low Pressure (15 to 29 PSI)	Medium Pressure (30 to 59 PSI)	High Pressure (60 PSI or more)
0569	0576	0575	0570
a. Center pivot systems (circle). . . . .	<input type="checkbox"/>		
0571	0577	0578	0579
b. Linear move tower systems (and other linear continuous move drive systems) . . . . .	<input type="checkbox"/>		
0568	0565	0566	0567
c. Solid set or permanent systems (except low-flow micro systems) . . . . .	<input type="checkbox"/>		

d. Mechanical move systems

None

Acres Irrigated (all pressures)

(i) Side roll, wheel move, or other mechanical move systems and other discrete move systems . . . . .

0240

(ii) Big gun or traveler systems . . . . .

0241

e. Hand-move systems, including hand watered nursery and other horticultural crops grown in the open . . . . .

0242

f. Other sprinkler systems . . . . .

0243

4. Drip, trickle, or low-flow micro irrigation

a. Surface drip (on or above ground) . . . . .

0248

b. Sub-surface drip (root zone) . . . . .

0246

c. Low-flow micro sprinklers or sprays (these systems apply water at low pressure and are not self-propelled or easily moved) . . . . .

0247

d. Other drip, trickle, or low-flow micro systems . . . . .

0249

21308077



**SECTION 9 ACRES HARVESTED IN THE OPEN AND PASTURELAND**

1. Did this operation irrigate any crops in the open or pastureland?

0388

1  **Yes** - Continue

3  **No** - Go to Section 12

For each item listed, report the irrigated acres harvested in the first column. If pastureland is irrigated, report total acres of irrigated pastureland in the first column. For selected crops, report the average yield from the irrigated harvested acres in the second column. Then report the average irrigation water applied per acre in either acre-feet or inches for the acres reported in column one. Report the crop as irrigated if water was applied to supplement rainfall, even if the amount of water applied was not sufficient to obtain maximum yields. **Report nursery and other horticultural crops grown in the open in item 17.**

Irrigated Crops and Pastureland		Irrigated Land Include preplant and supplemental or semi-irrigation					
		Irrigated Acres Harvested	Average Yield per Irrigated Acre Harvested		Average Estimated Quantity of Water Applied per Acre		
					Acre-Feet	Tenths	OR
	None	0050	0051		0052		0053
2. Corn for grain or seed – Exclude popcorn and sweet corn. ....	<input type="checkbox"/>			Bu.			OR
		0060	0061	Tenths	0062		0063
3. Corn for silage or greenchop – Exclude popcorn and sweet corn. ....	<input type="checkbox"/>			Tons			OR
		0070	0071		0072		0073
4. Sorghum for grain or seed. ....	<input type="checkbox"/>			Bu.			OR
		0080	0081		0082		0083
5. Wheat for grain or seed. ....	<input type="checkbox"/>			Bu.			OR
		0106	0101		0102		0103
6. Soybeans for beans. ....	<input type="checkbox"/>			Bu.			OR
		0110	0111		0112		0113
7. Beans, dry edible. ....	<input type="checkbox"/>			Cwt.			OR
		0120	0121		0122		0123
8. Rice – Include post harvest water applied to improve residue decomposition. .	<input type="checkbox"/>			Cwt.			OR
		0130			0132		0133
9. Other small grains (barley, oats, rye, etc.)..	<input type="checkbox"/>						OR
		0140	0141	Tenths	0142		0143
10. Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) .....	<input type="checkbox"/>			Tons, dry			OR

21308085

**SECTION 9** Continued –

Irrigated Crops and Pastureland		Irrigated Land Include preplant and supplemental or semi-irrigation					
		Irrigated Acres Harvested	Average Yield per Irrigated Acre Harvested		Average Estimated Quantity of Water Applied per Acre		
					Tenths	OR	Inches
11. All other hay and haylage including small grain, other tame, and wild hay (dry hay, greenchop, and silage) . . . . .	None	0150	0151	Tenths	0152	0153	
	<input type="checkbox"/>			Tons, dry			
12. Peanuts . . . . .	<input type="checkbox"/>	0550	0551		0552	0553	
				Lbs.			
13. Cotton . . . . .	<input type="checkbox"/>	0160	0161		0162	0163	
				Lbs. lint			
14. All land from which vegetables, potatoes, and melons were harvested . . . . .	<input type="checkbox"/>	0186	Tenths		0187	0188	
a. Sweet corn . . . . .	<input type="checkbox"/>	0850	Tenths	0851	0852	0853	
				Cwt.			
b. Tomatoes in the open . . . . .	<input type="checkbox"/>	0860	Tenths	0861	0862	0863	
				Cwt.			
c. Lettuce and romaine . . . . .	<input type="checkbox"/>	0870	Tenths	0871	0872	0873	
				Cwt.			
d. Potatoes – Exclude sweet potatoes . . . . .	<input type="checkbox"/>	0190	Tenths	0191	0192	0193	
				Cwt.			
15. All berries . . . . .	<input type="checkbox"/>	0560	Tenths		0562	0563	
16. Land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees . . . . .	<input type="checkbox"/>	0210	Tenths		0212	0213	
17. Nursery and other horticultural crops grown in the open (Note: Nursery, greenhouse, and other horticultural crops grown under protection will be reported in a later section.) . . . . .	<input type="checkbox"/>	0690	Tenths		0691	0692	
18. All other crops grown in the open and not listed - Specify: 0620 <input type="text"/>	<input type="checkbox"/>	0621			0622	0623	
19. Irrigated pastureland, all types . . . . .	<input type="checkbox"/>	0230			0232	0233	

21308093

## SECTION 10 FIELD WATER DISTRIBUTION AND WATER SOURCE FOR CROPS IN THE OPEN

1. Did this operation irrigate any crops in the open or pastureland?

1489

1  **Yes** - Continue

3  **No** - Go to Section 12

### WATER DISTRIBUTION CODES – USE IN THE TABLE BELOW

CODE	PRESSURE SYSTEM	CODE	GRAVITY SYSTEM
01 = Hand-move system 02 = Solid set or permanent system 03 = Side roll or wheel line system 04 = Big gun or traveling gun system 05 = Linear move system (under 15 PSI) 06 = Linear move system (15 to 29 PSI) 07 = Linear move system (30 to 59 PSI) 08 = Linear move system (60 PSI or more) 09 = Center pivot system (under 15 PSI) 10 = Center pivot system (15 to 29 PSI) 11 = Center pivot system (30 to 59 PSI) 12 = Center pivot system (60 PSI or more) 13 = Low-flow irrigation (drip, trickle, or micro sprinkler system) 14 = Other pressure system – Specify:		15 = Down rows or furrows from unlined open ditches 16 = Down rows or furrows from lined open ditches 17 = Down rows or furrows from poly pipe, lay-flat tubing, or above ground or underground pipe 18 = Controlled flooding within field borders from unlined open ditches 19 = Controlled flooding within field borders from lined open ditches 20 = Controlled flooding within field borders from poly pipe, lay-flat tubing, or above ground pipe 21 = Controlled flooding within field borders from underground pipe 22 = Uncontrolled flooding (rangeland, pastureland, etc.) including open discharge from a well or pump 23 = Other gravity system – Specify:	
1006	<input type="text"/>	1007	<input type="text"/>

Report for irrigated acres in the open. For each irrigated crop in the open, report separately the primary field distribution method, acres irrigated by water source, and acres on which chemigation was used in the irrigation system. Refer to the table above for the water distribution codes.

Irrigated Crops and Pastureland	Enter Code from Above for Primary Method of Field Water Distribution	Water Source (Column totals may exceed irrigated crop acres reported in Section 9 when more than one water source was used.)			Acres on which chemigation was applied through the irrigation system		
		Ground Water from Wells (Acres)	On-Farm Surface Water <sup>1</sup> (Acres)	Off-Farm Water (All Suppliers) <sup>2</sup> (Acres)	Commercial Fertilizer (Acres)	Pesticide Application (Acres)	
2. Corn for grain or seed – Exclude popcorn and sweet corn . <input type="checkbox"/>	None	0250	0255	0254	0256	0252	0253
3. Corn for silage or greenchop – Exclude popcorn and sweet corn . <input type="checkbox"/>		0260	0265	0264	0266	0262	0263
4. Sorghum for grain or seed . . . . . <input type="checkbox"/>		0270	0275	0274	0276	0272	0273
5. Wheat for grain or seed . . . . . <input type="checkbox"/>		0280	0285	0284	0286	0282	0283
6. Soybeans for beans . . . . . <input type="checkbox"/>		0300	0305	0304	0306	0302	0303
7. Beans, dry edible . . . . . <input type="checkbox"/>		0310	0315	0314	0316	0312	0313
8. Rice . . . . . <input type="checkbox"/>		0320	0325	0324	0326	0322	0323
9. Other small grains (barley, oats, rye, etc.) . . . . . <input type="checkbox"/>		0330	0335	0334	0336	0332	0333
10. Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) . <input type="checkbox"/>		0340	0345	0344	0346	0342	0343

<sup>1</sup> On-farm water source includes recycled water and reclaimed water from on-farm livestock operations.  
<sup>2</sup> Off-farm water supplies may include water purchased from the U.S. Bureau of Reclamation; a state, county, or local district; mutual, private, cooperative, or neighborhood ditches; or commercial or municipal water systems.

21308101

**SECTION 10** Continued –

Irrigated Crops and Pastureland	Enter Code from Previous Page for Primary Method of Field Water Distribution	Water Source (Column totals may exceed irrigated crop acres reported in Section 9 when more than one water source was used.)						Acres on which chemigation was applied through the irrigation system				
		Ground Water from Wells (Acres)		On-Farm Surface Water <sup>1</sup> (Acres)		Off-Farm Water (All Suppliers) <sup>2</sup> (Acres)		Commercial Fertilizer (Acres)		Pesticide Application (Acres)		
11. All other hay and haylage including small grain, other meadow, and wild hay (dry hay, greenchop, and silage) . . . . .	None	0350	0355	0354	0356	0352	0353					
	<input type="checkbox"/>	0580	0585	0584	0586	0582	0583					
12. Peanuts . . . . .	<input type="checkbox"/>	0360	0365	0364	0366	0362	0363					
	<input type="checkbox"/>											
13. Cotton . . . . .	<input type="checkbox"/>	0474	0479	Tenths	0478	Tenths	0480	Tenths	0476	Tenths	0477	Tenths
	<input type="checkbox"/>	0900	0905	Tenths	0904	Tenths	0906	Tenths	0902	Tenths	0903	Tenths
14. All acres in the open from which vegetables, potatoes, and melons were harvested . . . . .	<input type="checkbox"/>	0910	0915	Tenths	0914	Tenths	0916	Tenths	0912	Tenths	0913	Tenths
	<input type="checkbox"/>	0920	0925	Tenths	0924	Tenths	0926	Tenths	0922	Tenths	0923	Tenths
a. Sweet corn . . . . .	<input type="checkbox"/>	0390	0395	Tenths	0394	Tenths	0396	Tenths	0392	Tenths	0393	Tenths
b. Tomatoes in the open . . . . .	<input type="checkbox"/>	0590	0595	Tenths	0594	Tenths	0596	Tenths	0592	Tenths	0593	Tenths
c. Lettuce and romaine . . . . .	<input type="checkbox"/>	0410	0415	Tenths	0414	Tenths	0416	Tenths	0412	Tenths	0413	Tenths
d. Potatoes – Exclude sweet potatoes . . . . .	<input type="checkbox"/>	1110	1115	Tenths	1114	Tenths	1116	Tenths	1112	Tenths	1113	Tenths
15. All berries . . . . .	<input type="checkbox"/>	1120	1125	1124	1126	1122	1123					
16. Land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees . . . . .	<input type="checkbox"/>	1119										
	<input type="checkbox"/>	0430	0435	0434	0436	0432	0433					
17. Nursery and other horticultural crops grown in the open (Note: Nursery, greenhouse, and other horticultural crops grown under protection will be reported in a later section.) . . . . .	<input type="checkbox"/>											
	<input type="checkbox"/>											
18. All other crops grown in the open and not listed – Specify:												
	<input type="checkbox"/>											
19. Irrigated pastureland, all types . . . . .	<input type="checkbox"/>											

<sup>1</sup> On-farm water source includes recycled water and reclaimed water from on-farm livestock operations.  
<sup>2</sup> Off-farm water supplies may include water purchased from the U.S. Bureau of Reclamation; a state, county, or local district; mutual, private, cooperative, or neighborhood ditches; or commercial or municipal water systems.

21308119

**SECTION 11 IRRIGATION FOR NURSERY AND OTHER HORTICULTURAL CROPS GROWN IN THE OPEN**

1. Were any irrigated nursery, floriculture, sod, mushrooms, vegetable seeds, propagative materials, Christmas trees, or other horticultural crops grown in the open (including natural shade) on this operation in 2018?

0751 1  **Yes - Continue** 3  **No - Go to Section 12**

2. Report total acres and irrigated acres for nursery and other horticultural crops grown in the open (including natural shade) .....

None

Acres in the Open			
Total Acres		Irrigated Acres	
	Tenths		Tenths
0737		0738	

3. For nursery and other horticultural crops in the open, enter the total acres and irrigated acres by crop category on this operation in 2018.

**NURSERY AND OTHER HORTICULTURAL CROPS IN THE OPEN**

a. Floriculture and bedding crops  
Bedding/garden plants - annuals, herbaceous perennials, vegetable plants; cut flowers and cut florist greens; indoor foliage plants; potted flowering plants; hanging baskets .....

None

Total Acres		Irrigated Acres	
	Tenths		Tenths
0739		0740	

b. Nursery crops  
Nursery stock - ornamentals, shrubs, flowering trees, evergreens, live Christmas trees, fruit and nut trees and plants, vines, palms, ornamental grasses, bareroot herbaceous perennials; aquatic plants .....

0741		0742	
------	--	------	--

c. Sod .....

0743		0744	
------	--	------	--

d. Propagative materials  
Bulbs, corms, rhizomes, tubers, cuttings, seedlings, liners, plugs, flower seeds, tobacco plants, vegetable seeds, vegetable transplants to farm fields .....

0745		0746	
------	--	------	--

e. Christmas trees and short rotation woody crops .....

0747		0748	
------	--	------	--

f. Other horticultural crops - Specify:

1010  .....

0749		0750	
------	--	------	--

**SECTION 11 CONTINUED –**

4. For nursery and other horticultural crops in the open, report area irrigated or watered in 2018 by method used. If more than one method was used on the same area, report for all methods that apply. Report quantity of water used for growing and finishing in the unit or units of measure most often used on this operation.

IRRIGATION METHODS	None	1	2		OR	3		
		Total Acres Irrigated or Watered <small>Tenths</small>	a. Quantity of Water Applied	b. Enter Code for Unit of Measure <small>1 = Acre-Feet 2 = Gallons 3 = Inches/Acre</small>		a. Average Flow Rate <small>(Gallons per Minute)  <small>Tenths</small></small>	b. Number of Hours per Week Used in 2018	c. Number of Weeks Used in 2018
		0796	0797	0798		0799	0800	0801
a. Hand watered.....	<input type="checkbox"/>	0802	0803	0804	OR	0805	0806	0807
b. Gravity irrigation.....	<input type="checkbox"/>	0808	0809	0810	OR	0811	0812	0813
c. Sprinkler.....	<input type="checkbox"/>	0814	0815	0816	OR	0817	0818	0819
d. Drip, trickle, or low-flow micro irrigation.....	<input type="checkbox"/>	0820	0821	0822	OR	0823	0824	0825
e. Subirrigation (including hydroponic)...	<input type="checkbox"/>				OR			

5. For each method used to irrigate or water nursery and other horticultural crops in the open, report water sources by percent of source applied. If more than one source was used, report all that apply. For example, if the only source for handwatered crops was ground water, then report 100 percent in column 1, row a. If this operation used gravity irrigation and half of the water came from ground water and half came from on-farm surface water, then report 50 percent in column 1, row b and 50 percent in column 2, row b.

IRRIGATION METHODS	Water Source			
	1 Ground Water from Wells <small>(Percent)</small>	2 On-Farm Surface Water <small>(Percent)</small>	3 Off-Farm Water (All Suppliers) <small>(Percent)</small>	Total
	0832	0833	0834	
a. Hand watered.....				<b>100%</b>
	0835	0836	0837	
b. Gravity irrigation.....				<b>100%</b>
	0838	0839	0840	
c. Sprinkler.....				<b>100%</b>
	0841	0842	0843	
d. Drip, trickle, or low-flow micro irrigation.....				<b>100%</b>
	0844	0845	0846	
e. Subirrigation (including hydroponic).....				<b>100%</b>

For each irrigation method used, columns 1 + 2 + 3 must equal 100 percent.

21308135

**SECTION 12 IRRIGATION FOR NURSERY, GREENHOUSE, AND OTHER HORTICULTURAL CROPS GROWN UNDER PROTECTION**

1. Were any irrigated nursery or greenhouse crops, floriculture, sod, mushrooms, vegetable seeds, propagative materials, or other horticultural crops grown under protection on this operation in 2018? Include crops grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection and hoop houses. Exclude crops temporarily covered for early germination, frost protection, etc. Report crops grown under natural shade in Section 11.

0627 1  **Yes - Continue** 3  **No - Go to Section 13**

2. Report total area and irrigated area for nursery, greenhouse, and other horticultural crops grown under protection . . . . .

Square Feet Under Protection			
Total Area		Irrigated Area	
0628		0629	

3. For nursery or greenhouse crops, floriculture, sod, mushrooms, vegetable seeds, propagative materials, or other horticultural crops grown under protection, enter the total area and irrigated area by horticultural crop category on this operation in 2018.

**NURSERY, GREENHOUSE, AND OTHER HORTICULTURAL CROPS UNDER PROTECTION**

a. Floriculture and bedding crops  
Bedding/garden plants - annuals, herbaceous perennials, vegetable plants; cut flowers and cut florist greens; indoor foliage plants; potted flowering plants; hanging baskets . . . . .

Total Area (Square Feet)		Irrigated Area (Square Feet)	
0630		0631	

b. Nursery crops  
Nursery stock - ornamentals, shrubs, flowering trees, evergreens, live Christmas trees, fruit and nut trees and plants, vines, palms, ornamental grasses, bareroot herbaceous perennials; aquatic plants. . . . .

0632		0633	
------	--	------	--

c. Propagative materials  
Bulbs, corms, rhizomes, tubers, cuttings, seedlings, liners, plugs, flower seeds, tobacco plants, vegetable seeds, vegetable transplants to farm fields . . . . .

0636		0637	
------	--	------	--

d. Food crops grown under protection  
Tomatoes, other vegetables and fresh cut herbs, fruits and berries . . . . .

0638		0639	
------	--	------	--

e. Mushroom crops . . . . .

0640		0641	
------	--	------	--

f. Other horticultural crops – Specify:

1011  . . .

0642		0643	
------	--	------	--

**SECTION 12 CONTINUED –**

4. For nursery, greenhouse, and other horticultural crops under protection, report area irrigated or watered in 2018 by method used. If more than one method was used on the same area, report for all methods that apply. Report quantity of water in the unit or units of measure most often used on this operation. If total quantity of water (column 2a) and the unit of measure (column 2b) are known, then skip column 3.

IRRIGATION METHODS	None	1	2		OR	3		
		Total Area Irrigated or Watered (Square Feet)	a. Quantity of Water Applied	b. Enter Code for Unit of Measure 1=Acre-Feet 2=Gallons 3=Gallons/Sq Ft 4=Inches/Sq Ft		a. Average Flow Rate (Gallons per Minute) Tenths	b. Number of Hours per Week Used in 2018	c. Number of Weeks Used in 2018
		0701	0702	0703		0704	0705	0706
a. Hand watered .....	<input type="checkbox"/>	0707	0708	0709	OR	0710	0711	0712
b. Gravity irrigation .....	<input type="checkbox"/>	0713	0714	0715	OR	0716	0717	0718
c. Sprinkler .....	<input type="checkbox"/>	0719	0720	0721	OR	0722	0723	0724
d. Drip, trickle, or low-flow micro irrigation .....	<input type="checkbox"/>	0725	0726	0727	OR	0728	0729	0730
e. Subirrigation (including hydroponic) ...	<input type="checkbox"/>				OR			

5. For each method used to irrigate or water nursery, greenhouse, or other horticultural crops under protection, report water sources by percent of source applied. If more than one source was used, report all that apply. For example, if the only source for handwatered crops was ground water, then report 100 percent in column 1, row a. If this operation used gravity irrigation and half of the water came from ground water and half came from on-farm surface water, then report 50 percent in column 1, row b and 50 percent in column 2, row b.

IRRIGATION METHODS	Water Source			
	1 Ground Water from Wells (Percent)	2 On-Farm Surface Water (Percent)	3 Off-Farm Water (All Suppliers) (Percent)	Total
a. Hand watered .....	0646	0647	0648	100%
b. Gravity irrigation .....	0649	0650	0651	100%
c. Sprinkler .....	0652	0653	0654	100%
d. Drip, trickle, or low-flow micro irrigation .....	0655	0656	0657	100%
e. Subirrigation (including hydroponic) .....	0658	0659	0660	100%

For each irrigation method used, columns 1 + 2 + 3 must equal 100 percent.

21308150



## SECTION 13 EXPENDITURES FOR IRRIGATION

### EXPENDITURE AND FUNDING ASSISTANCE CODES – USE IN THE TABLE BELOW

CODE	PRIMARY PURPOSE OF EXPENDITURE	CODE	PRIMARY SOURCE OF FUNDING ASSISTANCE
1 =	New expansion	1 =	No funding assistance or loans
2 =	Water conservation	2 =	FSA Environmental Quality Incentives Program (EQIP)
3 =	Energy conservation	3 =	Other USDA financial assistance or loans
4 =	Scheduled replacement or maintenance	4 =	Non-USDA and all other financial assistance or loans

Report the 2018 expenditure cost, acres affected (rounded to the nearest acre), primary purpose of expenditure, and primary source of funding assistance by expenditure category using the Expenditure and Funding Assistance Codes from the table above. Include the portion of the expenditures made by or shared with others (landlords or government agencies), including programs such as Environmental Quality Incentive Program (EQIP).

EXPENDITURE TYPE	None	Total Cost of Expenditure (Include amount financed)	Irrigated Acres Affected by Expenditure (Acres)	Enter Code from Above for Primary Purpose of Expenditure	Enter Code from Above for Primary Source of Funding Assistance
1. Purchase of new or replacement irrigation equipment and machinery – Include sprinklers, pipes, siphons, nozzles, pumps, engines, motors, filtration equipment, etc. Exclude computers, computer control panels, and software .....	<input type="checkbox"/>	0511 \$ .....00	0514	0512	0513
2. New well construction or deepening of existing wells – Include drilling costs, cost of casing, and any costs to prepare well for installation of pump. Exclude cost of pumps or motors .....	<input type="checkbox"/>	0515 \$ .....00	0518	0516	0517
3. Construction or improvement of permanent storage and distribution systems – Include dams, ponds, reservoirs, permanent ditches, canals, flumes, etc. ....	<input type="checkbox"/>	0519 \$ .....00	0522	0520	0521
4. Computers, control panels, computer controlled valves, software, and software-controlled hardware for irrigation water management. ....	<input type="checkbox"/>	0544 \$ .....00	0547	0545	0546
5. Clearing or leveling non-irrigated land for new irrigation acres (the primary purpose is expansion of irrigation acres) .....	<input type="checkbox"/>	0548 \$ .....00	0526		0549
6. Land leveling of previously irrigated land (the primary purpose cannot be new expansion) .....	<input type="checkbox"/>	0556 \$ .....00	0559	0557	0558

21308168





**SECTION 15 LABOR USED FOR IRRIGATION ON THIS OPERATION IN 2018**

1. Did you have any paid labor for the irrigation portion of your operation in 2018?

0731

1  **Yes** - Continue

3  **No** - Go to Section 16

a. Report the number of hours that the hired workers performed irrigation work in 2018 and the average hourly wage. (Exclude contract labor.) .....

None

Total Hours of Paid Irrigation Labor per Year		Average Hourly Wage	
			Cents
0732		0733	\$

b. Report contract irrigation labor expenses on this operation in 2018 .....

None

Total Expense for Contract Irrigation Labor	
0788	\$ .00

21308192

**SECTION 16 NO IRRIGATED LAND IN 2018**

1. Complete this section if you did not irrigate any land in 2018. If you did irrigate land in 2018, skip to Section 17.

2. Was any land irrigated on this operation in 2017?

- 0528 1  **Yes** - Continue 3  **No** - Go to Section 17

3. What were the reasons for not irrigating in 2018? Mark (X) all that apply –

- |   |   |
|---|---|
| 1050 <input type="checkbox"/> Sufficient soil moisture – no irrigation needed   | 1057 <input type="checkbox"/> Sold or leased irrigated land or irrigated area under protection to others and did not irrigate during 2017 |
| 1052 <input type="checkbox"/> Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.) | 1058 <input type="checkbox"/> Restrictions on water use   |
| 1053 <input type="checkbox"/> Shortage of ground water (lowering water level of wells or depletion of ground water)               | 1059 <input type="checkbox"/> Converted to non-agricultural use   |
| 1054 <input type="checkbox"/> Irrigation uneconomical due to high fuel and power costs and/or low commodity prices                | 1060 <input type="checkbox"/> Converted to an agricultural enterprise not requiring irrigation  |
| 1055 <input type="checkbox"/> Loss of water rights not due to voluntary transfers   | 1061 <input type="checkbox"/> Available surface water too salty   |
| 1056 <input type="checkbox"/> Sold or leased water rights or annual water allocation  | 1062 <input type="checkbox"/> Other – Specify:<br>1063 <input type="text"/>   |

4. Do you consider your discontinuance of irrigation to be permanent? . . . . . 0530 1  **Yes** 3  **No**

**SECTION 17 VALUE OF SALES IN 2018**

1. Which range includes the gross value of all agricultural products sold from this operation in 2018 including landlord's share? Mark (X) only one –

- 0980 1  \$0 - \$9,999 2  \$10,000 - \$24,999 3  \$25,000 - \$49,999 4  \$50,000 - \$99,999  
5  \$100,000 - \$249,999 6  \$250,000 - \$499,999 7  \$500,000 - \$999,999 8  \$1,000,000 and over

2. What percent of total sales were from **irrigated** crop sales, including irrigated nursery or greenhouse crops, floriculture, sod, mushrooms, vegetable seeds, and propagative materials? . . . . .

Percent	
0981	
0982	
<b>100%</b>	

3. What percent of total sales were from **non-irrigated** crop sales and livestock sales? . . . . .

**SECTION 18 PERSON COMPLETING THIS FORM – Please print**

Name 1092  Area Code and Phone Number 9911  -  -  Date (MM DD YY) 9910

**Survey Results:** To receive the complete results of this survey on the release date, go to [www.agcensus.usda.gov](http://www.agcensus.usda.gov).

To have a brief summary emailed to you at a later date, please enter your email address: . . . . . 1095

Would you rather have a brief summary mailed to you at a later date? . . . . . 9990 1  **Yes** 3  **No**

**Thank you for your response**

**OFFICE USE**

Response	Respondent	Mode	Enum.	Eval.	R. Unit	Change	Optional Use
1-Comp 2-R 3-Inac	9901 1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Oth	9902 1-PASI (Mail) 2-PATI (Tel) 3-PAPI (Face-to-Face)	9903 9998	9900	9921	9985	9907 9908 9906 9916

S/E Name

21308200



## INSTRUCTION BOOKLET 2018 IRRIGATION AND WATER MANAGEMENT SURVEY



### Completing the 2018 Questionnaire

Everyone who receives a questionnaire must fill it out and return it, including nursery, greenhouse, and other horticultural crop producers.

Use a **blue** or **black** ball point pen.

Round to whole acres.

### If You Received More than One Questionnaire for the Same Operation

Duplicate form(s) — If you received extra report forms for the SAME farming operation, return all report forms in the same envelope as the completed report. Make all entries clear and easy to read.

Irrigation is the application of water by any artificial or controlled means, such as sprinklers, furrows and ditches, spreader dikes, flooding, hand watering, or subirrigation pipes. Include the area where lagoon waste water from livestock operations was distributed by a sprinkler or flood system.

Include area in the open and under protection. Under protection includes nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection, and hoop houses. Crops covered only temporarily to be further grown in the open should not be included for area under protection.

### General

Refer to the instructions below for completing your questionnaire. The enclosed census follow-on questionnaire was mailed to producers and growers throughout the United States. Because it is meant for use in all parts of the country, it may contain items and inquiries which do not apply to your operation. In this case, mark the "No" or "None" box and go on to the next item or section.

### Partial Year Operation

If you stopped farming during 2018, complete the questionnaire for the portion of 2018 that you did farm. Write "Stopped farming in 2018" and the date you stopped farming below the address area. Mail the completed questionnaire in the return envelope.

### Partnership Operations

Complete only ONE questionnaire for a partnership operation and include all partners' shares on the same questionnaire. If two or more questionnaires were received for the partnership, see instruction on "If You Received More Than One Questionnaire for the Same Operation" above.

### How to Enter Your Responses on the Questionnaire

Please enter your answers in the spaces provided and in the units requested, i.e., number of acres, dollars, percent, etc. Mark all applicable Yes/No boxes with an "X".

### Instructions by Section

Complete Sections 1 and 2 of the questionnaire. If you did not irrigate or water any cropland (including nursery and greenhouse area in the open and under protection), pastureland, or rangeland in 2018, complete Sections 1 and 2 and then go to Section 16 on the back page and complete the remainder of the questionnaire.

### Section 1 – Acreage in 2018

Report land owned, rented, or used by the respondent, spouse, partnership, corporation, or organization identified on the questionnaire. If you did not operate any land in 2018, go to Section 18 on the back page and complete the remainder of the questionnaire.

**Include** all land, regardless of location or use; cropland, pastureland, rangeland, woodland, idle land, **greenhouses or other area under protection**, farmsteads, Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmable Wetlands Program (FWP), and Conservation Reserve Enhancement Program (CREP). All responses in this section should be rounded to whole acres. Area under protection less than one acre should be reported as one acre. **Exclude** land used under a grazing permit.

**Item 1** - Report all land owned in 2018 by you and/or your spouse, or by the partnership, corporation, or organization named on the questionnaire. Include all fields and tracts of cropland, pastureland, woodland, wasteland, idle land, and farmsteads.

**Item 2** - Report all land rented or leased from others on shares, cash rent, used rent-free, in exchange for services, for taxes, etc., regardless of location, even if used for part of the year. **Exclude** land used on a per-head basis under a grazing permit or animal unit month (AUM) basis.

**Item 3** - Report all land rented or leased to others regardless of the purpose. Include land that was rented and subleased to others.

**Item 4** - The acres in item 4, **Box A**, should equal item 1 plus item 2 minus item 3. All responses to this questionnaire should refer to these **total acres in this operation**. It is important that this number is correct as it is used to establish consistency throughout the questionnaire. The acreage of this operation must equal the acreage reported in Section 2, item 4, column 1, **Box B**. After completing Section 1, if the acres in Item 4, Box A equal zero and you did not raise or own any livestock, aquaculture, or poultry in 2018, write a description of the land use in the space by item 4. Complete Section 18 and mail the questionnaire in the return envelope.

## Section 2 – Land in 2018

Account for total acres in **this operation** in column 1 and irrigated land in **this operation** in column 2. If the same land had more than one use in 2018, report that land only once in the first use that applies. Irrigation refers to the one or more applications of water to land or crops by any artificial or controlled means, such as sprinklers, furrows and ditches, spreader dikes, flooding, hand watering, or subirrigation pipes. Include the area where lagoon waste water from livestock operations was distributed by a sprinkler or flood system.

Include area in the open and under protection. Under protection includes nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, “tunnel” protection and hoop houses. Crops covered only temporarily to be further grown in the open should not be included for area under protection.

In addition to fully irrigated land, report as irrigated any land to which partial, supplemental, or semi-irrigation was applied in column 2. Also include any acreage which received only preplant irrigation (watered before planting). Hayland, pastureland or rangeland should be reported as irrigated if spring flood water was spread by man-made canals, ditches, spreader dikes, pipes, or other water works. Include acres where lagoon wastewater from livestock operations was used for irrigation. Include area under protection that was hand watered.

For conservation program land, if the operator was allowed to cut conservation program land for hay, then this land should be considered cropland harvested; if it was grazed, it should be considered other pasture and grazing land. Except for disaster designation uses, almost all conservation program land will be reported in item 1c, cropland not harvested or grazed.

**Item 1a** - Include as cropland harvested in the open: field crops, hay and forage, land in vegetables, citrus groves, vineyards, berries, nuts, orchards, Christmas trees (whether harvested in 2018 or not), short rotation woody crops, nursery and other horticultural crops such as bedding and garden plants, nursery stock, and propagative materials.

For winter wheat, report the 2018 acres harvested.

For double cropped acres if more than one crop was harvested from the same land in 2018, report those acres only once as cropland harvested.

**Item 1b** - Include as nursery, greenhouse, and other horticulture under protection: crops grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, “tunnel” protection, and hoop houses. Crops covered only temporarily, such as for frost protection, to be further grown in the open should not be included for area under protection.

**Item 1c** - Include cropland used for cover crops, cropland on which all crops failed, idle cropland, cropland in summer fallow, and cropland in government programs, including conservation program land unless used for grazing, hay, or forage. Include land on which sugarcane and pineapples were grown but not harvested in 2018.

**Item 2a** - Exclude land used under a grazing permit.

**Item 2b** - Report woodland pastured.

**Item 2c** - Include any pastured land other than cropland and woodland pastured. Include rotation pasture and grazing land that could have been used for crops without additional improvements.

**Item 3** - Any land that does not fit into one of the above categories. Include land in roads, buildings, farmsteads, woodland not pastured, and wasteland.

**Item 4** - This should equal the sum of all land uses reported in items 1 through 3. Also, **Box B** acres must equal acres in “this operation” reported in Section 1, item 4, **Box A**. Anyone who irrigated any land in 2018 should complete the entire questionnaire.

**Item 5** - This question helps determine if this operation irrigated any area in the open or under protection in 2018. If the answer to this question is 'Yes', then continue completing the form. If you did not irrigate any area in the open or under protection, check the 'No' box and go to Section 16 on the back page.

**Item 6** - Report the state with the largest amount of irrigated land for "this operation." If you irrigate in more than one state and the acres irrigated happens to be the same in those states, then report the state that includes your farmstead.

### **Section 3 – Ground Water From Wells**

Water usage for this survey will be published in acrefeet. An acre-foot is the quantity of water needed to cover one acre to the depth of one foot, or 326,000 gallons. Ground water is water from a well or wells located on this operation.

**Item 1** - Report whether this operation irrigated any land with ground water from wells on this operation at any time during 2018.

**Item 2** - Report acres in the open irrigated with ground water from wells and the estimated quantity of ground water used in one of the following units:

- total acre-feet; or
- total gallons; or
- average inches applied per acre

**Item 3** - Report the area under protection irrigated with ground water in square feet. Report the area only once, regardless of how many crops were grown for sale from the same area.

**Item 4** - Report the total number of wells used on this operation in 2018.

**Item 4a** - Report the number of wells reported in item 4 above that used backflow prevention devices (check valves) in 2018. Report the number of acres and area under protection irrigated in 2018 with water pumped from wells with backflow prevention devices.

**Item 4b** - Report how many wells reported in item 4 above used flow meters or flow measuring devices. Report the number of acres and area under protection irrigated in 2018 with water from wells with flow measurement devices.

**Item 4c** - Report the number of free-flowing wells used in 2018. Free-flowing wells do not require the use of a pump to lift the water to the surface. Water flows to the surface under natural pressure. These are most commonly found in Florida and some western states.

**Item 5** - Report the well characteristics for up to 3 primary wells pumped on this operation in 2018.

**Note:** The 3 primary wells should include those wells with the greatest quantity of water pumped in 2018. Report the characteristics for each individual well even if these values are similar across wells. If less than 3 wells were pumped in 2018, then only report for those wells used. Do not include the characteristics of free flowing wells that did not use a well pump, reported in Item 4c.

**Item 5a** - If you used more than 3 wells in 2018, then for all other wells (excluding the 3 primary wells), report the average value for well characteristics.

**Item 6** - Change in depth to water is defined as a change in the depth of water from the well-head to the water table level that has occurred over the last five years prior to 2018.

### **Section 4 – On-Farm Surface Water**

On-farm surface water is a water supply not controlled by a water supply organization and includes water from a stream, drainage ditch, lake, pond, spring, or reservoir on or adjacent to your farm.

**Item 1** - Report whether this operation used any on-farm surface water including recycled and reclaimed water. For this survey, recycled water is the reuse of irrigation water that was previously used to irrigate a crop on the operation. Reclaimed water is treated wastewater used for irrigation.

**Item 2** - Report acres in the open on this operation irrigated with on-farm surface water and the estimated quantity used in one of the following units:

- total acre-feet; or
- total gallons; or
- average inches applied per acre

**Item 3** - Report the total area under protection irrigated with on-farm surface water in square feet. Report the area only once, regardless of how many crops were grown for sale from the same area.

**Item 4** - Report whether this operation used recycled water to irrigate any crops in 2018.

**Item 4a** - Report the area on which one or more applications of recycled water for irrigation were made in 2018. Report the acres only once even if multiple applications were made to the same acreage.



**Item 5** - Report whether this operation used reclaimed water from on-farm livestock to irrigate any crops in 2018. For the purposes of this survey, the total 2018 application of reclaimed water needs to be at least one half inch to be considered irrigation.

**Item 5a** - Report the area on which one or more applications of reclaimed water for irrigation were made in 2018. Report the acres only once even if multiple applications were made to the same acreage.

**Item 5b** - Report how much reclaimed irrigation water was used on this operation in 2018. Report the quantity of reclaimed water in acre-feet or total gallons.

### **Section 5 – Off-Farm Water**

Off-farm surface water is surface or ground water from U.S. Bureau of Reclamation, other Federal agencies, irrigation districts, or other suppliers.

**Item 1** - Report whether this operation used any water from off-farm sources.

**Item 2** - Report acres in the open on this operation irrigated with off-farm water and the estimated quantity used in one of the following units:

- total acre-feet; or
- total gallons; or
- average inches applied per acre

**Item 3** - Report the total area under protection irrigated with off-farm water in square feet. Report the area only once, regardless of how many crops were grown for sale from the same area.

**Item 4** - Report whether this operation received any off-farm water and total cost, if any was purchased. Report in whole dollars.

**Item 5** - Report the supplier of off-farm water.

**Item 6** - Report whether this operation used reclaimed water to irrigate any crops in 2018.

**Item 6a** - Report the area on which one or more applications of reclaimed water for irrigation were made in 2018. Report the acres only once even if multiple applications were made to the same acreage.

**Item 6b** - Report how much reclaimed irrigation water was used on this operation in 2018. Report the quantity of reclaimed water in acre-feet or total gallons.

**Item 6c** - Identify the source(s) of reclaimed water used on this operation by marking an 'X' in all the sources that apply.

### **Section 6 – Pumps, Other Than Well Pumps, Used For Irrigation**

These are pumps that were used for pumping surface water from rivers and streams, irrigation channels, ponds, and other water holding systems.

Tailwater pits hold water that was previously used for irrigation.

Relifting or boosting water within system - Some irrigation systems using water from wells may also have pumps in places other than their well pumps to provide additional lift, pressure, or lateral movement, especially on farms with large distribution systems or irregular terrain. These pumps are often referred to as booster pumps. Include these booster pumps in this section.

Vertical lift refers to the average surface-level feet-of-lift the pumps must raise the water in order to distribute the water through the field irrigation system. Discharge capacity refers to average pumping capacity in gallons per minute (GPM). Discharge operating pressure refers to the average operating pressure in pounds per square inch at the point of discharge.

### **Section 7 – Energy Expense for All Well and Other Irrigation Pumps**

For each energy source, report the number of well pumps and other pumps, the cost of the energy used to power pumps (include the landlord's share of pumping costs), and the number of acres irrigated by water source. The sum of acres irrigated across all energy types may be less than the total acres irrigated for the operation reported in Section 2, item 4, column 2, Box C. The difference should equal those acres irrigated using no pumps to supply water to the field.

### **Section 8 – Method of Water Distribution in Fields in the Open**

This section refers to the method used to distribute irrigation water.

**Item 1** - Report whether this operation irrigated any fields in the open. If so, complete this section.

Report the acres of land irrigated by each of the distribution systems listed. If the same land was irrigated by more than one method, then report acres irrigated by each method used. **Note:** Do not report information for the delivery system used to convey water from the source to the field. Report the method only for the field distribution system.

**Item 2** - Gravity irrigation refers to the free flowing application of water across a field. The water is distributed across a field using either pipes or open ditches near the head of the field from which water is released to flow down furrows or to flood the field.

**Item 2a** - Row crops are generally irrigated by water flowing down furrows.

**Item 2b** - Report the controlled flooding acreage for crops such as rice or cranberries which are flooded across the entire field with the water contained within borders or basins.

**Item 2c** - Uncontrolled flooding is often used to water pasture or rangeland. Water is directed to the area by artificial or controlled means but there are no furrows or borders within the field when uncontrolled flooding is used.

**Item 2d** - Report acreage here if not reported in any of the above gravity system categories.

**Item 3** - Sprinkler irrigation is separated into six categories: center pivot, linear move tower, solid set and permanent systems, mechanical move systems, hand-move systems, and other sprinkler systems. Use nozzle pressure for the pressure categories

**Item 3a** - A center pivot system uses a boom half the width of the field. It is anchored at the center of the field and sweeps in a circle.

**Item 3b** - Linear move tower systems and other linear continuous move drive systems are self-propelled systems that travel in straight lines across the field.

**Item 3c** - Report for solid set and permanent systems. Exclude low-flow micro systems.

**Item 3di** - Mechanical move systems include side roll, wheel move, other mechanical move systems, and other discrete move systems.

**Item 3dii** - Big gun or traveler systems use large pulsating sprinklers and travel across the area being watered.

**Item 3e** - Hand-move systems are any non-propelled system which must be moved manually.

**Item 3f** - Report acreage here if not reported in any of the above sprinkler system categories.

**Item 4** - Drip, trickle, or low-flow micro irrigation water is generally distributed by tubes or tapes which meter out small amounts of water at low pressure.

**Item 4a** - Report acres on which on or above ground surface drip irrigation was used.

**Item 4b** - Report acres on which sub-surface or root zone drip was used.

**Item 4c** - Report acres on which low-flow micro sprinklers were used. This refers to micro sprinklers that apply water at low pressure and are not self-propelled or easily moved.

**Item 4d** - Report acreage here if not reported in any of the above drip, trickle, or low-flow system categories.

The total acres, by method of water distribution, should be equal to or greater than Section 2, column 2, item 4, total acres irrigated, Box C. Every acre reported as irrigated in Section 2 needs to be reported by method of irrigation in Section 8. If you use multiple methods of water distribution for the same acres, this sum may be larger than Section 2, column 2, item 4, total acres irrigated, Box C.

## **Section 9 – Acres Harvested in the Open and Pastureland**

Report the acres of each crop harvested and its corresponding average yield per acre. Report acres of each crop harvested, even when multiple crops have been harvested off the same land. In addition, for each irrigated crop harvested, report the estimated average quantity of water applied per acre for the 2018 irrigation season. Report water applied in average acre-feet per acre or in inches per acre (but not both). Acre-feet per acre should be reported to the nearest tenth of a foot (for example, 1.6 or 2.3 acre-feet per acre), while acre-inches per acre should be reported to the nearest whole inch (for example, 19 or 28 inches per acre).

The sum of irrigated acres harvested in Section 9 should be equal to or greater than Section 2, item 4, column 2, Box C, total acres irrigated.

Any harvested crop grown in the open not pre-listed should be entered under item 18 'all other crops grown in the open.' Report the crop name in the 'specify' area.

## Section 10 – Field Water Distribution and Water Source for Crops in the Open

For each crop with irrigated acres harvested reported in Section 9, report the primary type of irrigation system in the first column by selecting the appropriate water distribution code from the water distribution code list above the table. Report the number of acres irrigated from each water source (ground, on-farm surface, and off-farm suppliers).

Then, for each irrigated crop, report the number of acres that were irrigated applying chemigation, that is, the application of fertilizers or pesticides through the irrigation water. Report the acres of commercial fertilizer application and acres for pesticide application separately.

**Note:** For each crop, an irrigated acre harvested may be reported in both the fertilizer and pesticide columns. Therefore, for each crop, the sum of chemigation acres may total more than the corresponding irrigated harvested acres reported for that crop in column 1 of section 9.

Report the acres of the irrigated crop by water source.

## Section 11 – Irrigation for Nursery and Other Horticultural Crops Grown in the Open

**Item 1** - Report whether this operation irrigated any nursery, greenhouse, floriculture, mushrooms, propagative materials, or other horticultural crops grown in the open in 2018. If any horticultural crops on your operation were grown in the open, then complete this section.

**Item 2** - Report the total acres and irrigated acres for horticulture crops grown in the open to the nearest tenth acre. Report the acres only once even when multiple crops were harvested off the same land. Irrigation refers to the application of water to land or crops by any artificial or controlled means.

**Item 3** - Report acres for each horticulture crop listed to the nearest tenth acre. Report acres of each crop harvested, even when multiple crops were harvested off the same land. For example, if annual bedding plants and a nursery crop were harvested from the same 2 acres, enter 2.0 acres in the Floriculture and bedding crops category and 2.0 acres in the Nursery crop category. For each category, enter the total acres grown in the open and irrigated acres.

Report for each crop category grown on this operation the total acres in the open and irrigated acres in the appropriate category:

- a. Floriculture and bedding crops - Bedding/garden plants - annuals, herbaceous perennials, vegetable plants; cut flowers and cut florist greens; indoor foliage plants; potted flowering plants; hanging baskets
- b. Nursery crops - Nursery stock - ornamentals, shrubs, flowering trees, evergreens, live Christmas trees, fruit and nut trees and plants, vines, palms, ornamental grasses, bareroot herbaceous perennials; aquatic plants
- c. Sod
- d. Propagative materials - Bulbs, corms, rhizomes, tubers, cuttings, seedlings, liners, plugs, flower seeds, tobacco plants, vegetable seeds, vegetable transplants to farm fields
- e. Christmas trees and short rotation woody crops - A short rotation woody crop is a tree that grows from seed to a mature tree in 10 years or less.
- f. Other horticultural crops - If more than one crop was grown for this category, report the primary type of crop in the specify area.

**Item 4** - Report the area irrigated or watered for horticultural crops grown in the open in 2018 by irrigation method used on this operation. If more than one method was used, report area in all methods that apply. Report quantity of water in the unit of measure most used for each method. If the total quantity of water, column 2a, and the unit of measure, column 2b, is known, then skip column 3.

Report for the following irrigation methods:

- a. Hand Watered
- b. Gravity Irrigation - refers to the free-flowing application of water.
- c. Sprinkler - Exclude hand-held sprinklers.
- d. Drip, trickle, or low-flow micro irrigation - the water is distributed down the rows by tapes which meter out small amounts of water at low pressure near the plant's roots.
- e. Subirrigation - this is sometimes referred to as water seepage. It is used to maintain a water table at a predetermined depth. Normally these systems are permanently in place below the rootline. Water is usually applied by using emitters. Include hydroponic in this category.

The total area reported, by method used, should be equal to or greater than item 2, irrigated area, code 0738.

**Item 5** - Report the water source percentage for each irrigation method listed. The percentage for ground water, on-farm water, and off-farm water should add to 100% for each method (row).

## **Definitions of Water Sources**

**Ground water** is water from a well or wells located on this farm.

**On-farm surface water** is a water supply not controlled by a water supply organization and includes water from a stream, drainage ditch, lake, pond, spring, or reservoir on or adjacent to your farm.

**Off-farm surface water** is surface or ground water from U.S. Bureau of Reclamation, other Federal agencies, or other suppliers.

## **Section 12 – Irrigation for Nursery, Greenhouse, and Other Horticultural Crops Grown Under Protection**

**Item 1** - Report whether this operation irrigated any nursery, greenhouse, floriculture, mushrooms, propagative materials, or other horticultural crops grown under protection. Under protection includes horticultural crops grown under glass, rigid plastic, plastic film, including “tunnel” protection and hoop houses. If any horticultural crops on your operation were grown under protection, then complete this section.

**Item 2** - Report the total area and irrigated area under protection in square feet. Report the area only once, regardless of how many crops were grown for sale from the same area. Irrigation refers to one or more applications of water to land or crops by any artificial or controlled means.

**Item 3** - Report the area irrigated in square feet for each horticultural category listed. Report the area of each horticulture crop, even when multiple crops were harvested off the same land. For example, if two crops of annual bedding plants were grown from 1,000 square feet, enter 1,000 in the Floriculture and Bedding Crops category. If 500 square feet of food crops were also grown in the same area, then also report 500 in the Food crops grown under protection category. For each category, enter the total area under protection that was irrigated.

Report crops grown on this operation in the appropriate category:

- a. **Floriculture and bedding crops** - Bedding/garden plants - annuals, herbaceous perennials, vegetable plants; cut flowers and cut florist greens; indoor foliage plants; potted flowering plants; hanging baskets
- b. **Nursery crops** - Nursery stock - ornamentals, shrubs, flowering trees, evergreens, live Christmas trees, fruit and nut trees and plants, vines, palms, ornamental grasses, bareroot herbaceous perennials; aquatic plants

- c. **Propagative materials** - Bulbs, corms, rhizomes, tubers, cuttings, seedlings, liners, plugs, flower seeds, tobacco plants, vegetable seeds, vegetable transplants to farm fields
- d. **Food crops grown under protection** - Tomatoes, other vegetables and fresh cut herbs, fruits and berries.
- e. **Mushrooms**
- f. **Other horticultural crops** - If more than one crop was grown for this category, report the primary type of crop in the specify area.

**Item 4** - Report the area irrigated or watered for horticultural crops grown under protection in 2018 by irrigation method used on this operation.

If more than one method was used, report area in all methods that apply. Report quantity of water in the unit of measure most used for each method. If the total quantity of water, column 2a, and the unit of measure, column 2b, is known, then skip column 3.

Report for the following irrigation methods:

- a. **Hand Watered**
- b. **Gravity Irrigation** - refers to the free-flowing application of water.
- c. **Sprinkler** - Exclude hand-held sprinklers.
- d. **Drip, trickle, or low-flow micro irrigation** - the water is distributed down the rows by tapes which meter out small amounts of water at low pressure near the plant's roots.
- e. **Subirrigation** - this is sometimes referred to as water seepage. It is used to maintain a water table at a predetermined depth. Normally these systems are permanently in place below the rootline. Water is usually applied by using emitters. Include hydroponic in this category.

The total area reported, by method used, should be equal to or greater than item 2, irrigated area, code 0629.

**Item 5** - Report the water source percentage for each irrigation method listed. The percentage for ground water, on-farm water, and off-farm water should add to 100% for each method (row).

## **Definitions of Water Sources**

**Ground water** is water from a well or wells located on this farm.

**On-farm surface water** is a water supply not controlled by a water supply organization and includes water from a stream, drainage ditch, lake, pond, spring, or reservoir on or adjacent to your farm.

**Off-farm surface water** is surface or ground water from U.S. Bureau of Reclamation, other Federal agencies, or other suppliers.

### **Section 13 – Expenditures for Irrigation**

For the construction and improvement categories report the cost of the expenditure in column 1, the irrigated acres affected in column 2, the primary purpose code of the expenditure in column 3, and the primary source code of the funding assistance in column 4 if any were received. Primary purpose codes and source codes of the funding can be found at the top of the page.

### **Section 14 – Irrigation and Water Management Practices**

**Item 1** - Report on the method(s) or approach(es) used to decide when to schedule water applications in 2018. Mark all that apply.

**Item 2** - Report whether this operation had to discontinue irrigation in 2018 long enough to affect crop yield.

**Item 2a** - Report the acres which had to discontinue or reduce irrigation long enough to reduce crop yields.

**Item 2b** - Report the reason(s) if irrigation was discontinued. Mark all that apply. If “other” is marked, report the reason for discontinuing irrigation in the “specify” response area.

**Item 3 and 4** - If you reported gravity irrigation in Section 8, then complete Items 3 and 4. In Item 4, for each practice, a through d, report the number of gravity irrigated acres using the specific practices.

**Item 5** - Report the sources that this operation relied on for guidance in reducing irrigation costs or to conserve water. Mark all that apply.

**Item 6** - Report any issues which prevented you from implementing improvements to existing irrigation systems during the past five years. Mark all that apply.

**Item 7** - If you made irrigation and/or drainage improvements above regular maintenance in the past five years, then mark item 7 ‘Yes’

**Item 8 and 8a** - If you received any technical or financial assistance for irrigation and/or drainage improvements, mark yes to item 8 and indicate the sources you received technical or financial assistance in item 8a. Mark all that apply. If no assistance was received, do not mark any check box.

### **Section 15 – Labor Used for Irrigation on This Operation in 2018**

If you paid any labor cost for the irrigation activities, report total hours and average hourly wage in item 1a and report contract labor expenses for irrigation activities in item 1b. Labor costs here should pertain only to the operation and maintenance of the irrigation system and facilities. Include the landlord’s share of irrigation labor costs. Exclude cost for custom work and contract labor for harvesting.

### **Section 16 – No Irrigated Land in 2018**

Complete this section ONLY if you did not irrigate in 2018. If you did irrigate in 2018, skip to Section 17.

**Item 2** - Report whether any land on this operation was irrigated in 2017.

**Item 3** - Report the reasons for not irrigating in 2018. Mark all that apply and if ‘other’ is marked, report the reason(s) in the “specify” response area.

**Item 4** - Report whether the discontinuance of irrigation is permanent.

### **Section 17 – Value of Sales in 2018**

**Item 1** - Select the appropriate range of the gross value of sales of all agricultural products sold from this operation in 2018. Agricultural products include all crops and livestock sold from this operation.

**Item 2** - Report the percent of the total gross value of sales that were from **irrigated** crops.

**Item 3** - Report the percent of the total gross value of sales that were from **non-irrigated crop or livestock** sales. The sum of items 2 and 3 should equal 100 percent.

### **Section 18 – Person Completing this Form**

Please print the name of the person completing this questionnaire, the date completed, and telephone number. Please indicate if you would like a free summary of the survey results in the mail.