

Kansas

Irrigation Water Use

2011



Kansas Department of Agriculture
Division of Water Resources
109 S.W. 9th St., 2nd Floor
Topeka, KS 66612
(785) 296-3717

U.S. Geological Survey
4821 Quail Crest Place
Lawrence, KS 66049
(785) 842-9909

Equal Opportunity Employers

2011 KANSAS IRRIGATION TABLES

TABLE OF CONTENTS

Introduction

- Table 1 - Selected Water Use Statistics by Regional Location, Kansas, 2007-2011
- Table 2 - Irrigation Water Use, Acres Irrigated and Average Application Rate by County, Kansas, 2007-2011
- Table 3 - Comparison of Water Use and Acres Irrigated by Meter Status and Regional Location, Kansas, 2011
- Table 4 - Water Use, Acres Irrigated, and Average Application Rate by Crop and Regional Location, Kansas, 2011
- Table 5 - Water Use, Acres Irrigated, and Average Application Rate by Crop and County, Kansas, 2011
- Table 6 - Estimated Number of Acres Irrigated by Crop and Regional Location, Kansas, 2011
- Table 7 - Estimated Number of Acres Irrigated by Crop and County, Kansas, 2011
- Table 8 - Water Use, Acres Irrigated, and Average Application Rate by Type of Irrigation System by Regional Location, Kansas, 2011
- Table 9 - Total Water Use, Acres Irrigated, and Percent by System Type and Regional Location, Kansas, 2011
- Table 10 - Water Use, Acres Irrigated, and Average Application Rate by Type of Irrigation System by County, Kansas, 2011

INTRODUCTION

The data shown in this publication were prepared using information from Irrigation Water Use Reports submitted to the Kansas Department of Agriculture, Division of Water Resources (DWR), for the 2007 through 2011 calendar years. Annual Water Use Reports are required of all permitted water users as a condition of K.S.A. 82a-732 of the Water Appropriations Act. Each year, Irrigation Water Use Reports are reviewed by DWR to ensure that the information provided is as complete and accurate as possible. Corrections to the reported information may be made through follow-up letters and phone calls. DWR expresses their appreciation to all irrigation water users for completing these annual reports and participating in the follow-up process.

Irrigation is most prevalent in western Kansas where average annual rainfall is less than 20 inches and sufficient groundwater can be pumped to compensate for this lack of moisture. Irrigation water use decreases from western to eastern Kansas, where precipitation is greater and significant aquifers are not present. For many years, the maximum allowable quantities of water allowed for irrigation were 2.0 acre-feet per acre in western Kansas (from the Kansas/Colorado border to the Range 20 West / Range 21 West line), 1.5 acre-feet per acre in central Kansas (from the Range 20 West / Range 21 West line to the Range 5 East / Range 6 East line), and 1.0 acre-feet per acre in eastern Kansas (from the Range 5 East / Range 6 East line to the Kansas / Missouri border). As a result of revised regulations, appropriations of water for irrigation after Sept. 22, 2000 have been based on county-level net irrigation requirements for corn, as determined by the National Resources Conservation Service (NRCS). These county values are shown on p. 68 of the Kansas Water Appropriation Act Rules and Regulations:

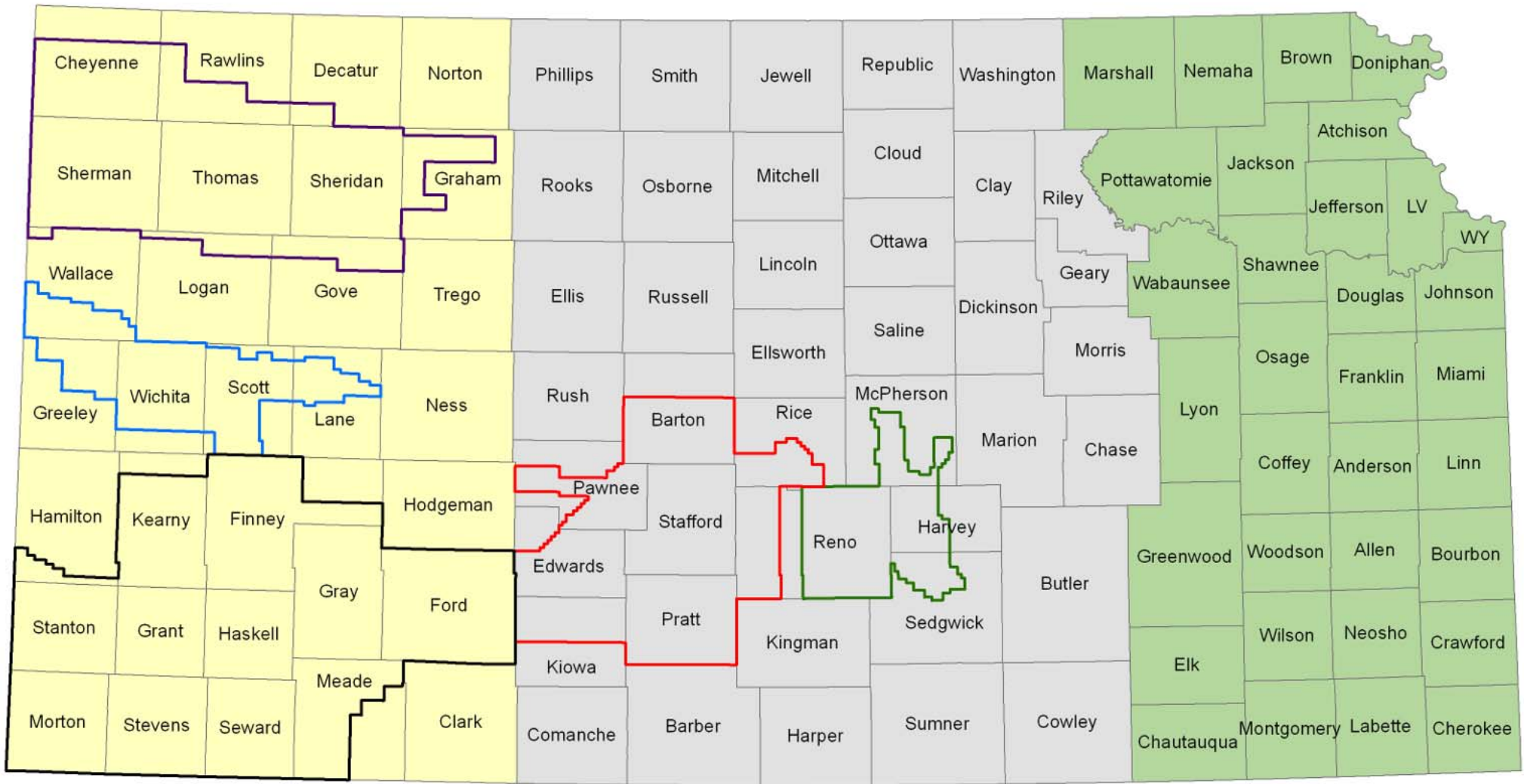
http://www.ksda.gov/includes/statute_regulations/mainportal/KWAA_Rules_Regs_November_2010_FullVersion.pdf.

Irrigation water use data in this report are shown by county and by region. The three major regions used for analysis are similar to those originally used for allocation of reasonable quantities for irrigation, because those guidelines were in effect when the majority of irrigation water rights were issued. The division between central and eastern Kansas was adjusted to coincide with county boundaries (see figure 1). The western and central regions are further divided to distinguish the 5 Groundwater Management Districts from the remainder of each region.

Several factors should be considered when interpreting the irrigation water use data presented in this report, or when comparing these data to other sources of irrigation information:

- Quantities of water diverted and acres irrigated are as reported by irrigators, with possible corrections after review by DWR staff. Although the law requires accurate reporting, it is impossible to verify every measurement.
- This report compares irrigation water use with irrigated acres to produce application rates by county and by regional location. Water diverted under ditch irrigation water rights in southwest Kansas and by irrigation districts in north-central Kansas cannot be directly associated with irrigated acres in the same county or region of withdrawal, and for this reason these quantities of surface water are not included in the tables of this report.
- While the majority of irrigated lands in Kansas are in crops, some counties may have irrigation water use for golf courses, nurseries, and recreational areas.
- Historic water use data maintained by DWR are subject to revision at any time as better information becomes available. Revisions to past years' data may result in very small differences from previously published county, regional, and state totals. The data shown in this report are current as of May, 2013.

Figure 1. Regions Used for Kansas Irrigation Water Use Analyses



Kansas Department of Agriculture
 Administrative Services, GIS
 October 20, 2011



Legend

- | | | | |
|----------------|-----------------------|-------------------------|-------------------------|
| Central Kansas | Western Kansas | Equus Beds GMD #2 | Northwest Kansas GMD #4 |
| Eastern Kansas | Western Kansas GMD #1 | Southwest Kansas GMD #3 | Big Bend GMD #5 |

Table 1
SELECTED WATER USE STATISTICS BY REGIONAL LOCATION
KANSAS, 2007-2011

Regional Location	2011					Acre-feet per acre (AF/A)					
	Total Number of Pd's ^{a/}	Water Use (AF) ^{b/}	Acres Irrigated	Use above Regional Standard (AF) ^{c/}	Percent Above Regional Standard	2007	2008	2009	2010	2011	Average
Western Kansas											
Western KS GMD No. 1	2,511	208,294	200,611	2,553	1.23%	0.89	0.99	0.88	0.89	1.04	0.94
Southwest KS GMD No. 3	9,664	2,296,229	1,450,873	111,311	4.85%	1.16	1.31	1.18	1.26	1.58	1.30
Northwest KS GMD No. 4	3,441	428,653	381,854	2,292	0.53%	1.09	1.05	0.78	0.96	1.12	1.00
Remainder of Western KS	2,194	122,717	109,064	3,070	2.50%	0.95	0.95	0.84	0.97	1.13	0.97
Central Kansas											
Equus Beds GMD No. 2	1,806	174,728	134,233	9,749	5.58%	0.79	0.65	0.77	0.89	1.30	0.88
Big Bend GMD No. 5	4,455	668,633	460,637	58,573	8.76%	0.86	0.94	0.98	1.11	1.45	1.07
Remainder of Central KS	5,077	196,809	242,033	9,884	5.02%	0.66	0.52	0.61	0.64	0.81	0.65
Eastern Kansas											
All Eastern Kansas	1,455	43,753	75,791	2,342	5.35%	0.43	0.30	0.21	0.34	0.58	0.37
State Total	30,603	4,139,815	3,055,096	199,774	4.83%	1.01	1.10	0.99	1.08	1.36	1.11

^{a/} Total number of active points of diversion includes those that were not used in 2011.

^{b/} Water use does not include approximately 132,495 acre-feet of surface water withdrawn in 2011 under ditch irrigation water rights in southwest Kansas and by irrigation districts in north-central Kansas. These amounts are not included in any of the tables.

^{c/} Regional standards used for comparison are those that apply to the majority of appropriations for irrigation water use (see figure 1).

Table 2
IRRIGATION WATER USE, ACRES IRRIGATED, AND AVERAGE APPLICATION RATE
BY COUNTY, KANSAS, 2007-2011

County	2011		Average acre-foot per acre (AF/A)					
	Water Use (AF)	Acres Irrigated	2007	2008	2009	2010	2011	Average
Allen	590	974	0.00	0.13	0.42	0.36	0.61	0.30
Anderson	1,158	1,978	0.57	0.21	0.33	0.32	0.59	0.40
Atchison	59	224	0.42	0.17	0.29	0.27	0.26	0.28
Barber	7,409	4,640	0.79	0.80	0.95	1.00	1.60	1.03
Barton	48,727	36,700	0.87	0.68	0.85	0.98	1.33	0.94
Bourbon	11	90	0.13	0.00	0.00	0.00	0.12	0.05
Brown	861	3,100	0.42	0.41	0.27	0.36	0.28	0.35
Butler	944	1,705	0.35	0.46	0.62	0.58	0.55	0.51
Chase	0	0	1.10	0.34	0.03	0.03	0.00	0.30
Chautauqua	5	20	0.00	0.00	0.00	0.00	0.24	0.05
Cherokee	385	722	0.16	0.13	0.30	0.37	0.53	0.30
Cheyenne	54,320	46,084	1.26	1.22	0.90	1.00	1.18	1.11
Clark	6,126	4,862	1.09	0.93	0.76	0.94	1.26	1.00
Clay	10,382	24,448	0.66	0.47	0.45	0.35	0.42	0.47
Cloud	11,435	23,885	0.57	0.40	0.56	0.43	0.48	0.49
Coffey	456	882	0.32	0.19	0.27	0.29	0.52	0.32
Comanche	10,533	6,960	1.06	1.01	1.09	1.18	1.51	1.17
Cowley	2,777	2,949	0.36	0.44	0.51	0.57	0.94	0.56
Crawford	861	2,075	0.28	0.19	0.21	0.27	0.41	0.27
Decatur	10,016	10,831	0.99	0.97	0.75	0.85	0.92	0.90
Dickinson	3,698	4,991	0.70	0.52	0.49	0.51	0.74	0.59
Doniphan	15	246	0.29	0.16	0.15	0.06	0.06	0.14
Douglas	1,435	2,587	0.48	0.40	0.18	0.40	0.55	0.40
Edwards	141,180	99,002	0.92	1.10	1.03	1.11	1.43	1.12
Elk	0	0	0.00	0.00	0.00	0.00	0.00	0.00
Ellis	2,058	2,016	0.62	0.69	0.81	0.89	1.02	0.81
Ellsworth	322	594	0.47	0.19	0.22	0.49	0.54	0.38
Finney	352,332	217,138	1.18	1.33	1.17	1.35	1.62	1.33
Ford	125,888	88,072	0.95	1.13	1.08	1.06	1.43	1.13
Franklin	1,211	1,265	0.68	0.69	0.67	0.86	0.96	0.77
Geary	3,143	4,891	0.47	0.42	0.47	0.50	0.64	0.50
Gove	21,379	20,376	0.84	0.84	0.73	0.90	1.05	0.87
Graham	12,401	14,590	0.83	0.69	0.68	1.03	0.85	0.82
Grant	161,527	104,401	1.11	1.31	1.19	1.32	1.55	1.30
Gray	254,746	167,989	1.10	1.21	1.12	1.21	1.52	1.23
Greeley	22,734	21,918	0.98	1.00	0.97	0.88	1.04	0.97
Greenwood	57	128	0.69	1.00	0.50	0.43	0.45	0.61
Hamilton	45,184	30,121	1.17	1.25	1.13	1.34	1.50	1.28
Harper	2,489	2,206	0.71	0.60	0.51	0.79	1.13	0.75
Harvey	46,128	36,221	0.79	0.67	0.73	0.89	1.27	0.87
Haskell	270,805	185,791	1.06	1.18	1.05	1.17	1.46	1.18
Hodgeman	33,815	26,580	0.81	0.96	0.81	0.93	1.27	0.96
Jackson	132	300	0.41	0.36	0.58	0.39	0.44	0.44
Jefferson	2,896	5,066	0.51	0.34	0.12	0.30	0.57	0.37
Jewell	1,536	3,828	0.49	0.30	0.42	0.53	0.40	0.43
Johnson	3,415	3,890	0.76	0.53	0.45	0.71	0.88	0.67

Table 2
IRRIGATION WATER USE, ACRES IRRIGATED, AND AVERAGE APPLICATION RATE
BY COUNTY, KANSAS, 2007-2011

County	2011		Average acre-foot per acre (AF/A)					
	Water Use (AF)	Acres Irrigated	2007	2008	2009	2010	2011	Average
Kearny	163,761	98,991	1.41	1.57	1.28	1.45	1.65	1.47
Kingman	24,096	15,946	0.95	0.78	1.01	1.11	1.51	1.07
Kiowa	82,223	53,329	1.01	1.15	1.11	1.21	1.54	1.20
Labette	265	487	0.22	0.11	0.21	0.37	0.54	0.29
Lane	20,602	17,592	0.75	1.01	0.93	0.88	1.17	0.95
Leavenworth	522	1,130	0.54	0.32	0.17	0.29	0.46	0.36
Lincoln	572	1,401	0.25	0.12	0.27	0.28	0.41	0.27
Linn	145	220	0.55	0.51	0.24	0.68	0.66	0.53
Logan	8,744	8,656	0.87	0.91	0.53	0.72	1.01	0.81
Lyon	162	253	0.49	0.27	0.35	0.31	0.64	0.41
Marion	1,968	2,738	0.55	0.39	0.32	0.46	0.72	0.49
Marshall	1,109	2,682	0.53	0.38	0.38	0.47	0.41	0.43
McPherson	41,814	35,440	0.67	0.58	0.68	0.73	1.18	0.77
Meade	229,740	126,381	1.31	1.41	1.34	1.35	1.82	1.45
Miami	162	437	0.33	0.18	0.19	0.42	0.37	0.30
Mitchell	4,847	7,631	0.72	0.54	0.87	0.74	0.64	0.70
Montgomery	319	1,180	0.26	0.20	0.29	0.19	0.27	0.24
Morris	179	239	0.33	0.46	0.18	0.63	0.75	0.47
Morton	64,678	47,713	0.91	1.15	1.03	1.10	1.36	1.11
Nemaha	139	360	0.20	1.34	0.39	0.65	0.38	0.59
Neosho	92	125	0.69	0.71	0.37	0.46	0.74	0.59
Ness	5,927	4,241	0.65	0.95	0.92	0.86	1.40	0.96
Norton	8,539	14,484	0.88	0.82	0.68	0.85	0.59	0.76
Osage	112	374	0.25	0.14	0.22	0.28	0.30	0.24
Osborne	2,826	3,398	0.70	0.58	0.84	0.47	0.83	0.68
Ottawa	2,713	4,870	0.57	0.32	0.43	0.38	0.56	0.45
Pawnee	98,427	78,695	0.74	0.78	0.84	1.02	1.25	0.93
Phillips	5,711	7,069	0.69	0.73	0.72	0.69	0.81	0.73
Pottawatomie	10,842	17,828	0.34	0.22	0.13	0.25	0.61	0.31
Pratt	133,148	85,666	0.79	1.02	1.10	1.11	1.55	1.11
Rawlins	17,667	18,462	0.90	0.89	0.70	0.82	0.96	0.85
Reno	80,401	57,433	0.88	0.70	0.89	1.01	1.40	0.98
Republic	16,328	31,209	0.69	0.47	0.58	0.59	0.52	0.57
Rice	31,163	22,676	0.75	0.61	0.72	0.96	1.37	0.88
Riley	3,520	5,395	0.39	0.22	0.17	0.31	0.65	0.35
Rooks	1,558	1,953	0.41	0.36	0.43	0.62	0.80	0.52
Rush	13,890	11,552	0.72	0.60	0.83	0.82	1.20	0.83
Russell	12	21	10.55	0.15	0.36	0.41	0.59	2.41
Saline	4,757	5,005	0.66	0.39	0.38	0.66	0.95	0.61
Scott	51,621	49,359	0.88	0.98	0.88	0.86	1.05	0.93
Sedgwick	51,412	42,431	0.75	0.60	0.68	0.85	1.21	0.82
Seward	219,381	126,588	1.28	1.41	1.25	1.30	1.73	1.39
Shawnee	9,592	16,740	0.42	0.32	0.12	0.33	0.57	0.35
Sheridan	78,586	77,753	1.05	0.98	0.76	1.01	1.01	0.96
Sherman	139,193	113,581	1.15	1.15	0.87	0.97	1.23	1.07
Smith	1,441	3,192	0.46	0.39	0.50	0.43	0.45	0.45

Table 2
IRRIGATION WATER USE, ACRES IRRIGATED, AND AVERAGE APPLICATION RATE
BY COUNTY, KANSAS, 2007-2011

County	2011		Average acre-foot per acre (AF/A)					
	Water Use (AF)	Acres Irrigated	2007	2008	2009	2010	2011	Average
Stafford	129,735	83,207	0.89	0.89	0.94	1.17	1.56	1.09
Stanton	141,533	104,030	1.06	1.20	1.12	1.17	1.36	1.18
Stevens	296,142	171,889	1.21	1.41	1.30	1.26	1.72	1.38
Sumner	11,599	10,388	0.56	0.32	0.43	0.70	1.12	0.63
Thomas	111,934	100,373	1.05	1.01	0.68	0.89	1.12	0.95
Trego	6,263	5,341	1.02	0.83	0.83	1.02	1.17	0.97
Wabaunsee	5,201	8,385	0.34	0.21	0.13	0.31	0.62	0.32
Wallace	59,662	51,139	1.01	1.03	0.90	0.95	1.17	1.01
Washington	3,068	10,983	0.45	0.32	0.42	0.31	0.28	0.36
Wichita	60,644	67,076	0.81	0.95	0.82	0.85	0.90	0.87
Wilson	1,104	1,497	0.32	0.33	0.26	0.23	0.74	0.38
Woodson	94	114	0.00	0.00	0.00	0.42	0.82	0.25
Wyandotte	346	432	0.75	0.59	0.48	0.46	0.80	0.62
Total	4,139,815	3,055,096	1.01	1.10	0.99	1.08	1.36	1.11

**TABLE 3
COMPARISON OF WATER USE AND ACRES IRRIGATED BY METER STATUS AND REGIONAL LOCATION
KANSAS, 2011**

Regional Location	Metered				Not Metered				Combined ^{a/}	Total No. of Pd's	Percent Metered ^{b/}
	No. of Pd's	Water Use (AF)	Acres Irrigated	AF/A	No. of Pd's	Water Use (AF)	Acres Irrigated	AF/A	No. of Pd's		
Western Kansas											
Western KS GMD No. 1	1,161	155,192	146,383	1.06	490	53,102	54,228	0.98	23	1,674	70%
Southwest KS GMD No. 3	7,667	2,261,008	1,422,352	1.59	161	35,221	28,026	1.26	145	7,973	98%
Northwest KS GMD No. 4	3,034	426,061	378,583	1.13	29	2,592	2,982	0.87	96	3,159	99%
Remainder of Western KS	1,248	115,749	100,445	1.15	59	6,968	5,499	1.27	251	1,558	95%
Central Kansas											
Equus Beds GMD No. 2	1,064	143,637	108,344	1.33	277	31,091	25,889	1.20	322	1,663	79%
Big Bend GMD No. 5	3,671	648,998	445,202	1.46	126	19,635	15,315	1.28	380	4,177	97%
Remainder of Central KS	2,606	182,503	224,123	0.81	214	14,306	17,478	0.82	698	3,518	92%
Eastern Kansas											
All Eastern Kansas	626	34,595	59,400	0.58	208	9,158	16,391	0.56	113	947	75%
State Total	21,077	3,967,742	2,884,832	1.38	1,564	172,073	165,808	1.04	2,028	24,669	93%

^{a/} Water use and acres irrigated from combined points of diversion are included with either metered or not metered points of diversion.

^{b/} Percent metered is the number of metered pd's divided by the total number of pd's excluding combined.

TABLE 4
WATER USE, ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY CROP AND REGIONAL LOCATION
KANSAS, 2011

Regional Location	Alfalfa			Corn			Grain Sorghum			Soybeans			Wheat			Other or Multiple Crops ^{a/}		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Western Kansas																		
GMD No. 1	1,476	1,106	1.33	68,596	52,618	1.30	1,966	1,548	1.27	503	425	1.18	3,134	4,850	0.65	132,619	140,064	0.95
GMD No. 3	171,472	94,822	1.81	795,855	433,260	1.84	9,118	7,487	1.22	40,489	22,759	1.78	57,161	49,462	1.16	1,222,135	843,083	1.45
GMD No. 4	4,486	3,673	1.22	265,643	212,926	1.25	518	1,156	0.45	17,770	15,984	1.11	4,093	7,955	0.51	136,142	140,160	0.97
Remainder	12,508	9,243	1.35	41,020	33,975	1.21	2,090	1,914	1.09	4,228	4,912	0.86	4,044	5,270	0.77	58,827	53,750	1.09
Central Kansas																		
GMD No. 2	1,872	1,477	1.27	59,933	46,089	1.30	1,662	1,726	0.96	43,399	33,888	1.28	530	597	0.89	67,331	50,456	1.33
GMD No. 5	24,659	16,741	1.47	318,257	215,399	1.48	5,935	4,825	1.23	132,614	86,393	1.54	6,900	8,414	0.82	180,268	128,865	1.40
Remainder	5,101	5,764	0.89	70,453	85,383	0.83	5,060	4,623	1.09	35,394	45,468	0.78	1,344	2,680	0.50	79,456	98,115	0.81
Eastern Kansas																		
All Eastern KS	27	66	0.40	17,208	29,121	0.59	0	0	0.00	9,576	19,270	0.50	13	70	0.18	16,929	27,264	0.62
State Total	221,602	132,892	1.67	1,636,965	1,108,771	1.48	26,350	23,279	1.13	283,972	229,099	1.24	77,220	79,298	0.97	1,893,707	1,481,757	1.28

^{a/} Other includes irrigated oats, barley, rye, dry beans, sunflowers, pasture, turf grass, cotton, grapes, other unspecified crops, golf courses, truck farms, orchards, and nurseries. Multiple crops are reported combinations of irrigated alfalfa, corn, grain sorghum, soybeans, and other crops.

TABLE 5
WATER USE, ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY CROP AND COUNTY
KANSAS, 2011

County	Alfalfa			Corn			Grain Sorghum			Soybeans			Wheat			Other or Multiple Crops ^{1/}		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Allen	0	0	0	366	520	0.7	0	0	0	12	84	0.14	0	0	0	212	370	0.57
Anderson	0	0	0	217	373	0.58	0	0	0	65	188	0.35	0	0	0	875	1,417	0.62
Atchison	0	0	0	17	138	0.12	0	0	0	0	0	0	0	0	0	42	86	0.49
Barber	126	104	1.21	3,445	1,913	1.8	0	0	0	1,228	820	1.5	0	0	0	2,609	1,803	1.45
Barton	1,764	1,548	1.14	21,635	16,094	1.34	1,105	713	1.55	9,122	6,773	1.35	507	586	0.87	14,593	10,986	1.33
Bourbon	0	0	0	11	90	0.12	0	0	0	0	0	0	0	0	0	0	0	0
Brown	0	0	0	428	1,269	0.34	0	0	0	175	1,014	0.17	0	0	0	259	817	0.32
Butler	0	0	0	0	0	0	0	0	0	84	162	0.52	0	0	0	860	1,543	0.56
Chase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chautauqua	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	20	0.24
Cherokee	0	0	0	271	573	0.47	0	0	0	0	0	0	0	0	0	114	149	0.77
Cheyenne	2,412	1,650	1.46	34,659	27,724	1.25	68	128	0.53	4,421	3,908	1.13	788	1,432	0.55	11,971	11,242	1.06
Clark	454	222	2.05	1,090	1,048	1.04	0	0	0	0	0	0	59	127	0.47	4,523	3,465	1.31
Clay	14	26	0.53	4,069	8,815	0.46	0	0	0	1,307	3,484	0.38	0	0	0	4,992	12,123	0.41
Cloud	24	86	0.28	3,077	6,836	0.45	37	210	0.18	1,522	3,685	0.41	0	0	0	6,775	13,068	0.52
Coffey	0	0	0	130	190	0.69	0	0	0	129	249	0.52	0	0	0	197	443	0.44
Comanche	696	442	1.57	1,696	1,079	1.57	1,217	792	1.54	1,390	899	1.55	528	558	0.95	5,007	3,190	1.57
Cowley	0	0	0	389	397	0.98	0	0	0	1,039	1,278	0.81	0	0	0	1,348	1,274	1.06
Crawford	0	0	0	161	460	0.35	0	0	0	168	484	0.35	0	0	0	532	1,131	0.47
Decatur	856	879	0.97	6,179	6,142	1.01	0	0	0	955	1,123	0.85	101	367	0.27	1,925	2,320	0.83
Dickinson	0	0	0	1,407	1,838	0.77	88	130	0.67	312	549	0.57	0	0	0	1,893	2,474	0.77
Doniphan	0	0	0	5	144	0.03	0	0	0	9	90	0.1	0	0	0	1	12	0.08
Douglas	0	0	0	862	1,493	0.58	0	0	0	225	486	0.46	0	0	0	347	608	0.57
Edwards	5,074	3,404	1.49	73,967	50,966	1.45	1,023	1,054	0.97	29,930	19,760	1.51	820	1,089	0.75	30,366	22,729	1.34
Elk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellis	417	417	1	654	616	1.06	190	209	0.91	0	0	0	142	131	1.09	655	643	1.02
Ellsworth	0	0	0	102	100	1.02	0	0	0	0	0	0	0	0	0	220	494	0.44
Finney	66,857	37,326	1.79	97,059	53,614	1.81	2,080	1,338	1.55	7,587	4,155	1.83	14,611	12,497	1.17	164,137	108,208	1.52
Ford	6,393	3,497	1.83	57,328	33,802	1.7	673	820	0.82	11,055	6,609	1.67	3,843	3,794	1.01	46,595	39,550	1.18
Franklin	0	0	0	70	304	0.23	0	0	0	0	0	0	0	0	0	1,142	961	1.19
Geary	35	80	0.43	903	1,552	0.58	0	0	0	650	1,173	0.55	0	0	0	1,555	2,086	0.75
Gove	416	294	1.41	12,217	10,658	1.15	221	383	0.58	348	351	0.99	343	703	0.49	7,834	7,987	0.98
Graham	405	637	0.64	6,965	7,037	0.99	202	220	0.92	1,115	1,583	0.7	39	302	0.13	3,675	4,811	0.76
Grant	3,325	1,847	1.8	35,046	18,428	1.9	694	514	1.35	236	120	1.97	3,031	3,354	0.9	119,195	80,138	1.49
Gray	28,762	17,537	1.64	106,753	56,435	1.89	2,072	1,647	1.26	7,112	3,687	1.93	10,172	10,396	0.98	99,875	78,287	1.28
Greeley	0	0	0	8,999	6,319	1.42	226	240	0.94	0	0	0	385	827	0.47	13,124	14,532	0.9
Greenwood	0	0	0	35	75	0.47	0	0	0	0	0	0	0	0	0	22	53	0.42
Hamilton	7,313	4,606	1.59	9,890	5,807	1.7	0	0	0	0	0	0	2,078	1,516	1.37	25,904	18,192	1.42
Harper	124	251	0.49	705	466	1.51	0	0	0	1,012	908	1.11	0	0	0	649	581	1.12
Harvey	161	122	1.32	15,510	12,095	1.28	304	325	0.94	10,803	8,688	1.24	9	79	0.12	19,342	14,912	1.3

TABLE 5
WATER USE, ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY CROP AND COUNTY
KANSAS, 2011

County	Alfalfa			Corn			Grain Sorghum			Soybeans			Wheat			Other or Multiple Crops ^W		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Haskell	10,750	5,585	1.92	90,290	51,822	1.74	1,337	1,612	0.83	4,264	2,380	1.79	6,452	4,136	1.56	157,712	120,256	1.31
Hodgeman	401	222	1.8	11,866	8,383	1.42	771	485	1.59	698	422	1.65	1,538	2,194	0.7	18,541	14,874	1.25
Jackson	0	0	0	22	50	0.44	0	0	0	0	0	0	0	0	0	110	250	0.44
Jefferson	0	0	0	1,011	1,876	0.54	0	0	0	931	1,447	0.64	0	0	0	954	1,743	0.55
Jewell	41	156	0.26	864	1,890	0.46	0	0	0	224	937	0.24	0	0	0	408	845	0.48
Johnson	0	0	0	191	396	0.48	0	0	0	0	0	0	0	0	0	3,224	3,494	0.92
Kearny	46,506	24,212	1.92	50,120	28,350	1.77	680	365	1.86	2,019	1,398	1.44	3,643	2,924	1.25	60,793	41,742	1.46
Kingman	0	0	0	9,407	6,347	1.48	632	515	1.23	4,462	3,039	1.47	109	194	0.56	9,486	5,851	1.62
Kiowa	3,413	2,243	1.52	39,978	25,196	1.59	386	430	0.9	17,705	10,729	1.65	509	687	0.74	20,234	14,044	1.44
Labette	0	0	0	54	200	0.27	0	0	0	0	0	0	0	0	0	211	287	0.74
Lane	0	0	0	4,077	2,773	1.47	911	606	1.5	0	0	0	550	766	0.72	15,065	13,447	1.12
Leavenworth	0	0	0	97	314	0.31	0	0	0	155	304	0.51	0	0	0	270	512	0.53
Lincoln	0	0	0	10	40	0.24	0	0	0	80	130	0.62	152	794	0.19	330	437	0.76
Linn	0	0	0	45	135	0.33	0	0	0	0	0	0	0	0	0	101	85	1.18
Logan	1	23	0.04	3,842	3,068	1.25	67	82	0.82	0	0	0	220	231	0.95	4,615	5,252	0.88
Lyon	0	0	0	129	181	0.71	0	0	0	0	0	0	0	0	0	33	72	0.46
Marion	27	70	0.38	934	1,340	0.7	2	4	0.52	356	348	1.02	6	35	0.17	643	941	0.68
Marshall	0	0	0	812	1,341	0.61	0	0	0	62	440	0.14	0	0	0	235	901	0.26
McPherson	233	272	0.86	13,493	11,517	1.17	328	287	1.14	8,301	7,103	1.17	43	80	0.54	19,416	16,181	1.2
Meade	1,006	465	2.16	101,494	51,214	1.98	469	323	1.45	3,970	2,115	1.88	3,008	1,765	1.7	119,793	70,499	1.7
Miami	0	0	0	0	0	0	0	0	0	36	165	0.22	0	0	0	125	272	0.46
Mitchell	88	730	0.12	2,412	3,335	0.72	0	0	0	613	1,465	0.42	0	0	0	1,734	2,101	0.83
Montgomery	0	0	0	30	145	0.21	0	0	0	46	228	0.2	0	0	0	243	807	0.3
Morris	0	0	0	124	146	0.85	0	0	0	55	85	0.64	0	0	0	0	8	0.04
Morton	0	0	0	18,144	12,352	1.47	207	126	1.64	0	0	0	2,216	2,117	1.05	44,112	33,118	1.33
Nemaha	0	0	0	0	0	0	0	0	0	8	70	0.11	0	0	0	131	290	0.45
Neosho	0	0	0	61	85	0.71	0	0	0	0	0	0	0	0	0	32	40	0.79
Ness	2	6	0.33	1,973	1,071	1.84	522	432	1.21	0	0	0	367	275	1.33	3,064	2,457	1.25
Norton	398	497	0.8	4,013	4,597	0.87	0	0	0	1,239	1,757	0.71	0	0	0	2,889	7,633	0.38
Osage	0	0	0	0	0	0	0	0	0	53	284	0.19	0	0	0	58	90	0.65
Osborne	32	50	0.64	917	1,096	0.84	131	217	0.6	456	424	1.08	0	0	0	1,289	1,611	0.8
Ottawa	9	55	0.16	487	879	0.55	43	130	0.33	740	1,594	0.46	0	0	0	1,435	2,212	0.65
Pawnee	6,875	4,798	1.43	36,877	28,304	1.3	1,413	1,383	1.02	16,021	11,533	1.39	2,451	3,007	0.82	34,791	29,670	1.17
Phillips	176	296	0.6	2,904	4,025	0.72	0	0	0	1,063	1,167	0.91	1	13	0.08	1,566	1,568	1
Pottawatomie	0	0	0	3,994	6,076	0.66	0	0	0	3,101	5,323	0.58	11	55	0.19	3,737	6,374	0.59
Pratt	4,412	2,771	1.59	71,245	45,352	1.57	1,548	1,043	1.48	20,597	12,575	1.64	672	812	0.83	34,673	23,113	1.5
Rawlins	1,778	2,122	0.84	10,378	9,694	1.07	17	32	0.54	495	519	0.95	232	534	0.43	4,767	5,561	0.86
Reno	1,532	1,084	1.41	31,197	22,286	1.4	1,187	1,167	1.02	17,309	12,386	1.4	527	571	0.92	28,648	19,939	1.44
Republic	332	555	0.6	6,431	11,904	0.54	8	43	0.19	2,346	5,437	0.43	4	50	0.07	7,208	13,220	0.55
Rice	416	293	1.42	16,046	11,655	1.38	0	0	0	7,265	5,343	1.36	196	239	0.82	7,240	5,146	1.41

TABLE 5
WATER USE, ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY CROP AND COUNTY
KANSAS, 2011

County	Alfalfa			Corn			Grain Sorghum			Soybeans			Wheat			Other or Multiple Crops ^{a/}		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Riley	79	130	0.61	1,741	2,391	0.73	67	121	0.55	923	1,604	0.58	0	0	0	710	1,149	0.62
Rooks	369	418	0.88	283	469	0.6	136	217	0.63	199	348	0.57	60	100	0.6	511	401	1.27
Rush	1,043	649	1.61	2,185	2,064	1.06	1,504	1,000	1.5	1,850	1,643	1.13	53	107	0.49	7,255	6,089	1.19
Russell	0	0	0	0	0	0	0	0	0	0	0	0	7	15	0.48	5	6	0.86
Saline	392	360	1.09	1,227	1,077	1.14	66	72	0.91	673	751	0.9	2	30	0.07	2,397	2,715	0.88
Scott	680	555	1.22	13,353	11,047	1.21	365	252	1.45	477	370	1.29	483	535	0.9	36,264	36,600	0.99
Sedgwick	255	168	1.52	18,204	15,221	1.2	642	632	1.02	15,457	12,921	1.2	202	376	0.54	16,652	13,113	1.27
Seward	4,513	2,236	2.02	61,006	31,046	1.97	160	75	2.13	3,760	1,945	1.93	5,406	3,728	1.45	144,536	87,558	1.65
Shawnee	0	0	0	5,482	8,704	0.63	0	0	0	1,953	4,393	0.44	0	0	0	2,156	3,643	0.59
Sheridan	848	679	1.25	43,941	41,135	1.07	224	365	0.61	4,736	4,491	1.05	275	577	0.48	28,562	30,506	0.94
Sherman	1,147	837	1.37	96,566	70,669	1.37	56	280	0.2	3,613	2,581	1.4	1,305	2,950	0.44	36,506	36,264	1.01
Smith	95	101	0.95	633	1,363	0.46	52	43	1.2	264	696	0.38	19	138	0.14	378	851	0.44
Stafford	3,365	2,203	1.53	57,451	36,997	1.55	514	372	1.38	31,012	19,155	1.62	1,754	2,000	0.88	35,640	22,480	1.59
Stanton	0	0	0	38,647	22,200	1.74	590	545	1.08	0	0	0	1,476	2,004	0.74	100,819	79,281	1.27
Stevens	2,718	1,622	1.68	136,220	71,471	1.91	155	122	1.27	632	440	1.44	2,382	2,184	1.09	154,036	96,050	1.6
Sumner	0	0	0	4,699	4,787	0.98	33	65	0.51	4,346	3,538	1.23	0	0	0	2,521	1,998	1.26
Thomas	347	183	1.9	62,089	48,377	1.28	35	160	0.22	3,608	3,501	1.03	1,258	1,792	0.7	44,596	46,360	0.96
Trego	831	547	1.52	1,636	1,464	1.12	370	470	0.79	623	570	1.09	51	69	0.74	2,753	2,221	1.24
Wabaunsee	27	66	0.4	2,193	3,350	0.65	0	0	0	1,862	3,124	0.6	2	15	0.13	1,117	1,830	0.61
Wallace	28	7	3.97	32,759	24,550	1.33	138	120	1.15	0	0	0	467	1,130	0.41	26,271	25,332	1.04
Washington	15	100	0.15	1,336	4,423	0.3	0	0	0	692	2,619	0.26	0	0	0	1,024	3,841	0.27
Wichita	797	551	1.45	12,515	10,482	1.19	381	363	1.05	26	55	0.47	1,654	2,311	0.72	45,271	53,314	0.85
Wilson	0	0	0	419	525	0.8	0	0	0	458	665	0.69	0	0	0	227	307	0.74
Woodson	0	0	0	94	114	0.82	0	0	0	0	0	0	0	0	0	0	0	0
Wyandotte	0	0	0	0	0	0	0	0	0	129	232	0.55	0	0	0	217	200	1.09
State Total	221,602	132,892	1.67	1,636,965	1,108,771	1.48	26,350	23,279	1.13	283,972	229,099	1.24	77,220	79,298	0.97	1,893,707	1,481,757	1.28

^{a/} Other includes irrigated oats, barley, rye, dry beans, sunflowers, pasture, turf grass, cotton, grapes, other unspecified crops, golf courses, truck farms, orchards, and nurseries. Multiple crops are reported combinations of irrigated alfalfa, corn, grain sorghum, soybeans, and other crops.

TABLE 6
ESTIMATED NUMBER OF ACRES IRRIGATED BY CROP AND REGIONAL LOCATION ^{a/}
KANSAS, 2011

Regional Location	Alfalfa	Corn	Grain Sorghum	Soybeans	Wheat	Other	Total
Western Kansas							
GMD No. 1	2,963	132,969	5,853	4,401	49,230	5,195	200,611
GMD No. 3	159,630	828,068	52,067	69,243	280,258	61,607	1,450,873
GMD No. 4	7,750	279,292	3,651	42,994	31,429	16,738	381,854
Remainder	15,232	54,700	5,086	12,322	16,777	4,947	109,064
Central Kansas							
GMD No. 2	2,558	63,942	3,454	51,795	7,960	4,523	134,233
GMD No. 5	21,347	258,192	12,061	118,092	35,809	15,136	460,637
Remainder	8,939	122,409	7,830	79,773	10,816	12,266	242,033
Eastern Kansas							
All Eastern KS	136	39,249	0	28,866	206	7,333	75,791
State Total	218,555	1,778,821	90,002	407,485	432,486	127,747	3,055,096

^{a/} Figures may not add to totals due to independent rounding. The estimated number of acres of each type of crop was determined by adding single-crop acreages to prorated multiple and double-crop acreages. Acres reported as combinations of multiple specified crops were divided equally among the number of crops indicated. Unspecified crop acres were assigned to major and other crop types in the proportion that these crops were specified in the same region. Double-crop acres were assigned to 20% corn, 15% grain sorghum, 20% soybeans, 40% wheat, and 5% other.

TABLE 7
ESTIMATED NUMBER OF ACRES IRRIGATED BY CROP AND COUNTY ^{a/}
KANSAS, 2011

County	Alfalfa	Corn	Grain Sorghum	Soybeans	Wheat	Other Crops	Total
Allen	0	705	0	269	0	0	974
Anderson	0	1,052	0	832	0	95	1,978
Atchison	0	138	0	0	0	86	224
Barber	131	2,175	107	1,087	305	835	4,640
Barton	1,986	20,049	1,440	9,882	2,403	940	36,700
Bourbon	0	90	0	0	0	0	90
Brown	0	1,666	0	1,411	0	24	3,100
Butler	0	527	0	689	0	490	1,705
Chase	0	0	0	0	0	0	0
Chautauqua	0	0	0	0	0	20	20
Cherokee	0	641	0	68	0	13	722
Cheyenne	2,731	32,539	461	5,597	3,214	1,541	46,084
Clark	911	1,928	99	140	1,340	444	4,862
Clay	156	14,819	96	8,828	483	65	24,448
Cloud	244	12,870	455	9,449	565	302	23,885
Coffey	0	406	0	465	0	11	882
Comanche	802	1,639	1,163	1,251	1,170	935	6,960
Cowley	0	594	0	1,341	320	696	2,949
Crawford	0	891	0	1,005	90	90	2,075
Decatur	1,367	7,245	0	1,528	470	220	10,831
Dickinson	74	2,857	212	1,625	123	100	4,991
Doniphan	0	144	0	90	0	12	246
Douglas	0	1,719	0	694	0	174	2,587
Edwards	4,362	59,484	1,921	24,908	6,133	2,193	99,002
Elk	0	0	0	0	0	0	0
Ellis	422	675	289	80	184	366	2,016
Ellsworth	11	160	63	222	138	2	594
Finney	53,586	96,704	4,324	9,540	44,943	8,042	217,138
Ford	4,416	50,031	3,788	12,036	15,229	2,572	88,072
Franklin	0	846	0	337	0	82	1,265
Geary	231	2,283	0	1,857	181	339	4,891
Gove	322	14,329	779	1,491	2,471	985	20,376
Graham	844	8,812	474	2,965	967	528	14,590
Grant	6,362	57,884	3,337	1,036	29,944	5,839	104,401
Gray	24,140	89,429	4,086	7,298	34,084	8,952	167,989
Greeley	122	15,591	963	0	4,337	906	21,918
Greenwood	0	75	0	0	0	53	128
Hamilton	7,828	11,184	2,466	126	6,714	1,803	30,121
Harper	320	511	0	1,071	119	184	2,206
Harvey	291	18,585	550	15,044	1,391	360	36,221
Haskell	14,267	108,476	12,930	8,984	37,290	3,844	185,791
Hodgeman	654	16,127	1,441	1,284	6,742	331	26,580
Jackson	0	155	0	105	0	40	300
Jefferson	0	2,678	0	2,178	0	210	5,066
Jewell	253	2,231	0	1,344	0	0	3,828

TABLE 7
ESTIMATED NUMBER OF ACRES IRRIGATED BY CROP AND COUNTY ^{a/}
KANSAS, 2011

County	Alfalfa	Corn	Grain Sorghum	Soybeans	Wheat	Other Crops	Total
Johnson	0	404	0	0	8	3,479	3,890
Kearny	32,388	42,956	1,186	4,988	9,541	7,931	98,991
Kingman	0	7,331	962	4,482	2,402	769	15,946
Kiowa	2,665	29,889	1,285	13,835	4,218	1,436	53,329
Labette	0	310	0	110	0	67	487
Lane	0	8,992	2,027	1,795	4,227	552	17,592
Leavenworth	0	397	0	387	0	347	1,130
Lincoln	91	217	20	156	846	72	1,401
Linn	0	135	0	0	0	85	220
Logan	130	5,434	196	171	2,271	454	8,656
Lyon	0	181	0	0	0	72	253
Marion	70	1,653	4	661	75	276	2,738
Marshall	0	1,768	0	867	0	47	2,682
McPherson	566	17,938	817	13,656	2,076	387	35,440
Meade	2,020	91,515	4,142	5,779	20,446	2,479	126,381
Miami	0	0	0	165	0	272	437
Mitchell	732	4,080	0	2,204	111	504	7,631
Montgomery	0	458	0	541	0	182	1,180
Morris	0	146	0	85	0	8	239
Morton	100	27,184	2,710	341	15,162	2,217	47,713
Nemaha	0	65	0	135	0	160	360
Neosho	0	85	0	0	0	40	125
Ness	342	1,488	927	345	982	157	4,241
Norton	881	7,527	59	4,333	1,610	73	14,484
Osage	0	0	0	284	0	90	374
Osborne	125	1,848	286	1,026	0	114	3,398
Ottawa	96	1,848	137	2,604	139	45	4,870
Pawnee	7,035	39,221	2,925	19,645	8,375	1,495	78,695
Phillips	570	4,748	0	1,729	13	10	7,069
Pottawatomie	69	9,027	0	8,199	60	472	17,828
Pratt	3,086	51,773	2,627	16,868	5,575	5,737	85,666
Rawlins	2,766	12,222	280	1,538	959	698	18,462
Reno	1,802	27,296	2,403	17,555	5,531	2,846	57,433
Republic	924	18,225	89	11,133	372	465	31,209
Rice	366	12,997	156	7,257	1,610	290	22,676
Riley	202	2,625	122	1,785	0	661	5,395
Rooks	571	515	225	361	189	91	1,953
Rush	1,049	4,181	2,132	3,381	378	430	11,552
Russell	0	0	0	0	15	6	21
Saline	558	1,588	281	1,545	385	648	5,005
Scott	1,307	33,089	1,069	2,678	10,713	504	49,359
Sedgwick	465	18,532	1,052	16,012	1,418	4,952	42,431
Seward	5,823	73,350	3,793	10,513	26,105	7,004	126,588
Shawnee	0	10,372	0	5,879	0	489	16,740
Sheridan	1,856	55,390	1,292	13,874	3,948	1,394	77,753

TABLE 7
ESTIMATED NUMBER OF ACRES IRRIGATED BY CROP AND COUNTY ^{a/}
KANSAS, 2011

County	Alfalfa	Corn	Grain Sorghum	Soybeans	Wheat	Other Crops	Total
Sherman	1,488	88,842	661	4,208	9,704	8,680	113,581
Smith	101	1,773	79	1,022	198	19	3,192
Stafford	2,930	43,962	1,715	25,257	7,271	2,072	83,207
Stanton	940	64,981	9,614	527	25,795	2,173	104,030
Stevens	3,055	128,357	3,328	5,063	22,731	9,355	171,889
Sumner	0	5,354	200	4,090	300	444	10,388
Thomas	916	70,473	440	15,140	9,800	3,604	100,373
Trego	668	2,210	533	1,196	227	508	5,341
Wabaunsee	73	4,149	0	3,930	47	185	8,385
Wallace	143	39,496	458	80	8,529	2,432	51,139
Washington	130	6,321	29	4,406	63	34	10,983
Wichita	1,790	37,580	1,790	517	23,985	1,414	67,076
Wilson	0	665	0	805	0	27	1,497
Woodson	0	114	0	0	0	0	114
Wyandotte	0	0	0	256	0	176	432

^{a/} The estimated number of acres of each type of crop was determined by adding single-crop acreages to prorated multiple and double-crop acreages. Acres reported as combinations of multiple specified crops were divided equally among the number of crops indicated. Unspecified crop acres were assigned to major and other crop types in the proportion that these crops were specified in the same county. Double-crop acres were assigned to 20% corn, 15% grain sorghum, 20% soybeans, 40% wheat, and 5% other. State totals by crop type not shown on county table due to rounding error. See Table 6 for State totals of estimated acres by crop type.

**TABLE 8
WATER USE , ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY TYPE OF IRRIGATION SYSTEM BY REGIONAL LOCATION
KANSAS, 2011**

Regional Location	Flood			Center Pivot			Center Pivot with Drop Nozzles			Other Sprinkler			Combination Center Pivot and Flood			Subsurface Drip and Comb. Drip and Other			Other or Unspecified		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Western Kansas																					
GMD No. 1	15,282	12,510	1.22	9,163	10,351	0.89	163,560	160,075	1.02	244	529	0.46	17,501	15,144	1.16	2,091	1,595	1.31	452	407	1.11
GMD No. 3	41,503	26,246	1.58	235,558	153,340	1.54	1,759,320	1,093,400	1.61	5,229	3,540	1.48	234,510	161,796	1.45	15,757	9,328	1.69	4,352	3,223	1.35
GMD No. 4	3,151	2,440	1.29	30,173	27,196	1.11	381,240	338,183	1.13	707	857	0.82	10,631	10,641	1	1,334	1,127	1.18	1,417	1,410	1.01
Remainder	18,052	13,720	1.32	9,356	8,257	1.13	71,102	69,108	1.03	1,593	1,713	0.93	20,975	14,790	1.42	1,526	1,294	1.18	114	182	0.62
Central Kansas																					
GMD No. 2	24,855	17,427	1.43	14,753	11,587	1.27	116,632	89,220	1.31	1,520	1,474	1.03	9,983	8,320	1.2	6,730	5,998	1.12	255	207	1.23
GMD No. 5	21,845	17,414	1.25	63,012	43,607	1.44	564,462	383,295	1.47	810	714	1.13	13,025	11,402	1.14	5,479	4,205	1.3	0	0	0.00
Remainder	32,682	35,783	0.91	24,994	37,589	0.66	121,318	142,770	0.85	6,191	6,031	1.03	9,905	16,974	0.58	1,406	2,062	0.68	312	824	0.38
Eastern Kansas																					
All Eastern KS	6,398	8,024	0.8	8,999	18,957	0.47	20,797	39,352	0.53	4,356	5,497	0.79	1,828	2,818	0.65	1,100	664	1.66	275	479	0.57
State Total	163,767	133,564	1.23	396,009	310,884	1.27	3,198,431	2,315,403	1.38	20,651	20,355	1.01	318,358	241,885	1.32	35,423	26,273	1.35	7,177	6,732	1.07

TABLE 9
TOTAL WATER USE, ACRES IRRIGATED , AND PERCENT BY SYSTEM TYPE AND REGIONAL LOCATION
KANSAS, 2011

	Percent of acres irrigated by system type							
	Total Acres Irrigated	Flood	Center Pivot	Pivot with Drop Nozzles	Other Sprinkler	Comb. Pivot + Flood	Subsurface Drip and Comb. Drip + Other	Other or Unspecified
Western Kansas								
Western KS GMD No. 1	200,611	6.2%	5.2%	79.8%	0.3%	7.6%	0.0%	0.2%
Southwest KS GMD No. 3	1,450,873	1.8%	10.6%	75.4%	0.2%	11.2%	0.0%	0.2%
Northwest KS GMD No. 4	381,854	0.6%	7.1%	88.6%	0.2%	2.8%	0.0%	0.4%
Remainder of Western KS	109,064	12.6%	7.6%	63.4%	1.6%	13.6%	0.0%	0.2%
Central Kansas								
Equus Beds GMD No. 2	134,233	13.0%	8.6%	66.5%	1.1%	6.2%	0.0%	0.2%
Big Bend GMD No. 5	460,637	3.8%	9.5%	83.2%	0.2%	2.5%	0.0%	0.0%
Remainder of Central KS	242,033	14.8%	15.5%	59.0%	2.5%	7.0%	0.0%	0.3%
Eastern Kansas								
All Eastern Kansas	75,791	10.6%	25.0%	51.9%	7.3%	3.7%	0.0%	0.6%
State Total	3,055,096	0.0%	0.1%	0.8%	0.0%	0.1%	0.0%	0.0%
Percent of water use by system type								
	Total Water Use (AF)	Flood	Center Pivot	Pivot with Drop Nozzles	Other Sprinkler	Comb. Pivot + Flood	Subsurface Drip and Comb. Drip + Other	Other or Unspecified
Western Kansas								
Western KS GMD No. 1	208,294	7.3%	4.4%	78.5%	0.1%	8.4%	1.0%	0.2%
Southwest KS GMD No. 3	2,296,229	1.8%	10.3%	76.6%	0.2%	10.2%	0.7%	0.2%
Northwest KS GMD No. 4	428,653	0.7%	7.0%	88.9%	0.2%	2.5%	0.3%	0.3%
Remainder of Western KS	122,717	14.7%	7.6%	57.9%	1.3%	17.1%	1.2%	0.1%
Central Kansas								
Equus Beds GMD No. 2	174,728	14.2%	8.4%	66.8%	0.9%	5.7%	3.9%	0.1%
Big Bend GMD No. 5	668,633	3.3%	9.4%	84.4%	0.1%	1.9%	0.8%	0.0%
Remainder of Central KS	196,809	16.6%	12.7%	61.6%	3.1%	5.0%	0.7%	0.2%
Eastern Kansas								
All Eastern Kansas	43,753	14.6%	20.6%	47.5%	10.0%	4.2%	2.5%	0.6%
State Total	4,139,815	4.0%	9.6%	77.3%	0.5%	7.7%	0.9%	0.2%

TABLE 10
WATER USE , ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY TYPE OF IRRIGATION SYSTEM BY COUNTY
KANSAS, 2011

County	Flood			Center Pivot			Center Pivot with Drop Nozzles			Other Sprinkler			Combination Center Pivot and Flood			Subsurface Drip and Comb. Drip & Other			Other or Unspecified		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Allen	283	160	1.77	260	520	0.50	0	0	0.00	47	294	0.16	0	0	0.00	0	0	0.00	0	0	0.00
Anderson	129	115	1.13	195	313	0.62	833	1,550	0.54	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Atchison	0	0	0.00	0	0	0.00	0	0	0.00	42	86	0.49	0	0	0.00	0	0	0.00	17	138	0.12
Barber	463	192	2.41	671	460	1.46	6,267	3,981	1.57	8	7	1.07	0	0	0.00	0	0	0.00	0	0	0.00
Barton	8,514	6,644	1.28	2,886	2,609	1.11	32,656	22,931	1.42	228	196	1.16	3,746	3,731	1.00	697	589	1.18	0	0	0.00
Bourbon	0	0	0.00	11	90	0.12	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Brown	0	0	0.00	233	976	0.24	607	2,100	0.29	11	20	0.55	0	0	0.00	10	4	2.42	0	0	0.00
Butler	0	0	0.00	24	47	0.52	479	1,168	0.41	396	437	0.91	0	0	0.00	0	3	0.10	44	50	0.88
Chase	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Chautauqua	0	0	0.00	5	20	0.24	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Cherokee	0	0	0.00	38	133	0.29	0	0	0.00	12	10	1.22	335	579	0.58	0	0	0.00	0	0	0.00
Cheyenne	172	158	1.09	2,896	2,719	1.07	49,982	41,953	1.19	468	341	1.37	595	718	0.83	123	133	0.92	83	62	1.34
Clark	339	221	1.53	0	0	0.00	5,783	4,578	1.26	1	28	0.04	0	0	0.00	0	0	0.00	3	35	0.09
Clay	1,990	3,735	0.53	758	2,321	0.33	6,452	15,575	0.41	47	55	0.86	1,032	2,477	0.42	48	165	0.29	55	120	0.46
Cloud	2,507	3,716	0.67	577	1,598	0.36	6,433	14,588	0.44	47	94	0.50	1,757	3,604	0.49	113	260	0.43	1	25	0.04
Coffey	25	38	0.66	14	39	0.36	410	794	0.52	7	11	0.66	0	0	0.00	0	0	0.00	0	0	0.00
Comanche	33	120	0.28	2,334	1,383	1.69	8,148	5,447	1.50	17	10	1.74	0	0	0.00	0	0	0.00	0	0	0.00
Cowley	0	30	0.02	692	851	0.81	1,888	1,823	1.04	189	231	0.82	0	0	0.00	0	0	0.00	7	14	0.48
Crawford	0	0	0.00	559	1,232	0.45	232	753	0.31	71	90	0.79	0	0	0.00	0	0	0.00	0	0	0.00
Decatur	831	727	1.14	1,383	1,286	1.08	6,833	7,708	0.89	102	233	0.44	810	836	0.97	0	0	0.00	56	41	1.37
Dickinson	305	157	1.95	897	1,406	0.64	2,121	2,937	0.72	147	164	0.90	207	216	0.96	0	1	0.03	20	110	0.18
Doniphan	0	0	0.00	5	144	0.03	9	90	0.10	0	0	0.00	0	0	0.00	1	12	0.08	0	0	0.00
Douglas	7	12	0.58	790	1,179	0.67	609	1,278	0.48	27	90	0.30	0	2	0.12	2	26	0.08	0	0	0.00
Edwards	601	474	1.27	9,881	7,204	1.37	129,624	90,405	1.43	87	42	2.07	89	85	1.05	898	792	1.13	0	0	0.00
Elk	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Ellis	520	440	1.18	221	231	0.95	821	839	0.98	298	283	1.05	197	203	0.97	1	20	0.03	0	0	0.00
Ellsworth	96	127	0.76	56	230	0.24	149	187	0.80	21	50	0.41	0	0	0.00	0	0	0.00	0	0	0.00
Finney	16,390	9,922	1.65	23,721	16,233	1.46	285,549	174,548	1.64	1,708	1,186	1.44	23,563	14,323	1.65	1,401	926	1.51	0	0	0.00

TABLE 10
WATER USE , ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY TYPE OF IRRIGATION SYSTEM BY COUNTY
KANSAS, 2011

County	Flood			Center Pivot			Center Pivot with Drop Nozzles			Other Sprinkler			Combination Center Pivot and Flood			Subsurface Drip and Comb. Drip & Other			Other or Unspecified		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Ford	1,480	1,087	1.36	8,787	6,365	1.38	110,691	76,845	1.44	518	645	0.80	2,787	1,892	1.47	1,491	1,113	1.34	134	125	1.07
Franklin	0	0	0.00	296	792	0.37	248	424	0.58	0	0	0.00	0	0	0.00	668	49	####	0	0	0.00
Geary	623	500	1.25	273	539	0.51	1,884	3,294	0.57	61	112	0.55	252	346	0.73	50	100	0.50	0	0	0.00
Gove	1,195	925	1.29	1,374	992	1.38	16,320	16,213	1.01	15	64	0.23	2,320	1,965	1.18	31	85	0.36	125	132	0.94
Graham	0	0	0.00	2,897	3,050	0.95	8,701	10,876	0.80	5	54	0.09	773	565	1.37	0	0	0.00	25	45	0.56
Grant	3,567	2,375	1.50	14,460	10,338	1.40	130,336	80,195	1.63	1,319	795	1.66	11,497	10,267	1.12	149	71	2.10	199	360	0.55
Gray	3,838	2,744	1.40	55,662	35,725	1.56	181,980	123,030	1.48	68	65	1.04	10,148	4,772	2.13	3,052	1,653	1.85	0	0	0.00
Greeley	212	85	2.50	425	619	0.69	21,744	21,101	1.03	87	80	1.08	267	33	8.08	0	0	0.00	0	0	0.00
Greenwood	16	45	0.36	20	43	0.47	21	40	0.53	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Hamilton	3,175	2,375	1.34	3,800	2,570	1.48	29,224	20,075	1.46	2	43	0.04	8,984	5,058	1.78	0	0	0.00	0	0	0.00
Harper	131	88	1.49	483	492	0.98	1,836	1,532	1.20	23	50	0.47	0	0	0.00	15	44	0.33	0	0	0.00
Harvey	8,468	5,958	1.42	2,644	2,105	1.26	30,370	24,102	1.26	363	516	0.70	2,190	1,949	1.12	2,094	1,591	1.32	0	0	0.00
Haskell	3,862	2,854	1.35	19,479	12,763	1.53	183,839	120,874	1.52	191	89	2.15	58,614	46,511	1.26	4,820	2,700	1.79	0	0	0.00
Hodgeman	5,943	3,822	1.55	2,690	2,013	1.34	16,125	13,479	1.20	78	55	1.43	8,446	6,711	1.26	533	500	1.07	0	0	0.00
Jackson	0	0	0.00	0	0	0.00	106	260	0.41	26	40	0.66	0	0	0.00	0	0	0.00	0	0	0.00
Jefferson	382	528	0.72	560	917	0.61	1,734	3,231	0.54	57	53	1.07	133	186	0.72	0	0	0.00	30	151	0.20
Jewell	233	438	0.53	514	1,377	0.37	546	1,350	0.40	0	0	0.00	244	663	0.37	0	0	0.00	0	0	0.00
Johnson	27	2	13.26	816	1,603	0.51	50	60	0.84	2,297	2,094	1.10	0	0	0.00	105	73	1.43	121	58	2.08
Kearny	4,840	3,766	1.29	15,414	8,940	1.72	120,479	69,889	1.72	35	32	1.10	22,473	15,888	1.41	0	0	0.00	519	476	1.09
Kingman	0	0	0.00	2,566	1,700	1.51	21,204	14,184	1.49	326	62	5.26	0	0	0.00	0	0	0.00	0	0	0.00
Kiowa	102	134	0.76	8,157	5,414	1.51	72,596	46,737	1.55	29	120	0.24	865	637	1.36	475	287	1.66	0	0	0.00
Labette	0	0	0.00	74	217	0.34	184	220	0.84	7	50	0.14	0	0	0.00	0	0	0.00	0	0	0.00
Lane	2,263	1,985	1.14	1,489	1,446	1.03	11,091	9,724	1.14	0	0	0.00	5,021	3,663	1.37	646	667	0.97	94	107	0.88
Leavenworth	0	0	0.00	236	636	0.37	116	289	0.40	170	205	0.83	0	0	0.00	0	0	0.00	0	0	0.00
Lincoln	22	64	0.35	0	0	0.00	547	1,332	0.41	3	5	0.51	0	0	0.00	0	0	0.00	0	0	0.00
Linn	0	0	0.00	35	35	0.99	45	135	0.33	66	50	1.32	0	0	0.00	0	0	0.00	0	0	0.00
Logan	54	93	0.58	768	835	0.92	7,603	7,198	1.06	7	12	0.55	0	0	0.00	5	3	1.77	308	515	0.60
Lyon	0	0	0.00	0	0	0.00	129	181	0.71	33	72	0.46	0	0	0.00	0	0	0.00	0	0	0.00

TABLE 10
WATER USE , ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY TYPE OF IRRIGATION SYSTEM BY COUNTY
KANSAS, 2011

County	Flood			Center Pivot			Center Pivot with Drop Nozzles			Other Sprinkler			Combination Center Pivot and Flood			Subsurface Drip and Comb. Drip & Other			Other or Unspecified		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Marion	167	170	0.98	853	1,273	0.67	774	1,082	0.72	118	108	1.10	0	0	0.00	55	105	0.52	0	0	0.00
Marshall	0	0	0.00	111	459	0.24	960	2,176	0.44	21	27	0.76	0	0	0.00	0	0	0.00	17	20	0.87
McPherson	9,380	6,630	1.41	4,442	3,593	1.24	19,890	17,621	1.13	91	121	0.75	3,549	3,267	1.09	4,450	4,201	1.06	12	7	1.71
Meade	4,188	1,987	2.11	12,346	6,737	1.83	159,593	86,474	1.85	415	147	2.82	51,255	29,828	1.72	1,672	1,048	1.60	271	160	1.69
Miami	0	0	0.00	10	120	0.09	7	60	0.12	123	227	0.54	0	0	0.00	0	0	0.00	21	30	0.69
Mitchell	1,975	2,055	0.96	229	510	0.45	2,003	4,063	0.49	0	0	0.00	637	723	0.88	0	0	0.00	4	280	0.01
Montgomery	0	0	0.00	0	0	0.00	177	770	0.23	96	182	0.53	46	228	0.20	0	0	0.00	0	0	0.00
Morris	123	159	0.77	56	72	0.78	0	0	0.00	0	8	0.04	0	0	0.00	0	0	0.00	0	0	0.00
Morton	203	243	0.83	13,313	10,187	1.31	47,696	34,543	1.38	176	89	1.98	2,175	2,272	0.96	3	7	0.44	1,113	372	2.99
Nemaha	0	0	0.00	8	70	0.11	3	130	0.02	91	138	0.66	0	0	0.00	0	0	0.00	36	22	1.65
Neosho	0	0	0.00	0	0	0.00	61	85	0.71	32	40	0.79	0	0	0.00	0	0	0.00	0	0	0.00
Ness	3,187	2,007	1.59	464	239	1.94	1,856	1,664	1.12	0	0	0.00	120	84	1.43	298	244	1.22	2	3	0.77
Norton	2,280	2,646	0.86	547	878	0.62	4,568	9,790	0.47	427	496	0.86	587	549	1.07	129	125	1.04	0	0	0.00
Osage	4	50	0.09	0	0	0.00	49	234	0.21	58	90	0.65	0	0	0.00	0	0	0.00	0	0	0.00
Osborne	2,105	2,112	1.00	101	176	0.57	448	819	0.55	0	0	0.00	69	152	0.45	102	139	0.74	0	0	0.00
Ottawa	87	211	0.41	624	1,035	0.60	1,816	3,280	0.55	39	61	0.64	145	281	0.51	0	0	0.00	2	2	0.83
Pawnee	9,532	8,634	1.10	2,571	2,242	1.15	77,324	59,944	1.29	26	21	1.24	7,529	6,681	1.13	1,445	1,173	1.23	0	0	0.00
Phillips	1,299	1,386	0.94	661	872	0.76	2,894	3,834	0.75	28	33	0.85	594	725	0.82	226	214	1.06	9	5	1.77
Pottawatomie	1,769	2,216	0.80	2,047	3,935	0.52	5,903	9,888	0.60	142	366	0.39	786	1,174	0.67	195	249	0.78	0	0	0.00
Pratt	1,107	516	2.15	22,008	14,259	1.54	107,848	69,400	1.55	143	118	1.21	221	120	1.84	1,820	1,253	1.45	0	0	0.00
Rawlins	429	350	1.23	987	1,241	0.80	15,647	15,946	0.98	293	571	0.51	310	354	0.88	0	0	0.00	0	0	0.00
Reno	2,162	1,566	1.38	8,435	6,302	1.34	67,958	47,631	1.43	360	469	0.77	1,061	1,005	1.06	174	255	0.68	252	205	1.23
Republic	4,269	6,013	0.71	4,338	9,483	0.46	5,774	11,728	0.49	11	48	0.23	1,922	3,901	0.49	13	36	0.37	0	0	0.00
Rice	827	582	1.42	2,841	2,040	1.39	27,241	19,876	1.37	84	68	1.24	170	110	1.55	0	0	0.00	0	0	0.00
Riley	816	1,075	0.76	467	753	0.62	1,850	2,858	0.65	357	650	0.55	0	0	0.00	30	59	0.52	0	0	0.00
Rooks	21	36	0.58	137	222	0.62	1,400	1,695	0.83	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Rush	7,515	5,748	1.31	183	289	0.63	5,151	4,392	1.17	147	200	0.74	743	789	0.94	151	134	1.13	0	0	0.00
Russell	0	0	0.00	0	0	0.00	0	0	0.00	5	6	0.86	0	0	0.00	0	0	0.00	7	15	0.48

TABLE 10
WATER USE , ACRES IRRIGATED, AND AVERAGE APPLICATION RATE BY TYPE OF IRRIGATION SYSTEM BY COUNTY
KANSAS, 2011

County	Flood			Center Pivot			Center Pivot with Drop Nozzles			Other Sprinkler			Combination Center Pivot and Flood			Subsurface Drip and Comb. Drip & Other			Other or Unspecified		
	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A	Water Use (AF)	Acres Irrig.	AF/A
Saline	947	876	1.08	172	237	0.72	2,580	2,908	0.89	576	411	1.40	383	418	0.92	96	116	0.83	3	39	0.08
Scott	7,165	6,029	1.19	1,502	1,535	0.98	34,049	33,412	1.02	64	54	1.19	7,890	7,657	1.03	951	672	1.41	0	0	0.00
Sedgwick	9,394	6,758	1.39	4,871	4,760	1.02	28,891	24,596	1.17	3,778	2,908	1.30	4,013	2,915	1.38	315	340	0.93	150	154	0.97
Seward	907	609	1.49	26,504	15,931	1.66	168,607	94,579	1.78	411	268	1.53	22,953	15,201	1.51	0	0	0.00	0	0	0.00
Shawnee	2,967	3,749	0.79	1,819	3,990	0.46	3,863	7,569	0.51	619	920	0.67	246	341	0.72	45	111	0.40	32	60	0.54
Sheridan	358	490	0.73	7,921	7,072	1.12	65,868	65,700	1.00	52	160	0.32	3,570	3,625	0.98	342	286	1.19	475	420	1.13
Sherman	1,856	1,161	1.60	9,933	8,500	1.17	124,771	101,356	1.23	321	268	1.20	1,790	1,903	0.94	424	348	1.22	99	45	2.20
Smith	628	988	0.64	123	471	0.26	517	1,305	0.40	40	64	0.62	63	285	0.22	70	79	0.89	0	0	0.00
Stafford	1,912	1,210	1.58	14,241	9,310	1.53	112,184	71,664	1.57	230	209	1.10	1,024	703	1.46	144	111	1.30	0	0	0.00
Stanton	1,202	478	2.52	13,123	10,346	1.27	104,317	75,600	1.38	131	65	2.02	18,829	15,251	1.23	3,168	1,810	1.75	761	480	1.59
Stevens	1,074	281	3.82	30,324	17,980	1.69	252,796	146,478	1.73	257	159	1.61	10,337	5,741	1.80	0	0	0.00	1,355	1,250	1.08
Sumner	0	0	0.00	710	544	1.31	10,624	9,516	1.12	130	125	1.04	0	0	0.00	132	198	0.67	2	5	0.41
Thomas	39	63	0.62	3,783	3,551	1.07	104,592	93,659	1.12	106	57	1.86	2,702	2,580	1.05	409	272	1.50	302	191	1.58
Trego	440	322	1.37	1,992	1,676	1.19	2,895	2,735	1.06	423	188	2.25	478	333	1.44	2	4	0.58	33	83	0.40
Wabaunsee	298	503	0.59	707	1,255	0.56	3,891	6,248	0.62	23	31	0.73	282	308	0.91	0	40	0.00	0	0	0.00
Wallace	1,053	671	1.57	1,723	2,210	0.78	52,611	45,046	1.17	0	0	0.00	3,421	2,522	1.36	478	370	1.29	377	320	1.18
Washington	508	1,082	0.47	1,061	4,373	0.24	1,222	4,661	0.26	67	157	0.43	210	710	0.30	0	0	0.00	0	0	0.00
Wichita	5,446	4,440	1.23	4,546	5,167	0.88	49,075	55,498	0.88	93	395	0.23	904	1,269	0.71	580	307	1.89	0	0	0.00
Wilson	491	606	0.81	107	120	0.89	373	560	0.67	59	111	0.53	0	0	0.00	74	100	0.74	0	0	0.00
Woodson	0	0	0.00	0	0	0.00	94	114	0.82	0	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00
Wyandotte	0	0	0.00	45	119	0.37	84	113	0.74	217	200	1.09	0	0	0.00	0	0	0.00	0	0	0.00
State Total	163,767	133,564	1.23	396,009	310,884	1.27	3,198,431	2,315,403	1.38	20,651	20,355	1.01	318,358	241,885	1.32	35,423	26,273	1.35	7,177	6,732	1.07