2025 OCWP
Oklahoma Comprehensive Water Plan

Legal Availability Analysis

March 2026 / FINAL

OKLAHOMA Water Resources Board

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Abbreviations

AFY	acre-feet per year
EPS	equal proportionate share
GIS	geographic information system
GRDA	Grand River Dam Authority
MAY	maximum annual yield
OCWP	Oklahoma Comprehensive Water Plan
OWRB	Oklahoma Water Resources Board
PDL	Permitted Dedicated Lands
Regular Permit	Long-term Surface Water Permit or Vested Right

SECTION 1 INTRODUCTION

In 1974, the Oklahoma Legislature enacted 82 OK Statute §1086.2(1), which requires that the Oklahoma Water Resources Board (OWRB) decennially develop a strategic guide for managing the state's water resources over the next 50 years. The Oklahoma Comprehensive Water Plan (OCWP) was first published in 1974, with subsequent updates in 1980, 1995, and 2012. The Oklahoma Legislature appropriated funds for the current update due in 2025.

This Legal Availability Analysis report summarizes the methodology and results of the legal (or permit) water supply availability analysis. This analysis is prepared at the basin level. The report describes both stream water (or surface water) and groundwater legal availability. The legal availability analysis is based on Oklahoma current water law and policy.

Physical water supply availability analysis is addressed separately and documented in the Physical Water Supply Availability report.

The physical and legal availability of water are related but different; a user may have the right to water at a specific diversion location, but hydrologic or other conditions may lead to a lack of physical availability. Similarly, water may be physically present at a legally designated diversion point but that water may be obligated to downstream users or more senior users in the immediate vicinity, leaving a lack of legally available supply. The methodologies for the analysis of physical and legal availability are consequently also related but different; and just as changing hydrological conditions may alter the physical availability of water in the future, so changing statutory conditions may alter the legal availability of water in the future. More information on the differences and similarities between physical and legal supply availability are discussed in Appendix A.

The legislation requiring development of the OCWP also calls for OWRB to define and quantify the amount of "Excess and Surplus Water" in the state (82 OK Statute §1086.1). OWRB is currently developing updated calculations of Excess and Surplus Water.

SECTION 2 SURFACE WATER LEGAL AVAILABILITY

This section summarizes the analysis of surface water legal availability in Oklahoma relative to current and forecasted 2075 demands (Appendix B). Included is a brief description of the OWRB methodology for assessment of suitable legal availability for individual permit applications in line with the current statutory framework in Oklahoma, how OWRB's approach was modified to assess basin-level and statewide legal availability, and the results of the analysis.

2.1 Regulatory Framework for Surface Water in Oklahoma

The Oklahoma Water Resources Board manages permitting of "stream water" or surface water except in the Grand River Region. The Grand River basin is managed by the Grand River Dam Authority (GRDA), which has full authority over allocating stream water in the region to permittees and is not under the purview of OWRB, though some state authorized stream water permits exist in the basin, existing prior to GRDA authority. Legal availability of water for the Grand River Region is shown in this report for comparison purposes only.

In 2016, the State of Oklahoma, the Choctaw Nation of Oklahoma, the Chickasaw Nation, and the City of Oklahoma City reached a water rights settlement involving Sardis Lake and the Kiamichi River Basin. In

2023, the Oklahoma Supreme Court decided Leo v OWRB, which resulted in the settlement act taking effect. "The 2016 Water Settlement Agreement calls on Oklahoma City to engage in conservation measures before it may utilize water from Sardis Lake or the Kiamichi River. Additionally, the amount of water that can be taken by Oklahoma City will be based on the Oklahoma Department of Wildlife Conservation's lake level management plan so that environmental and recreational needs in southeast Oklahoma are not diminished" (Pappas, June 2024). Basins that are wholly or partially impacted by the 2016 Water Settlement Agreement are identified in the tables and figures.

OWRB manages permitting of surface water, which is defined as water in a "definite stream" (a watercourse in a definite, natural channel, with defined beds and banks, originating from a definite source or sources of supply) and may be intermittent or irregular flow. Stream water is considered publicly owned and subject to appropriation by the OWRB.

Oklahoma's water law is a combination of the riparian water rights scheme found predominantly in the Eastern United States and the prior appropriation water rights doctrine found predominantly in the Western United States. OWRB issues permits for specified volumes of surface water at specified diversion locations, known as "water rights." New water rights may not interfere with existing permits, domestic users (discussed in further detail below), and yields from reservoirs, which are critical to both electrical and water supply.

The OWRB shall issue permits if the following conditions are met:

1. Unappropriated water is available in the amount applied for.
2. There is a current or future need for the water.
3. Use is beneficial.
4. Use does not interfere with domestic or existing uses.
5. Use does not interfere with uses within the stream system of origin.

The OWRB has five types of surface water permits briefly described below. More information is available on OWRB's Water Permitting website.

- Long-term Surface Water Permit or Vested Right (Regular Permit). Authorizes year-round appropriation of surface water.
- Provisional Temporary Surface Water Permit. Authorizes the appropriation of surface water for up to 90 days. The provisional temporary permit is nonrenewable and is the only permit that does not require a public hearing and subsequent approval by the OWRB.
- Seasonal Surface Water Permit. Authorizes the appropriation of surface water for specified periods.
- Temporary Surface Water Permit. Authorizes the appropriation of surface water for up to 3 months.
- Term Surface Water Permit. Authorizes the appropriation of surface water for a given number of years.

Surface water permits are usually conditioned upon timely construction of works and full use of the annually authorized amount within a seven-year period. The OWRB may place certain conditions upon the permit to protect existing rights and uses and current stream flows and to address other issues of importance.

Domestic users in Oklahoma are those individuals using surface water (or groundwater) household purposes, for farm and domestic animals up to the normal grazing capacity of the land whether or not the animals are actually owned by such natural individual or family, and for the irrigation of land not exceeding a total of 3 acres in area for the growing of gardens, orchards, and lawns. Under certain statutory limits, these uses do not require permits from OWRB.

2.2 Existing OWRB Methodology for Evaluating Surface Water Available for Appropriation

The OWRB has a general methodology for the evaluation of surface water available for appropriation that is applied whenever a regular stream water permit application is reviewed. For total water supply, OWRB uses a statewide runoff "raster," a gridded geospatial dataset, developed by the United States Geological Survey, which has the average (mean) runoff for each cell based on an analysis of 1940 to 2007 observations. Generally, OWRB's methodology to determine if water is available for appropriation is an analysis of available water at the diversion point. The first step is to determine if the requested amount of water is available at the diversion point (based on upstream flows and permits). The second step evaluates whether the permit request will negatively downstream permits. For example, if upstream availability is greater than downstream use, no over-appropriation or interference with existing users is anticipated. The third step is applied to applications that seek to transfer water to a different basin than where the diversion point is located (origin basin). In this step, OWRB factors in future demand projections in the origin basin (State Title 785:20-5-6) and an in-basin reserve amount to determine if the water is available for appropriation. The in-basin reserve was calculated as 10 percent of runoff with domestic use and compact reserve requirements subtracted. Oklahoma is a party to four interstate stream compacts, which are state and federally approved apportionment of water flowing into and out of Oklahoma, with each compact containing specific provisions of how water is apportioned. OWRB includes compact obligations for statutorily required surface water availability estimations.

This methodology forms the basis for the statewide analysis. Some modifications to this process exist for special situations such as withdrawals from federally owned reservoirs, but these special situations were not incorporated into the 2025 OCWP analysis and are not detailed further. OWRB has developed a custom geographic information system (GIS) toolbox for implementation of this methodology, and it was the outputs from this toolbox were incorporated into the analysis of surface water available for appropriation in the 2025 OCWP. OWRB provided with Basin Runoff, Total Set Asides, Interstate Compact Inflows, and In-Basin Reserve amounts (Table 1) in January 2025. Set asides include domestic use and existing appropriative uses (active permits, pending permit applications, reservoir dependable yields, and normal storage in Natural Resources Conservation Service ponds). These values are based on the contributing area, permit database, unappropriated reservoir yield, Compact reserves (flow required to be delivered from Oklahoma to downstream states), which are tabulated in Appendix C – Supplemental Surface Water Information from OWRB.

Table 1 Basin Runoff, Total Set Asides, Compact Inflows, and In-Basin Reserve Values

OCWP Basin ID	Basin Name	OWRB Stream System	Basin Runoff (AYF)	Total Set Asides (AFY)[3]	Compact Inflows (AFY)	In-Basin Reserve (AFY)
1[1]	Red River Mainstem (To Kiamichi River)	1-1	397,210	174,057		22,871
2[1]	Little River (McCurtain County) - 1	1-2	413,833	422,009		23,995
3[1]	Little River (McCurtain County) - 2	1-2	1,482,672	391,771		129,413
4[1]	Little River (McCurtain County) - 3	1-2	763,042	233,310		72,744
5[1]	Kiamichi River - 1	1-3	309,116	1,373,929		26,392
6[1]	Kiamichi River - 2	1-3	1,295,217	200,530		126,060
7[1]	Muddy Boggy River - 1	1-4-1	224,400	474,769		16,948
8[1]	Muddy Boggy River - 2	1-4-1	593,433	529,906		56,733
9[1]	Clear Boggy Creek	1-4-2	501,295	53,124		47,723
10[1]	Red River Mainstem (To Blue River)	1-5	154,732	599,814		8,768
11[1]	Blue River - 1	1-6	115,385	21,828		9,454
12[1]	Blue River - 2	1-6	216,378	35,300		20,517
13[1]	Red River Mainstem (To Washita)	1-7	139,400	103,798		9,862
14[1]	Lower Washita	1-8-1	655,204	231,027		61,032
15[1]	Middle Washita - 1	1-8-2	159,037	31,188		14,647
16[1]	Middle Washita - 2	1-8-2	263,978	68,109		23,697
17	Upper Washita - 1	1-8-3	36,763	14,144		3,129
18	Upper Washita - 2	1-8-3	49,266	29,321		4,188
19	Upper Washita - 3	1-8-3	212,084	94,223		17,391
20	Washita Headwaters	1-8-4	57,765	84,169	3,618	3,193
21[1]	Red River Mainstem (To Walnut Bayou)	1-9	612,842	290,050		57,273
22[1]	Walnut Bayou	1-10	108,968	16,219		10,096
23[1]	Mud Creek	1-11	186,287	15,968		17,071

OCWP Basin ID	Basin Name	OWRB Stream System	Basin Runoff (AYF)	Total Set Asides (AFY)[3]	Compact Inflows (AFY)	In-Basin Reserve (AFY)
24[1]	Beaver Creek - 1	1-12	20,898	29,998		1,835
25[1]	Beaver Creek - 2	1-12	166,768	62,829		15,325
26[1]	Beaver Creek - 3	1-12	59,467	6,783		5,480
27	Cache Creek - 1	1-13-1	20,794	128,092		1,825
28	Cache Creek - 2	1-13-1	180,839	71,786		16,419
29	Deep Red River and West Cache Creek - 1	1-13-2	117,258	13,930		10,530
30	Deep Red River And West Cache Creek - 2	1-13-2	102,696	39,399		8,826
31	Red River Mainstem (To North Fork of Red)	1-14	70,715	12,311		5,841
32	Lower North Fork Red River - 1	1-15-1	15,820	2,885		1,294
33	Lower North Fork Red River - 2	1-15-1	50,586	10,739		4,245
34	Lower North Fork Red River - 3	1-15-1	82,892	49,351		6,374
35	Lower North Fork Red River - 4	1-15-1	19,622	19,158		1,657
36	Upper North Fork Red River - 1	1-15-2	15,419	95,111		1,084
37	Upper North Fork Red River - 2	1-15-2	34,122	18,285	19,414	1,813
38	Salt Fork Red River - 1	1-16	55,395	24,626		4,258
39	Salt Fork Red River - 2	1-16	11,222	4,307	25,320	708
40	Prairie Dog Town Fork Red River - 1	1-17	25,747	7,076	5,007	1,885
41	Prairie Dog Town Fork Red River - 2	1-17	16,943	7,902	1,541	1,116
42	Elm Fork Red River - 1	1-18	9,187	3,415		654
43	Elm Fork Red River - 2	1-18	35,133	11,075	1,225	2,429
44[1]	Poteau River - 1	2-1	62,293	4,376	6,166	6,000
45[1]	Poteau River - 2	2-1	1,036,181	100,862	185,570	100,626
46[1]	Lower Arkansas River - 1	2-2	1,012,243	474,119		57,306
47[1]	Lower Arkansas River - 2	2-2	599,021	468,856		33,592
48[1]	Canadian River (To North Canadian River)	2-3	1,778,877	251,841		170,152

OCWP Basin ID	Basin Name	OWRB Stream System	Basin Runoff (AYF)	Total Set Asides (AFY)[3]	Compact Inflows (AFY)	In-Basin Reserve (AFY)
49	Middle Arkansas River	2-4	572,616	70,052		54,088
50	Lower North Canadian River	2-5-1	331,807	89,580		30,645
51	Middle North Canadian River	2-5-2	85,435	133,729		6,826
52	Upper North Canadian River - 1	2-5-3	40,579	40,953		1,900
53	Upper North Canadian River - 2	2-5-3	32,412	38,179		0 [4]
54	Upper North Canadian River - 3	2-5-3	18,401	17,182		277
55	North Canadian Headwaters	2-5-4	23,269	57,421		0 [4]
56[1]	Lower Canadian River - 1	2-6-1	361,497	73,043		33,885
57[1]	Lower Canadian River - 2	2-6-1	62,232	20,373		5,736
58[1]	Middle Canadian River	2-6-2	130,801	69,673		11,438
59	Upper Canadian River	2-6-3	123,295	58,220		7,405
60	Deep Fork River	2-7	612,035	128,241		56,381
61	Little River - 1	2-8	95,962	9,895		8,906
62	Little River - 2	2-8	167,889	69,060		15,347
63	Lower Cimarron River	2-9-1	297,823	35,307		27,174
64	Middle Cimarron River	2-9-2	584,132	223,990		49,786
65	Upper Cimarron River	2-9-3	76,843	55,419		3,147
66	Cimarron Headwaters	2-9-4	5,410	20,580		0 [4]
67	Lower Salt Fork of the Arkansas River - 1	2-10-1	105,428	6,300		9,982
68	Lower Salt Fork of the Arkansas River - 2	2-10-2	491,128	80,953		43,761
69	Lower Salt Fork of the Arkansas River - 3	2-10-1	78,760	7,549		7,519
70	Upper Salt Fork of the Arkansas River	2-10-1	84,116	15,230		7,879
71	Arkansas River - Cimarron Rivers to Keystone Lake	2-11	766,281	174,405		71,757
72	Arkansas River Mainstem (To Kansas State Line)	2-12	557,705	309,511		52,191
73	Bird Creek - 1	2-13	77,329	7,627		7,302

OCWP Basin ID	Basin Name	OWRB Stream System	Basin Runoff (AYF)	Total Set Asides (AFY)(3)	Compact Inflows (AFY)	In-Basin Reserve (AFY)
74	Bird Creek - 2	2-13	472,369	122,453		44,938
75	Caney River - 1	2-14	69,623	34,358		6,576
76	Caney River - 2	2-14	462,187	91,101		43,785
77	Verdigris River (To Oologah Dam) - 1	2-15-1	205,583	112,139		19,616
78	Verdigris River (To Oologah Dam) - 2	2-15-1	160,296	45,003		15,258
79	Verdigris River (To Kansas State Line)	2-15-2	415,072	278,516		39,539
80(2)	Grand (Neosho) River - 1	2-16	1,200,889	265,890	46,600	115,144
81(2)	Grand (Neosho) River - 2	2-16	499,590	25,444		47,798
82	Illinois River	2-17	658,085	256,363	211,448	63,661

Notes:
AFY - acre-feet per year
(1) Permitting of surface water in portions or all of Basins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 44, 45, 46, 47, 48, 56, 57, and 58 are wholly or partially subject to the provisions of the 2016 Water Settlement Agreement.
(2) Basins 80 and 81 are managed by GRDA, which has full appropriation over the stream water.
(3) Set Asides include domestic use and existing appropriative uses (active permits, pending permit applications, reservoir dependable yields, and normal storage in Natural Resources Conservation Service ponds).
(4) In-basin reserve of "0" indicates estimated domestic use is greater than basin runoff.

2.3 Evaluation of Future Surface Water Legal Availability

The 2025 OCWP surface water legal availability follows a similar methodology as described in Section 2.2 with a few modifications necessary for a statewide basin-level analysis. The basin outlet was selected as the diversion point because all analyses were done at the basin scale. Interstate compact inflows were included for 10 basins on Oklahoma's borders which receive water from neighboring states and Compact-required outflows from 17 basins along the Red River or Arkansas River and subject to Interstate Compact requirements for those rivers. In-basin reserves were included in the total set-asides per basin (not just for inter-basin transfers). If upstream basin outflow is negative, these gaps are passed onto the downstream basin and removed from the basin runoff volume. The 2025 OCWP approach is illustrated in Equations 1 and 2.

- **Equation 1:** Upstream Basin Outflow = Basin Runoff + Compact Inflows (if applicable) – Total Basin Set Asides – 10% In Basin Reserve – Basin's Future Incremental Demand Changes
- **Equation 2:** Downstream Basin Outflow = Upstream Basin Outflow + Basin Runoff + Compact Inflows (if applicable) – Total Basin Set Asides – 10% In Basin Reserve – Basin's Future Incremental Demand Changes

The projected change in surface water demand assumes that future demands in a given basin will be met by the same proportions of surface water and groundwater as they are today, as a baseline assumption for future scenario analyses.

The results of the surface water legal availability analyses for the current (2025) and 2075 conditions are presented in Table 2. Included is the estimated available water for permits, estimated gaps if there is no estimated legally available water (i.e., amount by which demand exceeds legally available supply), and potential restrictions on downstream permitting. The potential restrictions are derived from OWRB's methodology for evaluation of permit applications and analysis downstream of a diversion point; should a basin have an identified gap in legally available supply, OWRB will restrict downstream permits to the edge of the relevant stream system, i.e. at a confluence with another major water source. Correspondingly, such cases occurring in the basin-level analysis for the 2025 OCWP are similarly flagged as the legal availability of water in a basin may thus require case-by-case review at a later date. Figure 1 illustrates the projected surface water available for appropriation in 2075. Projections of the legally available Surface Water (water that is available for appropriation via permitting) indicate that 75 basins will have at least some Surface Water available for permitting in 2075.

Table 2 Projected Permit Availability of Surface Water in 2025 and 2075

OCWP Basin ID	Basin Name	OWRB Stream System	Estimated Available Water for Permits in 2025 (AFY)[1]	Estimated Gaps in Available Water for Permits in 2025 (AFY)[2]	Estimated Available Water for Permits after 2075 Demand Projections are Applied (AFY)[1]	Estimated Gaps in Available Water for Permits in 2075 (AFY)[2]	Potential Restrictions to Permitting of Mainstem of Creek or River	Cumulative Incremental SW Demand Changes Between 2020 and 2075 (AFY)[5]
1[3]	Red River Mainstem (To Kiamichi River)	1-1	2,395,900	0	2,379,400	0	No	16,500
2[3]	Little River (McCurtain County) - 1	1-2	1,612,500	0	1,609,900	0	No	2,600
3[3]	Little River (McCurtain County) - 2	1-2	1,090,900	0	1,089,300	0	No	1,600
4[3]	Little River (McCurtain County) - 3	1-2	529,700	0	529,500	0	No	200
5[3]	Kiamichi River - 1	1-3	29,900	0	32,200	0	No	-2,300
6[3]	Kiamichi River - 2	1-3	1,094,700	0	1,095,000	0	No	-300
7[3]	Muddy Boggy River - 1	1-4-1	261,300	0	260,200	0	No	1,100
8[3]	Muddy Boggy River - 2	1-4-1	63,500	0	63,100	0	No	400
9[3]	Clear Boggy Creek	1-4-2	448,200	0	447,600	0	No	600
10[3]	Red River Mainstem (To Blue River)	1-5	2,142,800	0	2,138,400	0	No	4,400
11[3]	Blue River - 1	1-6	274,600	0	270,800	0	No	3,800
12[3]	Blue River - 2	1-6	181,100	0	177,500	0	No	3,600
13[3]	Red River Mainstem (To Washita)	1-7	2,052,000	0	2,053,000	0	No	-1,000
14[3]	Lower Washita	1-8-1	885,500	0	884,500	0	No	1,000
15[3]	Middle Washita - 1	1-8-2	461,400	0	460,600	0	No	800
16[3]	Middle Washita - 2	1-8-2	333,500	0	332,800	0	No	700
17	Upper Washita - 1	1-8-3	137,600	0	136,200	0	No	1,400
18	Upper Washita - 2	1-8-3	19,900	0	20,000	0	No	-100
19	Upper Washita - 3	1-8-3	95,100	0	93,700	0	No	1,400
20	Washita Headwaters	1-8-4	0	-22,800	0	-22,800	No	0
21[3]	Red River Mainstem (To Walnut Bayou)	1-9	2,016,400	0	2,023,100	0	No	-6,700
22[3]	Walnut Bayou	1-10	92,700	0	92,600	0	No	100
23[3]	Mud Creek	1-11	170,300	0	170,400	0	No	-100
24[3]	Beaver Creek - 1	1-12	147,500	0	147,600	0	No	-100
25[3]	Beaver Creek - 2	1-12	103,900	0	103,900	0	No	0
26[3]	Beaver Creek - 3	1-12	52,700	0	52,800	0	No	-100
27	Cache Creek - 1	1-13-1	168,400	0	174,100	0	No	-5,700
28	Cache Creek - 2	1-13-1	109,100	0	113,700	0	No	-4,600
29	Deep Red River and West Cache Creek - 1	1-13-2	166,600	0	167,600	0	No	-1,000
30	Deep Red River and West Cache Creek - 2	1-13-2	63,300	0	63,700	0	No	-400
31	Red River Mainstem (To North Fork of Red)	1-14	397,400	0	406,600	0	No	-9,200
32	Lower North Fork Red River - 1	1-15-1	73,400	0	75,800	0	No	-2,400
33	Lower North Fork Red River - 2	1-15-1	60,500	0	62,700	0	No	-2,200
34	Lower North Fork Red River - 3	1-15-1	20,200	0	20,000	0	No	200

OCWP Basin ID	Basin Name	OWRB Stream System	Estimated Available Water for Permits in 2025 (AFY)[1]	Estimated Gaps in Available Water for Permits in 2025 (AFY)[2]	Estimated Available Water for Permits after 2075 Demand Projections are Applied (AFY)[1]	Estimated Gaps in Available Water for Permits in 2075 (AFY)[2]	Potential Restrictions to Permitting of Mainstem of Creek or River	Cumulative Incremental SW Demand Changes Between 2020 and 2075 (AFY)[5]
35	Lower North Fork Red River - 4	1-15-1	500	0	500	0	No	0
36	Upper North Fork Red River - 1	1-15-2	0	-44,400	0	-44,400	No	0
37	Upper North Fork Red River - 2	1-15-2	35,200	0	35,300	0	Yes	-100
38	Salt Fork Red River - 1	1-16	63,000	0	63,300	0	No	-300
39	Salt Fork Red River - 2	1-16	32,200	0	32,300	0	No	-100
40	Prairie Dog Town Fork Red River - 1	1-17	97,300	0	97,800	0	No	-500
41	Prairie Dog Town Fork Red River - 2	1-17	10,600	0	10,600	0	No	0
42	Elm Fork Red River - 1	1-18	31,100	0	31,100	0	No	0
43	Elm Fork Red River - 2	1-18	25,300	0	25,300	0	No	0
44[3]	Poteau River - 1	2-1	1,185,000	0	1,185,400	0	No	-400
45[3]	Poteau River - 2	2-1	1,120,900	0	1,120,900	0	No	0
46[3]	Lower Arkansas River - 1	2-2	9,351,700	0	9,248,400	0	No	103,300
47[3]	Lower Arkansas River - 2	2-2	8,813,600	0	8,712,500	0	No	101,100
48[3]	Canadian River (To North Canadian River)	2-3	2,807,100	0	2,751,000	0	No	56,100
49	Middle Arkansas River	2-4	2,636,100	0	2,615,400	0	No	20,700
50	Lower North Canadian River	2-5-1	154,900	0	127,300	0	No	27,600
51	Middle North Canadian River	2-5-2	0	-87,400	0	-89,000	No	-1,600
52	Upper North Canadian River - 1	2-5-3	0	-39,100	0	-39,200	No	-100
53	Upper North Canadian River - 2	2-5-3	0	-39,900	0	-40,000	Yes	-100
54	Upper North Canadian River - 3	2-5-3	1,200	0	1,200	0	Yes	0
55	North Canadian Headwaters	2-5-4	0	-34,200	0	-34,200	No	0
56[3]	Lower Canadian River - 1	2-6-1	641,400	0	630,200	0	No	11,200
57[3]	Lower Canadian River - 2	2-6-1	41,900	0	41,700	0	No	200
58[3]	Middle Canadian River	2-6-2	126,200	0	122,300	0	No	3,900
59	Upper Canadian River	2-6-3	65,100	0	64,200	0	No	900
60	Deep Fork River	2-7	483,800	0	464,800	0	No	19,000
61	Little River - 1	2-8	184,900	0	178,700	0	No	6,200
62	Little River - 2	2-8	98,800	0	92,700	0	No	6,100
63	Lower Cimarron River	2-9-1	644,100	0	631,100	0	No	13,000
64	Middle Cimarron River	2-9-2	381,600	0	370,300	0	No	11,300
65	Upper Cimarron River	2-9-3	21,400	0	20,200	0	No	1,200
66	Cimarron Headwaters	2-9-4	0	-15,200	0	-15,300	No	-100
67	Lower Salt Fork of the Arkansas River - 1	2-10-1	649,400	0	649,200	0	No	200
68	Lower Salt Fork of the Arkansas River - 2	2-10-2	410,200	0	410,200	0	No	0
69	Lower Salt Fork of the Arkansas River - 3	2-10-1	140,100	0	139,500	0	No	600

OCWP Basin ID	Basin Name	OWRB Stream System	Estimated Available Water for Permits in 2025 (AFY)[1]	Estimated Gaps in Available Water for Permits in 2025 (AFY)[2]	Estimated Available Water for Permits after 2075 Demand Projections are Applied (AFY)[1]	Estimated Gaps in Available Water for Permits in 2075 (AFY)[2]	Potential Restrictions to Permitting of Mainstem of Creek or River	Cumulative Incremental SW Demand Changes Between 2020 and 2075 (AFY)[5]
70	Upper Salt Fork of the Arkansas River	2-10-1	68,900	0	68,500	0	No	400
71	Arkansas River - Cimarron Rivers to Keystone Lake	2-11	2,133,600	0	2,134,500	0	No	-900
72	Arkansas River Mainstem (To Kansas State Line)	2-12	897,600	0	914,900	0	No	-17,300
73	Bird Creek - 1	2-13	419,600	0	408,600	0	No	11,000
74	Bird Creek - 2	2-13	349,900	0	349,400	0	No	500
75	Caney River - 1	2-14	406,400	0	405,000	0	No	1,400
76	Caney River - 2	2-14	371,100	0	370,900	0	No	200
77	Verdigris River (To Oologah Dam) - 1	2-15-1	1,171,300	0	1,153,100	0	No	18,200
78	Verdigris River (To Oologah Dam) - 2	2-15-1	1,077,800	0	1,062,000	0	No	15,800
79	Verdigris River (To Kansas State Line)	2-15-2	136,600	0	136,700	0	No	-100
80[4]	Grand (Neosho) River - 1	2-16	1,455,700	0	1,454,100	0	No	1,600
81[4]	Grand (Neosho) River - 2	2-16	474,100	0	474,200	0	No	-100
82	Illinois River	2-17	613,200	0	613,800	0	No	-600

Notes:
(1) Rounded values.
(2) Rounded values. Negative values indicate that Basin is over appropriated based on the latest runoff model.
(3) Permitting of surface water in portions or all of Basins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 44, 45, 46, 47, 48, 56, 57, and 58 are wholly or partially subject to the provisions of the.2016 Water Settlement Agreement.
(4) Basins 80 and 81 are managed by GRDA, which has full appropriation over the stream water.
(5) Water demand projections used in the OCWP are available in Appendix B. More information is available in the Water Demand Forecast report available on OWRB's Water Planning website (https://oklahoma.gov/owrb/water-planning.html).

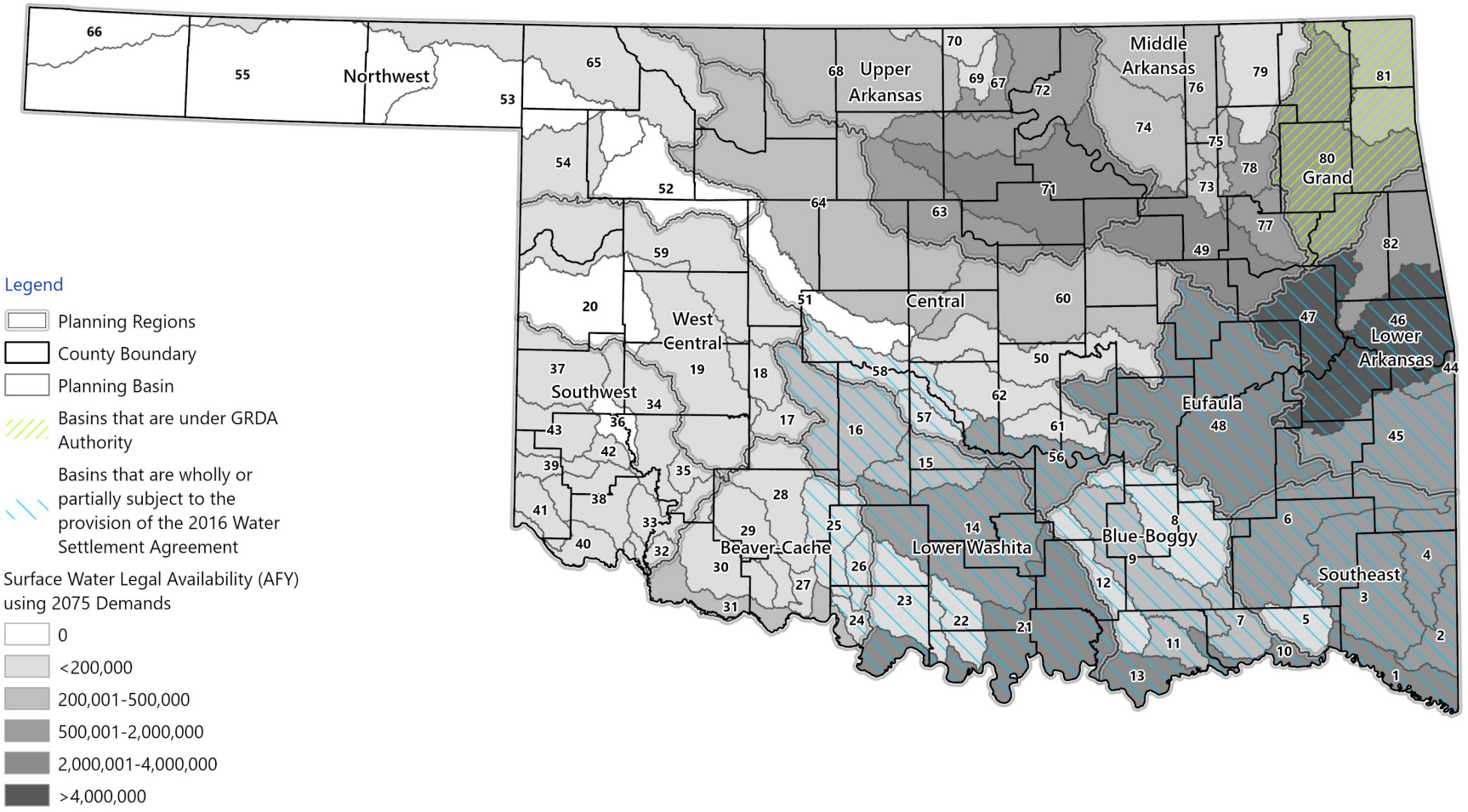

Figure 1 Projected Permit Availability of Surface Water in 2075

SECTION 3 GROUNDWATER LEGAL AVAILABILITY

This section summarizes the analysis of groundwater legal availability in Oklahoma relative to current and forecasted 2075 demands. Included is a brief description of the OWRB methodology for assessment of suitable legal availability for individual permit applications in line with the current statutory framework in Oklahoma, how OWRB's approach was modified to assess basin-level and statewide legal availability, and the results of the analysis.

3.1 Regulatory Framework for Groundwater in Oklahoma

Oklahoma law defines groundwater as "fresh water under the surface of the earth regardless of the geologic structure in which it is standing or moving outside the cut bank of any definite stream" (82 OK Statute §1020.1). The owner of the land owns the groundwater beneath the surface and may develop the water for beneficial use subject to reasonable regulation by the State. Use of groundwater is governed by the Oklahoma Groundwater Law (60 OK Statute §60).

Any landowner has the right to take ground water from land owned by him for domestic use without a permit (82 OK Statute §1020.3). For all other uses, permits must be obtained from the OWRB allocating a proportionate share of the total annual yield of the basin based on "the percentage of the land overlying the fresh groundwater basin or subbasin which the applicant owns or leases and which is dedicated to the application" (82 OK Statute §1020.9.B), providing that the following provisions are satisfied:

- Lands owned or leased by the applicant overlie the fresh groundwater basin or subbasin,
- Applicant intends to put the water to a beneficial use,
- Unauthorized use will not occur (waste by depletion),
- Use will not cause pollution to the basin or aquifer, and
- Proposed use is not likely to degrade or interfere with springs or streams emanating in whole or in part from water originating from a sensitive sole source groundwater basin.

The maximum annual yield (MAY) of each major ground water basin or subbasin is a determination by OWRB of the total annual amount of fresh groundwater that can be produced based upon a minimum basin or subbasin life of 20 years (82 OK Statute §1020.5). Prior to establishing the MAY for a basin, OWRB conducts a hydrologic investigation to establish the land area overlying the basin, the amount of water in storage, transmissibility, rate of recharge, total discharge, and possibility of pollution from natural sources. Once the investigation is complete, OWRB makes a tentative determination of the MAY, hydrologic surveys are made available to the public, and a public hearing on the tentative determination is conducted in the basin area. Evidence in support or opposition to the tentative determination is received, and then OWRB must make a final determination of the MAY.

After the MAY is determined, OWRB can issue Regular Permits that allocate the equal proportionate share (EPS) of the MAY for each acre of land dedicated to the permit application that overlies the basin. OWRB also has authority to issue temporary permits to use groundwater before the determination of the MAY for a basin. In lieu of the MAY, the law provides that "the water allocated by a temporary permit shall not be less than 2 acre-feet annually for each acre of land owned or leased by the applicant" (82 OK Statute §1020.11.B.2).

3.2 Evaluation of Future Groundwater Legal Availability

Analysis of legal groundwater availability provides estimates of the maximum allowable permitted amount of groundwater, by aquifer and planning basin, along with the total amount currently permitted (as regular, prior right, and temporary permits) and the remaining amount available for permitting currently and after meeting projected demands in 2075. This section describes the methodology used to develop the legal groundwater availability estimates and provides the results for each aquifer/planning basin.

3.2.1 Methodology

3.2.1.1 Amount of Permittable Groundwater

The maximum allowable permitted amount of groundwater is, by definition, the MAY for those aquifers for which the MAY has been determined by OWRB. For all other aquifers, the maximum allowable permitted amount is calculated as the total area of the aquifer multiplied by 2 AFY per acre, as prescribed by Oklahoma statute. The amount of permittable groundwater in each planning basin was then estimated based on the area of the aquifer within the basin. Although this calculation overlooks considerations of aquifer hydraulics based on saturated thickness, transmissivity, and specific yield/storage, it is consistent with the proportionate share based on land area codified in Oklahoma groundwater law and greatly simplifies the estimation process.

For groundwater basins or subbasins with an adopted MAY, the official aquifer extent used by OWRB for determining the MAY was used for this analysis. For other aquifers, the most recent or best available information on the aquifer extent was used. In all cases, the process for determination of the aquifer extents was closely coordinated with OWRB staff.

3.2.1.2 Permitted Dedicated Lands

Permitted dedicated land refers to the land overlying a groundwater basin that an applicant owns or leases and designates for a specific groundwater permit application. The amount of water allocated on a Regular Permit is a proportionate part of the maximum annual yield of the basin with the proportionate share equal to the percentage of land the applicant owns or leases within the basin. Therefore, the dedicated land area directly determines the amount of groundwater available to the applicant.

The OWRB's Permitted Dedicated Lands (PDL) for Groundwater Use Permits GIS dataset was used to determine the locations of PDLs associated with Groundwater Use permits in the OWRB's Long-Term Water Rights database (OWRB, 2023). The PDL GIS dataset identifies the land parcel and water use permit, permit type, i.e., regular, prior right, or temporary, and permitted amount; the PDL dataset does not specify the aquifer or groundwater basin to which the permit is assigned. Therefore, each land parcel in the PDL dataset was assigned to an aquifer as part of this analysis.

Generally, each PDL parcel was assigned to the uppermost aquifer underlying the majority of the parcel area. OWRB staff provided information for some aquifers that identified all permits assigned to those aquifers; when available, this information was used preferentially to assign the aquifer. Additionally, some PDL parcels do not overlie a defined groundwater basin. Parcels outside of an aquifer boundary were either assigned to a nearby aquifer based on proximity or noted as "Not Assigned." Each PDL parcel was also assigned to a single OCWP planning basin based on the location of the center of the parcel.

The total PDL acreage was calculated for each aquifer/basin. These acreages were then multiplied by the applicable EPS, either the MAY for Regular Permits or 2 AFY per acre for temporary permits, to calculate the total currently permitted amount for each aquifer/basin. The amount available for permitting was then calculated as the difference between the maximum allowable permitted amount and the total currently permitted.

3.2.2 Future Conditions

In addition to the analysis for current conditions based on existing permits, this analysis was repeated for a 2075 forecasted future demand condition for the 2025 OCWP. The projected change in groundwater demand to 2075 was subtracted from the total amount currently available to permit to determine the 2075 available to permit amount for each aquifer/basin.

3.2.3 Results

The results of the groundwater legal availability analyses for the current (2025) and 2075 conditions are presented in Table 3. Table 3 provides the MAY/maximum allowable permitted amount for each planning basin considering all aquifers underlying the basin. Table 3 also provides, for each planning basin, the total current permitted amount (includes prior, regular, and temporary permits), total temporary permitted amount, current amount available to permit (all existing permits included), current amount available to permit (only prior and Regular Permits included), projected groundwater demand change from 2025 to 2075, amount remaining available to permit in 2075 (all existing permits included), and amount remaining available to permit in 2075 (only prior and Regular Permits included). The projected change in groundwater demand assumes that future demands in a given basin will be met by the same proportions of surface water and groundwater as they are today, as a baseline assumption for future scenario analyses.

The maximum allowable permitted amount of groundwater statewide is 91,739,500 AFY. Of that amount, 3,942,400 AFY of groundwater is currently permitted. By 2075, statewide groundwater demands are projected to increase by 141,700 AFY. Sufficient groundwater is available for permitting in all basins to accommodate the projected changes in demand. Figure 2 illustrates the projected groundwater available for appropriation in 2075.

Table 3 Permit Availability of Groundwater

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
1	Red River Mainstem (To Kiamichi River)	1,322,260	7,890	2,380	1,314,360	1,316,750	2,030	1,312,330	1,314,720
2	Little River (McCurtain County) - 1	711,080	180	0	710,900	710,900	30	710,870	710,870
3	Little River (McCurtain County) - 2	1,829,480	100	80	1,829,380	1,829,460	70	1,829,310	1,829,390
4	Little River (McCurtain County) - 3	744,520	0	0	744,520	744,520	50	744,470	744,470
5	Kiamichi River - 1	697,370	5,910	0	691,460	691,460	140	691,320	691,320
6	Kiamichi River - 2	1,943,290	430	170	1,942,860	1,943,030	-20	1,942,860	1,943,030
7	Muddy Boggy River - 1	758,010	2,460	490	755,540	756,030	30	755,520	756,010
8	Muddy Boggy River - 2	1,345,690	4,570	3,160	1,341,130	1,344,290	30	1,341,090	1,344,250
9	Clear Boggy Creek	1,132,150	10,460	750	1,121,690	1,122,440	340	1,121,350	1,122,100

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
10	Red River Mainstem (To Blue River)	692,680	5,990	1,690	686,690	688,370	450	686,240	687,930
11	Blue River - 1	597,950	1,810	0	596,140	596,140	110	596,030	596,030
12	Blue River - 2	587,330	11,010	340	576,320	576,660	400	575,920	576,260
13	Red River Mainstem (To Washita)	1,091,850	16,890	12,500	1,074,960	1,087,470	1,270	1,073,690	1,086,190
14	Lower Washita	514,930	43,470	16,670	471,460	488,120	190	471,270	487,930
15	Middle Washita - 1	382,000	15,760	10,260	366,240	376,500	-50	366,240	376,500
16	Middle Washita - 2	1,517,780	45,500	29,420	1,472,280	1,501,710	20	1,472,260	1,501,680
17	Upper Washita - 1	283,580	31,660	15,700	251,920	267,610	390	251,520	267,220
18	Upper Washita - 2	393,820	150,810	82,800	243,010	325,810	2,700	240,310	323,110
19	Upper Washita - 3	1,771,020	117,000	65,240	1,654,030	1,719,260	3,010	1,651,020	1,716,250
20	Washita Headwaters	783,520	110,250	63,540	673,280	736,820	1,060	672,210	735,760
21	Red River Mainstem (To Walnut Bayou)	2,376,360	54,220	7,150	2,322,140	2,329,300	1,440	2,320,700	2,327,850

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
22	Walnut Bayou	206,280	21,530	3,700	184,750	188,450	270	184,480	188,180
23	Mud Creek	25,130	5,820	5,570	19,310	24,880	20	19,290	24,860
24	Beaver Creek - 1	3,890	1,700	0	2,180	2,180	-20	2,180	2,180
25	Beaver Creek - 2	487,450	21,840	19,070	465,610	484,680	-140	465,610	484,680
26	Beaver Creek - 3	15,930	1,790	1,530	14,140	15,670	0	14,140	15,670
27	Cache Creek - 1	128,100	730	0	127,360	127,360	-60	127,360	127,360
28	Cache Creek - 2	977,920	9,250	5,450	968,680	974,130	-490	968,680	974,130
29	Deep Red Creek and West Cache Creek - 1	598,650	9,010	3,380	589,630	593,020	-80	589,630	593,020
30	Deep Red Creek and West Cache Creek - 2	718,620	900	0	717,720	717,720	-60	717,720	717,720
31	Red River Mainstem (To North Fork of Red)	882,140	17,720	2,540	864,410	866,960	120	864,290	866,840
32	Lower North Fork Red River - 1	190,230	24,060	0	166,170	166,170	360	165,810	165,810
33	Lower North Fork Red River - 2	444,320	24,950	190	419,370	419,560	360	419,010	419,200

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
34	Lower North Fork Red River - 3	823,570	18,230	6,310	805,340	811,660	370	804,980	811,290
35	Lower North Fork Red River - 4	130,870	640	640	130,230	130,870	30	130,190	130,830
36	Upper North Fork Red River - 1	299,460	22,200	220	277,260	277,480	510	276,750	276,980
37	Upper North Fork Red River - 2	949,070	82,960	29,480	866,110	895,590	1,100	865,010	894,490
38	Salt Fork Red River - 1	918,660	47,880	29,160	870,780	899,940	250	870,520	899,680
39	Salt Fork Red River - 2	399,220	7,060	5,210	392,160	397,370	90	392,070	397,280
40	Prairie Dog Town Fork Red River - 1	441,340	10,320	4,950	431,020	435,970	90	430,930	435,880
41	Prairie Dog Town Fork Red River - 2	358,130	96,290	52,580	261,840	314,420	1,320	260,520	313,100
42	Elm Fork Red River - 1	181,730	8,080	3,200	173,660	176,850	90	173,560	176,760
43	Elm Fork Red River - 2	672,350	910	0	671,440	671,440	10	671,430	671,430
44	Poteau River - 1	146,780	60	30	146,720	146,750	0	146,720	146,740
45	Poteau River - 2	1,678,500	2,280	2,280	1,676,220	1,678,500	640	1,675,570	1,677,850

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
46	Lower Arkansas River - 1	3,279,350	14,850	12,380	3,264,500	3,276,880	3,420	3,261,080	3,273,460
47	Lower Arkansas River - 2	904,620	8,660	5,630	895,960	901,590	1,490	894,470	900,100
48	Canadian River (To North Canadian River)	3,116,010	13,720	4,550	3,102,300	3,106,840	240	3,102,060	3,106,600
49	Middle Arkansas River	393,020	22,620	10,400	370,400	380,800	150	370,250	380,650
50	Lower North Canadian River	1,411,570	99,400	42,770	1,312,160	1,354,940	4,760	1,307,400	1,350,180
51	Middle North Canadian River	1,090,560	85,430	16,880	1,005,130	1,022,020	8,220	996,910	1,013,800
52	Upper North Canadian River - 1	851,620	63,490	8,600	788,130	796,730	2,950	785,180	793,790
53	Upper North Canadian River - 2	1,466,750	211,660	2,100	1,255,090	1,257,190	15,900	1,239,200	1,241,290
54	Upper North Canadian River - 3	546,460	89,420	320	457,040	457,360	570	456,470	456,790

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
55	North Canadian Headwaters	4,906,280	1,139,150	31,540	3,767,120	3,798,670	14,710	3,752,410	3,783,950
56	Lower Canadian River - 1	793,900	56,580	43,360	737,320	780,680	1,530	735,790	779,150
57	Lower Canadian River - 2	233,980	3,670	3,670	230,310	233,980	210	230,100	233,770
58	Middle Canadian River	1,064,570	78,360	66,730	986,210	1,052,940	5,470	980,740	1,047,480
59	Upper Canadian River	2,479,140	181,050	148,780	2,298,090	2,446,870	17,100	2,280,990	2,429,770
60	Deep Fork River	1,801,640	48,480	38,150	1,753,160	1,791,310	3,770	1,749,390	1,787,540
61	Little River - 1	328,350	2,580	2,120	325,770	327,890	50	325,720	327,840
62	Little River - 2	760,580	35,540	30,380	725,030	755,420	1,300	723,740	754,120
63	Lower Cimarron River	1,417,560	12,330	6,710	1,405,230	1,411,930	2,090	1,403,130	1,409,840
64	Middle Cimarron River	6,388,020	293,150	229,510	6,094,870	6,324,380	23,690	6,071,180	6,300,690
65	Upper Cimarron River	1,895,430	169,370	26,710	1,726,050	1,752,760	8,040	1,718,010	1,744,720
66	Cimarron Headwaters	839,030	48,920	260	790,110	790,370	460	789,650	789,910

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
67	Lower Salt Fork Arkansas River - 1	408,190	9,100	8,530	399,090	407,620	-770	399,090	407,620
68	Upper Salt Fork Arkansas River	3,917,900	58,010	45,180	3,859,900	3,905,070	2,660	3,857,240	3,902,420
69	Lower Salt Fork Arkansas River - 2	277,810	2,420	1,390	275,390	276,780	-350	275,390	276,780
70	Lower Salt Fork Arkansas River - 3	364,270	3,310	3,270	360,950	364,230	320	360,640	363,910
71	Arkansas River - Cimarron Rivers to Keystone Lake	2,016,570	25,460	6,810	1,991,100	1,997,910	2,930	1,988,170	1,994,980
72	Arkansas River Mainstem (To Kansas State Line)	1,983,320	53,310	24,080	1,930,010	1,954,090	-350	1,930,010	1,954,090
73	Bird Creek - 1	47,980	0	0	47,980	47,980	30	47,950	47,950
74	Bird Creek - 2	579,070	4,320	50	574,750	574,800	50	574,700	574,750
75	Caney River - 1	108,270	0	0	108,270	108,270	10	108,260	108,260
76	Caney River - 2	572,250	70	0	572,190	572,190	-40	572,190	572,190

OCWP Basin ID	OCWP Basin Name	MAY/Maximum Permit (AFY)	Total Current Permitted Volume (AFY) (includes prior, regular, and temporary permits)	Total Temporary Permitted Volume (AFY)	Available to Permit (AFY) (includes total current permitted volume)(1)	Available to Permit (AFY) (only prior and Regular Permits included)(1)	Projected Groundwater Demand Changes in 2075 (AFY) (includes total current permitted volume)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY)(1)	Remaining Available to Permit after 2075 Demand Projections Applied (AFY) (only prior and regular permits included)(1)
77	Verdigris River (To Oologah Dam) - 1	281,860	190	190	281,670	281,860	30	281,640	281,830
78	Verdigris River (To Oologah Dam) - 2	459,620	0	0	459,620	459,620	20	459,600	459,600
79	Verdigris River (To Kansas State Line)	1,260,180	0	0	1,260,180	1,260,180	10	1,260,170	1,260,170
80	Grand (Neosho) River - 1	5,158,870	12,930	11,810	5,145,930	5,157,740	-20	5,145,930	5,157,740
81	Grand (Neosho) River - 2	2,677,650	18,660	14,370	2,658,980	2,673,350	-10	2,658,980	2,673,350
82	Illinois River	2,502,250	3,590	3,090	2,498,660	2,501,750	10	2,498,650	2,501,740
	Grand Total	**91,739,510**	**3,942,380**	**1,338,150**	**87,797,070**	**89,135,260**	**139,120**	**87,655,460**	**88,993,650**

Notes:
(1) Small differences may result from rounding.

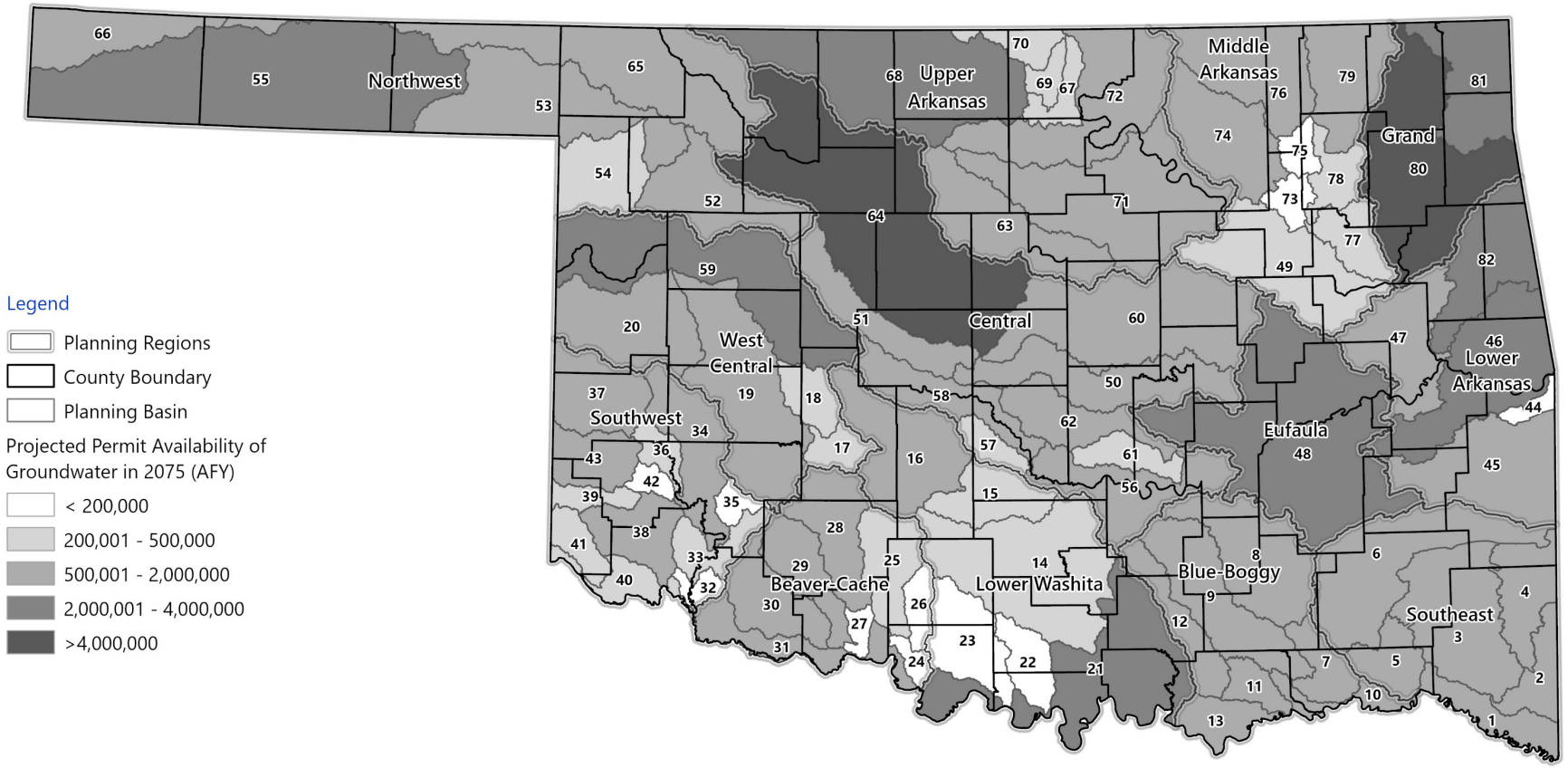

Figure 2 Projected Permit Availability of Groundwater in 2075

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APPENDIX A

DIFFERENCES BETWEEN SURFACE WATER PHYSICAL AND LEGAL AVAILABILITY

DIFFERENCES BETWEEN SURFACE WATER PHYSICAL AND LEGAL AVAILABILITY

A reliable water source is contingent upon having the water physically present for diversion and use (physical supply or "wet water"), possessing the necessary water rights to divert water (legal supply or "paper water"), adequate water quality for intended use, and sufficient infrastructure to divert, treat, and convey the water for use. The Oklahoma Comprehensive Water Plan (OCWP) evaluates supply and demand factors at the region and/or basin level.

The physically available and legally available surface water flows are two separate analyses.

Generally, similarities between physical and legal analysis are:

- Both account for unappropriated dependable yield from reservoirs. The physical analysis used an earlier unappropriated dependable yield database. The values may differ slightly but are generally similar.
- Both account for interstate compact requirements. The physical surface water analysis takes compact water out from water coming into the state (most upstream basin), while the legal analysis takes it out from selected basins. The amount of water removed is similar.

Generally, differences between physical and legal availability are:

- The surface water legal analysis removes domestic use and pending permit application amounts from the available water. These are in addition to factoring in future changes in water demand for the seven use sectors used throughout the OCWP. The pending permit application amounts are a significant driver of the differences between surface and legal water availability in Basins 5, 7, 8, and 27.
- Physical surface water supply analysis uses United States Geological Survey (USGS) stream gage data from October 1949 to September 2021 (water years 1950 to 2020). The surface water legal analysis uses flow data from 1940 to 2007.
- The physical surface water analysis is based on the June 2023 permit database. All in-basin permits are accounted for, while only permitted interbasin transfers greater than 500 acre-feet per year are included in the physical surface water analysis.
- The normal storage volume of Natural Resources Conservation Service (NRCS) reservoirs is not included in the physical surface water analysis but is included in the legal analysis. The presence of the NRCS reservoirs is embedded in the historical USGS gage record that is used for the physical water availability analysis. However, the physical analysis does not account for any additional available firm yield that might still be available for use from the NRCS reservoirs.
- The physical and legal availability analysis assumes that all water from upstream basins is available to downstream basins (Figure 1).

More information on the water supply analyses is available in the *Physical Water Supply Availability Report* and *Legal Availability Analysis Report*.

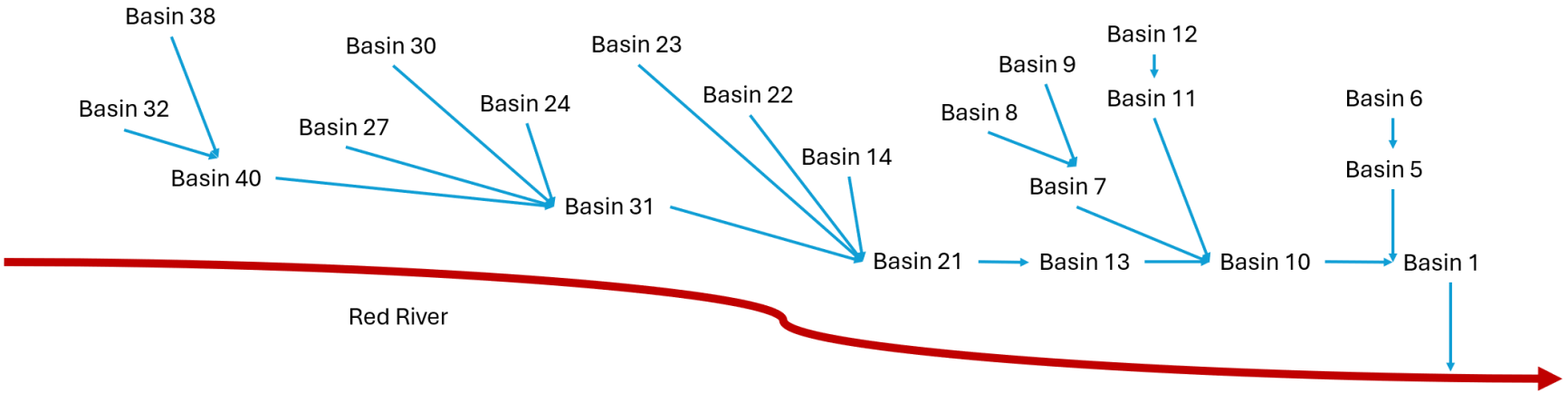

Figure 1 Flow Schematic Used for Physical and Legal Surface Water Availability Analysis

APPENDIX B

WATER DEMAND FORECAST

APPENDIX B

DEMANDS BY SECTOR BY PLANNING BASIN

This appendix includes projected demands for each demand sector by OCWP Planning Basin for key planning periods. Demands for each sector are shown for groundwater, surface water, and total demands. Small differences between projections occur when county level projections are converted to basin level projections. Basin projections are used to evaluate water availability.

Table B.1 Public Supply Demand Projections by OCWP Planning Basin – Groundwater (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	-	-	-	-	-	-
2	Little River (McCurtain County) - 1	-	-	-	-	-	-
3	Little River (McCurtain County) - 2	-	-	-	-	-	-
4	Little River (McCurtain County) - 3	-	-	-	-	-	-
5	Kiamichi River - 1	243	244	236	226	218	205
6	Kiamichi River - 2	-	-	-	-	-	-
7	Muddy Boggy River - 1	10	10	9	9	9	8
8	Muddy Boggy River - 2	285	268	260	247	230	210
9	Clear Boggy Creek	215	221	220	220	224	225
10	Red River Mainstem (To Blue River)	37	37	36	35	34	32
11	Blue River - 1	60	67	69	75	84	93
12	Blue River - 2	756	830	853	909	1,008	1,099
13	Red River Mainstem (To Washita)	244	272	281	303	341	376
14	Lower Washita	3,022	3,148	3,141	3,134	3,167	3,189
15	Middle Washita - 1	158	165	166	169	177	184
16	Middle Washita - 2	1,481	1,511	1,489	1,443	1,377	1,328
17	Upper Washita - 1	219	232	227	219	208	200
18	Upper Washita - 2	217	210	204	192	174	156
19	Upper Washita - 3	2,845	2,934	2,976	3,051	3,260	3,397
20	Washita Headwaters	123	131	131	133	141	146
21	Red River Mainstem (To Walnut Bayou)	1,684	1,771	1,793	1,857	2,005	2,121
22	Walnut Bayou	185	188	188	188	191	193
23	Mud Creek	26	27	26	25	24	22
24	Beaver Creek - 1	131	140	136	130	123	115
25	Beaver Creek - 2	353	340	330	311	288	262
26	Beaver Creek - 3	145	142	138	130	121	111
27	Cache Creek - 1	72	65	59	49	35	20

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
28	Cache Creek - 2	1,646	1,590	1,539	1,437	1,297	1,158
29	Deep Red Creek and West Cache Creek - 1	215	202	191	171	144	115
30	Deep Red Creek and West Cache Creek - 2	119	116	111	100	88	75
31	Red River Mainstem (To North Fork of Red)	186	178	167	147	122	96
32	Lower North Fork Red River - 1	40	39	37	33	29	25
33	Lower North Fork Red River - 2	362	332	313	281	233	183
34	Lower North Fork Red River - 3	2,764	2,725	2,727	2,693	2,721	2,686
35	Lower North Fork Red River - 4	-	-	-	-	-	-
36	Upper North Fork Red River - 1	245	247	241	239	232	224
37	Upper North Fork Red River - 2	2,658	2,654	2,667	2,661	2,738	2,749
38	Salt Fork Red River - 1	507	496	479	461	428	392
39	Salt Fork Red River - 2	85	86	84	83	81	78
40	Prairie Dog Town Fork Red River - 1	21	19	18	16	13	10
41	Prairie Dog Town Fork Red River - 2	709	714	686	632	535	453
42	Elm Fork Red River - 1	972	980	958	949	923	887
43	Elm Fork Red River - 2	2	2	2	2	3	3
44	Poteau River - 1	-	-	-	-	-	-
45	Poteau River - 2	-	-	-	-	-	-
46	Lower Arkansas River - 1	3	3	3	3	3	2
47	Lower Arkansas River - 2	165	162	157	148	139	127
48	Canadian River (To North Canadian River)	2,426	2,421	2,364	2,280	2,189	2,069
49	Middle Arkansas River	326	327	324	318	315	310
50	Lower North Canadian River	6,545	7,003	7,252	7,785	8,723	9,543
51	Middle North Canadian River	2,562	2,766	2,915	3,262	3,971	4,546
52	Upper North Canadian River - 1	755	768	773	793	847	877
53	Upper North Canadian River - 2	7,919	8,051	8,054	8,181	8,591	8,779
54	Upper North Canadian River - 3	464	475	469	458	461	447
55	North Canadian Headwaters	2,895	2,753	2,732	2,681	2,596	2,491
56	Lower Canadian River - 1	898	904	904	914	940	954

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
57	Lower Canadian River - 2	1,041	1,055	1,062	1,090	1,135	1,187
58	Middle Canadian River	15,854	16,310	16,728	17,635	19,304	20,722
59	Upper Canadian River	1,666	1,789	1,839	1,941	2,171	2,346
60	Deep Fork River	4,349	4,651	4,802	5,122	5,681	6,174
61	Little River - 1	94	96	96	95	95	94
62	Little River - 2	3,986	4,112	4,204	4,401	4,761	5,064
63	Lower Cimarron River	1,062	1,121	1,154	1,215	1,331	1,432
64	Middle Cimarron River	9,062	9,682	9,986	10,782	12,354	13,616
65	Upper Cimarron River	781	863	866	912	1,061	1,147
66	Cimarron Headwaters	-	-	-	-	-	-
67	Lower Salt Fork Arkansas River - 1	3,356	3,208	3,117	2,937	2,736	2,489
68	Upper Salt Fork Arkansas River	2,688	2,885	2,947	3,141	3,655	3,999
69	Lower Salt Fork Arkansas River - 2	1,393	1,331	1,293	1,218	1,135	1,033
70	Lower Salt Fork Arkansas River - 3	94	90	88	83	77	70
71	Arkansas River - Cimarron Rivers to Keystone Lake	2,646	2,759	2,795	2,844	3,020	3,127
72	Arkansas River Mainstem (To Kansas State Line)	5,245	5,038	4,914	4,673	4,417	4,086
73	Bird Creek - 1	-	-	-	-	-	-
74	Bird Creek - 2	85	85	83	79	74	69
75	Caney River - 1	-	-	-	-	-	-
76	Caney River - 2	6	6	6	6	5	5
77	Verdigris River (To Oologah Dam) - 1	1	1	1	1	1	1
78	Verdigris River (To Oologah Dam) - 2	-	-	-	-	-	-
79	Verdigris River (To Kansas State Line)	-	-	-	-	-	-
80	Grand (Neosho) River - 1	253	250	243	232	221	207
81	Grand (Neosho) River - 2	3,039	3,106	3,060	3,015	3,003	2,952
82	Illinois River	70	74	73	71	70	69
	Total	**104,773**	**107,482**	**108,496**	**111,275**	**118,107**	**122,856**

Table B.2 Public Supply Demand Projections by OCWP Planning Basin – Surface Water (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	2,159	2,464	2,536	2,694	2,979	3,233
2	Little River (McCurtain County) - 1	1,267	1,445	1,487	1,580	1,747	1,896
3	Little River (McCurtain County) - 2	3,079	3,513	3,616	3,842	4,247	4,610
4	Little River (McCurtain County) - 3	239	272	280	298	329	357
5	Kiamichi River - 1	936	908	873	832	785	725
6	Kiamichi River - 2	1,248	1,214	1,169	1,114	1,053	975
7	Muddy Boggy River - 1	-	-	-	-	-	-
8	Muddy Boggy River - 2	1,485	1,415	1,369	1,285	1,186	1,071
9	Clear Boggy Creek	878	900	897	898	915	922
10	Red River Mainstem (To Blue River)	10	11	11	12	14	15
11	Blue River - 1	430	478	495	533	600	662
12	Blue River - 2	4,920	5,429	5,598	5,992	6,686	7,332
13	Red River Mainstem (To Washita)	1,740	1,936	2,003	2,157	2,427	2,680
14	Lower Washita	14,009	14,375	14,354	14,303	14,431	14,475
15	Middle Washita - 1	146	158	158	159	164	168
16	Middle Washita - 2	1,694	1,787	1,745	1,685	1,598	1,527
17	Upper Washita - 1	601	637	622	602	572	547
18	Upper Washita - 2	219	216	210	198	181	165
19	Upper Washita - 3	3,326	3,469	3,534	3,657	3,969	4,186
20	Washita Headwaters	41	44	44	44	46	48
21	Red River Mainstem (To Walnut Bayou)	7,171	7,362	7,349	7,337	7,464	7,524
22	Walnut Bayou	3,498	3,562	3,569	3,569	3,625	3,651
23	Mud Creek	99	99	98	96	95	92
24	Beaver Creek - 1	56	60	58	56	53	49
25	Beaver Creek - 2	1,883	1,812	1,760	1,654	1,527	1,386
26	Beaver Creek - 3	543	523	508	479	446	406
27	Cache Creek - 1	123	112	101	83	60	34
28	Cache Creek - 2	18,339	17,646	17,137	16,045	14,554	13,073

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	1,773	1,695	1,637	1,520	1,360	1,199
30	Deep Red Creek and West Cache Creek - 2	1,018	992	949	859	751	639
31	Red River Mainstem (To North Fork of Red)	1,189	1,152	1,097	986	850	710
32	Lower North Fork Red River - 1	337	328	314	284	248	211
33	Lower North Fork Red River - 2	4,661	4,221	3,953	3,513	2,839	2,141
34	Lower North Fork Red River - 3	491	473	458	428	388	346
35	Lower North Fork Red River - 4	46	45	43	41	37	34
36	Upper North Fork Red River - 1	-	-	-	-	-	-
37	Upper North Fork Red River - 2	110	116	115	116	119	121
38	Salt Fork Red River - 1	2,184	1,975	1,848	1,640	1,320	989
39	Salt Fork Red River - 2	-	-	-	-	-	-
40	Prairie Dog Town Fork Red River - 1	332	300	281	249	200	150
41	Prairie Dog Town Fork Red River - 2	-	-	-	-	-	-
42	Elm Fork Red River - 1	-	-	-	-	-	-
43	Elm Fork Red River - 2	-	-	-	-	-	-
44	Poteau River - 1	3,004	3,052	2,987	2,902	2,792	2,685
45	Poteau River - 2	8,165	8,256	8,048	7,744	7,354	6,967
46	Lower Arkansas River - 1	6,734	6,925	6,748	6,431	5,992	5,627
47	Lower Arkansas River - 2	16,530	16,300	15,823	15,014	14,085	13,018
48	Canadian River (To North Canadian River)	11,032	10,746	10,401	9,853	9,278	8,544
49	Middle Arkansas River	103,550	105,757	107,478	111,430	118,501	124,448
50	Lower North Canadian River	58,127	62,206	64,372	68,902	76,728	83,657
51	Middle North Canadian River	1,886	2,024	2,098	2,253	2,521	2,758
52	Upper North Canadian River - 1	-	-	-	-	-	-
53	Upper North Canadian River - 2	-	-	-	-	-	-
54	Upper North Canadian River - 3	-	-	-	-	-	-
55	North Canadian Headwaters	-	-	-	-	-	-
56	Lower Canadian River - 1	2,325	2,369	2,387	2,441	2,553	2,635
57	Lower Canadian River - 2	75	76	77	80	85	90

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	6,420	6,642	6,816	7,184	7,843	8,405
59	Upper Canadian River	2,415	2,598	2,655	2,776	3,049	3,261
60	Deep Fork River	43,051	46,060	47,643	50,961	56,731	61,824
61	Little River - 1	397	407	409	414	422	429
62	Little River - 2	19,068	19,850	20,379	21,493	23,470	25,174
63	Lower Cimarron River	8,341	8,410	8,509	8,762	9,264	9,618
64	Middle Cimarron River	20,295	21,766	22,559	24,220	27,072	29,612
65	Upper Cimarron River	-	-	-	-	-	-
66	Cimarron Headwaters	-	-	-	-	-	-
67	Lower Salt Fork Arkansas River - 1	717	686	666	628	585	532
68	Upper Salt Fork Arkansas River	12	11	11	10	10	9
69	Lower Salt Fork Arkansas River - 2	297	284	276	260	242	220
70	Lower Salt Fork Arkansas River - 3	20	19	19	18	16	15
71	Arkansas River - Cimarron Rivers to Keystone Lake	10,574	11,048	11,178	11,328	11,972	12,355
72	Arkansas River Mainstem (To Kansas State Line)	1,420	1,376	1,340	1,267	1,181	1,083
73	Bird Creek - 1	46,055	47,100	48,014	50,047	53,577	56,600
74	Bird Creek - 2	5,550	5,635	5,656	5,708	5,843	5,949
75	Caney River - 1	4,824	4,934	5,031	5,250	5,631	5,955
76	Caney River - 2	4,380	4,380	4,388	4,436	4,604	4,691
77	Verdigris River (To Oologah Dam) - 1	9,684	9,939	10,102	10,413	10,915	11,409
78	Verdigris River (To Oologah Dam) - 2	14,506	14,666	14,858	15,168	15,695	16,205
79	Verdigris River (To Kansas State Line)	1,183	1,276	1,256	1,222	1,192	1,159
80	Grand (Neosho) River - 1	5,144	5,184	5,093	4,949	4,773	4,592
81	Grand (Neosho) River - 2	572	599	589	574	563	552
82	Illinois River	2,849	3,080	3,013	2,890	2,756	2,648
	Total	**501,479**	**516,806**	**523,158**	**537,869**	**567,163**	**591,078**

Table B.3 Public Supply Demand Projections by OCWP Planning Basin – Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	2,159	2,464	2,536	2,694	2,979	3,233
2	Little River (McCurtain County) - 1	1,267	1,445	1,487	1,580	1,747	1,896
3	Little River (McCurtain County) - 2	3,079	3,513	3,616	3,842	4,247	4,610
4	Little River (McCurtain County) - 3	239	272	280	298	329	357
5	Kiamichi River - 1	1,179	1,152	1,110	1,058	1,003	930
6	Kiamichi River - 2	1,248	1,214	1,169	1,114	1,053	975
7	Muddy Boggy River - 1	10	10	9	9	9	8
8	Muddy Boggy River - 2	1,770	1,684	1,630	1,532	1,417	1,281
9	Clear Boggy Creek	1,093	1,122	1,118	1,119	1,138	1,147
10	Red River Mainstem (To Blue River)	47	48	47	47	47	47
11	Blue River - 1	490	545	564	608	684	755
12	Blue River - 2	5,676	6,259	6,452	6,901	7,694	8,431
13	Red River Mainstem (To Washita)	1,984	2,207	2,284	2,460	2,768	3,056
14	Lower Washita	17,031	17,522	17,495	17,437	17,599	17,664
15	Middle Washita - 1	304	323	324	328	341	352
16	Middle Washita - 2	3,175	3,298	3,234	3,128	2,975	2,855
17	Upper Washita - 1	821	869	849	821	780	747
18	Upper Washita - 2	436	426	414	390	356	321
19	Upper Washita - 3	6,170	6,403	6,509	6,708	7,229	7,583
20	Washita Headwaters	164	175	175	177	187	194
21	Red River Mainstem (To Walnut Bayou)	8,855	9,133	9,142	9,193	9,470	9,646
22	Walnut Bayou	3,683	3,750	3,757	3,758	3,817	3,844
23	Mud Creek	125	126	124	121	119	115
24	Beaver Creek - 1	187	200	194	186	176	164
25	Beaver Creek - 2	2,236	2,152	2,090	1,965	1,815	1,648
26	Beaver Creek - 3	688	665	646	609	567	517
27	Cache Creek - 1	195	177	159	132	95	54
28	Cache Creek - 2	19,985	19,236	18,677	17,482	15,852	14,231

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	1,988	1,897	1,828	1,691	1,504	1,314
30	Deep Red Creek and West Cache Creek - 2	1,137	1,108	1,060	960	838	714
31	Red River Mainstem (To North Fork of Red)	1,375	1,330	1,263	1,133	973	806
32	Lower North Fork Red River - 1	376	367	351	317	277	236
33	Lower North Fork Red River - 2	5,023	4,554	4,266	3,794	3,072	2,324
34	Lower North Fork Red River - 3	3,255	3,199	3,185	3,121	3,109	3,031
35	Lower North Fork Red River - 4	46	45	43	41	37	34
36	Upper North Fork Red River - 1	245	247	241	239	232	224
37	Upper North Fork Red River - 2	2,767	2,770	2,782	2,776	2,857	2,870
38	Salt Fork Red River - 1	2,691	2,471	2,327	2,101	1,748	1,381
39	Salt Fork Red River - 2	85	86	84	83	81	78
40	Prairie Dog Town Fork Red River - 1	353	319	299	265	213	160
41	Prairie Dog Town Fork Red River - 2	709	714	686	632	535	453
42	Elm Fork Red River - 1	972	980	958	949	923	887
43	Elm Fork Red River - 2	2	2	2	2	3	3
44	Poteau River - 1	3,004	3,052	2,987	2,902	2,792	2,685
45	Poteau River - 2	8,165	8,256	8,048	7,744	7,354	6,967
46	Lower Arkansas River - 1	6,737	6,928	6,751	6,433	5,995	5,630
47	Lower Arkansas River - 2	16,695	16,462	15,980	15,162	14,224	13,145
48	Canadian River (To North Canadian River)	13,457	13,167	12,765	12,133	11,468	10,612
49	Middle Arkansas River	103,876	106,084	107,802	111,749	118,816	124,758
50	Lower North Canadian River	64,672	69,209	71,624	76,687	85,452	93,200
51	Middle North Canadian River	4,448	4,790	5,014	5,515	6,492	7,303
52	Upper North Canadian River - 1	755	768	773	793	847	877
53	Upper North Canadian River - 2	7,919	8,051	8,054	8,181	8,591	8,779
54	Upper North Canadian River - 3	464	475	469	458	461	447
55	North Canadian Headwaters	2,895	2,753	2,732	2,681	2,596	2,491
56	Lower Canadian River - 1	3,223	3,273	3,291	3,355	3,493	3,588
57	Lower Canadian River - 2	1,116	1,132	1,139	1,170	1,220	1,277

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	22,274	22,953	23,544	24,819	27,146	29,127
59	Upper Canadian River	4,081	4,388	4,495	4,717	5,221	5,606
60	Deep Fork River	47,400	50,711	52,445	56,083	62,412	67,999
61	Little River - 1	492	504	505	509	516	523
62	Little River - 2	23,054	23,962	24,584	25,894	28,230	30,238
63	Lower Cimarron River	9,403	9,531	9,663	9,977	10,596	11,049
64	Middle Cimarron River	29,356	31,448	32,545	35,002	39,426	43,228
65	Upper Cimarron River	781	863	866	912	1,061	1,147
66	Cimarron Headwaters	-	-	-	-	-	-
67	Lower Salt Fork Arkansas River - 1	4,074	3,894	3,783	3,564	3,321	3,021
68	Upper Salt Fork Arkansas River	2,700	2,897	2,958	3,151	3,664	4,008
69	Lower Salt Fork Arkansas River - 2	1,690	1,615	1,569	1,478	1,377	1,253
70	Lower Salt Fork Arkansas River - 3	115	110	106	100	93	85
71	Arkansas River - Cimarron Rivers to Keystone Lake	13,220	13,807	13,973	14,171	14,993	15,482
72	Arkansas River Mainstem (To Kansas State Line)	6,664	6,415	6,254	5,939	5,598	5,170
73	Bird Creek - 1	46,055	47,100	48,014	50,047	53,577	56,600
74	Bird Creek - 2	5,634	5,720	5,739	5,787	5,917	6,018
75	Caney River - 1	4,824	4,934	5,031	5,250	5,631	5,955
76	Caney River - 2	4,386	4,386	4,394	4,441	4,609	4,696
77	Verdigris River (To Oologah Dam) - 1	9,685	9,940	10,103	10,414	10,916	11,410
78	Verdigris River (To Oologah Dam) - 2	14,506	14,666	14,858	15,168	15,695	16,205
79	Verdigris River (To Kansas State Line)	1,183	1,276	1,256	1,222	1,192	1,159
80	Grand (Neosho) River - 1	5,397	5,435	5,336	5,180	4,994	4,799
81	Grand (Neosho) River - 2	3,611	3,704	3,648	3,589	3,567	3,504
82	Illinois River	2,919	3,154	3,086	2,962	2,826	2,718
	Total	**606,251**	**624,288**	**631,654**	**649,144**	**685,270**	**713,935**

Table B.4 Self-Supplied Domestic Demand Projections by OCWP Planning Basin – Groundwater/Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	36	39	40	41	44	46
2	Little River (McCurtain County) - 1	54	62	64	68	75	81
3	Little River (McCurtain County) - 2	205	228	232	242	262	280
4	Little River (McCurtain County) - 3	110	126	129	137	152	165
5	Kiamichi River - 1	114	115	111	106	102	96
6	Kiamichi River - 2	59	57	55	51	48	43
7	Muddy Boggy River - 1	93	93	90	86	82	77
8	Muddy Boggy River - 2	94	91	88	84	79	73
9	Clear Boggy Creek	269	281	282	287	299	308
10	Red River Mainstem (To Blue River)	96	102	103	107	115	121
11	Blue River - 1	161	179	186	200	225	248
12	Blue River - 2	205	216	218	225	238	249
13	Red River Mainstem (To Washita)	93	104	107	116	130	144
14	Lower Washita	1,178	1,208	1,198	1,180	1,169	1,158
15	Middle Washita - 1	1,016	1,028	1,029	1,033	1,043	1,062
16	Middle Washita - 2	1,081	1,094	1,081	1,050	1,007	975
17	Upper Washita - 1	44	47	46	44	42	40
18	Upper Washita - 2	243	257	251	243	231	221
19	Upper Washita - 3	66	68	67	66	66	66
20	Washita Headwaters	76	80	80	80	84	85
21	Red River Mainstem (To Walnut Bayou)	85	90	91	92	97	100
22	Walnut Bayou	5	6	6	6	7	7
23	Mud Creek	59	57	56	52	49	44
24	Beaver Creek - 1	0	0	0	0	0	0
25	Beaver Creek - 2	233	230	226	217	204	193
26	Beaver Creek - 3	15	14	14	13	12	11
27	Cache Creek - 1	0	0	0	0	0	0
28	Cache Creek - 2	170	165	160	151	138	125

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	86	82	80	75	68	61
30	Deep Red Creek and West Cache Creek - 2	8	8	8	7	6	5
31	Red River Mainstem (To North Fork of Red)	20	19	18	16	13	11
32	Lower North Fork Red River - 1	6	6	6	5	4	4
33	Lower North Fork Red River - 2	16	15	15	14	12	11
34	Lower North Fork Red River - 3	8	7	7	7	6	5
35	Lower North Fork Red River - 4	4	4	4	4	3	3
36	Upper North Fork Red River - 1	2	2	2	2	2	2
37	Upper North Fork Red River - 2	350	348	350	349	359	360
38	Salt Fork Red River - 1	5	5	5	5	4	4
39	Salt Fork Red River - 2	3	3	3	3	3	3
40	Prairie Dog Town Fork Red River - 1	3	2	2	2	2	1
41	Prairie Dog Town Fork Red River - 2	0	0	0	0	0	0
42	Elm Fork Red River - 1	4	4	4	4	4	4
43	Elm Fork Red River - 2	187	185	186	186	191	191
44	Poteau River - 1	0	0	0	0	0	0
45	Poteau River - 2	85	89	87	83	77	71
46	Lower Arkansas River - 1	605	650	636	610	575	548
47	Lower Arkansas River - 2	307	316	312	306	301	294
48	Canadian River (To North Canadian River)	180	182	177	169	161	151
49	Middle Arkansas River	845	862	872	895	937	973
50	Lower North Canadian River	3,830	4,070	4,187	4,434	4,865	5,245
51	Middle North Canadian River	236	257	272	307	378	436
52	Upper North Canadian River - 1	110	116	118	126	143	155
53	Upper North Canadian River - 2	158	164	161	157	158	155
54	Upper North Canadian River - 3	82	84	83	82	83	82
55	North Canadian Headwaters	108	105	102	96	93	86
56	Lower Canadian River - 1	1,293	1,325	1,336	1,369	1,428	1,482
57	Lower Canadian River - 2	654	662	667	683	711	743

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	725	757	779	830	926	1,010
59	Upper Canadian River	343	364	367	374	402	420
60	Deep Fork River	6,172	6,518	6,654	6,963	7,515	8,009
61	Little River - 1	885	905	906	909	917	924
62	Little River - 2	1,288	1,319	1,335	1,369	1,432	1,486
63	Lower Cimarron River	934	978	999	1,045	1,124	1,197
64	Middle Cimarron River	1,907	2,029	2,092	2,244	2,508	2,745
65	Upper Cimarron River	142	152	152	156	173	181
66	Cimarron Headwaters	21	19	18	16	14	11
67	Lower Salt Fork Arkansas River - 1	8	8	8	8	7	7
68	Upper Salt Fork Arkansas River	149	158	162	173	200	219
69	Lower Salt Fork Arkansas River - 2	1	1	1	1	0	0
70	Lower Salt Fork Arkansas River - 3	4	4	4	4	4	5
71	Arkansas River - Cimarron Rivers to Keystone Lake	1,162	1,197	1,198	1,195	1,223	1,233
72	Arkansas River Mainstem (To Kansas State Line)	297	300	294	284	271	259
73	Bird Creek - 1	174	177	180	186	197	206
74	Bird Creek - 2	451	455	450	441	431	421
75	Caney River - 1	142	142	143	145	148	151
76	Caney River - 2	527	530	525	517	512	503
77	Verdigris River (To Oologah Dam) - 1	174	180	183	188	194	202
78	Verdigris River (To Oologah Dam) - 2	319	321	324	328	334	341
79	Verdigris River (To Kansas State Line)	366	374	374	373	375	376
80	Grand (Neosho) River - 1	1,198	1,255	1,246	1,239	1,246	1,252
81	Grand (Neosho) River - 2	1,059	1,088	1,071	1,053	1,046	1,028
82	Illinois River	1,143	1,228	1,210	1,184	1,167	1,153
	Total	**34,650**	**36,070**	**36,384**	**37,196**	**38,954**	**40,446**

Table B.5 Oil and Gas Demand Projections by OCWP Planning Basin – Groundwater (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	38	38	38	38	38	38
2	Little River (McCurtain County) - 1	35	35	35	35	35	35
3	Little River (McCurtain County) - 2	-	-	-	-	-	-
4	Little River (McCurtain County) - 3	-	-	-	-	-	-
5	Kiamichi River - 1	2	2	2	2	2	2
6	Kiamichi River - 2	25	25	25	25	25	25
7	Muddy Boggy River - 1	8	8	8	8	8	8
8	Muddy Boggy River - 2	192	192	192	192	192	192
9	Clear Boggy Creek	128	128	128	128	128	128
10	Red River Mainstem (To Blue River)	0	0	0	0	0	0
11	Blue River - 1	0	0	0	0	0	0
12	Blue River - 2	55	55	55	55	55	55
13	Red River Mainstem (To Washita)	0	0	0	0	0	0
14	Lower Washita	2,117	2,117	2,117	2,117	2,117	2,117
15	Middle Washita - 1	432	432	432	432	432	432
16	Middle Washita - 2	899	899	899	899	899	899
17	Upper Washita - 1	60	60	60	60	60	60
18	Upper Washita - 2	62	62	62	62	62	62
19	Upper Washita - 3	133	133	133	133	133	133
20	Washita Headwaters	21	21	21	21	21	21
21	Red River Mainstem (To Walnut Bayou)	471	471	471	471	471	471
22	Walnut Bayou	504	504	504	504	504	504
23	Mud Creek	264	264	264	264	264	264
24	Beaver Creek - 1	5	5	5	5	5	5
25	Beaver Creek - 2	191	191	191	191	191	191
26	Beaver Creek - 3	90	90	90	90	90	90
27	Cache Creek - 1	2	2	2	2	2	2
28	Cache Creek - 2	54	54	54	54	54	54

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	6	6	6	6	6	6
30	Deep Red Creek and West Cache Creek - 2	46	46	46	46	46	46
31	Red River Mainstem (To North Fork of Red)	35	35	35	35	35	35
32	Lower North Fork Red River - 1	10	10	10	10	10	10
33	Lower North Fork Red River - 2	17	17	17	17	17	17
34	Lower North Fork Red River - 3	29	29	29	29	29	29
35	Lower North Fork Red River - 4	-	-	-	-	-	-
36	Upper North Fork Red River - 1	2	2	2	2	2	2
37	Upper North Fork Red River - 2	2	2	2	2	2	2
38	Salt Fork Red River - 1	14	14	14	14	14	14
39	Salt Fork Red River - 2	1	1	1	1	1	1
40	Prairie Dog Town Fork Red River - 1	11	11	11	11	11	11
41	Prairie Dog Town Fork Red River - 2	3	3	3	3	3	3
42	Elm Fork Red River - 1	-	-	-	-	-	-
43	Elm Fork Red River - 2	1	1	1	1	1	1
44	Poteau River - 1	0	0	0	0	0	0
45	Poteau River - 2	9	9	9	9	9	9
46	Lower Arkansas River - 1	78	78	78	78	78	78
47	Lower Arkansas River - 2	59	59	59	59	59	59
48	Canadian River (To North Canadian River)	511	511	511	511	511	511
49	Middle Arkansas River	168	168	168	168	168	168
50	Lower North Canadian River	378	378	378	378	378	378
51	Middle North Canadian River	559	559	559	559	559	559
52	Upper North Canadian River - 1	453	453	453	453	453	453
53	Upper North Canadian River - 2	75	75	75	75	75	75
54	Upper North Canadian River - 3	33	33	33	33	33	33
55	North Canadian Headwaters	210	210	210	210	210	210
56	Lower Canadian River - 1	298	298	298	298	298	298
57	Lower Canadian River - 2	84	84	84	84	84	84

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	504	504	504	504	504	504
59	Upper Canadian River	833	833	833	833	833	833
60	Deep Fork River	485	485	485	485	485	485
61	Little River - 1	83	83	83	83	83	83
62	Little River - 2	102	102	102	102	102	102
63	Lower Cimarron River	746	746	746	746	746	746
64	Middle Cimarron River	3,234	3,234	3,234	3,234	3,234	3,234
65	Upper Cimarron River	163	163	163	163	163	163
66	Cimarron Headwaters	10	10	10	10	10	10
67	Lower Salt Fork Arkansas River - 1	42	42	42	42	42	42
68	Upper Salt Fork Arkansas River	181	181	181	181	181	181
69	Lower Salt Fork Arkansas River - 2	26	26	26	26	26	26
70	Lower Salt Fork Arkansas River - 3	31	31	31	31	31	31
71	Arkansas River - Cimarron Rivers to Keystone Lake	316	316	316	316	316	316
72	Arkansas River Mainstem (To Kansas State Line)	167	167	167	167	167	167
73	Bird Creek - 1	-	-	-	-	-	-
74	Bird Creek - 2	21	21	21	21	21	21
75	Caney River - 1	-	-	-	-	-	-
76	Caney River - 2	92	92	92	92	92	92
77	Verdigris River (To Oologah Dam) - 1	30	30	30	30	30	30
78	Verdigris River (To Oologah Dam) - 2	-	-	-	-	-	-
79	Verdigris River (To Kansas State Line)	-	-	-	-	-	-
80	Grand (Neosho) River - 1	249	249	249	249	249	249
81	Grand (Neosho) River - 2	4	4	4	4	4	4
82	Illinois River	-	-	-	-	-	-
	Total	**16,199**	**16,199**	**16,199**	**16,199**	**16,199**	**16,199**

Table B.6 Oil and Gas Demand Projections by OCWP Planning Basin – Surface Water (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	2	2	2	2	2	2
2	Little River (McCurtain County) - 1	2	2	2	2	2	2
3	Little River (McCurtain County) - 2	88	88	88	88	88	88
4	Little River (McCurtain County) - 3	42	42	42	42	42	42
5	Kiamichi River - 1	-	-	-	-	-	-
6	Kiamichi River - 2	48	48	48	48	48	48
7	Muddy Boggy River - 1	3	3	3	3	3	3
8	Muddy Boggy River - 2	534	534	534	534	534	534
9	Clear Boggy Creek	184	184	184	184	184	184
10	Red River Mainstem (To Blue River)	1	1	1	1	1	1
11	Blue River - 1	3	3	3	3	3	3
12	Blue River - 2	15	15	15	15	15	15
13	Red River Mainstem (To Washita)	4	4	4	4	4	4
14	Lower Washita	314	314	314	314	314	314
15	Middle Washita - 1	521	521	521	521	521	521
16	Middle Washita - 2	953	953	953	953	953	953
17	Upper Washita - 1	2	2	2	2	2	2
18	Upper Washita - 2	7	7	7	7	7	7
19	Upper Washita - 3	266	266	266	266	266	266
20	Washita Headwaters	364	364	364	364	364	364
21	Red River Mainstem (To Walnut Bayou)	107	107	107	107	107	107
22	Walnut Bayou	32	32	32	32	32	32
23	Mud Creek	25	25	25	25	25	25
24	Beaver Creek - 1	-	-	-	-	-	-
25	Beaver Creek - 2	91	91	91	91	91	91
26	Beaver Creek - 3	9	9	9	9	9	9
27	Cache Creek - 1	-	-	-	-	-	-
28	Cache Creek - 2	1	1	1	1	1	1

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	0	0	0	0	0	0
30	Deep Red Creek and West Cache Creek - 2	1	1	1	1	1	1
31	Red River Mainstem (To North Fork of Red)	-	-	-	-	-	-
32	Lower North Fork Red River - 1	-	-	-	-	-	-
33	Lower North Fork Red River - 2	1	1	1	1	1	1
34	Lower North Fork Red River - 3	24	24	24	24	24	24
35	Lower North Fork Red River - 4	4	4	4	4	4	4
36	Upper North Fork Red River - 1	8	8	8	8	8	8
37	Upper North Fork Red River - 2	117	117	117	117	117	117
38	Salt Fork Red River - 1	0	0	0	0	0	0
39	Salt Fork Red River - 2	0	0	0	0	0	0
40	Prairie Dog Town Fork Red River - 1	0	0	0	0	0	0
41	Prairie Dog Town Fork Red River - 2	0	0	0	0	0	0
42	Elm Fork Red River - 1	-	-	-	-	-	-
43	Elm Fork Red River - 2	20	20	20	20	20	20
44	Poteau River - 1	-	-	-	-	-	-
45	Poteau River - 2	16	16	16	16	16	16
46	Lower Arkansas River - 1	30	30	30	30	30	30
47	Lower Arkansas River - 2	2	2	2	2	2	2
48	Canadian River (To North Canadian River)	1,570	1,570	1,570	1,570	1,570	1,570
49	Middle Arkansas River	1	1	1	1	1	1
50	Lower North Canadian River	191	191	191	191	191	191
51	Middle North Canadian River	2,165	2,165	2,165	2,165	2,165	2,165
52	Upper North Canadian River - 1	170	170	170	170	170	170
53	Upper North Canadian River - 2	114	114	114	114	114	114
54	Upper North Canadian River - 3	379	379	379	379	379	379
55	North Canadian Headwaters	1	1	1	1	1	1
56	Lower Canadian River - 1	510	510	510	510	510	510
57	Lower Canadian River - 2	259	259	259	259	259	259

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	1,469	1,469	1,469	1,469	1,469	1,469
59	Upper Canadian River	1,310	1,310	1,310	1,310	1,310	1,310
60	Deep Fork River	94	94	94	94	94	94
61	Little River - 1	3	3	3	3	3	3
62	Little River - 2	3	3	3	3	3	3
63	Lower Cimarron River	400	400	400	400	400	400
64	Middle Cimarron River	5,920	5,920	5,920	5,920	5,920	5,920
65	Upper Cimarron River	89	89	89	89	89	89
66	Cimarron Headwaters	0	0	0	0	0	0
67	Lower Salt Fork Arkansas River - 1	2	2	2	2	2	2
68	Upper Salt Fork Arkansas River	496	496	496	496	496	496
69	Lower Salt Fork Arkansas River - 2	1	1	1	1	1	1
70	Lower Salt Fork Arkansas River - 3	2	2	2	2	2	2
71	Arkansas River - Cimarron Rivers to Keystone Lake	168	168	168	168	168	168
72	Arkansas River Mainstem (To Kansas State Line)	114	114	114	114	114	114
73	Bird Creek - 1	15	15	15	15	15	15
74	Bird Creek - 2	7	7	7	7	7	7
75	Caney River - 1	15	15	15	15	15	15
76	Caney River - 2	5	5	5	5	5	5
77	Verdigris River (To Oologah Dam) - 1	-	-	-	-	-	-
78	Verdigris River (To Oologah Dam) - 2	7	7	7	7	7	7
79	Verdigris River (To Kansas State Line)	40	40	40	40	40	40
80	Grand (Neosho) River - 1	0	0	0	0	0	0
81	Grand (Neosho) River - 2	-	-	-	-	-	-
82	Illinois River	-	-	-	-	-	-
	Total	**19,363**	**19,363**	**19,363**	**19,363**	**19,363**	**19,363**

Table B.7 Oil and Gas Demand Projections by OCWP Planning Basin – Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	40	40	40	40	40	40
2	Little River (McCurtain County) - 1	37	37	37	37	37	37
3	Little River (McCurtain County) - 2	88	88	88	88	88	88
4	Little River (McCurtain County) - 3	42	42	42	42	42	42
5	Kiamichi River - 1	2	2	2	2	2	2
6	Kiamichi River - 2	73	73	73	73	73	73
7	Muddy Boggy River - 1	11	11	11	11	11	11
8	Muddy Boggy River - 2	726	726	726	726	726	726
9	Clear Boggy Creek	312	312	312	312	312	312
10	Red River Mainstem (To Blue River)	1	1	1	1	1	1
11	Blue River - 1	3	3	3	3	3	3
12	Blue River - 2	70	70	70	70	70	70
13	Red River Mainstem (To Washita)	4	4	4	4	4	4
14	Lower Washita	2,431	2,431	2,431	2,431	2,431	2,431
15	Middle Washita - 1	953	953	953	953	953	953
16	Middle Washita - 2	1,852	1,852	1,852	1,852	1,852	1,852
17	Upper Washita - 1	62	62	62	62	62	62
18	Upper Washita - 2	69	69	69	69	69	69
19	Upper Washita - 3	399	399	399	399	399	399
20	Washita Headwaters	385	385	385	385	385	385
21	Red River Mainstem (To Walnut Bayou)	577	577	577	577	577	577
22	Walnut Bayou	536	536	536	536	536	536
23	Mud Creek	289	289	289	289	289	289
24	Beaver Creek - 1	5	5	5	5	5	5
25	Beaver Creek - 2	282	282	282	282	282	282
26	Beaver Creek - 3	99	99	99	99	99	99
27	Cache Creek - 1	2	2	2	2	2	2
28	Cache Creek - 2	56	56	56	56	56	56

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	6	6	6	6	6	6
30	Deep Red Creek and West Cache Creek - 2	46	46	46	46	46	46
31	Red River Mainstem (To North Fork of Red)	35	35	35	35	35	35
32	Lower North Fork Red River - 1	10	10	10	10	10	10
33	Lower North Fork Red River - 2	18	18	18	18	18	18
34	Lower North Fork Red River - 3	53	53	53	53	53	53
35	Lower North Fork Red River - 4	4	4	4	4	4	4
36	Upper North Fork Red River - 1	10	10	10	10	10	10
37	Upper North Fork Red River - 2	119	119	119	119	119	119
38	Salt Fork Red River - 1	14	14	14	14	14	14
39	Salt Fork Red River - 2	1	1	1	1	1	1
40	Prairie Dog Town Fork Red River - 1	11	11	11	11	11	11
41	Prairie Dog Town Fork Red River - 2	3	3	3	3	3	3
42	Elm Fork Red River - 1	-	-	-	-	-	-
43	Elm Fork Red River - 2	21	21	21	21	21	21
44	Poteau River - 1	0	0	0	0	0	0
45	Poteau River - 2	26	26	26	26	26	26
46	Lower Arkansas River - 1	109	109	109	109	109	109
47	Lower Arkansas River - 2	61	61	61	61	61	61
48	Canadian River (To North Canadian River)	2,081	2,081	2,081	2,081	2,081	2,081
49	Middle Arkansas River	169	169	169	169	169	169
50	Lower North Canadian River	569	569	569	569	569	569
51	Middle North Canadian River	2,724	2,724	2,724	2,724	2,724	2,724
52	Upper North Canadian River - 1	624	624	624	624	624	624
53	Upper North Canadian River - 2	189	189	189	189	189	189
54	Upper North Canadian River - 3	412	412	412	412	412	412
55	North Canadian Headwaters	210	210	210	210	210	210
56	Lower Canadian River - 1	808	808	808	808	808	808
57	Lower Canadian River - 2	343	343	343	343	343	343

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	1,973	1,973	1,973	1,973	1,973	1,973
59	Upper Canadian River	2,144	2,144	2,144	2,144	2,144	2,144
60	Deep Fork River	579	579	579	579	579	579
61	Little River - 1	86	86	86	86	86	86
62	Little River - 2	105	105	105	105	105	105
63	Lower Cimarron River	1,146	1,146	1,146	1,146	1,146	1,146
64	Middle Cimarron River	9,154	9,154	9,154	9,154	9,154	9,154
65	Upper Cimarron River	252	252	252	252	252	252
66	Cimarron Headwaters	10	10	10	10	10	10
67	Lower Salt Fork Arkansas River - 1	44	44	44	44	44	44
68	Upper Salt Fork Arkansas River	677	677	677	677	677	677
69	Lower Salt Fork Arkansas River - 2	27	27	27	27	27	27
70	Lower Salt Fork Arkansas River - 3	33	33	33	33	33	33
71	Arkansas River - Cimarron Rivers to Keystone Lake	484	484	484	484	484	484
72	Arkansas River Mainstem (To Kansas State Line)	281	281	281	281	281	281
73	Bird Creek - 1	15	15	15	15	15	15
74	Bird Creek - 2	29	29	29	29	29	29
75	Caney River - 1	15	15	15	15	15	15
76	Caney River - 2	97	97	97	97	97	97
77	Verdigris River (To Oologah Dam) - 1	30	30	30	30	30	30
78	Verdigris River (To Oologah Dam) - 2	7	7	7	7	7	7
79	Verdigris River (To Kansas State Line)	40	40	40	40	40	40
80	Grand (Neosho) River - 1	249	249	249	249	249	249
81	Grand (Neosho) River - 2	4	4	4	4	4	4
82	Illinois River	-	-	-	-	-	-
	Total	**35,562**	**35,562**	**35,562**	**35,562**	**35,562**	**35,562**

Table B.8 Thermoelectric Power Generation Water Consumption Demand Projections by OCWP Planning Basin – Groundwater (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
17	Upper Washita - 1	94	64	61	78	91	103
28	Cache Creek - 2	14	10	9	12	14	15
50	Lower North Canadian River	21	14	13	17	20	22
51	Middle North Canadian River	9	6	6	2	2	2
52	Upper North Canadian River - 1	164	111	106	136	159	179
58	Middle Canadian River	1,628	1,106	1,049	1,352	1,578	1,774
60	Deep Fork River	569	387	367	473	552	620
67	Lower Salt Fork Arkansas River - 1	3	2	2	2	3	3
	Total	**2,502**	**1,700**	**1,613**	**2,073**	**2,418**	**2,719**

Table B.9 Thermoelectric Power Generation Water Consumption Demand Projections by OCWP Planning Basin – Surface Water (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	824	1,554	1,797	2,087	2,493	2,946
5	Kiamichi River - 1	2,335	1,657	1,554	555	474	464
8	Muddy Boggy River - 2	3,392	2,304	2,186	2,817	3,287	3,696
17	Upper Washita - 1	947	644	611	787	918	1,033
28	Cache Creek - 2	173	117	111	144	168	188
44	Poteau River - 1	1,151	816	766	273	234	229
47	Lower Arkansas River - 2	6,962	7,363	7,814	8,606	10,068	11,629
49	Middle Arkansas River	4,940	3,379	3,213	4,136	4,827	5,430
50	Lower North Canadian River	2,278	1,548	1,468	1,892	2,208	2,483
56	Lower Canadian River - 1	621	422	401	516	602	677
58	Middle Canadian River	169	115	109	141	164	185
60	Deep Fork River	3,319	2,255	2,139	2,757	3,216	3,616
67	Lower Salt Fork Arkansas River - 1	5	4	3	4	5	6
72	Arkansas River Mainstem (To Kansas State Line)	21,318	15,125	14,186	5,064	4,327	4,236
77	Verdigris River (To Oologah Dam) - 1	4,178	2,839	2,693	3,471	4,050	4,553
78	Verdigris River (To Oologah Dam) - 2	2,707	2,988	3,197	3,481	4,073	4,714
80	Grand (Neosho) River - 1	4,652	3,955	4,003	4,716	5,511	6,290
	Total	**59,971**	**47,086**	**46,250**	**41,447**	**46,625**	**52,374**

Table B.10 Thermoelectric Power Generation Water Consumption Demand Projections by OCWP Planning Basin – Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	824	1,554	1,797	2,087	2,493	2,946
5	Kiamichi River - 1	2,335	1,657	1,554	555	474	464
8	Muddy Boggy River - 2	3,392	2,304	2,186	2,817	3,287	3,696
17	Upper Washita - 1	1,041	708	671	865	1,010	1,135
28	Cache Creek - 2	187	127	120	156	182	203
44	Poteau River - 1	1,151	816	766	273	234	229
47	Lower Arkansas River - 2	6,962	7,363	7,814	8,606	10,068	11,629
49	Middle Arkansas River	4,940	3,379	3,213	4,136	4,827	5,430
50	Lower North Canadian River	2,299	1,562	1,481	1,909	2,228	2,505
51	Middle North Canadian River	9	6	6	2	2	2
52	Upper North Canadian River - 1	164	111	106	136	159	179
56	Lower Canadian River - 1	621	422	401	516	602	677
58	Middle Canadian River	1,797	1,221	1,158	1,493	1,742	1,959
60	Deep Fork River	3,888	2,641	2,506	3,230	3,768	4,236
67	Lower Salt Fork Arkansas River - 1	8	6	5	6	8	9
72	Arkansas River Mainstem (To Kansas State Line)	21,318	15,125	14,186	5,064	4,327	4,236
77	Verdigris River (To Oologah Dam) - 1	4,178	2,839	2,693	3,471	4,050	4,553
78	Verdigris River (To Oologah Dam) - 2	2,707	2,988	3,197	3,481	4,073	4,714
80	Grand (Neosho) River - 1	4,652	3,955	4,003	4,716	5,511	6,290
	Total	**62,473**	**48,785**	**47,864**	**43,519**	**49,044**	**55,093**

Table B.11 Self-Supplied Industrial Demand Projections by OCWP Planning Basin – Groundwater (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	2,520	2,456	2,528	2,686	2,970	3,223
38	Salt Fork Red River - 1	140	136	127	113	91	68
49	Middle Arkansas River	182	177	181	189	203	215
55	North Canadian Headwaters	2,946	2,872	2,866	2,853	2,787	2,718
56	Lower Canadian River - 1	270	263	264	267	274	280
58	Middle Canadian River	3,513	3,425	3,393	3,297	3,154	3,059
67	Lower Salt Fork Arkansas River - 1	3,324	3,241	3,148	2,966	2,764	2,514
72	Arkansas River Mainstem (To Kansas State Line)	944	920	900	857	800	747
	Total	**13,839**	**13,491**	**13,409**	**13,228**	**13,043**	**12,824**

Table B.12 Self-Supplied Industrial Demand Projections by OCWP Planning Basin – Surface Water (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	37,753	36,802	37,881	40,247	44,497	48,298
8	Muddy Boggy River - 2	126	123	119	113	104	94
14	Lower Washita	31	31	31	31	31	31
47	Lower Arkansas River - 2	12,505	12,190	11,859	11,274	10,588	9,818
48	Canadian River (To North Canadian River)	536	523	506	482	457	421
58	Middle Canadian River	1,490	1,453	1,440	1,399	1,338	1,297
67	Lower Salt Fork Arkansas River - 1	406	396	385	362	338	307
77	Verdigris River (To Oologah Dam) - 1	408	397	401	406	414	423
82	Illinois River	12	12	11	11	10	9
	Total	**53,268**	**51,926**	**52,633**	**54,324**	**57,775**	**60,698**

Table B.13 Self-Supplied Industrial Demand Projections by OCWP Planning Basin – Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	40,273	39,258	40,410	42,933	47,466	51,521
8	Muddy Boggy River - 2	126	123	119	113	104	94
14	Lower Washita	31	31	31	31	31	31
38	Salt Fork Red River - 1	140	136	127	113	91	68
47	Lower Arkansas River - 2	12,505	12,190	11,859	11,274	10,588	9,818
48	Canadian River (To North Canadian River)	536	523	506	482	457	421
49	Middle Arkansas River	182	177	181	189	203	215
55	North Canadian Headwaters	2,946	2,872	2,866	2,853	2,787	2,718
56	Lower Canadian River - 1	270	263	264	267	274	280
58	Middle Canadian River	5,004	4,878	4,833	4,696	4,492	4,356
67	Lower Salt Fork Arkansas River - 1	3,730	3,636	3,533	3,329	3,101	2,821
72	Arkansas River Mainstem (To Kansas State Line)	944	920	900	857	800	747
77	Verdigris River (To Oologah Dam) - 1	408	397	401	406	414	423
82	Illinois River	12	12	11	11	10	9
	Total	**67,107**	**65,416**	**66,042**	**67,552**	**70,818**	**73,522**

Table B.14 Livestock Demand Projections by OCWP Planning Basin – Groundwater (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	41	43	43	43	42	42
2	Little River (McCurtain County)	34	36	36	36	36	35
3	Little River (McCurtain County)	-	-	-	-	-	-
4	Little River (McCurtain County)	-	-	-	-	-	-
5	Kiamichi River	41	39	39	39	37	36
6	Kiamichi River	156	159	160	158	155	153
7	Muddy Boggy River	41	40	40	39	37	36
8	Muddy Boggy River	180	179	180	179	179	180
9	Clear Boggy Creek	127	124	124	121	117	114
10	Red River Mainstem (To Blue River)	44	43	43	42	40	39
11	Blue River	85	82	82	80	77	74
12	Blue River	83	80	80	78	75	73
13	Red River Mainstem (To Washita)	126	122	122	119	114	110
14	Lower Washita	256	248	247	241	232	224
15	Middle Washita	343	334	333	325	313	304
16	Middle Washita	370	363	363	357	349	343
17	Upper Washita	98	97	97	96	95	94
18	Upper Washita	128	125	125	123	121	119
19	Upper Washita	567	550	549	534	513	497
20	Washita Headwaters	273	265	265	258	247	239
21	Lower Washita - Mainstem Red River (To Lake Texoma)	194	187	187	182	175	170
22	Walnut Bayou	31	30	30	30	28	27
23	Mud Creek	93	90	90	87	84	81
24	Beaver Creek	18	18	18	17	16	16
25	Beaver Creek	123	119	119	116	111	108
26	Beaver Creek	26	25	25	25	24	23
27	Cache Creek	40	39	39	38	36	35
28	Cache Creek	214	209	209	205	199	194

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek	140	136	135	132	127	122
30	Deep Red Creek and West Cache Creek	183	178	177	172	165	158
31	Red River Mainstem (To North Fork of Red)	154	150	149	144	139	133
32	Lower North Fork Red River	30	29	29	28	27	26
33	Lower North Fork Red River	68	66	66	64	61	59
34	Lower North Fork Red River	210	204	204	198	190	184
35	Lower North Fork Red River	-	-	-	-	-	-
36	Upper North Fork Red River	36	35	35	34	33	32
37	Upper North Fork Red River	131	127	127	124	119	115
38	Salt Fork Red River	90	88	87	85	82	79
39	Salt Fork Red River	41	39	39	38	37	35
40	Prairie Dog Town Fork Red River	44	42	42	41	40	38
41	Prairie Dog Town Fork Red River	65	63	63	61	59	57
42	Elm Fork Red River	17	17	17	16	16	15
43	Elm Fork Red River	85	83	82	80	77	74
44	Poteau River	35	37	37	37	37	37
45	Poteau River	359	373	379	378	373	371
46	Lower Arkansas River	200	203	205	203	199	196
47	Lower Arkansas River	121	120	120	117	113	110
48	Lower Canadian River (To Lake Eufaula)	579	578	583	582	584	590
49	Middle Arkansas River	104	101	101	99	95	93
50	Lower North Canadian River	133	130	130	128	125	122
51	Middle North Canadian River	284	275	275	267	257	248
52	Upper North Canadian River	803	802	809	811	816	826
53	Upper North Canadian River	1,682	1,684	1,698	1,706	1,721	1,748
54	Upper North Canadian River	737	740	747	751	761	775
55	North Canadian Headwaters	10,257	10,425	10,567	10,768	11,096	11,495
56	Lower Canadian River	302	299	301	298	297	296
57	Lower Canadian River	223	217	216	211	203	197

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	277	269	269	263	253	246
59	Upper Canadian River	1,066	1,054	1,059	1,051	1,043	1,041
60	Deep Fork River	200	194	194	191	184	179
61	Little River	31	30	30	30	29	28
62	Little River	47	46	46	46	44	43
63	Lower Cimarron River	1,138	1,109	1,108	1,084	1,051	1,023
64	Middle Cimarron River	1,945	1,910	1,914	1,887	1,848	1,824
65	Upper Cimarron River	2,742	2,717	2,731	2,715	2,700	2,702
66	Cimarron Headwaters	709	692	692	678	659	644
67	Lower Salt Fork Arkansas River	16	15	15	15	14	14
68	Upper Salt Fork Arkansas River	1,298	1,259	1,255	1,221	1,173	1,133
69	Lower Salt Fork Arkansas River	9	9	9	8	8	8
70	Lower Salt Fork Arkansas River	13	12	12	12	12	11
71	Arkansas - Cimarron Rivers (To Keystone Lake)	207	201	200	197	188	182
72	Arkansas River Mainstem (To Kansas State Line)	131	127	127	124	119	115
73	Bird Creek	-	-	-	-	-	-
74	Bird Creek	75	73	72	71	68	66
75	Caney River	-	-	-	-	-	-
76	Caney River	109	105	105	102	98	95
77	Verdigris River (To Oologah Dam)	39	37	37	36	35	34
78	Verdigris River (To Oologah Dam)	-	-	-	-	-	-
79	Verdigris River (To Kansas State Line)	-	-	-	-	-	-
80	Grand (Neosho) River	464	464	467	460	449	438
81	Grand (Neosho) River	328	334	337	333	326	321
82	Illinois River	183	187	189	187	183	181
	Total	**31,873**	**31,729**	**31,933**	**31,852**	**31,782**	**31,928**

Table B.15 Livestock Demand Projections by OCWP Planning Basin – Surface Water (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	373	384	389	386	380	376
2	Little River (McCurtain County) - 1	310	321	326	324	319	317
3	Little River (McCurtain County) - 2	1,014	1,039	1,053	1,044	1,026	1,014
4	Little River (McCurtain County) - 3	599	622	632	630	622	618
5	Kiamichi River - 1	363	352	351	342	329	318
6	Kiamichi River - 2	779	775	780	766	745	728
7	Muddy Boggy River - 1	367	356	356	346	333	322
8	Muddy Boggy River - 2	1,175	1,158	1,161	1,148	1,131	1,122
9	Clear Boggy Creek	941	918	918	898	871	850
10	Red River Mainstem (To Blue River)	235	228	228	222	213	206
11	Blue River - 1	193	188	187	182	175	170
12	Blue River - 2	385	374	374	364	351	340
13	Red River Mainstem (To Washita)	288	279	279	271	261	252
14	Lower Washita	2,132	2,072	2,066	2,013	1,939	1,876
15	Middle Washita - 1	508	495	493	481	465	451
16	Middle Washita - 2	1,707	1,672	1,667	1,633	1,588	1,552
17	Upper Washita - 1	216	212	213	210	207	205
18	Upper Washita - 2	305	298	299	294	287	282
19	Upper Washita - 3	1,472	1,428	1,425	1,387	1,334	1,289
20	Washita Headwaters	731	710	708	689	662	639
21	Red River Mainstem (To Walnut Bayou)	1,508	1,465	1,462	1,425	1,373	1,329
22	Walnut Bayou	280	272	271	265	255	247
23	Mud Creek	826	802	801	779	749	725
24	Beaver Creek - 1	160	155	155	151	145	140
25	Beaver Creek - 2	613	596	594	579	557	540
26	Beaver Creek - 3	236	229	229	223	214	207
27	Cache Creek - 1	120	116	116	113	108	105
28	Cache Creek - 2	584	569	569	557	539	526

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	424	412	411	400	384	372
30	Deep Red Creek and West Cache Creek - 2	555	540	536	521	499	481
31	Red River Mainstem (To North Fork of Red)	521	507	504	490	470	453
32	Lower North Fork Red River - 1	90	87	86	84	81	78
33	Lower North Fork Red River - 2	201	195	194	189	181	175
34	Lower North Fork Red River - 3	620	601	600	583	561	542
35	Lower North Fork Red River - 4	112	108	108	105	101	98
36	Upper North Fork Red River - 1	109	106	106	103	99	96
37	Upper North Fork Red River - 2	387	375	374	364	350	338
38	Salt Fork Red River - 1	266	258	257	250	241	232
39	Salt Fork Red River - 2	121	117	117	113	109	105
40	Prairie Dog Town Fork Red River - 1	126	122	121	118	114	110
41	Prairie Dog Town Fork Red River - 2	189	183	183	178	171	165
42	Elm Fork Red River - 1	54	53	52	51	49	47
43	Elm Fork Red River - 2	257	250	249	242	233	225
44	Poteau River - 1	97	101	103	103	102	102
45	Poteau River - 2	1,183	1,217	1,234	1,227	1,207	1,197
46	Lower Arkansas River - 1	1,802	1,818	1,834	1,811	1,772	1,743
47	Lower Arkansas River - 2	1,109	1,091	1,093	1,070	1,037	1,010
48	Canadian River (To North Canadian River)	3,384	3,338	3,350	3,315	3,269	3,243
49	Middle Arkansas River	906	883	882	861	832	808
50	Lower North Canadian River	794	776	776	761	740	724
51	Middle North Canadian River	767	744	743	723	696	672
52	Upper North Canadian River - 1	361	355	357	352	347	344
53	Upper North Canadian River - 2	-	-	-	-	-	-
54	Upper North Canadian River - 3	-	-	-	-	-	-
55	North Canadian Headwaters	-	-	-	-	-	-
56	Lower Canadian River - 1	955	947	952	946	941	941
57	Lower Canadian River - 2	82	81	80	78	76	74

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	747	728	726	708	684	665
59	Upper Canadian River	1,187	1,153	1,151	1,121	1,079	1,045
60	Deep Fork River	1,632	1,590	1,589	1,552	1,500	1,459
61	Little River - 1	248	243	243	238	231	226
62	Little River - 2	404	395	395	386	374	365
63	Lower Cimarron River	186	182	183	181	176	174
64	Middle Cimarron River	3,743	3,704	3,719	3,693	3,664	3,657
65	Upper Cimarron River	15	15	15	15	16	16
66	Cimarron Headwaters	-	-	-	-	-	-
67	Lower Salt Fork Arkansas River - 1	138	134	133	130	125	121
68	Upper Salt Fork Arkansas River	617	599	597	582	560	542
69	Lower Salt Fork Arkansas River - 2	77	75	74	73	70	68
70	Lower Salt Fork Arkansas River - 3	111	108	108	105	101	98
71	Arkansas River - Cimarron Rivers to Keystone Lake	1,874	1,821	1,817	1,771	1,706	1,653
72	Arkansas River Mainstem (To Kansas State Line)	1,179	1,145	1,142	1,112	1,070	1,035
73	Bird Creek - 1	97	94	94	92	89	87
74	Bird Creek - 2	694	674	673	655	631	610
75	Caney River - 1	174	169	169	165	159	154
76	Caney River - 2	964	936	934	910	876	848
77	Verdigris River (To Oologah Dam) - 1	344	335	334	326	314	305
78	Verdigris River (To Oologah Dam) - 2	439	427	427	416	402	389
79	Verdigris River (To Kansas State Line)	1,452	1,413	1,410	1,375	1,324	1,283
80	Grand (Neosho) River - 1	3,465	3,448	3,463	3,400	3,304	3,228
81	Grand (Neosho) River - 2	1,732	1,760	1,778	1,758	1,722	1,696
82	Illinois River	1,464	1,495	1,512	1,497	1,469	1,450
	Total	**56,877**	**55,992**	**56,086**	**55,022**	**53,489**	**52,295**

Table B.16 Livestock Demand Projections by OCWP Planning Basin – Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	415	426	432	429	422	418
2	Little River (McCurtain County) - 1	344	356	362	360	355	352
3	Little River (McCurtain County) - 2	1,014	1,039	1,053	1,044	1,026	1,014
4	Little River (McCurtain County) - 3	599	622	632	630	622	618
5	Kiamichi River - 1	403	391	391	381	366	354
6	Kiamichi River - 2	935	934	939	924	900	881
7	Muddy Boggy River - 1	408	396	396	385	371	358
8	Muddy Boggy River - 2	1,355	1,336	1,342	1,327	1,310	1,302
9	Clear Boggy Creek	1,069	1,042	1,042	1,019	988	965
10	Red River Mainstem (To Blue River)	280	271	271	264	254	245
11	Blue River - 1	278	270	269	262	252	244
12	Blue River - 2	468	455	454	442	426	413
13	Red River Mainstem (To Washita)	414	401	400	390	375	363
14	Lower Washita	2,387	2,320	2,313	2,254	2,172	2,101
15	Middle Washita - 1	851	829	826	806	778	755
16	Middle Washita - 2	2,077	2,034	2,030	1,990	1,936	1,895
17	Upper Washita - 1	314	309	310	307	302	299
18	Upper Washita - 2	432	423	424	417	407	401
19	Upper Washita - 3	2,039	1,978	1,974	1,922	1,847	1,786
20	Washita Headwaters	1,005	975	973	947	909	878
21	Red River Mainstem (To Walnut Bayou)	1,702	1,652	1,649	1,607	1,548	1,499
22	Walnut Bayou	311	302	302	294	284	275
23	Mud Creek	919	892	890	867	833	806
24	Beaver Creek - 1	178	173	173	168	161	156
25	Beaver Creek - 2	736	715	713	695	669	647
26	Beaver Creek - 3	262	254	254	247	238	230
27	Cache Creek - 1	160	155	155	151	145	140
28	Cache Creek - 2	799	779	778	762	738	720

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	564	547	546	531	511	494
30	Deep Red Creek and West Cache Creek - 2	739	718	713	693	664	640
31	Red River Mainstem (To North Fork of Red)	675	656	652	634	608	586
32	Lower North Fork Red River - 1	119	116	115	112	107	103
33	Lower North Fork Red River - 2	269	261	260	253	243	234
34	Lower North Fork Red River - 3	830	805	803	781	751	725
35	Lower North Fork Red River - 4	112	108	108	105	101	98
36	Upper North Fork Red River - 1	145	141	141	137	132	127
37	Upper North Fork Red River - 2	518	503	501	488	469	453
38	Salt Fork Red River - 1	356	345	344	335	323	311
39	Salt Fork Red River - 2	161	156	156	152	146	141
40	Prairie Dog Town Fork Red River - 1	169	164	164	159	153	148
41	Prairie Dog Town Fork Red River - 2	254	246	246	239	230	221
42	Elm Fork Red River - 1	71	69	69	67	65	63
43	Elm Fork Red River - 2	342	332	331	322	310	299
44	Poteau River - 1	132	138	141	140	139	138
45	Poteau River - 2	1,542	1,590	1,614	1,605	1,581	1,568
46	Lower Arkansas River - 1	2,002	2,021	2,039	2,014	1,970	1,939
47	Lower Arkansas River - 2	1,231	1,211	1,213	1,188	1,150	1,120
48	Canadian River (To North Canadian River)	3,964	3,917	3,933	3,897	3,853	3,833
49	Middle Arkansas River	1,010	984	983	960	927	901
50	Lower North Canadian River	927	906	905	889	864	846
51	Middle North Canadian River	1,050	1,019	1,017	990	952	921
52	Upper North Canadian River - 1	1,164	1,158	1,165	1,163	1,163	1,170
53	Upper North Canadian River - 2	1,682	1,684	1,698	1,706	1,721	1,748
54	Upper North Canadian River - 3	737	740	747	751	761	775
55	North Canadian Headwaters	10,257	10,425	10,567	10,768	11,096	11,495
56	Lower Canadian River - 1	1,257	1,246	1,252	1,244	1,237	1,237
57	Lower Canadian River - 2	305	297	296	289	279	271

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	1,024	997	995	971	938	911
59	Upper Canadian River	2,252	2,206	2,210	2,172	2,122	2,086
60	Deep Fork River	1,832	1,785	1,783	1,742	1,684	1,638
61	Little River - 1	279	273	273	267	260	254
62	Little River - 2	452	441	441	431	418	408
63	Lower Cimarron River	1,324	1,292	1,291	1,265	1,227	1,197
64	Middle Cimarron River	5,688	5,614	5,633	5,580	5,512	5,482
65	Upper Cimarron River	2,757	2,732	2,746	2,731	2,715	2,718
66	Cimarron Headwaters	709	692	692	678	659	644
67	Lower Salt Fork Arkansas River - 1	153	149	148	145	139	135
68	Upper Salt Fork Arkansas River	1,915	1,858	1,853	1,803	1,733	1,675
69	Lower Salt Fork Arkansas River - 2	86	83	83	81	78	75
70	Lower Salt Fork Arkansas River - 3	124	120	120	117	113	109
71	Arkansas River - Cimarron Rivers to Keystone Lake	2,081	2,022	2,017	1,967	1,894	1,835
72	Arkansas River Mainstem (To Kansas State Line)	1,310	1,272	1,269	1,236	1,189	1,150
73	Bird Creek - 1	97	94	94	92	89	87
74	Bird Creek - 2	769	747	745	726	699	676
75	Caney River - 1	174	169	169	165	159	154
76	Caney River - 2	1,073	1,041	1,039	1,012	974	943
77	Verdigris River (To Oologah Dam) - 1	382	372	371	362	349	339
78	Verdigris River (To Oologah Dam) - 2	439	427	427	416	402	389
79	Verdigris River (To Kansas State Line)	1,452	1,413	1,410	1,375	1,324	1,283
80	Grand (Neosho) River - 1	3,930	3,912	3,931	3,860	3,752	3,666
81	Grand (Neosho) River - 2	2,060	2,094	2,115	2,091	2,048	2,017
82	Illinois River	1,647	1,682	1,701	1,684	1,653	1,630
	Total	**88,750**	**87,721**	**88,020**	**86,874**	**85,271**	**84,222**

Table B.17 Crop Irrigation Demand Projections by OCWP Planning Basin – Groundwater (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	2,371	3,686	3,686	3,686	3,686	3,686
2	Little River (McCurtain County) - 1	-	-	-	-	-	-
3	Little River (McCurtain County) - 2	-	-	-	-	-	-
4	Little River (McCurtain County) - 3	-	-	-	-	-	-
5	Kiamichi River - 1	180	216	234	273	331	385
6	Kiamichi River - 2	-	-	-	-	-	-
7	Muddy Boggy River - 1	42	50	54	63	77	89
8	Muddy Boggy River - 2	73	115	143	202	202	202
9	Clear Boggy Creek	663	768	821	924	970	970
10	Red River Mainstem (To Blue River)	409	488	529	614	733	841
11	Blue River - 1	-	-	-	-	-	-
12	Blue River - 2	3	5	6	8	13	20
13	Red River Mainstem (To Washita)	2,387	2,765	2,955	3,328	3,494	3,494
14	Lower Washita	271	364	357	350	347	346
15	Middle Washita - 1	133	102	82	64	56	55
16	Middle Washita - 2	7,046	7,289	7,329	7,321	7,335	7,354
17	Upper Washita - 1	7,351	7,699	7,764	7,764	7,764	7,764
18	Upper Washita - 2	40,348	42,811	43,138	43,138	43,138	43,138
19	Upper Washita - 3	13,989	16,395	16,424	16,456	16,486	16,517
20	Washita Headwaters	7,854	8,919	8,920	8,920	8,920	8,920
21	Red River Mainstem (To Walnut Bayou)	549	1,286	1,296	1,340	1,429	1,562
22	Walnut Bayou	87	353	353	353	353	353
23	Mud Creek	15	67	67	67	67	67
24	Beaver Creek - 1	-	-	-	-	-	-
25	Beaver Creek - 2	414	424	404	393	402	418
26	Beaver Creek - 3	77	116	116	116	116	116
27	Cache Creek - 1	6	7	7	7	7	7
28	Cache Creek - 2	171	188	194	204	219	231

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	66	79	84	95	110	124
30	Deep Red Creek and West Cache Creek - 2	730	744	744	744	744	744
31	Red River Mainstem (To North Fork of Red)	11,061	11,299	11,299	11,299	11,299	11,299
32	Lower North Fork Red River - 1	19,151	19,532	19,532	19,532	19,532	19,532
33	Lower North Fork Red River - 2	17,522	17,972	18,019	18,073	18,078	18,078
34	Lower North Fork Red River - 3	4,043	4,441	4,480	4,516	4,519	4,519
35	Lower North Fork Red River - 4	185	204	210	218	219	219
36	Upper North Fork Red River - 1	7,879	8,270	8,351	8,407	8,412	8,412
37	Upper North Fork Red River - 2	20,831	21,759	21,847	21,847	21,847	21,847
38	Salt Fork Red River - 1	17,872	18,303	18,326	18,326	18,326	18,326
39	Salt Fork Red River - 2	2,790	2,888	2,895	2,895	2,895	2,895
40	Prairie Dog Town Fork Red River - 1	4,324	4,433	4,436	4,436	4,436	4,436
41	Prairie Dog Town Fork Red River - 2	49,617	51,163	51,207	51,207	51,207	51,207
42	Elm Fork Red River - 1	4,078	4,240	4,260	4,260	4,260	4,260
43	Elm Fork Red River - 2	456	474	477	477	477	477
44	Poteau River - 1	-	-	-	-	-	-
45	Poteau River - 2	732	1,056	1,261	1,377	1,377	1,377
46	Lower Arkansas River - 1	5,104	6,583	7,860	8,584	8,584	8,584
47	Lower Arkansas River - 2	2,264	2,671	2,881	3,306	3,814	3,814
48	Canadian River (To North Canadian River)	67	616	638	684	684	684
49	Middle Arkansas River	451	417	426	446	469	469
50	Lower North Canadian River	203	558	558	558	559	559
51	Middle North Canadian River	6,557	7,696	8,279	9,454	11,155	12,637
52	Upper North Canadian River - 1	9,916	11,787	11,870	12,048	12,345	12,659
53	Upper North Canadian River - 2	46,471	51,507	53,299	56,484	59,949	61,446
54	Upper North Canadian River - 3	14,121	14,667	14,667	14,667	14,667	14,667
55	North Canadian Headwaters	420,342	427,608	428,846	431,045	433,438	434,472
56	Lower Canadian River - 1	772	1,399	1,607	2,051	2,051	2,051
57	Lower Canadian River - 2	20	27	25	24	23	23

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	1,567	1,724	1,764	1,874	2,060	2,220
59	Upper Canadian River	27,912	31,751	33,102	35,822	40,081	44,277
60	Deep Fork River	57	137	137	137	137	137
61	Little River - 1	14	23	23	23	23	23
62	Little River - 2	67	91	91	91	91	91
63	Lower Cimarron River	725	985	1,093	1,335	1,770	2,300
64	Middle Cimarron River	44,745	53,553	54,788	57,038	59,922	63,168
65	Upper Cimarron River	49,598	52,129	53,061	54,707	56,498	57,271
66	Cimarron Headwaters	19,327	19,859	19,859	19,859	19,859	19,859
67	Lower Salt Fork Arkansas River - 1	2,561	3,473	3,473	3,473	3,473	3,473
68	Upper Salt Fork Arkansas River	5,611	6,467	6,513	6,618	6,813	7,051
69	Lower Salt Fork Arkansas River - 2	42	56	56	56	56	56
70	Lower Salt Fork Arkansas River - 3	963	1,306	1,306	1,306	1,306	1,306
71	Arkansas River - Cimarron Rivers to Keystone Lake	929	1,277	1,437	1,808	2,495	3,335
72	Arkansas River Mainstem (To Kansas State Line)	1,355	2,045	2,073	2,139	2,262	2,411
73	Bird Creek - 1	-	-	-	-	-	-
74	Bird Creek - 2	181	285	285	285	285	285
75	Caney River - 1	-	-	-	-	-	-
76	Caney River - 2	-	-	-	-	-	-
77	Verdigris River (To Oologah Dam) - 1	26	27	28	29	31	31
78	Verdigris River (To Oologah Dam) - 2	-	-	-	-	-	-
79	Verdigris River (To Kansas State Line)	-	-	-	-	-	-
80	Grand (Neosho) River - 1	0	0	0	0	0	0
81	Grand (Neosho) River - 2	36	153	153	153	153	153
82	Illinois River	0	0	0	0	0	0
	Total	**907,780**	**961,850**	**972,505**	**989,405**	**1,008,935**	**1,023,798**

Table B.18 Crop Irrigation Demand Projections by OCWP Planning Basin – Surface Water (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	966	1,490	1,494	1,501	1,512	1,522
2	Little River (McCurtain County) - 1	116	181	181	181	181	181
3	Little River (McCurtain County) - 2	213	332	332	332	332	332
4	Little River (McCurtain County) - 3	112	174	174	174	174	174
5	Kiamichi River - 1	136	163	177	206	249	290
6	Kiamichi River - 2	1	8	8	8	8	8
7	Muddy Boggy River - 1	237	294	312	349	405	457
8	Muddy Boggy River - 2	191	742	753	774	774	774
9	Clear Boggy Creek	276	716	724	744	786	847
10	Red River Mainstem (To Blue River)	599	713	773	894	1,059	1,205
11	Blue River - 1	157	182	194	219	230	230
12	Blue River - 2	476	606	683	866	1,190	1,658
13	Red River Mainstem (To Washita)	10,361	12,001	12,826	14,445	15,166	15,166
14	Lower Washita	389	509	504	499	497	497
15	Middle Washita - 1	92	149	141	134	131	130
16	Middle Washita - 2	1,036	824	758	692	666	661
17	Upper Washita - 1	1,209	1,266	1,277	1,277	1,277	1,277
18	Upper Washita - 2	200	242	242	242	242	242
19	Upper Washita - 3	3,611	4,229	4,246	4,258	4,259	4,259
20	Washita Headwaters	1,046	1,183	1,183	1,183	1,183	1,183
21	Red River Mainstem (To Walnut Bayou)	874	824	881	1,066	1,470	2,092
22	Walnut Bayou	-	-	-	-	-	-
23	Mud Creek	9	39	39	39	39	39
24	Beaver Creek - 1	5	75	75	75	75	75
25	Beaver Creek - 2	1,106	1,542	1,553	1,582	1,631	1,675
26	Beaver Creek - 3	-	-	-	-	-	-
27	Cache Creek - 1	76	95	95	95	95	95
28	Cache Creek - 2	793	919	981	1,106	1,285	1,439

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	119	142	150	166	189	209
30	Deep Red Creek and West Cache Creek - 2	1,888	1,925	1,925	1,925	1,925	1,925
31	Red River Mainstem (To North Fork of Red)	4	4	4	4	4	4
32	Lower North Fork Red River - 1	-	-	-	-	-	-
33	Lower North Fork Red River - 2	14,775	14,996	14,997	14,998	14,998	14,998
34	Lower North Fork Red River - 3	2,659	2,890	2,959	3,037	3,044	3,044
35	Lower North Fork Red River - 4	-	-	-	-	-	-
36	Upper North Fork Red River - 1	42	46	48	50	50	50
37	Upper North Fork Red River - 2	661	687	690	690	690	690
38	Salt Fork Red River - 1	61,020	61,926	61,926	61,926	61,926	61,926
39	Salt Fork Red River - 2	-	-	-	-	-	-
40	Prairie Dog Town Fork Red River - 1	1,360	1,381	1,381	1,381	1,381	1,381
41	Prairie Dog Town Fork Red River - 2	357	368	368	368	368	368
42	Elm Fork Red River - 1	-	-	-	-	-	-
43	Elm Fork Red River - 2	-	-	-	-	-	-
44	Poteau River - 1	899	1,297	1,549	1,692	1,692	1,692
45	Poteau River - 2	1,200	1,887	2,215	2,401	2,401	2,401
46	Lower Arkansas River - 1	6,517	7,595	9,045	9,867	9,867	9,867
47	Lower Arkansas River - 2	9,872	11,703	12,605	14,428	16,609	16,609
48	Canadian River (To North Canadian River)	621	1,117	1,311	1,724	1,724	1,724
49	Middle Arkansas River	667	752	796	884	990	990
50	Lower North Canadian River	459	776	777	781	783	784
51	Middle North Canadian River	920	1,066	1,140	1,286	1,485	1,643
52	Upper North Canadian River - 1	208	235	235	235	235	235
53	Upper North Canadian River - 2	545	613	613	613	613	613
54	Upper North Canadian River - 3	79	81	81	81	81	81
55	North Canadian Headwaters	247	251	253	257	261	263
56	Lower Canadian River - 1	633	1,038	1,104	1,247	1,247	1,247
57	Lower Canadian River - 2	100	215	214	213	213	213

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	3,321	3,296	3,370	3,658	4,182	4,642
59	Upper Canadian River	779	843	863	894	937	971
60	Deep Fork River	55	142	142	142	142	142
61	Little River - 1	-	-	-	-	-	-
62	Little River - 2	160	267	267	267	267	267
63	Lower Cimarron River	247	389	417	480	598	742
64	Middle Cimarron River	1,901	2,330	2,387	2,485	2,589	2,689
65	Upper Cimarron River	9,927	11,154	11,156	11,160	11,164	11,166
66	Cimarron Headwaters	2,492	2,594	2,594	2,594	2,594	2,594
67	Lower Salt Fork Arkansas River - 1	10	14	14	14	14	14
68	Upper Salt Fork Arkansas River	677	700	700	700	700	700
69	Lower Salt Fork Arkansas River - 2	730	989	989	989	989	989
70	Lower Salt Fork Arkansas River - 3	1,914	2,329	2,329	2,329	2,329	2,329
71	Arkansas River - Cimarron Rivers to Keystone Lake	272	2,121	2,121	2,121	2,121	2,121
72	Arkansas River Mainstem (To Kansas State Line)	-	-	-	-	-	-
73	Bird Creek - 1	22	20	20	20	20	20
74	Bird Creek - 2	272	426	426	426	426	426
75	Caney River - 1	125	141	141	141	141	141
76	Caney River - 2	-	-	-	-	-	-
77	Verdigris River (To Oologah Dam) - 1	5,677	5,785	5,814	5,872	5,941	5,941
78	Verdigris River (To Oologah Dam) - 2	218	247	247	247	247	247
79	Verdigris River (To Kansas State Line)	-	-	-	-	-	-
80	Grand (Neosho) River - 1	1,422	1,635	1,744	1,963	2,226	2,226
81	Grand (Neosho) River - 2	-	-	-	-	-	-
82	Illinois River	772	356	355	355	355	355
	Total	**161,134**	**178,267**	**183,086**	**190,050**	**195,673**	**198,186**

Table B.19 Crop Irrigation Demand Projections by OCWP Planning Basin – Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	3,337	5,176	5,179	5,187	5,198	5,208
2	Little River (McCurtain County) - 1	116	181	181	181	181	181
3	Little River (McCurtain County) - 2	213	332	332	332	332	332
4	Little River (McCurtain County) - 3	112	174	174	174	174	174
5	Kiamichi River - 1	316	378	411	478	580	675
6	Kiamichi River - 2	1	8	8	8	8	8
7	Muddy Boggy River - 1	279	344	366	412	482	546
8	Muddy Boggy River - 2	264	858	896	976	976	976
9	Clear Boggy Creek	939	1,483	1,544	1,668	1,756	1,818
10	Red River Mainstem (To Blue River)	1,009	1,201	1,302	1,508	1,793	2,046
11	Blue River - 1	157	182	194	219	230	230
12	Blue River - 2	479	611	688	874	1,202	1,678
13	Red River Mainstem (To Washita)	12,748	14,766	15,781	17,772	18,660	18,660
14	Lower Washita	660	873	860	849	844	843
15	Middle Washita - 1	225	251	223	197	187	185
16	Middle Washita - 2	8,081	8,113	8,087	8,013	8,001	8,015
17	Upper Washita - 1	8,560	8,965	9,041	9,041	9,041	9,041
18	Upper Washita - 2	40,548	43,053	43,380	43,380	43,380	43,380
19	Upper Washita - 3	17,600	20,624	20,670	20,714	20,745	20,776
20	Washita Headwaters	8,901	10,102	10,103	10,103	10,103	10,103
21	Red River Mainstem (To Walnut Bayou)	1,423	2,110	2,178	2,406	2,899	3,655
22	Walnut Bayou	87	353	353	353	353	353
23	Mud Creek	24	106	106	106	106	106
24	Beaver Creek - 1	5	75	75	75	75	75
25	Beaver Creek - 2	1,520	1,966	1,957	1,975	2,034	2,092
26	Beaver Creek - 3	77	116	116	116	116	116
27	Cache Creek - 1	82	103	103	103	103	103
28	Cache Creek - 2	964	1,106	1,175	1,310	1,504	1,671

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	185	221	234	261	300	333
30	Deep Red Creek and West Cache Creek - 2	2,617	2,669	2,669	2,669	2,669	2,669
31	Red River Mainstem (To North Fork of Red)	11,066	11,304	11,304	11,304	11,304	11,304
32	Lower North Fork Red River - 1	19,151	19,532	19,532	19,532	19,532	19,532
33	Lower North Fork Red River - 2	32,297	32,969	33,016	33,071	33,076	33,076
34	Lower North Fork Red River - 3	6,702	7,331	7,439	7,553	7,564	7,564
35	Lower North Fork Red River - 4	185	204	210	218	219	219
36	Upper North Fork Red River - 1	7,921	8,317	8,398	8,457	8,462	8,462
37	Upper North Fork Red River - 2	21,492	22,446	22,537	22,537	22,537	22,537
38	Salt Fork Red River - 1	78,893	80,230	80,252	80,252	80,252	80,252
39	Salt Fork Red River - 2	2,790	2,888	2,895	2,895	2,895	2,895
40	Prairie Dog Town Fork Red River - 1	5,685	5,814	5,816	5,816	5,816	5,816
41	Prairie Dog Town Fork Red River - 2	49,974	51,531	51,575	51,575	51,575	51,575
42	Elm Fork Red River - 1	4,078	4,240	4,260	4,260	4,260	4,260
43	Elm Fork Red River - 2	456	474	477	477	477	477
44	Poteau River - 1	899	1,297	1,549	1,692	1,692	1,692
45	Poteau River - 2	1,932	2,943	3,476	3,779	3,779	3,779
46	Lower Arkansas River - 1	11,621	14,178	16,905	18,452	18,452	18,452
47	Lower Arkansas River - 2	12,136	14,374	15,486	17,733	20,423	20,423
48	Canadian River (To North Canadian River)	688	1,733	1,949	2,408	2,408	2,408
49	Middle Arkansas River	1,118	1,169	1,222	1,330	1,459	1,459
50	Lower North Canadian River	662	1,334	1,336	1,340	1,341	1,342
51	Middle North Canadian River	7,476	8,762	9,420	10,740	12,640	14,280
52	Upper North Canadian River - 1	10,124	12,022	12,104	12,283	12,579	12,893
53	Upper North Canadian River - 2	47,016	52,120	53,912	57,097	60,562	62,059
54	Upper North Canadian River - 3	14,199	14,747	14,747	14,747	14,747	14,747
55	North Canadian Headwaters	420,589	427,859	429,099	431,302	433,699	434,735
56	Lower Canadian River - 1	1,404	2,437	2,712	3,298	3,298	3,298
57	Lower Canadian River - 2	120	242	240	237	236	236

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	4,888	5,020	5,134	5,532	6,242	6,862
59	Upper Canadian River	28,692	32,594	33,965	36,716	41,018	45,248
60	Deep Fork River	111	279	279	279	279	279
61	Little River - 1	14	23	23	23	23	23
62	Little River - 2	227	359	359	359	359	359
63	Lower Cimarron River	972	1,374	1,509	1,816	2,368	3,042
64	Middle Cimarron River	46,647	55,884	57,175	59,523	62,511	65,858
65	Upper Cimarron River	59,525	63,283	64,218	65,867	67,662	68,437
66	Cimarron Headwaters	21,819	22,453	22,453	22,453	22,453	22,453
67	Lower Salt Fork Arkansas River - 1	2,571	3,487	3,487	3,487	3,487	3,487
68	Upper Salt Fork Arkansas River	6,288	7,167	7,214	7,319	7,513	7,752
69	Lower Salt Fork Arkansas River - 2	771	1,046	1,046	1,046	1,046	1,046
70	Lower Salt Fork Arkansas River - 3	2,877	3,634	3,634	3,634	3,634	3,634
71	Arkansas River - Cimarron Rivers to Keystone Lake	1,200	3,397	3,558	3,928	4,615	5,456
72	Arkansas River Mainstem (To Kansas State Line)	1,355	2,045	2,073	2,139	2,262	2,411
73	Bird Creek - 1	22	20	20	20	20	20
74	Bird Creek - 2	453	712	712	712	712	712
75	Caney River - 1	125	141	141	141	141	141
76	Caney River - 2	-	-	-	-	-	-
77	Verdigris River (To Oologah Dam) - 1	5,704	5,813	5,842	5,901	5,972	5,972
78	Verdigris River (To Oologah Dam) - 2	218	247	247	247	247	247
79	Verdigris River (To Kansas State Line)	-	-	-	-	-	-
80	Grand (Neosho) River - 1	1,422	1,636	1,744	1,964	2,227	2,227
81	Grand (Neosho) River - 2	36	153	153	153	153	153
82	Illinois River	772	356	355	355	355	355
	Total	**1,068,913**	**1,140,116**	**1,155,591**	**1,179,455**	**1,204,608**	**1,221,984**

Table B.20 Total Water Withdrawal by OCWP Planning Basin – Total (AFY)

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
1	Red River Mainstem (To Kiamichi River)	47,568	49,871	51,489	54,638	60,107	65,142
2	Little River (McCurtain County) - 1	1,818	2,081	2,130	2,225	2,394	2,547
3	Little River (McCurtain County) - 2	4,600	5,200	5,320	5,548	5,956	6,324
4	Little River (McCurtain County) - 3	1,102	1,236	1,258	1,281	1,319	1,356
5	Kiamichi River - 1	4,364	3,705	3,587	2,583	2,531	2,524
6	Kiamichi River - 2	2,316	2,285	2,243	2,171	2,081	1,979
7	Muddy Boggy River - 1	801	854	872	904	955	1,002
8	Muddy Boggy River - 2	8,308	7,517	7,361	8,058	8,462	8,782
9	Clear Boggy Creek	3,682	4,240	4,298	4,404	4,493	4,549
10	Red River Mainstem (To Blue River)	1,431	1,623	1,724	1,926	2,209	2,460
11	Blue River - 1	1,089	1,179	1,216	1,291	1,393	1,479
12	Blue River - 2	6,898	7,609	7,881	8,511	9,630	10,842
13	Red River Mainstem (To Washita)	15,243	17,482	18,576	20,742	21,937	22,226
14	Lower Washita	23,719	24,384	24,328	24,182	24,245	24,229
15	Middle Washita - 1	3,348	3,385	3,355	3,318	3,302	3,307
16	Middle Washita - 2	16,266	16,393	16,283	16,034	15,771	15,592
17	Upper Washita - 1	11,421	11,353	11,352	11,620	11,797	11,955
18	Upper Washita - 2	41,727	44,228	44,538	44,498	44,442	44,391
19	Upper Washita - 3	26,274	29,471	29,619	29,809	30,286	30,608
20	Washita Headwaters	10,531	11,718	11,716	11,693	11,668	11,646
21	Red River Mainstem (To Walnut Bayou)	12,643	13,563	13,637	13,876	14,591	15,477
22	Walnut Bayou	4,622	4,947	4,954	4,947	4,996	5,016
23	Mud Creek	1,417	1,470	1,464	1,434	1,395	1,359
24	Beaver Creek - 1	376	453	446	434	417	400
25	Beaver Creek - 2	5,008	5,345	5,268	5,134	5,004	4,863
26	Beaver Creek - 3	1,140	1,149	1,128	1,084	1,031	973
27	Cache Creek - 1	439	437	419	388	344	299
28	Cache Creek - 2	22,196	21,493	20,990	19,945	18,503	17,045

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
29	Deep Red Creek and West Cache Creek - 1	2,829	2,754	2,694	2,565	2,389	2,208
30	Deep Red Creek and West Cache Creek - 2	4,547	4,550	4,496	4,375	4,225	4,075
31	Red River Mainstem (To North Fork of Red)	13,171	13,344	13,273	13,122	12,933	12,741
32	Lower North Fork Red River - 1	19,663	20,031	20,014	19,976	19,931	19,885
33	Lower North Fork Red River - 2	37,623	37,816	37,575	37,149	36,421	35,663
34	Lower North Fork Red River - 3	10,848	11,394	11,488	11,516	11,483	11,379
35	Lower North Fork Red River - 4	352	365	370	372	365	357
36	Upper North Fork Red River - 1	8,323	8,716	8,792	8,844	8,837	8,824
37	Upper North Fork Red River - 2	25,247	26,186	26,290	26,269	26,341	26,339
38	Salt Fork Red River - 1	82,098	83,202	83,070	82,820	82,433	82,031
39	Salt Fork Red River - 2	3,040	3,134	3,139	3,133	3,125	3,117
40	Prairie Dog Town Fork Red River - 1	6,221	6,311	6,292	6,254	6,196	6,137
41	Prairie Dog Town Fork Red River - 2	50,940	52,494	52,510	52,449	52,342	52,252
42	Elm Fork Red River - 1	5,125	5,294	5,291	5,280	5,251	5,213
43	Elm Fork Red River - 2	1,009	1,015	1,017	1,008	1,001	990
44	Poteau River - 1	5,325	5,402	5,535	5,041	4,885	4,772
45	Poteau River - 2	11,749	12,903	13,251	13,236	12,816	12,411
46	Lower Arkansas River - 1	21,074	23,886	26,439	27,617	27,100	26,677
47	Lower Arkansas River - 2	65,607	63,428	63,833	68,214	73,021	74,804
48	Canadian River (To North Canadian River)	20,906	21,602	21,410	21,170	20,427	19,506
49	Middle Arkansas River	112,948	113,386	114,980	120,117	128,143	134,812
50	Lower North Canadian River	322,634	247,287	241,027	293,229	337,312	375,799
51	Middle North Canadian River	15,951	17,563	18,456	20,280	23,190	25,667
52	Upper North Canadian River - 1	13,284	15,031	15,111	15,410	15,847	16,271
53	Upper North Canadian River - 2	56,964	62,207	64,014	67,330	71,221	72,929
54	Upper North Canadian River - 3	15,896	16,458	16,459	16,452	16,464	16,464
55	North Canadian Headwaters	437,006	444,225	445,576	447,910	450,481	451,736
56	Lower Canadian River - 1	715,579	489,930	465,558	597,902	696,095	781,520
57	Lower Canadian River - 2	2,538	2,676	2,685	2,722	2,789	2,869

OCWP Basin #	OCWP Basin Name	2020	2030	2035	2045	2060	2075
58	Middle Canadian River	38,028	38,031	38,637	40,597	43,791	46,571
59	Upper Canadian River	37,512	41,696	43,180	46,123	50,906	55,503
60	Deep Fork River	61,932	63,838	65,502	70,495	78,126	84,864
61	Little River - 1	1,755	1,791	1,792	1,794	1,802	1,809
62	Little River - 2	25,126	26,186	26,823	28,159	30,544	32,595
63	Lower Cimarron River	13,779	14,321	14,609	15,248	16,461	17,632
64	Middle Cimarron River	92,753	104,129	106,600	111,503	119,112	126,467
65	Upper Cimarron River	63,458	67,282	68,234	69,918	71,863	72,736
66	Cimarron Headwaters	22,559	23,173	23,172	23,156	23,136	23,118
67	Lower Salt Fork Arkansas River - 1	10,591	11,225	11,010	10,585	10,110	9,526
68	Upper Salt Fork Arkansas River	11,728	12,756	12,863	13,122	13,787	14,330
69	Lower Salt Fork Arkansas River - 2	2,575	2,772	2,726	2,633	2,529	2,402
70	Lower Salt Fork Arkansas River - 3	3,152	3,902	3,898	3,889	3,878	3,866
71	Arkansas River - Cimarron Rivers to Keystone Lake	18,147	20,907	21,230	21,747	23,210	24,490
72	Arkansas River Mainstem (To Kansas State Line)	784,277	559,951	525,747	194,444	167,396	163,700
73	Bird Creek - 1	46,361	47,406	48,322	50,360	53,897	56,927
74	Bird Creek - 2	7,337	7,661	7,675	7,694	7,787	7,855
75	Caney River - 1	5,279	5,402	5,500	5,716	6,094	6,417
76	Caney River - 2	6,084	6,055	6,056	6,067	6,192	6,240
77	Verdigris River (To Oologah Dam) - 1	21,567	20,255	20,272	21,608	22,900	24,025
78	Verdigris River (To Oologah Dam) - 2	19,152	19,712	20,189	20,877	22,197	23,568
79	Verdigris River (To Kansas State Line)	3,040	3,102	3,080	3,010	2,931	2,858
80	Grand (Neosho) River - 1	17,796	17,280	17,365	18,205	19,143	19,814
81	Grand (Neosho) River - 2	6,770	7,042	6,991	6,889	6,818	6,706
82	Illinois River	6,492	6,431	6,364	6,196	6,011	5,865
	Total	**3,696,096**	**3,239,567**	**3,195,933**	**3,094,474**	**3,274,942**	**3,445,704**

APPENDIX C

SUPPLEMENTAL SURFACE WATER INFORMATION FROM OWRB

Table C.1 Breakdown of Set Asides in Each OCWP Basin

Basin	Contributing Area (sq mi)	Total Basin Area (sq mi)	Runoff (AF)	Domestic Use (AF)	Permit Total (AF)	Applications Total (AF)	Unappropriated Dependable Yield (AF)	NRCS Normal Storage (AF)	Compact Reserves (AF)	Total Set Asides (AF)	10% Basin Reserve (AF)
1	401.35	414.96	397,209.92	9,614.47	3,226.50	742.40	-	1,590.00	158,883.97	174,057.34	22,871.15
2	347.97	351.73	413,832.54	8,351.33	2,125.00	246,000.00	-	-	165,533.02	422,009.35	23,994.82
3	1,293.85	1,293.85	1,482,671.83	31,052.46	42,426.00	60,000.00	100,805.00	-	*157,487.75*	391,771.21	129,413.16
4	550.99	554.60	763,041.68	13,228.97	12,491.00	-	185,220.00	-	*22,370.46*	233,310.43	72,744.23
5	379.50	379.50	309,115.64	9,107.97	46,896.00	1,281,800.00	-	42.00	*36,083.08*	1,373,929.05	26,392.46
6	1,442.51	1,442.50	1,295,217.14	34,620.23	127,828.00	320.00	34,457.00	3,305.00	-	200,530.23	126,059.69
7	347.57	347.57	224,400.00	8,341.68	4,846.00	415,000.00	-	-	*46,580.93*	474,768.61	16,947.74
8	1,087.54	1,087.54	593,433.28	26,100.88	167,546.00	321,140.00	7,192.00	7,927.38	-	529,906.26	56,733.24
9	1,002.80	1,002.85	501,295.35	24,067.15	18,448.00	-	-	10,609.00	-	53,124.15	47,722.82
10	216.53	218.48	154,731.93	5,160.32	12,604.00	520,000.00	-	157.00	61,892.77	599,814.09	8,767.88
11	219.51	219.69	115,385.19	5,268.24	979.00	-	-	-	*15,580.76*	21,828.00	9,453.62
12	467.02	466.85	216,377.61	11,208.54	24,054.30	-	-	37.00	-	35,299.84	20,516.91
13	324.61	327.35	139,399.94	7,790.62	26,153.70	36,865.00	-	-	*32,989.00*	103,798.32	9,862.03
14	1,870.17	1,870.13	655,204.23	44,884.00	67,180.20	21,900.00	3,065.00	93,998.00	-	231,027.20	61,032.02
15	523.63	523.65	159,036.50	12,567.18	6,547.00	-	-	12,074.00	-	31,188.18	14,646.93
16	1,125.17	1,125.17	263,977.50	27,009.48	24,725.50	914.00	-	15,460.00	-	68,108.98	23,696.80
17	227.96	227.95	36,763.26	5,471.12	6,380.60	-	-	2,292.00	-	14,143.72	3,129.21
18	307.67	307.67	49,265.66	7,384.05	18,779.00	119.00	-	3,039.00	-	29,321.05	4,188.16
19	1,590.42	1,590.41	212,083.61	38,170.04	12,531.80	285.00	-	43,236.06	-	94,222.90	17,391.36
20	1,075.09	1,077.94	57,765.46	25,831.94	23,479.10	-	366.00	34,492.30	-	84,169.34	3,193.35
21	1,671.13	1,690.67	612,841.69	40,107.15	60,026.10	137,835.00	50,091.50	1,990.00	-	290,049.75	57,273.45
22	333.61	333.57	108,967.66	8,006.58	1,828.00	-	-	6,384.00	-	16,218.58	10,096.11
23	648.83	648.83	186,286.67	15,571.91	394.00	2.00	-	-	-	15,967.91	17,071.48
24	106.31	106.31	20,897.61	2,551.37	2,447.00	25,000.00	-	-	-	29,998.37	1,834.62
25	563.29	563.30	166,768.25	13,518.94	47,326.00	1,200.00	784.00	-	-	62,828.94	15,324.93
26	194.39	194.39	59,467.23	4,665.42	38.00	-	-	2,080.00	-	6,783.42	5,480.18
27	106.19	106.15	20,794.35	2,548.52	527.00	125,016.00	-	-	-	128,091.52	1,824.58
28	693.51	693.51	180,838.70	16,644.15	50,584.90	4,557.00	-	-	-	71,786.05	16,419.45
29	498.39	498.43	117,257.55	11,961.39	1,969.00	-	-	-	-	13,930.39	10,529.62
30	601.50	601.49	102,696.39	14,436.03	7,896.00	-	-	17,067.00	-	39,399.03	8,826.04
31	512.53	524.78	70,714.91	12,300.77	10.00	-	-	-	-	12,310.77	5,841.41
32	120.19	120.29	15,819.97	2,884.65	-	-	-	-	-	2,884.65	1,293.53
33	338.90	339.00	50,586.19	8,133.59	2,062.80	-	-	543.00	-	10,739.39	4,245.26
34	797.91	797.95	82,892.10	19,149.77	23,690.00	82.00	-	6,429.00	-	49,350.77	6,374.23
35	127.02	127.06	19,621.66	3,048.42	16,110.00	-	-	-	-	19,158.42	1,657.32
36	190.87	190.87	15,419.06	4,580.91	90,530.00	-	-	-	-	95,110.91	1,083.81
37	666.49	675.00	34,121.72	15,995.87	919.50	-	-	1,370.00	-	18,285.37	1,812.59
38	534.11	533.65	55,394.75	12,818.70	7,911.00	-	-	3,896.00	-	24,625.70	4,257.61
39	172.50	173.60	11,221.76	4,140.02	167.00	-	-	-	-	4,307.02	708.17
40	287.58	282.30	25,747.09	6,902.03	174.00	-	-	-	-	7,076.03	1,884.51
41	240.94	241.88	16,943.41	5,782.47	2,120.00	-	-	-	-	7,902.47	1,116.09
42	110.28	110.28	9,187.23	2,646.78	768.00	-	-	-	-	3,414.78	654.05
43	467.82	453.02	35,132.92	10,846.77	-	228.00	-	-	-	11,074.77	2,428.61
44	95.55	98.12	62,293.05	2,293.20	2,083.00	-	-	-	-	4,376.20	5,999.99

Basin	Contributing Area (sq mi)	Total Basin Area (sq mi)	Runoff (AF)	Domestic Use (AF)	Permit Total (AF)	Applications Total (AF)	Unappropriated Dependable Yield (AF)	NRCS Normal Storage (AF)	Compact Reserves (AF)	Total Set Asides (AF)	10% Basin Reserve (AF)
45	1,246.73	1,250.53	1,036,181.20	29,921.57	43,826.00	1,120.00	16,544.00	9,450.00	-	100,861.57	100,625.96
46	1,428.41	1,432.44	1,012,243.27	34,281.89	24,684.90	-	-	10,255.20	404,897.31	474,119.30	57,306.41
47	978.99	978.98	599,021.33	23,495.77	205,751.40	-	-	-	239,608.53	468,855.70	33,591.70
48	3,223.38	3,223.32	1,778,877.32	77,361.05	103,206.20	511.00	33,351.50	37,411.00	-	251,840.75	170,151.63
49	1,322.32	1,322.33	572,615.76	31,735.78	35,122.10	350.00	-	2,844.00	-	70,051.88	54,088.00
50	1,056.71	1,056.74	331,806.59	25,360.96	48,610.40	1,544.00	-	14,065.00	-	89,580.36	30,644.56
51	715.54	715.48	85,434.62	17,173.01	85,638.10	29,500.00	-	1,418.00	-	133,729.11	6,826.16
52	899.08	899.08	40,578.57	21,577.83	895.00	-	18,480.00	-	-	40,952.83	1,900.07
53	1,512.16	1,526.78	32,412.37	36,292.99	1,530.00	-	-	356.00	-	38,178.99	-
54	651.44	652.12	18,401.05	15,634.50	1,547.00	-	-	-	-	17,181.50	276.66
55	2,358.50	3,627.06	23,269.15	56,604.05	817.00	-	-	-	-	57,421.05	-
56	943.52	943.42	361,497.45	22,644.55	47,977.00	74.70	-	2,347.00	-	73,043.25	33,885.29
57	203.12	202.90	62,231.72	4,874.85	15,498.30	-	-	-	-	20,373.15	5,735.69
58	684.07	684.38	130,800.89	16,417.60	39,570.40	12,980.00	-	705.00	-	69,673.00	11,438.33
59	2,051.94	2,057.67	123,294.54	49,246.55	8,923.30	-	-	50.00	-	58,219.85	7,404.80
60	2,009.49	2,009.48	612,035.16	48,227.78	36,595.00	400.00	613.00	42,405.00	-	128,240.78	56,380.74
61	287.68	287.66	95,961.55	6,904.24	145.00	-	-	2,846.00	-	9,895.24	8,905.73
62	600.68	600.69	167,888.52	14,416.22	26,640.00	28,003.60	-	-	-	69,059.82	15,347.23
63	1,086.62	1,086.53	297,822.88	26,078.91	8,859.90	-	-	368.00	-	35,306.81	27,174.40
64	3,594.81	3,641.44	584,132.36	86,275.44	130,883.00	1,000.00	-	5,832.00	-	223,990.44	49,785.69
65	1,890.55	2,022.99	76,843.08	45,373.13	10,046.00	-	-	-	-	55,419.13	3,147.00
66	685.52	698.22	5,410.22	16,452.47	4,128.00	-	-	-	-	20,580.47	-
67	232.86	233.89	105,427.79	5,609.10	550.00	140.60	-	-	-	6,299.70	9,981.87
68	2,229.73	2,236.42	491,128.10	53,513.47	5,640.30	21,600.00	-	199.00	-	80,952.77	43,761.46
69	148.82	148.81	78,759.89	3,571.65	2,777.00	-	-	1,200.00	-	7,548.65	7,518.82
70	221.92	223.54	84,115.98	5,326.00	9,880.20	-	-	24.11	-	15,230.31	7,879.00
71	2,029.55	2,029.60	766,280.90	48,709.28	46,746.50	20,837.00	8,434.00	49,678.00	-	174,404.78	71,757.16
72	1,492.48	1,492.93	557,704.78	35,798.95	190,057.20	27,839.00	48,317.00	7,499.00	-	309,511.15	52,190.58
73	179.53	179.57	77,328.79	4,308.75	3,318.00	-	-	-	-	7,626.75	7,302.00
74	957.90	957.86	472,368.76	22,989.72	34,001.00	-	65,431.00	31.00	-	122,452.72	44,937.90
75	161.14	161.13	69,622.60	3,867.31	30,490.30	-	-	-	-	34,357.61	6,575.53
76	1,051.63	1,015.76	462,186.68	24,333.02	41,007.00	-	22,982.00	2,779.00	-	91,101.02	43,785.37
77	392.59	392.63	205,582.85	9,422.12	84,874.70	17,829.00	-	13.35	-	112,139.17	19,616.07
78	321.55	321.50	160,295.67	7,717.10	37,286.30	-	-	-	-	45,003.40	15,257.86
79	820.18	822.26	415,071.65	19,684.32	169,024.00	12,042.00	77,766.00	-	-	278,516.32	39,538.73
80	2,060.35	2,061.14	1,200,888.81	49,448.43	215,846.00	-	-	596.00	-	265,890.43	115,144.04
81	900.58	903.06	499,589.55	21,613.91	3,620.00	-	-	210.00	-	25,443.91	47,797.56
82	894.62	896.70	658,085.29	21,470.78	234,634.40	-	-	258.00	-	256,363.18	63,661.45

Table C.2 Breakdown of Permits and Applications in Each OCWP Basin

Basin	Contributing Area (sq mi)	Total Basin Area (sq mi)	Regular Permit (AF)	Seasonal Permit (AF)	Term Permit (AF)	Vested Permit (AF)	GRDA Permit (AF)	Permit Total (AF)	Regular Permit Application (AF)	Term Application (AF)	Applications Total (AF)	Out-of-Basin Application Amount (AF)
1	401.35	414.96	2976.5	-	-	250.0	-	3226.5	-	-	-	-
2	347.97	351.73	2125.0	-	-	-	-	2125	-	-	-	-
3	1293.85	1293.85	40717.0	-	-	1709.0	-	42426	742.4	-	742.4	-
4	550.99	554.60	12491.0	-	-	-	-	12491	246000	-	246000	-
5	379.50	379.50	44354.0	-	442	2100.0	-	46896	60000	-	60000	625000
6	1442.51	1442.50	126659.0	10	459	700.0	-	127828	-	-	-	-
7	347.57	347.57	4735.0	-	111	-	-	4846	415000	-	415000	415000
8	1087.54	1087.54	134258.0	-	1851	31437.0	-	167546	320880	260	321140	320800
9	1002.80	1002.85	14866.0	-	185	3397.0	-	18448	-	-	-	-
10	216.53	218.48	12384.0	-	-	220.0	-	12604	520000	-	520000	520000
11	219.51	219.69	979.0	-	-	0.0	-	979	-	-	-	-
12	467.02	466.85	15692.3	-	-	8362.0	-	24054.3	-	-	-	-
13	324.61	327.35	25370.2	-	262.5	521.0	-	26153.7	36865	-	36865	36865
14	1870.17	1870.13	47499.2	147	2710	16824.0	-	67180.2	21900	-	21900	21900
15	523.63	523.65	6412.0	-	0	135.0	-	6547	-	-	-	-
16	1125.17	1125.17	14513.1	-	3093.4	7119.0	-	24725.5	908	6	914	-
17	227.96	227.95	2878.6	-	-	3502.0	-	6380.6	-	-	-	-
18	307.67	307.67	336.0	-	-	18443.0	-	18779	119	-	119	-
19	1590.42	1590.41	5054.4	288	1874.4	5315.0	-	12531.8	285	-	285	285
20	1075.09	1077.94	1663.1	-	-	21816.0	-	23479.1	-	-	-	-
21	1671.13	1690.67	54466.1	-	100	5460.0	-	60026.1	137835	-	137835	115000
22	333.61	333.57	1828.0	-	-	-	-	1828	-	-	-	-
23	648.83	648.83	300.0	-	-	94.0	-	394	-	-	-	-
24	106.31	106.31	170.0	-	1947	330.0	-	2447	25000	-	25000	25000
25	563.29	563.30	47326.0	-	-	-	-	47326	600	600	1200	-
26	194.39	194.39	38.0	-	-	-	-	38	-	-	-	-
27	106.19	106.15	284.0	-	-	243.0	-	527	125016	-	125016	125000
28	693.51	693.51	27991.9	160	74	22359.0	-	50584.9	4557	-	4557	-
29	498.39	498.43	1969.0	-	-	-	-	1969	-	-	-	-
30	601.50	601.49	7099.0	-	700	97.0	-	7896	-	-	-	-
31	512.53	524.78	10.0	-	-	-	-	10	-	-	-	-
32	120.19	120.29	-	-	-	-	-	-	1281800	-	1281800	-
33	338.90	339.00	1723.0	-	222.8	117.0	-	2062.8	320	-	320	-
34	797.91	797.95	21910.5	-	1033	746.5	-	23690	-	-	-	82
35	127.02	127.06	16100.0	-	10	-	-	16110	-	-	-	-
36	190.87	190.87	100.0	-	-	90430.0	-	90530	82	-	82	-
37	666.49	675.00	575.5	-	-	344.0	-	919.5	-	-	-	-
38	534.11	533.65	6494.3	-	372.7	1044.0	-	7911	-	-	-	-
39	172.50	173.60	-	-	-	167.0	-	167	-	-	-	-
40	287.58	282.30	-	-	-	174.0	-	174	-	-	-	-
41	240.94	241.88	2000.0	-	-	120.0	-	2120	-	-	-	-
42	110.28	110.28	568.0	-	-	200.0	-	768	-	-	-	-
43	467.82	453.02	-	-	-	-	-	-	228	-	228	-
44	95.55	98.12	2083.0	-	-	-	-	2083	-	-	-	-
45	1246.73	1250.53	42126.0	-	-	1700.0	-	43826	1120	-	1120	1120
46	1428.41	1432.44	24529.4	-	-	155.5	-	24684.9	-	-	-	-
47	978.99	978.98	106418.4	-	-	99333.0	-	205751.4	-	-	-	-

Basin	Contributing Area (sq mi)	Total Basin Area (sq mi)	Regular Permit (AF)	Seasonal Permit (AF)	Term Permit (AF)	Vested Permit (AF)	GRDA Permit (AF)	Permit Total (AF)	Regular Permit Application (AF)	Term Application (AF)	Applications Total (AF)	Out-of-Basin Application Amount (AF)
48	3223.38	3223.32	94303.2	811	-	8092.0	-	103206.2	381	130	511	-
49	1322.32	1322.33	30851.1	-	-	4271.0	-	35122.1	-	-	-	-
50	1056.71	1056.74	32345.4	-	-	16265.0	-	48610.4	1544	-	1544	-
51	715.54	715.48	1230.0	460	2629.1	81319.0	-	85638.1	29500	-	29500	28000
52	899.08	899.08	271.0	-	320	304.0	-	895	-	-	-	-
53	1512.16	1526.78	1158.0	-	-	372.0	-	1530	12042	-	12042	-
54	651.44	652.12	1547.0	-	-	-	-	1547	-	-	-	-
55	2358.50	3627.06	460.0	-	-	357.0	-	817	-	-	-	-
56	943.52	943.42	47878.0	-	-	99.0	-	47977	74.7	-	74.7	-
57	203.12	202.90	2872.9	-	12445.4	180.0	-	15498.3	-	-	-	-
58	684.07	684.38	39333.4	-	0	237.0	-	39570.4	12980	-	12980	1980
59	2051.94	2057.67	8420.3	-	-	503.0	-	8923.3	-	-	-	-
60	2009.49	2009.48	28166.0	7555	-	874.0	-	36595	400	-	400	-
61	287.68	287.66	145.0	-	-	-	-	145	-	-	-	-
62	600.68	600.69	26475.0	-	-	165.0	-	26640	28003.6	-	28003.6	28003.6
63	1086.62	1086.53	8784.9	-	-	75.0	-	8859.9	-	-	-	-
64	3594.81	3641.44	127132.9	-	602.1	3148.0	-	130883	1000	-	1000	-
65	1890.55	2022.99	1050.0	-	-	8996.0	-	10046	-	-	-	-
66	685.52	698.22	345.0	-	-	3783.0	-	4128	-	-	-	-
67	232.86	233.89	550.0	-	-	-	-	550	140.6	-	140.6	140.6
68	2229.73	2236.42	4631.3	20	-	989.0	-	5640.3	21600	-	21600	21600
69	148.82	148.81	2777.0	-	-	-	-	2777	-	-	-	-
70	221.92	223.54	7760.2	-	-	2120.0	-	9880.2	-	-	-	-
71	2029.55	2029.60	31990.5	-	-	14756.0	-	46746.5	20837	-	20837	20837
72	1492.48	1492.93	187528.2	-	-	2529.0	-	190057.2	27821.8	17.2	27839	27068
73	179.53	179.57	3318.0	-	-	-	-	3318	2	-	2	-
74	957.90	957.86	32281.0	-	-	1720.0	-	34001	350	-	350	-
75	161.14	161.13	30490.3	-	-	-	-	30490.3	-	-	-	-
76	1051.63	1015.76	31461.0	150	-	9396.0	-	41007	-	-	-	-
77	392.59	392.63	84439.7	435	-	-	-	84874.7	-	-	-	-
78	321.55	321.50	34209.3	207	-	2870.0	-	37286.3	-	-	-	-
79	820.18	822.26	164595.0	-	1630	2799.0	-	169024	17829	-	17829	12042
80	2060.35	2061.14	1628.0	-	-	-	214218	215846	-	-	-	-
81	900.58	903.06	-	-	-	-	3620	3620	-	-	-	-
82	894.62	896.70	231878.4	-	-	2756.0	-	234634.4	-	-	-	-