

APPENDIX 5A

POTENTIALLY FEASIBLE WATER MANAGEMENT STRATEGIES

Table 5A-1: Region K Water Management Strategies Considered and Evaluated

Table 5A-2: Region K Potentially Feasible WMS Screening

Table 5A-1: Region K Water Management Strategies Considered and Evaluated

Every WUG Entity with an Identified Need		WMSs REQUIRED TO BE CONSIDERED BY STATUTE										Additional										
Water User Group Name	Maximum Need 2020-2070 (af/yr)	Conservation	Drought Management	Reuse	Reallocation/management of existing supplies	Conjunctive Use	Acquisition of available supplies	Development of new supplies	Development of regional water supply or regional management of water supply facilities	Voluntary transfer of water (incl. regional water banks, sales, leases, options, subordination agreements, and financing agreements)	Emergency transfer of water under Section 11.139	System optimization, subordination, leases, enhancement of yield, improvement of water quality	New SW	New GW	Brush control; precipitation enhancement	Desalination	Aquifer storage and recovery	Amendment of water rights/permits	Rainwater harvesting	other	other	
<i>Aqua WSC</i>	26,269	PF	PF	nPF	nPF	nPF	PF	PF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Bastrop</i>	6,390	PF	PF	PF	nPF	nPF	nPF	PF	nPF	PF	nPF	nPF	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Bastrop County WCID #2</i>	644	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>County-Other, Bastrop</i>	1,490	PF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Creedmoor-Maha WSC</i>	609	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Elgin</i>	4,124	nPF	PF	nPF	nPF	nPF	PF	PF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Smithville</i>	721	PF	PF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Manufacturing, Bastrop</i>	199	nPF	nPF	nPF	nPF	nPF	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Mining, Bastrop</i>	7,843	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>County-Other, Blanco</i>	55	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Johnson City</i>	175	PF	PF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Bertram</i>	358	PF	PF	nPF	nPF	nPF	PF	PF	PF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>County-Other, Burnet</i>	460	PF	PF	nPF	nPF	nPF	nPF	PF	PF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Granite Shoals</i>	306	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Horseshoe Bay</i>	1,098	PF	PF	PF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Marble Falls</i>	3,386	PF	PF	PF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Meadowlakes</i>	896	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Mining, Burnet</i>	5,973	nPF	nPF	nPF	nPF	nPF	PF				nPF	nPF										
<i>Columbus</i>	163	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>County-Other, Colorado</i>	226	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Irrigation, Colorado</i>	58,954	PF	PF	nPF	nPF	nPF	PF	PF	PF	nPF	nPF	PF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	
<i>County-Other, Fayette</i>	639	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Schulenburg</i>	267	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Manufacturing, Fayette</i>	391	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Mining, Fayette</i>	1,986	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Steam-Electric, Fayette</i>	7,414	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Fredericksburg</i>	222	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Manufacturing, Gillespie</i>	626	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Austin</i>	63,194	PF	PF	PF	nPF	nPF	PF	PF	nPF	PF	nPF	PF		PF	nPF		PF	nPF	PF	nPF	nPF	
<i>Buda</i>	6,088	PF	PF	PF	nPF	nPF	PF	PF	PF	PF	nPF	nPF	nPF	PF	nPF	PF	PF	nPF	PF	nPF	nPF	
<i>County-Other, Hays</i>	3,382	nPF	PF	nPF	nPF	nPF	PF	PF	PF	nPF	nPF	nPF	nPF	PF	nPF	PF	PF	nPF	PF	nPF	nPF	
<i>Dripping Springs</i>	432	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Dripping Springs WSC</i>	126	PF	PF	nPF	nPF	nPF	nPF	PF	PF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Gofoorth SUD</i>	48	nPF	PF	nPF	nPF	nPF					nPF	nPF										
<i>West Travis County PUA</i>	13,460	PF	PF	nPF	nPF	nPF	nPF	PF	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Mining, Hays</i>	1,579	nPF	nPF	nPF	nPF	nPF	PF	PF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Llano</i>	488	PF	PF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>Irrigation, Matagorda</i>	166,548	PF	PF	nPF	nPF	nPF	PF	PF	PF	nPF	nPF	PF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	
<i>Steam-Electric, Matagorda</i>	25,483	nPF	nPF	nPF	nPF	nPF	PF	PF	nPF	nPF	nPF	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	
<i>County-Other, Mills</i>	29	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	
<i>Goldthwaite</i>	339	PF	PF	nPF	nPF	nPF	PF	PF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	

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Every WUG Entity with an Identified Need		WMSs REQUIRED TO BE CONSIDERED BY STATUTE										Additional										
Water User Group Name	Maximum Need 2020-2070 (af/yr)	Conservation	Drought Management	Reuse	Reallocation/management of existing supplies	Conjunctive Use	Acquisition of available supplies	Development of new supplies	Development of regional water supply or regional management of water supply facilities	Voluntary transfer of water (incl. regional water banks, sales, leases, options, subordination agreements, and financing agreements)	Emergency transfer of water under Section 11.139	System optimization, subordination, leases, enhancement of yield, improvement of water quality	New SW	New GW	Brush control; precipitation enhancement	Desalination	Aquifer storage and recovery	Amendment of water rights/permits	Rainwater harvesting	other	other	
Irrigation, Mills	605	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
San Saba	152	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Bee Cave Village	1,518	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Briarcliff Village	36	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Cedar Park	1,176	PF	PF	nPF	nPF	nPF					nPF	nPF										
Jonestown	206	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Lakeway	4,503	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Leander	4,937	nPF	nPF	nPF	nPF	nPF					nPF	nPF										
Loop 360 WSC	157	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Manor	2,067	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Manville WSC	3,738	nPF	PF	nPF	nPF	nPF	PF	nPF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Pflugerville	21,681	PF	PF	PF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Point Venture	455	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Rollingwood	379	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Round Rock	330	PF	PF	nPF	nPF	nPF				PF	nPF	nPF										
Travis County MUD #4	710	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Travis County WCID #10	3,619	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Travis County WCID #17	3,815	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Travis County WCID #18	131	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Volente	66	nPF	PF	nPF	nPF	nPF	nPF	PF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
West Lake Hills	1,550	PF	PF	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Steam-Electric, Travis	21,530	nPF	nPF	PF	nPF	nPF				PF	nPF	PF			nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF
Irrigation, Wharton	109,382	PF	PF	nPF	nPF	nPF	PF	PF	PF	nPF	nPF	PF	PF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF
Steam-Electric, Wharton	200	nPF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	PF	nPF	nPF	nPF	nPF	nPF	nPF	nPF	nPF

nPF = considered but determined 'not potentially feasible' (may include WMSs that were initially identified as potentially feasible)
 PF = considered 'potentially feasible' and therefore evaluated
 (all WMS evaluations shall be presented in the regional water plan including for WMSs considered potentially feasible but not recommended)

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))										Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts		
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation				Impacts on Other Management Strategies	
1	Drought Management	Aqua WSC	Mandatory water use reduction by 15%	Yes	\$279,400	\$279,400	\$50	5,588	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
2	Drought Management	Bastrop	Mandatory water use reduction by 15%	Yes	\$62,400	\$62,400	\$50	1,248	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
3	Drought Management	BASTROP COUNTY WCID #2	Mandatory water use reduction by 5%	Yes	\$5,100	\$5,100	\$50	102	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
4	Drought Management	COUNTY-OTHER BASTROP COUNTY	Mandatory water use reduction by 15%	Yes	\$42,250	\$42,250	\$50	845	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
5	Drought Management	COUNTY-OTHER BLANCO COUNTY	Mandatory water use reduction by 15%	Yes	\$9,650	\$9,650	\$50	193	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
6	Drought Management	COUNTY-OTHER BURNET COUNTY	Mandatory water use reduction by 15%	Yes	\$35,550	\$35,550	\$50	711	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
7	Drought Management	COUNTY-OTHER COLORADO COUNTY	Mandatory water use reduction by 15%	Yes	\$12,250	\$12,250	\$50	245	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
8	Drought Management	COUNTY-OTHER FAYETTE COUNTY	Mandatory water use reduction by 15%	Yes	\$12,100	\$12,100	\$50	242	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
9	Drought Management	COUNTY-OTHER GILLESPIE	Mandatory water use reduction by 15%	No	\$17,150	\$17,150	\$50	343	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
10	Drought Management	COUNTY-OTHER HAYS	Mandatory water use reduction by 15%	Yes	\$56,050	\$56,050	\$50	1,121	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
11	Drought Management	COUNTY-OTHER LLANO	Mandatory water use reduction by 5%	No	\$1,550	\$1,550	\$50	31	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
12	Drought Management	COUNTY-OTHER MATAGORDA	Mandatory water use reduction by 5%	No	\$4,150	\$4,150	\$50	83	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
13	Drought Management	COUNTY-OTHER MILLS	Mandatory water use reduction by 20%	Yes	\$4,200	\$4,200	\$50	84	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
14	Drought Management	COUNTY-OTHER SAN SABA	Mandatory water use reduction by 15%	No	\$12,000	\$12,000	\$50	240	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
15	Drought Management	CREEDMOOR-MAHA WSC	Mandatory water use reduction by 5%	Yes	\$2,550	\$2,550	\$50	51	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
16	Drought Management	ELGIN	Mandatory water use reduction by 15%	Yes	\$42,200	\$42,200	\$50	844	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
17	Drought Management	Smithville	Mandatory water use reduction by 15%	Yes	\$24,000	\$24,000	\$50	480	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
18	Drought Management	BLANCO	Mandatory water use reduction by 25%	No	\$3,700	\$3,700	\$50	74	2020	Guadalupe	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
19	Drought Management	CANYON LAKE WSC	Mandatory water use reduction by 15%	Yes	\$1,350	\$1,350	\$50	27	2020	Guadalupe	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
20	Drought Management	JOHNSON CITY	Mandatory water use reduction by 20%	Yes	\$4,800	\$4,800	\$50	96	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
21	Drought Management	BERTRAM	Mandatory water use reduction by 15%	Yes	\$5,450	\$5,450	\$50	109	2020	Brazos	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
22	Drought Management	BURNET	Mandatory water use reduction by 20%	No	\$32,900	\$32,900	\$50	658	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
23	Drought Management	CHISHOLM TRAIL SUD	Mandatory water use reduction by 15%	Yes	\$950	\$950	\$50	19	2020	Brazos	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
24	Drought Management	COTTONWOOD SHORES	Mandatory water use reduction by 20%	No	\$4,000	\$4,000	\$50	80	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
25	Drought Management	GRANITE SHOALS	Mandatory water use reduction by 5%	Yes	\$2,850	\$2,850	\$50	57	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
26	Drought Management	HORSESHOE BAY	Mandatory water use reduction by 25%	Yes	\$49,700	\$49,700	\$50	994	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
27	Drought Management	KEMPNER WSC	Mandatory water use reduction by 15%	Yes	\$1,800	\$1,800	\$50	36	2020	Brazos	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
28	Drought Management	KINGSLAND WSC	Mandatory water use reduction by 5%	No	\$200	\$200	\$50	4	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
29	Drought Management	MARBLE FALLS	Mandatory water use reduction by 20%	Yes	#VALUE!	#VALUE!	\$50	1277	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
30	Drought Management	MEADOWLAKES	Mandatory water use reduction by 20%	Yes	\$15,400	\$15,400	\$50	308	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
31	Drought Management	COLUMBUS	Mandatory water use reduction by 15%	Yes	\$9,850	\$9,850	\$50	197	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
32	Drought Management	EAGLE LAKE	Mandatory water use reduction by 15%	No	\$4,350	\$4,350	\$50	87	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
33	Drought Management	WEIMAR	Mandatory water use reduction by 15%	No	\$4,550	\$4,550	\$50	91	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
34	Drought Management	FAYETTE WSC	Mandatory water use reduction by 15%	No	\$7,600	\$7,600	\$50	152	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
35	Drought Management	FLATONIA	Mandatory water use reduction by 15%	No	\$3,400	\$3,400	\$50	68	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
36	Drought Management	LA GRANGE	Mandatory water use reduction by 15%	No	\$8,700	\$8,700	\$50	174	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
37	Drought Management	SCHULENBERG	Mandatory water use reduction by 15%	Yes	\$7,500	\$7,500	\$50	150	2020	Lavaca	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
38	Drought Management	FREDERICKSBURG	Mandatory water use reduction by 15%	Yes	\$30,450	\$30,450	\$50	609	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
39	Drought Management	AUSTIN	Mandatory water use reduction by 10%	Yes	\$1,446,850	\$1,446,850	\$50	28,937	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))										Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts	
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation				Impacts on Other Management Strategies
40	Drought Management	Buda	Mandatory water use reduction by 10%	Yes	\$36,700	\$36,700	\$50	734	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
41	Drought Management	DRIPPING SPRINGS	Mandatory water use reduction by 20%	Yes	\$9,400	\$9,400	\$50	188	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
42	Drought Management	DRIPPING SPRINGS WSC	Mandatory water use reduction by 20%	Yes	\$16,500	\$16,500	\$50	330	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
43	Drought Management	GOFORTH SUD	Mandatory water use reduction by 25%	Yes	\$5,300	\$5,300	\$50	106	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
44	Drought Management	WEST TRAVIS COUNTY PUA	Mandatory water use reduction by 20%	Yes	\$206,000	\$206,000	\$50	4,120	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
45	Drought Management	LLANO	Mandatory water use reduction by 15%	Yes	\$6,850	\$6,850	\$50	137	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
46	Drought Management	BAY CITY	Mandatory water use reduction by 20%	No	\$30,250	\$30,250	\$50	605	2020	Brazos-Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
47	Drought Management	PALACIOS	Mandatory water use reduction by 15%	No	\$5,400	\$5,400	\$50	108	2020	Colorado-Lavaca	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
48	Drought Management	GOLDTHWAITE	Mandatory water use reduction by 15%	Yes	\$2,950	\$2,950	\$50	59	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
49	Drought Management	RICHLAND SUD	Mandatory water use reduction by 15%	No	\$1,300	\$1,300	\$50	26	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
50	Drought Management	SAN SABA	Mandatory water use reduction by 20%	Yes	\$12,000	\$12,000	\$50	240	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
51	Drought Management	BARTON CREEK WEST WSC	Mandatory water use reduction by 15%	No	\$3,250	\$3,250	\$50	65	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
52	Drought Management	BEE CAVE VILLAGE	Mandatory water use reduction by 20%	Yes	\$30,700	\$30,700	\$50	614	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
53	Drought Management	BRIARCLIFF VILLAGE	Mandatory water use reduction by 10%	Yes	\$2,200	\$2,200	\$50	44	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
54	Drought Management	CEDAR PARK	Mandatory water use reduction by 20%	No	\$27,650	\$27,650	\$50	553	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
55	Drought Management	ROLLINGWOOD	Mandatory water use reduction by 15%	Yes	\$2,900	\$2,900	\$50	58	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
56	Drought Management	ROUND ROCK	Mandatory water use reduction by 7%	Yes	\$1,550	\$1,550	\$50	31	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
57	Drought Management	SHADY HOLLOW MUD	Mandatory water use reduction by 15%	No	\$5,850	\$5,850	\$50	117	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
58	Drought Management	SUNSET VALLEY	Mandatory water use reduction by 30%	No	\$14,000	\$14,000	\$50	280	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
59	Drought Management	THE HILLS	Mandatory water use reduction by 15%	No	\$10,850	\$10,850	\$50	217	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
60	Drought Management	TRAVIS COUNTY MUD #4	Mandatory water use reduction by 20%	Yes	\$45,350	\$45,350	\$50	907	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
61	Drought Management	TRAVIS COUNTY WCID #10	Mandatory water use reduction by 25%	Yes	\$45,250	\$45,250	\$50	905	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
62	Drought Management	TRAVIS COUNTY WCID #17	Mandatory water use reduction by 15%	Yes	\$88,800	\$88,800	\$50	1,776	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
63	Drought Management	TRAVIS COUNTY WCID #18	Mandatory water use reduction by 15%	Yes	\$14,000	\$14,000	\$50	280	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
64	Drought Management	TRAVIS COUNTY WCID #19	Mandatory water use reduction by 20%	No	\$5,000	\$5,000	\$50	100	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
65	Drought Management	TRAVIS COUNTY WCID #20	Mandatory water use reduction by 20%	No	\$5,900	\$5,900	\$50	118	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
66	Drought Management	VOLENTE	Mandatory water use reduction by 5%	Yes	\$350	\$350	\$50	7	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
67	Drought Management	WELLS BRANCH	Mandatory water use reduction by 5%	No	\$4,100	\$4,100	\$50	82	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
68	Drought Management	WEST LAKE HILLS	Mandatory water use reduction by 20%	Yes	\$15,650	\$15,650	\$50	313	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
69	Drought Management	LAGO VISTA	Mandatory water use reduction by 20%	No	\$34,300	\$34,300	\$50	686	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
70	Drought Management	LAKEWAY	Mandatory water use reduction by 20%	Yes	\$91,150	\$91,150	\$50	1,823	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
71	Drought Management	LOOP 360 WSC	Mandatory water use reduction by 15%	Yes	\$10,550	\$10,550	\$50	211	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
72	Drought Management	LOST CREEK MUD	Mandatory water use reduction by 20%	No	#VALUE!	#VALUE!	\$50	218	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
73	Drought Management	MANOR	Mandatory water use reduction by 15%	Yes	\$23,850	\$23,850	\$50	477	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
74	Drought Management	MANVILLE WSC	Mandatory water use reduction by 15%	Yes	\$45,550	\$45,550	\$50	911	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
75	Drought Management	NORTH AUSTIN MUD #1	Mandatory water use reduction by 15%	No	\$600	\$600	\$50	12	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
76	Drought Management	NORTHTOWN MUD	Mandatory water use reduction by 15%	No	\$9,000	\$9,000	\$50	180	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
77	Drought Management	PFLUGERVILLE	Mandatory water use reduction by 25%	Yes	\$423,150	\$423,150	\$50	8,463	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None
78	Drought Management	POINT VENTURE	Mandatory water use reduction by 15%	Yes	\$6,100	\$6,100	\$50	122	2020	Colorado	No	0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))										Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts			
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation				Impacts on Other Management Strategies		
79	Drought Management	Williamson-Travis County MUD #1	Mandatory water use reduction by 15%	Yes	\$1,150	\$1,150	\$50	23	2020	Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None	
80	Drought Management	EAST BERNARD	Mandatory water use reduction by 15%	No	\$3,350	\$3,350	\$50	67	2020	Brazos-Colorado	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None	
81	Drought Management	WHARTON	Mandatory water use reduction by 15%	No	\$14,550	\$14,550	\$50	291	2020	All	No		0	1	0	0	0	1	1	0	0	0	3	Impact is negligible	None	
82	Drought Management	IRRIGATION, COLORADO COUNTY	First rice crop only, no second crop.	Yes	\$4,815,346	\$4,815,346	\$163.00	29,542	2020	All	No	1	0	1	0	-1	-1	0	-1	-1	0	0	-2	Reduction of Irrigation return flows of up to 6,500 AFY. Reduction of approximately 17,000 acres of potential feedstock for migratory birds.	Reference cost implications stated in cost section of strategy write-up	
83	Drought Management	Irrigation, Mills County	Reduce water demands based on lack of available water.	Yes	\$15,375	\$15,375	\$123.00	125	2020	Brazos	No	1	0	1	0	0	-1	0	0	-1	0	0	0	0	Negligible	Reference cost implications stated in cost section of strategy write-up
84	Drought Management	IRRIGATION, MATAGORDA COUNTY	First rice crop only, no second crop.	Yes	\$24,171,356	\$24,171,356	\$649.00	37,244	2020	All	No	0	0	1	0	-1	-1	0	-1	-1	0	0	-3	Reduction of Irrigation return flows of up to 6,300 AFY. Reduction of approximately 15,000 acres of potential feedstock for migratory birds.	Reference cost implications stated in cost section of strategy write-up	
85	Drought Management	IRRIGATION, WHARTON COUNTY	First rice crop only, no second crop.	Yes	\$7,242,300	\$7,242,300	\$260.00	27,855	2020	All	No	1	0	1	0	-1	-1	0	-1	-1	0	0	-2	Reduction of Irrigation return flows of up to 6,300 AFY. Reduction of approximately 16,000 acres of potential feedstock for migratory birds.	Reference cost implications stated in cost section of strategy write-up	
86	Conservation	Aqua WSC	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	Yes	\$1,238,268	\$221,302	\$352.00	2,317	2020	All	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow).	
87	Conservation	Bastrop	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	Yes	\$224,866	\$59,136	\$303.00	1,958	2020	Colorado	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
88	Conservation	COUNTY-OTHER BASTROP COUNTY	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	Yes	\$230,000	\$34,401	\$374.00	677	2020	All	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
89	Conservation	Smithville	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	Yes	\$109,412	\$16,524	\$376.00	155	2020	Colorado	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
90	Conservation	BLANCO	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	No	\$47,867	\$7,181	\$378.00	32	2020	Guadalupe	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
91	Conservation	JOHNSON CITY	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	Yes	\$45,790	\$6,805	\$378.00	30	2020	Colorado	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
92	Conservation	BERTRAM	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	Yes	\$41,421	\$11,952	\$292.00	204	2020	Brazos	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
93	Conservation	BURNET	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	No	\$215,000	\$53,200	\$291.00	917	2020	All	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
94	Conservation	COTTONWOOD SHORES	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	No	\$30,672	\$7,087	\$322.00	23	2020	Colorado	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	
95	Conservation	HORSESHOE BAY	Conservation efforts of 1% per year GPCD reduction for >200 GPCD, and 0.5% GPCD reduction between 140 GPCD and 100 GPCD	Yes	\$44,289	\$19,252	\$257.00	1,839	2020	Colorado	No	1	0	1	0	0	0	1	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could leave up to 51,000 ac-ft of water in the lakes and aquifers. This additional water would increase storage levels, delay drought triggers, and increase springflows.	Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.	

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))											Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts				
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation	Impacts on Other Management Strategies							
135	Conservation	WHARTON																								Individual WUG implementation has negligible impacts to the region. The overall impact is likely negligible as well. Surface water conservation would increase the amount of water available in lakes and streams, while groundwater conservation would decrease WWTP discharges (streamflow), thus balancing each other out by the time the lower three counties are reached.		
136	Conservation - On farm Conservation	IRRIGATION, COLORADO COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$547,412	\$45,435	\$22.89	2,949	2020	Brazos-Colorado	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
137	Conservation - On farm Conservation	IRRIGATION, COLORADO COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$129,741	\$10,768	\$22.89	385	2020	Colorado	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
138	Conservation - On farm Conservation	IRRIGATION, COLORADO COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$814,992	\$67,644	\$22.89	4,034	2020	Lavaca	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
139	Conservation - On farm Conservation	IRRIGATION, MATAGORDA COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$1,784,048	\$148,076	\$22.89	11,269	2020	Brazos-Colorado	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
140	Conservation - On farm Conservation	IRRIGATION, MATAGORDA COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$304,331	\$25,259	\$22.89	1,986	2020	Colorado	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
141	Conservation - On farm Conservation	IRRIGATION, MATAGORDA COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$2,127,003	\$176,541	\$22.89	13,610	2020	Colorado-Lavaca	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
142	Conservation - On farm Conservation	IRRIGATION, WHARTON COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$1,759,978	\$146,078	\$22.89	10,577	2020	Brazos-Colorado	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
143	Conservation - On farm Conservation	IRRIGATION, WHARTON COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$488,160	\$40,517	\$22.89	2,203	2020	Colorado	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
144	Conservation - On farm Conservation	IRRIGATION, WHARTON COUNTY	On-Farm conservation measures to reduce the amount of water required for rice growing	YES	\$520,355	\$43,189	\$22.89	3,073	2020	Colorado-Lavaca	No	1	-1	1	0	-1	0	0	-1	1	0	0	0	0	0	Negligible impacts to streamflow and bay	Reference cost implications to implement conservation measures.	
145	Conservation - Irrigation Conveyance Improvements	IRRIGATION, COLORADO COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$498,876	\$41,407	\$10.96	3,793	2020	Brazos-Colorado	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 1,897 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
146	Conservation - Irrigation Conveyance Improvements	IRRIGATION, COLORADO COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$118,237	\$9,814	\$10.96	431	2020	Colorado	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 216 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
147	Conservation - Irrigation Conveyance Improvements	IRRIGATION, COLORADO COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$742,732	\$61,647	\$10.96	5,188	2020	Lavaca	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 2,594 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
148	Conservation - Irrigation Conveyance Improvements	IRRIGATION, MATAGORDA COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$1,625,868	\$134,947	\$10.96	14,492	2020	Brazos-Colorado	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 7,246 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
149	Conservation - Irrigation Conveyance Improvements	IRRIGATION, MATAGORDA COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$277,348	\$23,020	\$10.96	2,554	2020	Colorado	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 1,277 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
150	Conservation - Irrigation Conveyance Improvements	IRRIGATION, MATAGORDA COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$1,938,415	\$160,888	\$10.96	17,502	2020	Colorado-Lavaca	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 8,751 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
151	Conservation - Irrigation Conveyance Improvements	IRRIGATION, WHARTON COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$1,603,932	\$133,126	\$10.96	13,602	2020	Brazos-Colorado	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 6,801 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
152	Conservation - Irrigation Conveyance Improvements	IRRIGATION, WHARTON COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$444,878	\$36,925	\$10.96	2,834	2020	Colorado	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 1,417 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
153	Conservation - Irrigation Conveyance Improvements	IRRIGATION, WHARTON COUNTY	Improvements to the methods of water delivery to the rice fields in order to reduce the amount of water needed/lost	YES	\$474,218	\$39,360	\$10.96	3,952	2020	Colorado-Lavaca	No	1	-1	1	0	1	0	0	1	1	0	0	0	4	0	Reduction of up to 1,976 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications to implement conservation measures.	
154	Conservation - Sprinkler Irrigation	IRRIGATION, COLORADO COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$194,224	\$16,121	\$36.02	1,099	2020	Brazos-Colorado	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 1,099 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
155	Conservation - Sprinkler Irrigation	IRRIGATION, COLORADO COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$37,168	\$3,085	\$36.02	181	2020	Colorado	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 181 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
156	Conservation - Sprinkler Irrigation	IRRIGATION, COLORADO COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$281,278	\$23,346	\$36.02	1,565	2020	Lavaca	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 1,565 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
157	Conservation - Sprinkler Irrigation	IRRIGATION, MATAGORDA COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$669,614	\$55,578	\$36.02	3,910	2020	Brazos-Colorado	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 3,910 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
158	Conservation - Sprinkler Irrigation	IRRIGATION, MATAGORDA COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$115,635	\$9,598	\$36.02	680	2020	Colorado	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 680 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
159	Conservation - Sprinkler Irrigation	IRRIGATION, MATAGORDA COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$802,187	\$66,582	\$36.02	4,696	2020	Colorado-Lavaca	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 4,696 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
160	Conservation - Sprinkler Irrigation	IRRIGATION, WHARTON COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$648,637	\$53,837	\$36.02	3,750	2020	Brazos-Colorado	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 3,750 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
161	Conservation - Sprinkler Irrigation	IRRIGATION, WHARTON COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$163,772	\$13,593	\$36.02	895	2020	Colorado	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 895 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
162	Conservation - Sprinkler Irrigation	IRRIGATION, WHARTON COUNTY	Rice farming conversion to sprinkler irrigation (LEPA) versus field flooding	YES	\$190,585	\$15,819	\$36.02	1,098	2020	Colorado-Lavaca	No	1	-1	1	0	-1	-1	0	0	1	0	0	0	0	0	0	Reduction of up to 1,098 ac-ft/yr of return flows to Colorado River and Matagorda Bay	Reference cost implications of conversion.
163	Expansion of Groundwater Supply	Aqua WSC	Expand use of Carrizo-Wilcox aquifer by developing wellfield in Brazos Basin of Bastrop County	Yes	\$9,777,000	\$1,037,000	\$259	4,000	2020	Brazos	No	1	-1	1	0	0	1	0	0	0	0	0	3	0	0	Water supply is within the MAG, so dependent on the formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
164	New LCRA Contract (with construction)	Aqua WSC	Purchase SW through contract and construct new SWTP and transmission line from Colorado River	Yes	\$127,538,000	\$18,940,000	\$1,263	15,000	2040	Colorado	No	-1	1	1	0	0	0	-1	0	0	-1	0	-1	0	0	0	Could decrease amount of water available for release from the Highland Lakes by up to 15,000 AFY	
165	New LCRA Contract (with construction)	City of Bastrop	Purchase SW through contract and construct new SWTP and transmission line from Colorado River	Yes	\$34,858,000	\$5,526,000	\$2,210	2,500	2050	Colorado	No	-1	1	1	0	0	0	-1	0	0	-1	0	-1	0	0	0	Could decrease amount of water available for release from the Highland Lakes by up to 2,500 AFY	
166	Development of New Groundwater Supply	City of Bastrop	Develop a new supply of groundwater in the Carrizo-Wilcox aquifer in the Colorado Basin of Bastrop County	Yes	\$2,976,000	\$281,000	\$937	300	2020	Colorado	No	0	-1	1	0	0	1	1	0	0	0	0	2	0	0	Water supply is within the MAG, so dependent on the formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
167	Reuse (Direct)	City of Bastrop	Direct reuse of wastewater effluent.	Yes	\$4,625,000	\$502,000	\$448	1,120	2040	Colorado	No	0	0	1	0	1	0	0	1	-1	-1	1	2	0	0	Decrease return flows by 1,120 ac-ft/yr	Decrease return flows by 1,120 ac-ft/yr	
168	Expansion of Groundwater Supply	BASTROP COUNTY WCID #2	Expand use of Carrizo-Wilcox aquifer in Colorado Basin of Bastrop County	Yes	\$2,150,000	\$203,000	\$369	550	2060	Colorado	No	1	0	1	0	0	0	0	0	0	0	0	2	0	0	Water supply is within the MAG, so dependent on the formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))											Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts		
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation	Impacts on Other Management Strategies					
169	Expansion of Groundwater Supply	County-Other, Bastrop County	Expand use of Carrizo-Wilcox aquifer in Colorado Basin of Bastrop County	Yes	\$2,150,000	\$203,000	\$3,383	60	2020	Colorado	No	-1	0	1	0	0	0	1	0	0	0	0	0	1	Water supply is within the MAG, so dependent on the formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
170	Expansion of Groundwater Supply	Elgin	Expand use of Carrizo-Wilcox aquifer in Colorado Basin of Bastrop County	Yes	\$2,150,000	\$200,000	\$667	300	2020	Colorado	No	0	-1	1	0	0	0	0	0	0	0	0	0	0	Water supply is within the MAG, so dependent on the formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
171	New LCRA Contract (with construction)	Elgin	Purchase SW through contract and construct new SWTP and transmission line from Colorado River	Yes	\$61,623,000	\$8,986,000	\$2,567	3,500	2030	Colorado	No	-1	1	0	0	0	0	-1	0	0	-1	0	-2	Negligible	Could decrease amount of water available for release from the Highland Lakes by up to 3,500 AFY	
172	Development of New Groundwater Supply	Smithville	Develop a new supply of groundwater in the Queen City aquifer in the Colorado Basin of Bastrop County	Yes	\$2,620,000	\$241,000	\$1,607	150	2070	Colorado	No	-1	1	1	0	0	-1	0	0	0	0	0	0	0	Water supply is within the MAG, so drawdown in the aquifer could be up to 13 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
173	Expansion of Groundwater Supply	Manufacturing, Bastrop County	Expand use of Carrizo-Wilcox aquifer in Colorado Basin of Bastrop County	Yes	\$2,150,000	\$198,000	\$995	199	2020	Colorado	No	0	0	1	0	0	0	0	0	0	0	0	0	1	Water supply is within the MAG, so dependent on the formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
174	Development of New Groundwater Supply	Mining, Bastrop County	Develop a new supply of groundwater in the Queen City aquifer in the Guadalupe Basin of Bastrop County	Yes	\$2,446,000	\$231,000	\$755	306	2020	Guadalupe	No	0	0	1	0	0	0	0	0	0	0	0	0	1	Water supply is within the MAG, so drawdown in the aquifer could be up to 13 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
175	Development of New Groundwater Supply	Mining, Bastrop County	Develop a new supply of groundwater in the Carrizo-Wilcox aquifer in the Guadalupe Basin of Bastrop County	Yes	\$3,391,000	\$321,000	\$689	466	2040	Guadalupe	No	0	0	1	0	0	0	0	0	0	0	0	0	1	Water supply is within the MAG, so dependent on the formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
176	Expansion of Groundwater Supply	County-Other, Blanco County	Expand use of Ellenburger-San Saba aquifer in Colorado Basin of Blanco County	Yes	\$490,000	\$44,000	\$800	55	2050	Colorado	No	0	1	1	0	0	0	1	0	0	0	0	0	3	Water supply is within the MAG, so drawdown in the aquifer could be up to 2 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
177	Expansion of Groundwater Supply	County-Other, Blanco County	Expand use of Hickory aquifer in Colorado Basin of Blanco County	Yes	\$1,316,000	\$120,000	\$2,182	55	2050	Colorado	No	-1	1	1	0	0	0	1	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 7 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
178	Brush Control	County-Other, Blanco County	Removal of brush to increase recharge and runoff. Firm yield determined from Pedernales River Watershed Feasibility Study.	Yes	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	-1	1	0	1	0	0	0	0	0	0	0	1	Potential increases to streamflow of up to 425 AFY	Negligible
179	Expansion of Groundwater Supply	JOHNSON CITY	Expand use of Ellenburger-San Saba aquifer in Colorado Basin of Blanco County	Yes	\$1,505,000	\$140,000	\$800	175	2020	Colorado	No	0	1	1	0	0	0	0	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 2 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Additional drawdown of 175 AFY is likely to have negligible impacts to agriculture
180	Expansion of Groundwater Supply	Bertram	Expand use of Ellenburger-San Saba aquifer in Colorado Basin of Burnet County	Yes	\$1,374,000	\$127,000	\$706	180	2020	Brazos	No	0	0	1	0	0	0	0	0	0	0	0	0	1	Water supply is within the MAG, so aquifer should maintain 100% saturated thickness. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Additional drawdown of 180 AFY is likely to have negligible impacts to agriculture
181	Buena Vista Regional Project	Bertram	Contract with LCRA. Expansion of Buchanan WTP and transmission of treated surface water to Buena Vista residents, Bertram, and others	Yes	\$4,656,599	\$707,707	\$801	884	2020	Brazos	Yes	0	1	-1	1	0	0	-1	0	0	-1	0	-1	-1	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.
182	Buena Vista Regional Project	Burnet	Contract with LCRA. Expansion of Buchanan WTP and transmission of treated surface water to Buena Vista residents, Bertram, and others	No	\$10,535,292	\$1,601,147	\$801	2,000	2020	Colorado	No	0	1	1	1	0	0	-1	0	0	-1	0	1	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.	
183	Marble Falls Regional Project	COTTONWOOD SHORES	Contract with LCRA. Construction of new raw water intake and regional WTP at Max Starcke Dam, and construction of transmission lines to support future development.	No	\$8,172,147	\$1,296,700	\$1,297	1,000	2020	Colorado	No	-1	1	1	0	0	0	-1	0	0	-1	0	-1	-1	Project could remove up to 5,600 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 5,600 AFY of water from the Highland Lakes, with no return flows.
184	Marble Falls Regional Project	County-Other, Burnet County	Contract with LCRA. Construction of new raw water intake and regional WTP at Max Starcke Dam, and construction of transmission lines to	No	\$7,175,145	\$1,138,502	\$1,297	878	2020	Colorado	No	-1	1	1	0	0	0	-1	0	0	-1	0	-1	-1	Project could remove up to 5,600 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 5,600 AFY of water from the Highland Lakes, with no return flows.
185	Buena Vista Regional Project	County-Other, Burnet County	Contract with LCRA. Expansion of Buchanan WTP and transmission of treated surface water to Buena Vista residents, Bertram, and others	Yes	\$5,267,646	\$800,573	\$801	1,000	2040	Brazos	No	0	1	1	1	0	0	-1	0	0	-1	0	1	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.	
186	Buena Vista Regional Project	County-Other, Burnet County	Contract with LCRA. Expansion of Buchanan WTP and transmission of treated surface water to Buena Vista residents	No	\$5,267,646	\$800,573	\$801	1,000	2020	Colorado	No	0	1	1	1	0	0	-1	0	0	-1	0	1	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 5,000 AFY of water from the Highland Lakes, with no return flows.	
187	East Lake Buchanan Regional Project	County-Other, Burnet County	Contract with LCRA. Regional SWTP and deep water intake at Council Creek Village to provide treated water to communities along East Lake	No	\$10,477,785	\$1,612,000	\$1,724	935	2020	Colorado	No	-1	1	1	1	0	0	-1	0	0	-1	0	0	0	Project could remove up to 935 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 935 AFY of water from the Highland Lakes, with no return flows.
188	Brush Control	County-Other, Burnet County	Removal of brush to increase recharge and runoff. Firm yield determined from Pedernales River Watershed Feasibility Study.	No	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	-1	1	0	1	0	0	0	0	0	0	0	1	Potential increases to streamflow of up to 425 AFY	Negligible
189	LCRA Contract Amendment	GRANITE SHOALS	Amend existing contract with LCRA for additional supply	Yes	\$37,750	\$37,750	\$151	250	2050	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.	
190	Reuse (Direct)	HORSESHOE BAY	Direct reuse of wastewater effluent.	Yes	\$0	\$0	\$0	100	2020	Colorado	No	1	0	1	0	1	0	1	1	0	0	0	5	None	None	

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))											Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts	
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation	Impacts on Other Management Strategies				
191 LCRA Contract Amendment	HORSESHOE BAY	Amend existing contract with LCRA for additional supply	Yes	\$30,200	\$30,200	\$151	200	2020	Colorado	No	1	1	1	0	0	0	0	0	0	0	0	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
192 Marble Falls Regional Project	MARBLE FALLS	Contract with LCRA. Construction of new raw water intake and regional WTP at Max Starcke Dam, and construction of transmission lines to support future development.	Yes	\$32,688,587	\$5,186,798	\$1,297	4,000	2020	Colorado	No	-1	1	1	0	0	0	-1	0	0	-1	0	-1	0	Project could remove up to 5,600 AFY of water from the Highland Lakes, with no return flows.	Project could remove up to 5,600 AFY of water from the Highland Lakes, with no return flows.
193 Expansion of Groundwater Supply	Mining, Burnet County	Expand use of Ellenburger-San Saba aquifer in Colorado Basin of Burnet County	Yes	\$10,597,000	\$1,034,000	\$689	1,500	2020	Colorado	No	0	-1	1	0	0	0	0	0	0	0	0	0	0	Water supply is within the MAG, so aquifer should maintain 100% saturated thickness. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Maintaining 100% saturated thickness should create negligible impacts to agriculture, but mining demand could drawdown aquifer levels up to 30%, which could impact agriculture well pumping if located nearby. Local GCD can ensure appropriate distance.
194 Expansion of Groundwater Supply	Mining, Burnet County	Expand use of Hickory aquifer in Colorado Basin of Burnet County	Yes	\$13,437,000	\$1,293,000	\$718	1,800	2030	Colorado	No	0	-1	1	0	0	0	0	0	0	0	0	0	0	Water supply is within the MAG, so aquifer should maintain 100% saturated thickness. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible impact to agriculture due to limited use of aquifer for irrigation.
195 Expansion of Groundwater Supply	Mining, Burnet County	Expand use of Marble Falls aquifer in Colorado Basin of Burnet County	Yes	\$7,257,000	\$703,000	\$469	1,500	2060	Colorado	No	0	-1	1	0	0	0	0	0	0	0	0	0	0	Water supply is within the MAG, so aquifer should maintain 100% saturated thickness. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	No impact to agriculture as aquifer is not used for irrigation.
196 Expansion of Groundwater Supply	County-Other, Colorado County	Expand use of Gulf Coast aquifer in Colorado Basin of Colorado County	Yes	\$1,466,000	\$136,000	\$602	226	2020	Colorado	No	0	0	1	0	0	0	1	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
197 LCRA WMP - Interruptible Water	County, Matagorda County, Wharton County	municipal and industrial demands versus fully authorized demands	Yes	\$3,894,000	\$3,894,000	\$50	77,880	2020	All	No	1	1	1	0	1	1	0	0	1	-1	0	5	Environmental flows also have a firm commitment under the LCRA WMP of 33,440 AFY.	Provides a positive impact to agriculture in the volumes shown in Table 5-17.	
198 COA Return Flows	Irrigation, Colorado County, Matagorda County, Wharton County	Return flows from City of Austin and others	Yes	\$0	\$0	\$0	26,044	2020	All	No	1	0	1	0	1	1	0	1	1	0	0	6	Benefits shown in Table 5-2	Benefits shown in Table 5-2	
199 Expansion of Groundwater Supply	County-Other, Fayette County	Expand use of Gulf Coast aquifer in Colorado Basin of Fayette County	Yes	\$2,279,000	\$214,000	\$620	345	2020	Colorado	No	0	1	1	0	0	0	1	0	0	0	0	3	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
200 Expansion of Groundwater Supply	County-Other, Fayette County	Expand use of Gulf Coast aquifer in Lavaca Basin of Fayette County	Yes	\$2,279,000	\$213,000	\$724	294	2020	Lavaca	No	0	1	1	0	0	0	1	0	0	0	0	3	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
201 Reuse (Direct)	FLATONIA	Direct reuse of wastewater effluent.	No	\$1,226,000	\$110,000	\$821	182	2020	Lavaca	No	0	-1	1	0	1	0	1	1	0	0	0	3	Reduced demand on aquifer by up to 182 AFY.	None	
202 Expansion of Groundwater Supply	FLATONIA	Expand use of Gulf Coast aquifer in Lavaca Basin of Fayette County	No	\$2,241,000	\$206,000	\$2,060	100	2020	Lavaca	No	-1	0	1	0	0	0	0	0	0	0	0	0	0	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
203 Expansion of Groundwater Supply	Manufacturing, Fayette County	Expand use of Gulf Coast aquifer in Lavaca Basin of Fayette County	Yes	\$2,279,000	\$214,000	\$547	391	2020	Lavaca	No	0	1	1	0	0	0	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
204 Expansion of Groundwater Supply	Mining, Fayette County	Expand use of Gulf Coast aquifer in Colorado Basin of Fayette County	Yes	\$2,279,000	\$214,000	\$622	1,576	2020	Colorado	No	0	1	1	0	0	0	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
205 Expansion of Groundwater Supply	Mining, Fayette County	Expand use of Sparta aquifer in Guadalupe Basin of Fayette County	Yes	\$753,000	\$68,000	\$1,030	66	2020	Guadalupe	No	1	1	1	0	0	0	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 60 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
206 Expansion of Groundwater Supply	Mining, Fayette County	Expand use of Gulf Coast aquifer in Lavaca Basin of Fayette County	Yes	\$2,279,000	\$214,000	\$622	344	2020	Lavaca	No	0	1	1	0	0	0	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible	
207 Long Lake Storage Release	Steam-Electric, Fayette County	Use stored water from Long Lake released downstream for diversion	Yes	\$2,822,000	\$374,000	\$187	2,000	2020	Colorado	No	1	0	0	0	1	0	0	1	0	0	0	3	Refer to Direct Reuse discussion quantifying return flows	Change "no adverse" to "negligible"	
208 LCRA Contract Amendment	Steam-Electric, Fayette County	Amend existing contract with LCRA for additional supply.	Yes	\$2,265,000	\$2,265,000	\$151	15,000	2020	Colorado	No	1	1	1	0	0	0	0	0	0	0	0	3	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.	
209 Brush Control	County-Other, Gillespie County	Removal of brush to increase recharge and runoff. No firm yield is associated with this strategy.	No	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	0	1	0	1	0	1	1	0	1	1	6	Potential increases to streamflow of up to 425 AFY	Negligible	
210 Expansion of Groundwater Supply	Manufacturing, Gillespie County	Expand use of Ellenburger-San Saba aquifer in Colorado Basin of Gillespie County	Yes	\$3,880,000	\$368,000	\$588	626	2020	Colorado	No	0	1	1	0	0	0	0	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 5 feet, relative to 2010 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Additional drawdown of 626 AFY is likely to have negligible impacts to agriculture	
211 Reuse (Direct)	Buda	Direct reuse of wastewater effluent.	Yes	\$5,464,000	\$1,180,000	\$527	2,240	2020	Colorado	No	1	-1	1	0	1	0	0	1	0	-1	1	3	Reduction of return flows by up to 2,240 AFY.	None	
212 Groundwater Importation (HCPUA Pipeline)	Buda	Importation of groundwater from the Carrizo-Wilcox aquifer in Gonzales County (Region L) through a pipeline. Buda portion.	Yes	\$34,996,869	\$4,751,402	\$1,926	2,467	2030	Colorado	No	-1	1	-1	0	0	1	0	0	0	0	0	1	See Region L Plan	Negligible	

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))										Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts		
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation				Impacts on Other Management Strategies	
213	Alternative Groundwater Importation (HCPUA Pipeline)	Buda	Wilcox aquifer in Gonzales County (Region L) through a pipeline. Buda portion. Alternative version assumes volume available without MAG restriction. Reduces unit cost for Buda.	Yes	\$51,128,546	\$7,308,685	\$1,664	4,426	2030	Colorado	No	-1	1	-1	0	0	1	0	0	0	0	0	1	See Region L Plan	Negligible
214	Saline Edwards ASR Project	Buda	Non-drought year available freshwater Edwards BFZ aquifer volume will be stored in the Edwards BFZ (Saline Zone). In times of drought, water will be pumped, treated, and piped to users within the BSEACD district.	Yes	\$7,500,000	\$1,015,000	\$2,031	500	2030	Colorado	No	-1	0	0	1	0	0	0	0	0	0	0	0	Using up to 700 AFY of water from the Saline Zone may allow the same volume to remain in the freshwater zone during drier times. During average rainfall, the strategy may decrease springflow by removing an additional 300 ac-ft/yr	Negligible
215	Edwards / Middle Trinity ASR Project	Buda	Non-drought year available freshwater Edwards BFZ aquifer volume will be stored in the Trinity aquifer. In times of drought, water will be pumped, treated, and piped to users within the BSEACD district.	Yes	\$6,818,182	\$734,266	\$801	600	2030	Colorado	No	0	0	1	0	0	0	1	0	0	0	0	2	During average rainfall, the strategy may decrease springflow by removing up to an additional 1,140 ac-ft/yr	Negligible
216	Groundwater Importation (Hays County Pipeline)	County-Other, Hays County	Importation of groundwater from the Carrizo-Wilcox aquifer in Gonzales County (Region L) through a pipeline. Region L pipeline runs from delivery point near Kyle to the Wimberley area in Hays County. Region K pipeline will run from a to-be-determined connection point along the pipeline to the Dripping Springs area. Alternative version would use Forestar water (Region G Lee County Carrizo-Wilcox) as the source.	Yes	\$12,257,000	\$1,507,000	\$754	2,000	2030	Colorado	No	0	0	-1	0	0	-1	0	0	0	0	0	-2	Negligible	Negligible
217	Alternative Groundwater Importation (Hays County Pipeline)	County-Other, Hays County	Region L pipeline runs from delivery point near Kyle to the Wimberley area in Hays County. Region K pipeline will run from a to-be-determined connection point along the pipeline to the Dripping Springs area. Alternative version would use Forestar water (Region G Lee County Carrizo-	Yes	\$12,257,000	\$1,507,000	\$754	2,000	2030	Colorado	No	0	0	-1	0	0	-1	0	0	0	0	0	-2	Negligible	Negligible
218	Saline Edwards ASR Project	County-Other, Hays County	Non-drought year available freshwater Edwards BFZ aquifer volume will be stored in the Edwards BFZ (Saline Zone). In times of drought, water will be pumped, treated, and piped to users within the BSEACD district.	Yes	\$3,000,000	\$406,000	\$2,031	200	2030	Colorado	No	-1	0	0	1	0	0	0	1	0	0	0	0	Using up to 700 AFY of water from the Saline Zone may allow the same volume to remain in the freshwater zone during drier times. During average rainfall, may decrease springflow by removing an additional 300 ac-ft/yr	Negligible
219	Edwards / Middle Trinity ASR Project	County-Other, Hays County	Non-drought year available freshwater Edwards BFZ aquifer volume will be stored in the Trinity aquifer. In times of drought, water will be pumped, treated, and piped to users within the BSEACD district.	Yes	\$2,272,727	\$244,755	\$801	200	2030	Colorado	No	0	0	1	0	0	0	0	1	0	0	0	2	During average rainfall, the strategy may decrease springflow by removing up to an additional 1,140 ac-ft/yr	Negligible
220	Brush Control	County-Other, Hays County	Removal of brush to increase recharge and runoff. Firm yield determined from Pedernales River Watershed Feasibility Study.	Yes	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	-1	1	0	1	0	0	0	0	0	0	1	Potential increases to streamflow of up to 425 AFY	Negligible
221	Water Purchase	Dripping Springs	Water purchase from Dripping Springs WSC	Yes	\$0	\$0	\$0	432	2030	Colorado	No	1	1	1	0	0	1	1	0	0	0	0	5	None	None
222	Groundwater Importation (Hays County Pipeline)	Dripping Springs WSC	Wilcox aquifer in Gonzales County (Region L) through a pipeline. Region L pipeline runs from delivery point near Kyle to the Wimberley area in Hays County. Region K pipeline will run from a to-	Yes	\$6,128,500	\$753,500	\$754	1,000	2030	Colorado	No	0	0	-1	0	0	-1	0	0	0	0	0	-2	Negligible	Negligible
223	Alternative Groundwater Importation (Hays County Pipeline)	Dripping Springs WSC	Region L pipeline runs from delivery point near Kyle to the Wimberley area in Hays County. Region K pipeline will run from a to-be-determined connection point along the pipeline to the	Yes	\$6,128,500	\$753,500	\$754	1,000	2030	Colorado	No	0	0	-1	0	0	-1	0	0	0	0	0	-2	Negligible	Negligible
224	Water Purchase	Goforth SUD	Water purchase from GBRA to meet needs in Hays and Travis counties	Yes	\$9,600	\$9,600	\$200	48	2070	Colorado	No	1	1	1	0	0	1	1	0	0	0	0	5	None	None
225	Groundwater Importation (Hays County Pipeline)	West Travis County PUA	Wilcox aquifer in Gonzales County (Region L) through a pipeline. Region L pipeline runs from delivery point near Kyle to the Wimberley area in Hays County. Region K pipeline will run from a to-	Yes	\$6,128,500	\$753,500	\$754	1,000	2030	Colorado	No	0	0	-1	0	0	-1	0	0	0	0	0	-2	Negligible	Negligible
226	Alternative Groundwater Importation (Hays County Pipeline)	West Travis County PUA	Region L pipeline runs from delivery point near Kyle to the Wimberley area in Hays County. Region K pipeline will run from a to-be-determined	Yes	\$6,128,500	\$753,500	\$754	1,000	2030	Colorado	No	0	0	-1	0	0	-1	0	0	0	0	0	-2	Negligible	Negligible
227	LCRA Contract Amendment	West Travis County PUA	Amend existing contract with LCRA for additional supply for Hays and Travis counties	Yes	\$151,000	\$151,000	\$151	1,000	2030	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
228	Expansion of Groundwater Supply	Mining, Hays County	Expand use of Trinity aquifer in Colorado Basin of Hays County	Yes	\$4,652,000	\$457,000	\$436	1,047	2020	Colorado	No	1	-1	1	0	0	0	0	0	0	0	0	1	Water supply is within the MAG, so drawdown in the aquifer could be up to 30 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Additional drawdown is likely to have negligible impacts to agriculture in this area.
229	Edwards / Middle Trinity ASR Project	Mining, Hays County	Non-drought year available freshwater Edwards BFZ aquifer volume will be stored in the Trinity aquifer. In times of drought, water will be pumped, treated, and piped to users within the BSEACD district.	Yes	\$1,136,364	\$122,378	\$801	100	2030	Colorado	No	0	0	1	0	0	0	0	1	0	0	0	2	During average rainfall, the strategy may decrease springflow by removing up to an additional 1,140 ac-ft/yr	Negligible
230	Water Purchase	Mining, Hays County	Water purchase (reuse water) from Buda	Yes	\$100,000	\$100,000	\$200	500	2040	Colorado	No	1	1	1	0	0	0	0	1	0	0	0	4	None	None
231	Brush Control	County-Other, Llano County	Removal of brush to increase recharge and runoff. Firm yield determined from Pedernales River Watershed Feasibility Study.	No	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	-1	1	0	1	0	0	0	0	0	0	1	Potential increases to streamflow of up to 425 AFY	Negligible
232	Reuse (Direct)	Llano	Direct reuse of wastewater effluent.	Yes	\$689,000	\$66,000	\$660	100	2020	Colorado	No	0	0	1	0	1	0	0	1	0	-1	1	3	Negligible	None
233	Development of New Groundwater Supply	Llano	Develop a new supply of groundwater in the Hickory aquifer in the Colorado Basin of Llano County	Yes	\$2,743,000	\$254,000	\$1,270	200	2020	Colorado	No	-1	1	1	0	0	0	1	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 7 feet, relative to 2010 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	None
234	STPNOC Alternate Canal Delivery	Steam-Electric, Matagorda County	Divert available Garwood water during winter months through irrigation canal system upstream of Bay City Dam. Pipeline from canal to reservoir.	Yes	\$7,669,000	\$2,593,000	\$204	12,727	2020	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Negligible	Negligible
235	LCRA Contract Amendment	Steam-Electric, Matagorda County		Yes	\$1,510,000	\$1,510,000	\$151	10,000	2020	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))										Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts	
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation				Impacts on Other Management Strategies
236 STPNOC Brackish Surface Water Blending	Steam-Electric, Matagorda County	Under emergency conditions, the TCEQ can approve STPNOC to pump brackish surface water to blend with the freshwater in their reservoir	Yes	\$0	\$0	\$0	3,000	2020	Colorado	No	1	1	1	0	0	1	0	0	0	0	0	4	None	None
237 Brush Control	County-Other, Mills County	Removal of brush to increase recharge and runoff. Firm yield determined from Pedernales River Watershed Feasibility Study.	No	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	-1	1	0	1	0	0	0	0	0	0	1	Potential increases to streamflow of up to 425 AFY	Negligible
240 Expansion of Groundwater Supply	Irrigation, Mills County	Expand use of Trinity aquifer in Colorado Basin of Mills County	Yes	\$8,289,000	\$777,000	\$1,619	480	2020	Brazos	No	-1	1	1	0	0	0	1	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Positive impact of 480 ac-ft/yr of water for irrigation.
241 Brush Control	County-Other, San Saba County	Removal of brush to increase recharge and runoff. Firm yield determined from Pedernales River Watershed Feasibility Study.	No	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	-1	1	0	1	0	0	0	0	0	0	1	Potential increases to streamflow of up to 425 AFY	Negligible
242 Water Purchase	BEE CAVE VILLAGE	Purchase additional water from West Travis County PUA.	Yes	\$0	\$0	\$0	800	2020	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	None	None
243 Brush Control	County-Other, Travis County	Removal of brush to increase recharge and runoff. Firm yield determined from Pedernales River Watershed Feasibility Study.	No	\$2,137,000	\$213,700	\$500	425	2020	Colorado	No	0	-1	1	0	1	0	0	0	0	0	0	1	Potential increases to streamflow of up to 425 AFY	Negligible
244 Saline Edwards ASR Project	Creedmoor-Maha WSC	Non-drought year available freshwater Edwards BFZ aquifer volume will be stored in the Edwards BFZ (Saline Zone). In times of drought, water will be pumped, treated, and piped to users within the BSEACD district.	Yes	\$4,500,000	\$609,000	\$2,031	300	2030	Colorado	No	-1	0	0	1	0	0	0	1	0	0	0	0	Using up to 700 AFY of water from the Saline Zone may allow the same volume to remain in the freshwater zone during drier times. During average rainfall, may decrease springflow by removing an additional 300 ac-ft/yr	Negligible
245 New LCRA Contract	Creedmoor-Maha WSC	Once contract with City of Austin ends, contract with LCRA for water.	Yes	\$60,400	\$60,400	\$151	400	2030	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 28,000 AFY from the Highland Lakes.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
246 LCRA Contract Amendment	LAKEWAY	Amend existing contract with LCRA for additional supply	Yes	\$226,500	\$226,500	\$151	1,500	2020	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
247 Water Purchase	LAKEWAY	Purchase additional water from Travis County WCID #17.	Yes	\$0	\$0	\$0	1,000	2020	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	None	None
248 Expansion of Groundwater Supply	LAKEWAY	Expand use of Trinity aquifer in Colorado Basin of Travis County	Yes	\$2,985,000	\$285,000	\$570	500	2020	Colorado	No	0	1	1	0	0	0	1	0	0	0	0	3	Water supply is within the MAG, so drawdown in the aquifer could be up to 124 feet, depending on the formation. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
249 Expansion of Groundwater Supply	Manor	Expand use of Trinity aquifer in Colorado Basin of Travis County	Yes	\$3,442,000	\$327,000	\$545	600	2030	Colorado	No	0	1	1	0	0	0	1	0	0	0	0	3	Water supply is within the MAG, so drawdown in the aquifer could be up to 124 feet, depending on the formation. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
250 Water Purchase	Manor	Purchase additional water from Manville WSC.	Yes	\$900,000	\$900,000	\$900	1,000	2050	Colorado	No	0	1	1	0	0	0	0	0	0	-1	0	1	None	None
251 New LCRA Contract	Manville WSC	Once contract with City of Austin ends, contract with LCRA for water.	Yes	\$226,500	\$226,500	\$151	1,500	2060	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 28,000 AFY from the Highland Lakes.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
252 Expansion of Groundwater Supply	Manville WSC	Expand use of Trinity aquifer in Colorado Basin of Travis County	Yes	\$5,431,000	\$537,000	\$537	1,000	2050	Colorado	No	0	1	1	0	0	0	1	0	0	0	0	3	Water supply is within the MAG, so drawdown in the aquifer could be up to 124 feet, depending on the formation. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
253 Reuse (Direct)	Pflugerville	Direct reuse of wastewater effluent.	Yes	\$7,959,000	\$911,000	\$228	4,000	2020	Colorado	No	1	0	1	0	1	0	0	1	0	-1	1	4	Up to 4,000 AFY discharge reduction to Gilleland Creek.	None
254 LCRA Contract Amendment	Pflugerville	Amend existing contract with LCRA for additional supply	Yes	\$906,000	\$906,000	\$151	6,000	2050	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
255 Expansion of Groundwater Supply	Pflugerville	Expand use of Edwards BFZ aquifer in Colorado Basin of Travis County	Yes	\$3,729,000	\$371,000	\$371	1,000	2040	Colorado	No	1	1	1	0	0	0	1	0	0	0	0	4	Water supply is within the MAG, so spring/streamflow should be maintained at least 42 ac-ft/month. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
256 LCRA Contract Amendment	POINT VENTURE	Amend existing contract with LCRA for additional supply	Yes	\$15,100	\$15,100	\$151	100	2050	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
257 LCRA Contract Amendment	ROLLINGWOOD	Amend existing contract with LCRA for additional supply	Yes	\$45,300	\$45,300	\$151	300	2030	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
258 Edwards / Middle Trinity ASR Project	Sunset Valley	Non-drought year available freshwater Edwards BFZ aquifer volume will be stored in the Trinity aquifer. In times of drought, water will be pumped, treated, and piped to users within the BSEACD district.	Yes	\$2,272,727	\$244,755	\$801	200	2030	Colorado	No	0	0	1	0	0	0	0	1	0	0	0	2	During average rainfall, the strategy may decrease springflow by removing up to an additional 1,140 ac-ft/yr	Negligible
259 New LCRA Contract	Sunset Valley	Once contract with City of Austin ends, contract with LCRA for water.	Yes	\$75,500	\$75,500	\$151	500	2030	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 28,000 AFY from the Highland Lakes.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))										Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts		
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation				Impacts on Other Management Strategies	
260	Development of New Groundwater Supply	Sunset Valley	Develop a new supply of groundwater in the Trinity aquifer in the Colorado Basin of Travis County	Yes	\$2,228,000	\$207,000	\$1,035	200	2040	Colorado	No	-1	1	1	0	0	0	1	0	0	0	0	2	Water supply is within the MAG, so drawdown in the aquifer could be up to 30 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	Negligible
261	New LCRA Contract	Travis County WCID #10	Once contract with City of Austin ends, contract with LCRA for water.	Yes	\$302,000	\$302,000	\$151	2,000	2030	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 28,000 AFY from the Highland Lakes.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
262	LCRA Contract Amendment	Travis County WCID #17	Amend existing contract with LCRA for additional supply	Yes	\$151,000	\$151,000	\$151	1,000	2020	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 70,000 AFY from the Highland Lakes or other proposed LCRA reservoirs. Approximately 23,000 AFY would provide additional instream flows from the release point down to Matagorda County.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
263	New LCRA Contract (with construction)	VOLENTE	Construct intake from Lake Travis, transmission line, and treatment plant. Contract with LCRA for surface water.	Yes	\$8,263,000	\$1,064,000	\$7,493	146	2020	Colorado	No	-1	1	1	0	0	0	-1	0	0	-1	0	-1	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 28,000 AFY from the Highland Lakes.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
264	New LCRA Contract	West Lake Hills	Once contract with City of Austin ends, contract with LCRA for water.	Yes	\$196,300	\$196,300	\$151	1,300	2030	Colorado	No	1	1	1	0	0	0	0	0	0	-1	0	2	Individual WUG implementation has negligible impacts to the region, but full regional implementation could remove up to 28,000 AFY from the Highland Lakes.	Increases in firm municipal and industrial contracts over time will eventually reduce the amount of available interruptible water to 0 AFY.
265	COA Direct Reuse	Steam-Electric, Travis County	Direct reuse of wastewater effluent.	Yes	\$129,996,000	\$12,202,000	\$1,162	10,500	2020	Colorado	No	-1	1	1	1	1	0	0	1	-1	0	0	3	Plan discussion provides quantification related to return flows.	Plan discussion provides quantification related to return flows.
266	Development of New Groundwater Supply	Steam-Electric, Wharton County	Develop new wellfield in the Gulf Coast Aquifer in the Brazos-Colorado Basin of Wharton County	Yes	\$2,237,000	\$207,000	\$1,035	200	2050	Brazos-Colorado	No	-1	0	1	0	0	0	0	0	0	0	0	0	Negligible	Negligible
267	LCRA - Off-Channel Reservoir(s)	LCRA	Lane City off-channel reservoir	Yes	\$211,200,000	\$19,520,000	\$217	90,000	2020	Colorado	No	1	1	1	0	-1	1	0	1	1	1	0	6	Could potentially remove up to 90,000 ac-ft from the Colorado River, but will create additional waterfowl habitat.	Could potentially make available up to 54,000 ac-ft/yr of water for agriculture purposes, dependent on needs of firm customers.
268	LCRA - Off-Channel Reservoir(s)	LCRA	Off-Channel reservoir (Prairie Site) using diversions from existing LCRA water rights	Yes	\$376,000,000	\$27,805,000	\$1,545	18,000	2020	Colorado	No	-1	0	1	0	-1	0	0	1	1	1	0	2	Could potentially remove up to 18,000 ac-ft from the Colorado River, but will create additional waterfowl habitat.	Could potentially make available up to 18,000 ac-ft/yr of water for agriculture purposes, dependent on needs of firm customers.
269	LCRA - Off-Channel Reservoir(s)	LCRA	Off-Channel reservoir (Mid Basin Site) using diversions from existing LCRA water rights	Yes	\$298,000,000	\$22,089,000	\$1,227	18,000	2020	Colorado	No	-1	0	1	0	-1	0	0	1	1	1	0	2	Could potentially remove up to 18,000 ac-ft from the Colorado River, but will create additional waterfowl habitat.	Could potentially make available up to 18,000 ac-ft/yr of water for agriculture purposes, dependent on needs of firm customers.
270	LCRA - Off-Channel Reservoir(s)	LCRA	Off-Channel reservoir receiving diversions from LCRA's Excess Flows permit	Yes	\$298,000,000	\$22,065,000	\$1,446	16,691	2020	Colorado	No	-1	0	1	0	-1	0	0	1	1	1	0	2	Could potentially remove up to 16,691 ac-ft from the Colorado River, but will create additional waterfowl habitat.	Could potentially make available up to 16,691 ac-ft/yr of water for agriculture purposes, dependent on needs of firm customers.
271	Enhanced Municipal and Industrial Conservation	LCRA	Condensate Capture strategy by Reducing GPCD and Industrial water use through development of LCRA customer savings by incorporating	Yes	\$64,099,000	\$5,634,000	\$268	20,000	2020	Colorado	No	1	0	1	0	0	1	0	1	0	0	0	4	Negligible, as impacts have already been accounted for in individual WUG strategies.	Negligible
272	Alternative - Import Return Flows from Williamson County	LCRA	Return flows from Brazos River basin to Colorado basin through transmission of WWTP effluent	Yes	\$64,800,000	\$6,200,000	\$248	25,000	2020	Colorado	Yes	1	0	1	0	0	0	-1	1	1	1	-1	3	Increase streamflow in Colorado River Basin by up to 25,000 acre-feet/year, while decreasing the streamflow in the Brazos River Basin by the same amount.	Add "by up to 25,000 acre-feet." to discussion
273	Alternative - Supplement Bay and Estuary Inflows with Brackish Groundwater	LCRA	Brackish groundwater delivery to the Bay to achieve the same effect as volume of released stored water from Highland Lakes	Yes	\$40,500,000	\$6,350,000	\$529	12,000	2020	Matagorda	No	0	0	0	-1	-1	0	-1	0	0	1	0	-2	Instream flow from Highland Lakes to Matagorda Bay could be decreased by up to 12,000 acre-feet if B&E needs are met through this strategy.	Add "by up to 12,000 acre-feet." to discussion
274	Alternative - Baylor Creek Reservoir	LCRA	Reservoir (Baylor Creek) using diversions from existing LCRA water rights	Yes	\$179,000,000	\$16,200,000	\$900	18,000	2040	Colorado	No	0	0	1	0	-1	0	0	1	1	1	0	3	Could potentially remove up to 18,000 ac-ft from the Colorado River, but will create additional waterfowl habitat.	Could potentially make available up to 18,000 ac-ft/yr of water for agriculture purposes, dependent on needs of firm customers.
275	Development of New Groundwater Supply - FPP Onsite	LCRA	Develop a new supply of groundwater in the Gulf Coast aquifer in the Colorado Basin of Fayette County	Yes	\$2,749,000	\$347,000	\$496	700	2020	Colorado	No	1	1	1	0	0	0	0	1	0	0	0	4	Water supply is within the MAG, so drawdown in the aquifer could be up to 12 feet, relative to 1999 conditions. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows should be monitored.	None
276	Development of New Groundwater Supply - FPP Offsite	LCRA	Develop a new supply of groundwater in the Carrizo-Wilcox aquifer and Yegua-Jackson aquifer in the Colorado Basin of Fayette County	Yes	\$20,107,000	\$2,782,000	\$1,113	2,500	2020	Colorado	No	-1	1	0	0	0	0	0	1	0	0	0	1	aquifer could be up to 75 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but aquifer levels and springflows	None
277	Expand Use of Groundwater	LCRA	Expand use of Carrizo-Wilcox aquifer in Colorado Basin of Bastrop County	Yes	\$4,564,000	\$455,000	\$1,517	300	2020	Colorado	No	-1	0	1	0	0	0	0	0	0	0	0	0	formation, drawdown in the aquifer could be up to 237 feet. Assume that using water within the stated available yield should result in negligible impacts to springflows, but	None
278	Alternative - Brackish Groundwater Desalination	LCRA	Extracting and treating brackish groundwater from the Gulf Coast aquifer in Matagorda County for use in the Bay City area	Yes	\$277,006,000	\$43,180,000	\$1,035	22,400	2040	Colorado	No	-1	1	0	0	0	0	-1	0	0	0	0	-1	Add discussion of how using local groundwater could reduce the amount of water released from Highland Lakes that provides instream flows, up to 22,400 ac-ft/yr.	Add "of up to 22,400 ac-ft/yr" to discussion
279	Aquifer Storage and Recovery	LCRA	Surface water from the Colorado River is diverted to aquifer storage for later recovery	Yes	\$39,590,000	\$5,430,000	\$1,076	5,048	2040	Colorado	No	-1	1	1	0	0	0	0	0	0	0	0	1	Quantified impacts provided in Appendix 5D	Add "of up to 5,048 ac-ft/yr" to discussion
280	Enhanced Recharge and Conjunctive Use	LCRA	Surface water from the Colorado River is diverted to recharge basins	Yes	\$53,504,000	\$8,335,000	\$834	10,000	2020	Colorado	No	0	1	1	0	0	0	0	0	0	0	0	3	Could potentially reduce pulse flows in the Colorado River by up to 10,000 ac-ft/yr	Add "of up to 10,000 acre-feet/year" to discussion
281	Alternative - Groundwater Importation	LCRA	Import groundwater from outside of region (assume Carrizo-Wilcox aquifer water from Burleson County).	Yes	\$614,790,000	\$51,445,000	\$1,470	35,000	2040	N/A	No	-1	0	-1	0	0	0	0	0	0	0	0	-2	Add "of up to 21,000 ac-ft/yr" to discussion	Add "of up to 35,000 ac-ft/yr" to discussion
282	Amendments to Water Rights	LCRA	Amend run-of-river water rights for additional diversion locations and storage rights	Yes	\$0	\$0	\$0	N/A	2020	Colorado	No	1	0	1	0	0	0	0	1	0	0	0	3	Negligible. Impacts are captured under individual reservoir strategies.	No impacts are anticipated based on projected water demands.
283	Acquire Additional Water Rights	LCRA	Purchase of water rights owned by others in the basin.	Yes	\$125,000	\$125,000	\$500	250	2020	Colorado	No	1	0	1	0	0	0	0	0	0	0	0	2	Add "by up to 250 acre-feet/year" to discussion	Add "of up to 250 acre-feet/year" to discussion
284	LCRA Water Management Plan Amendments	LCRA	See Potential Strategy #197	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
285	Downstream Return Flows	LCRA	Return flows from Pflugerville to Colorado River	Yes	\$0	\$0	\$0	10,453	2020	Colorado	No	1	0	1	0	1	0	0	1	0	0	0	4	Add "of up to 10,453 acre-feet/year" to discussion	Negligible
286	Return Flows/Indirect Reuse	LCRA/COA	Return flows from City of Austin to Colorado River	Yes	\$0	\$0	\$0	61,444	2020	Colorado	No	1	0	1	0	1	0	0	1	0	0	0	4	Quantification addressed in text	Quantification addressed in text
287	COA Conservation	AUSTIN	Reduction in both per capita consumption and peak day to average day demand ratio	Yes	\$41,434,437	\$7,855,398	\$342.00	36,899	2020	Colorado	No	1	0	1	0	0	0	0	1	0	0	0	3	Could leave up to 37,000 ac-ft of water in the lakes and aquifers.	Negligible

**Table 5A-2: Region K
Potentially Feasible Water Management Strategy Screening (for 2016 Region K Plan)**

Water Management Strategy	Water User Group or Wholesale Provider	Strategy Description	Addressing a Need?	Total Strategy Cost (\$)	Annual Strategy Cost (\$)	Cost of Water (\$/ac-ft)	Max Yield (ac-ft/yr)	Starting Decade	Basin	Interbasin Transfer (Yes/No)	Screening Matrix Factors (Positive (1), Neutral (0), Negative (-1))										Total of Screening Factors	Quantified Environmental Impacts	Quantified Agriculture Impacts		
											Cost	Yield	Location	Water Quality	Environmental and Natural Resources	Local Preference	Institutional Constraints	Impacts on Water Resources	Impacts on Agricultural Resources	Impacts to Recreation				Impacts on Other Management Strategies	
288 COA Direct Reuse	AUSTIN	Direct reuse of wastewater effluent for municipal and manufacturing purposes	Yes	\$346,037,000	\$32,453,700	\$1,162	27,929	2020	Colorado	No	-1	1	1	1	1	0	0	1	-1	0	0	3	Plan discussion provides quantification related to return flows.	Plan discussion provides quantification related to return flows.	
289 COA Other Reuse	AUSTIN	Decentralized concepts and gray water use.	Yes	\$21,772,000	\$3,067,000	\$1,022	3,000	2020	Colorado	No	-1	1	1	1	1	0	0	1	-1	0	0	3	None	None	
290 Longhorn Dam Operations Improvements	AUSTIN	Automating knife gates to control flow passing below the gate	Yes	\$1,036,000	\$87,000	\$29	3,000	2020	Colorado	No	1	1	1	0	0	1	0	0	0	0	0	4	None	None	
291 Increased Use of Long Lake Storage	AUSTIN	Allow more fluctuation in lake level and operate as an off-channel reservoir	Yes	\$28,219,000	\$3,744,500	\$187	20,000	2020	Colorado	No	1	0	0	0	1	0	0	1	0	0	0	3	Refer to Direct Reuse discussion quantifying return flows	Negligible	
292 Capture Local Inflows to Lady Bird Lake	AUSTIN	Install intake below Tom Miller Dam and pumping excess flows to the water treatment plant	Yes	\$2,949,000	\$297,000	\$297	1,000	2020	Colorado	No	1	1	0	0	0	0	-1	0	0	0	0	1	Negligible	Negligible	
293 Aquifer Storage and Recovery	AUSTIN	Using treated effluent or surface water from the Colorado River is diverted to aquifer storage for later recovery	Yes	\$312,316,000	\$30,185,000	\$604	50,000	2020	Colorado	No	0	1	0	0	0	0	-1	0	0	0	0	0	Refer to Direct Reuse discussion quantifying return flows	Refer to Direct Reuse discussion quantifying return flows	
294 Indirect Potable Reuse through Lady Bird Lake	AUSTIN	Conveying WWTP discharge to Lady Bird Lake and withdrawing water to be treated at the WTP	Yes	\$41,970,000	\$3,593,000	\$180	20,000	2020	Colorado	No	1	1	0	-1	-1	0	-1	0	0	0	0	-1	Refer to Direct Reuse discussion quantifying return flows	None	
295 Lake Austin Operations	AUSTIN	Would allow the lake to operate at a varying level instead of constant in order to capture local flows	Yes	\$0	\$25,000	\$10	2,500	2020	Colorado	No	1	-1	0	0	0	0	0	0	0	0	-1	0	-1	Negligible	None
296 Rainwater Harvesting	AUSTIN	Development of catchment areas (rooftops) to capture rainwater for potable or non-potable use. For potable use, filtration and disinfection considerations would apply.	Yes	\$690,167,000	\$57,752,712	\$3,487	16,564	2020	Colorado	No	-1	0	1	0	0	0	0	0	0	0	0	0	0	Negligible	Negligible
297 Alternative - Brackish Groundwater Desalination	AUSTIN	Extracting brackish groundwater and delivering to Lake Austin	Yes	\$54,582,000	\$7,613,000	\$1,523	5,000	2030	Colorado	No	-1	1	0	0	0	0	-1	0	0	0	0	-1	Negligible	None	
298 Alternative - Reclaimed Water Bank Infiltration to Colorado Alluvium	AUSTIN	Using an infiltration basin to recharge the local Colorado Alluvium formation	Yes	\$151,800,000	\$12,700,000	\$423	30,000	2030	Colorado	No	0	1	0	0	0	0	-1	0	0	0	0	0	Refer to Direct Reuse discussion quantifying return flows	None	
299 Direct Potable Reuse	Buda	Directly treat reclaimed water for potable use within the municipality.	Yes	\$26,779,000	\$2,941,000	\$1,313	2,240	2020	Colorado	No	-1	0	1	1	0	1	-1	1	0	0	0	2	Reduction of return flows by up to 2,240 AFY.	Negligible	
300 Municipal Conservation	Burnet County-Other, Brazos Basin	Conservation efforts to reach 130 gpcd by 2020 and 125 gpcd by 2030.	Yes	\$164,771	\$23,754	\$396	94	2020	Brazos	No	1	0	1	0	1	0	1	0	0	0	0	4	Negligible	Negligible	
301 Reuse (Direct)	MARBLE FALLS	Expansion to direct reuse program.	Yes	\$0	\$0	\$0	11	2020	Colorado	No	1	0	1	1	0	1	0	0	0	0	0	4	Negligible	Negligible	
302 Water Right Permit Amendment	Steam-Electric, Matagorda County	Current pending application with TCEQ for amendment to existing water right permit. Small in-channel inflatable dams to extend opportunities for diversions. Strategy was considered but later removed from consideration by LCRA	Yes	\$0	\$0	\$0	0	2020	Colorado	No	1	0	1	0	0	1	0	0	0	0	0	3	None	None	
303 In-Channel Dams in Lower Basin	LCRA	Strategy to expand infrastructure only when contracts/water rights have already been obtained. Strategy considered but determined to not be needed.																				N/A	N/A		
304 Surface Water Infrastructure Expansion		Strategy to expand infrastructure only when contracts/water rights have already been obtained. Strategy considered but determined to not be needed.																				N/A	N/A		
305 HB 1437		Funding Mechanism Only																				N/A	N/A		
306 Reduced Lake Evaporation	AUSTIN	Adding a biodegradable product to cover the surface of lakes to reduce water losses due to evaporation. Strategy was evaluated but later removed from consideration by COA.	Yes	N/A	\$275,000	\$275	1,000	N/A	Colorado	No	1	0	0	0	-1	-1	-1	0	0	-1	0	-3	N/A	N/A	
307 Move SAR WWTP discharge above Austin Gauge	AUSTIN	Relocating WWTP effluent discharge upstream of river flow gauge to meet environmental flow requirements. Strategy was evaluated but later removed from consideration by COA.	Yes	\$5,217,000	\$555,000	\$555	1,000	N/A	Colorado	No	-1	0	0	-1	0	0	-1	0	0	0	0	-3	N/A	N/A	

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APPENDIX 5B
RECOMMENDED AND ALTERNATIVE WATER MANAGEMENT
STRATEGY TABLES

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Surplus/(Shortage)					260	234	200	153	89	2
AQUA WSC	BASTROP	BRAZOS	Conservation		6	9	10	11	15	20
AQUA WSC	BASTROP	BRAZOS	Drought Management	15%	14	17	23	30	39	52
Remaining Surplus/Shortage after Conservation and/or Drought Management					280	260	233	194	143	74
Surplus/(Shortage)					(2,534)	(4,656)	(7,145)	(11,210)	(17,667)	(26,269)
AQUA WSC	BASTROP	COLORADO	Conservation		619	895	960	1,128	1,499	1,992
AQUA WSC	BASTROP	COLORADO	Drought Management	15%	1,361	1,746	2,258	2,967	3,935	5,277
Remaining Surplus/Shortage after Conservation and/or Drought Management					(554)	(2,015)	(3,927)	(7,115)	(12,233)	(19,000)
AQUA WSC	BASTROP	COLORADO	Expansion of Groundwater Supply	Carrizo-Wilcox (Brazos Basin)	2,500	2,500	4,000	4,000	4,000	4,000
AQUA WSC	BASTROP	COLORADO	New LCRA Contract	LCRA System	0	0	5,000	5,000	10,000	15,000
Remaining Surplus/Shortage					1,946	485	5,073	1,885	1,767	0
Surplus/(Shortage)					185	167	143	110	64	4
AQUA WSC	BASTROP	GUADALUPE	Conservation		5	7	8	9	12	14
AQUA WSC	BASTROP	GUADALUPE	Drought Management	15%	10	12	16	21	28	37
Remaining Surplus/Shortage after Conservation and/or Drought Management					200	186	167	140	104	55
Surplus/(Shortage)					(30)	(671)	(1,519)	(2,685)	(4,274)	(6,390)
BASTROP	BASTROP	COLORADO	Conservation		195	440	688	1,084	1,459	1,958
BASTROP	BASTROP	COLORADO	Drought Management	15%	294	390	517	692	930	1,248
Remaining Surplus/Shortage after Conservation and/or Drought Management					459	159	(314)	(909)	(1,885)	(3,184)
BASTROP	BASTROP	COLORADO	Reuse				300	600	1,120	1,120
BASTROP	BASTROP	COLORADO	Development of New Groundwater	Carrizo-Wilcox	300	300	300	300	300	
BASTROP	BASTROP	COLORADO	New LCRA Contract	LCRA System				2,500	2,500	2,500
Remaining Surplus/Shortage					759	459	286	2,491	2,035	436
Surplus/(Shortage)					753	643	541	320	(93)	(644)
BASTROP COUNTY WCID	BASTROP	COLORADO	Drought Management	5%	19	27	38	53	74	102
Remaining Surplus/Shortage after Conservation and/or Drought Management					772	670	579	373	(19)	(542)
BASTROP COUNTY WCID	BASTROP	COLORADO	Expansion of Groundwater Supply	Carrizo-Wilcox					550	550
Remaining Surplus/Shortage					772	670	579	373	531	8
Surplus/(Shortage)					67	60	51	38	22	0
COUNTY-OTHER	BASTROP	BRAZOS	Conservation		1	2	4	7	8	10
COUNTY-OTHER	BASTROP	BRAZOS	Drought Management	15%	4	5	6	8	10	14
Remaining Surplus/Shortage after Conservation and/or Drought Management					72	67	61	53	40	24
Surplus/(Shortage)					(361)	(519)	(739)	(907)	(1,158)	(1,490)
COUNTY-OTHER	BASTROP	COLORADO	Conservation		89	191	337	403	515	663
COUNTY-OTHER	BASTROP	COLORADO	Drought Management	15%	272	328	402	504	643	827
Remaining Surplus/Shortage after Conservation and/or Drought Management					0	0	0	0	0	0
COUNTY-OTHER	BASTROP	COLORADO	Expansion of Groundwater Supply	Carrizo-Wilcox	60	60	60	60	60	60
Remaining Surplus/Shortage					60	60	60	60	60	0

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Surplus/(Shortage)					0	1	3	4	6	8
COUNTY-OTHER	BASTROP	GUADALUPE	Conservation		2	3	3	4	4	4
COUNTY-OTHER	BASTROP	GUADALUPE	Drought Management	15%	5	5	5	5	4	4
Remaining Surplus/Shortage after Conservation and/or Drought Management					2	4	6	8	10	12
Surplus/(Shortage)					16	12	5	0	0	0
CREEDMOOR-MAHA WSC	BASTROP	COLORADO	Drought Management	5%	1	1	2	2	3	4
Remaining Surplus/Shortage after Conservation and/or Drought Management					17	13	7	2	3	4
Surplus/(Shortage)					(472)	(732)	(1,013)	(1,533)	(2,432)	(3,631)
ELGIN	BASTROP	COLORADO	Drought Management	15%	195	248	319	417	552	732
Remaining Surplus/Shortage after Conservation and/or Drought Management					(277)	(484)	(694)	(1,116)	(1,880)	(2,899)
ELGIN	BASTROP	COLORADO	Expansion of Groundwater Supply	Carrizo-Wilcox	300	300	0	0	0	0
ELGIN	BASTROP	COLORADO	New LCRA Contract	LCRA System		3,500	3,500	3,500	3,500	3,500
ELGIN	BASTROP	COLORADO	Allocate to Travis County portion of Elgin			(48)	(129)	(222)	(304)	(381)
Remaining Surplus/Shortage					23	3,268	2,677	2,162	1,316	220
Surplus/(Shortage)					0	0	0	0	0	0
POLONIA WSC	BASTROP	COLORADO	Refer to Region L Plan							
Remaining Surplus/Shortage					0	0	0	0	0	0
Surplus/(Shortage)					1,006	932	953	663	70	(721)
SMITHVILLE	BASTROP	COLORADO	Conservation		44	72	76	88	117	155
SMITHVILLE	BASTROP	COLORADO	Drought Management	15%	126	161	208	273	362	480
Remaining Surplus/Shortage after Conservation and/or Drought Management					1,176	1,165	1,237	1,024	549	(86)
SMITHVILLE	BASTROP	COLORADO	Development of New Groundwater	Queen City						150
Remaining Surplus/Shortage					1,176	1,165	1,237	1,024	549	64
Surplus/(Shortage)					(55)	(87)	(120)	(151)	(174)	(199)
MANUFACTURING	BASTROP	COLORADO	Expansion of Groundwater Supply	Carrizo-Wilcox	55	87	120	151	174	199
Remaining Surplus/Shortage					0	0	0	0	0	0
Surplus/(Shortage)					(173)	(409)	(450)	(496)	(545)	(600)
MINING	BASTROP	BRAZOS	Unmet Needs	3 Oaks Mine						
Remaining Surplus/Shortage					(173)	(409)	(450)	(496)	(545)	(600)
Surplus/(Shortage)					(449)	(3,947)	(4,556)	(5,235)	(5,967)	(6,777)
MINING	BASTROP	COLORADO	Unmet Needs	3 Oaks Mine						
Remaining Surplus/Shortage					(449)	(3,947)	(4,556)	(5,235)	(5,967)	(6,777)

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Surplus/(Shortage)					(110)	(306)	(341)	(379)	(420)	(466)
MINING	BASTROP	GUADALUPE	Development of New Groundwater	Carrizo-Wilcox (Guadalupe Basin)	0	0	466	466	466	466
MINING	BASTROP	GUADALUPE	Development of New Groundwater	Queen City (Guadalupe Basin)	110	306	0	0	0	0
Remaining Surplus/Shortage					0	0	125	87	46	0
Shortage					831	773	740	723	710	702
BLANCO	BLANCO	GUADALUPE	Conservation		19	32	28	26	27	27
BLANCO	BLANCO	GUADALUPE	Drought Management	25%	55	63	68	71	73	74
Remaining Surplus/Shortage					850	805	768	749	737	729
Shortage					31	(18)	(55)	(79)	(98)	(113)
CANYON LAKE WSC	BLANCO	GUADALUPE	Drought Management	15%	19	23	24	25	26	27
			Check with Region L							
Remaining Surplus/Shortage					50	5	(31)	(54)	(72)	(86)
Shortage					130	49	2	(24)	(42)	(55)
COUNTY-OTHER	BLANCO	COLORADO	Drought Management	15%	86	99	107	111	113	115
COUNTY-OTHER	BLANCO	COLORADO	Expansion of Groundwater Supply	Ellenburger-San Saba				55	55	55
COUNTY-OTHER	BLANCO	COLORADO	Expansion of Groundwater Supply	Hickory				55	55	55
COUNTY-OTHER	BLANCO	COLORADO	Brush Control		0	0	0	0	0	0
Remaining Surplus/Shortage					216	148	109	197	181	170
Shortage					545	486	454	437	423	415
COUNTY-OTHER	BLANCO	GUADALUPE	Drought Management	15%	58	67	72	74	77	78
Remaining Surplus/Shortage					603	553	526	511	500	493
Shortage					(48)	(105)	(138)	(155)	(167)	(175)
JOHNSON CITY	BLANCO	COLORADO	Conservation		18	30	30	28	26	26
JOHNSON CITY	BLANCO	COLORADO	Drought Management	20%	71	82	89	92	95	96
JOHNSON CITY	BLANCO	COLORADO	Expansion of Groundwater Supply	Ellenburger-San Saba	175	175	175	175	175	175
Remaining Surplus/Shortage					216	182	156	140	129	122

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(40)	(118)	(184)	(249)	(307)	(358)
BERTRAM	BURNET	BRAZOS	Conservation		41	64	91	126	164	204
BERTRAM	BURNET	BRAZOS	Drought Management	15%	62	73	83	93	102	109
BERTRAM	BURNET	BRAZOS	Expansion of Groundwater Supply	Ellenburger-San Saba (Colorado Basin)	180	180	180	180	180	180
BERTRAM	BURNET	BRAZOS	Buena Vista Regional Project	LCRA System	500	884	884	884	884	884
Remaining Surplus/Shortage					743	1,083	1,054	1,034	1,023	1,019
Shortage/Surplus					6	5	4	2	1	0
BURNET	BURNET	BRAZOS	Conservation		1	1	2	3	4	4
BURNET	BURNET	BRAZOS	Drought Management	20%	2	2	2	2	3	3
Remaining Surplus/Shortage					7	6	6	5	5	4
Shortage/Surplus					2,273	1,920	1,621	1,329	1,066	836
BURNET	BURNET	COLORADO	Conservation		183	281	403	568	736	913
BURNET	BURNET	COLORADO	Drought Management	20%	368	439	498	557	609	655
BURNET	BURNET	COLORADO	Buena Vista Regional Project	LCRA System	1,000	2,000	2,000	2,000	2,000	2,000
Remaining Surplus/Shortage					3,824	4,640	4,522	4,454	4,411	4,404
Shortage/Surplus					268	226	191	156	124	96
COTTONWOOD SHORES	BURNET	COLORADO	Conservation		22	21	20	19	21	23
COTTONWOOD SHORES	BURNET	COLORADO	Drought Management	20%	45	54	61	68	74	80
COTTONWOOD SHORES	BURNET	COLORADO	Marble Falls Regional Project	LCRA System	376	700	700	700	700	700
Remaining Surplus/Shortage					711	1,001	972	943	919	899
Shortage/Surplus					412	198	20	(158)	(318)	(460)
COUNTY-OTHER	BURNET	BRAZOS	Drought Management	15%	175	207	234	260	284	306
COUNTY-OTHER	BURNET	BRAZOS	Buena Vista Regional Project	LCRA System	500	1,000	1,000	1,000	1,000	1,000
COUNTY-OTHER	BURNET	BRAZOS	Conservation		60	93	83	80	87	94
Remaining Surplus/Shortage					1,147	1,498	1,337	1,182	1,053	940
Shortage/Surplus					2,981	2,929	3,215	3,104	2,905	2,623
COUNTY-OTHER	BURNET	COLORADO	Drought Management	15%	351	359	316	333	362	405
COUNTY-OTHER	BURNET	COLORADO	East Lake Buchanan Regional Project	LCRA System	935	935	935	935	935	935
COUNTY-OTHER	BURNET	COLORADO	Buena Vista Regional Project	LCRA System	500	1,000	1,000	1,000	1,000	1,000
COUNTY-OTHER	BURNET	COLORADO	Marble Falls Regional Project	LCRA System	300	878	878	878	878	878
Remaining Surplus/Shortage					5,067	6,101	6,344	6,250	6,080	5,841

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					177	62	(38)	(137)	(226)	(306)
GRANITE SHOALS	BURNET	COLORADO	Drought Management	5%	33	38	43	48	53	57
GRANITE SHOALS	BURNET	COLORADO	LCRA Contract Amendment	LCRA System				250	250	250
Remaining Surplus/Shortage					210	100	5	161	77	1
Shortage/Surplus					101	(201)	(454)	(697)	(912)	(1,098)
HORSESHOE BAY	BURNET	COLORADO	Conservation		75	194	343	519	710	901
HORSESHOE BAY	BURNET	COLORADO	Drought Management	25%	187	262	326	386	440	487
HORSESHOE BAY	BURNET	COLORADO	Reuse		50	50	50	50	50	50
HORSESHOE BAY	BURNET	COLORADO	LCRA Contract Amendment	LCRA System	0	150	500	500	1,000	1,000
Remaining Surplus/Shortage					413	455	765	758	1,288	1,340
Shortage/Surplus					10	4	5	9	3	0
KINGSLAND WSC	BURNET	COLORADO	Drought Management	5%	2	3	3	3	4	4
Remaining Surplus/Shortage					12	7	8	12	7	4
Shortage/Surplus					1,418	381	(1,089)	(1,859)	(2,377)	(2,636)
MARBLE FALLS	BURNET	COLORADO	Conservation		234	587	1,016	1,397	1,764	2,059
MARBLE FALLS	BURNET	COLORADO	Drought Management	20%	466	674	968	1,122	1,225	1,277
MARBLE FALLS	BURNET	COLORADO	Direct Reuse		11	11	11	11	11	11
MARBLE FALLS	BURNET	COLORADO	Marble Falls Regional Project	LCRA System	500	4,000	4,000	4,000	4,000	4,000
Remaining Surplus/Shortage					2,629	5,653	4,906	4,671	4,623	4,711
Shortage/Surplus					(207)	(379)	(525)	(665)	(788)	(896)
MEADOWLAKES	BURNET	COLORADO	Conservation		84	188	309	443	573	708
MEADOWLAKES	BURNET	COLORADO	Drought Management	20%	170	204	233	261	286	308
Remaining Surplus/Shortage					47	13	17	39	71	120
Shortage/Surplus					(1,011)	(1,703)	(2,428)	(3,085)	(3,841)	(4,703)
MINING	BURNET	COLORADO	Expansion of Groundwater Supply	Ellenburger-San Saba	1,500	1,500	1,500	1,500	1,500	1,500
MINING	BURNET	COLORADO	Expansion of Groundwater Supply	Hickory		500	1,000	1,800	1,800	1,800
MINING	BURNET	COLORADO	Expansion of Groundwater Supply	Marble Falls					1,000	1,500
Remaining Surplus/Shortage					489	297	72	215	459	97
Shortage/Surplus					15	(15)	(36)	(80)	(122)	(163)
COLUMBUS	COLORADO	COLORADO	Conservation		112	206	296	347	404	464
COLUMBUS	COLORADO	COLORADO	Drought Management	15%	170	175	178	185	191	197
Remaining Surplus/Shortage					297	366	438	452	473	498

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					56	55	54	51	45	40
COUNTY-OTHER	COLORADO	BRAZOS-COLORADO	Drought Management	15%	23	23	23	24	25	26
Remaining Surplus/Shortage					79	78	77	75	70	66
Shortage/Surplus					(121)	(127)	(130)	(158)	(191)	(226)
COUNTY-OTHER	COLORADO	COLORADO	Drought Management	15%	150	151	151	155	160	165
COUNTY-OTHER	COLORADO	COLORADO	Expansion of Groundwater Supply	Gulf Coast	226	226	226	226	226	226
Remaining Surplus/Shortage					255	250	247	223	195	165
Shortage/Surplus					615	612	612	602	592	580
COUNTY-OTHER	COLORADO	LAVACA	Drought Management	15%	48	49	49	50	52	54
Remaining Surplus/Shortage					663	661	661	652	644	634
Shortage/Surplus					17	16	16	11	6	0
EAGLE LAKE	COLORADO	BRAZOS-COLORADO	Drought Management	15%	24	24	24	25	26	27
Remaining Surplus/Shortage					41	40	40	36	32	27
Shortage/Surplus					39	36	35	25	12	0
EAGLE LAKE	COLORADO	COLORADO	Drought Management	15%	54	55	55	57	59	60
Remaining Surplus/Shortage					93	91	90	82	71	60
Shortage/Surplus					27	23	20	13	7	0
WEIMAR	COLORADO	COLORADO	Conservation		19	24	30	39	47	57
WEIMAR	COLORADO	COLORADO	Drought Management	15%	27	27	27	27	27	27
Remaining Surplus/Shortage					73	47	50	52	54	57
Shortage/Surplus					56	47	41	27	13	0
WEIMAR	COLORADO	LAVACA	Conservation		37	50	60	78	97	114
WEIMAR	COLORADO	LAVACA	Drought Management	15%	56	57	58	60	62	64
Remaining Surplus/Shortage					149	154	159	165	172	178

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(21,628)	(20,296)	(19,000)	(17,738)	(16,511)	(15,316)
IRRIGATION	COLORADO	BRAZOS-COLORADO	Drought Management		8,822	8,584	8,354	8,129	7,910	7,697
IRRIGATION	COLORADO	BRAZOS-COLORADO	Conservation - On farm Conservation		1,292	1,654	2,003	2,336	2,652	2,949
IRRIGATION	COLORADO	BRAZOS-COLORADO	Conservation - Irrigation Conveyance Improvements		336	1,082	1,815	2,521	3,195	3,793
IRRIGATION	COLORADO	BRAZOS-COLORADO	Conservation - Sprinkler Irrigation		92	455	895	1,099	1,099	1,099
IRRIGATION	COLORADO	BRAZOS-COLORADO	COA Return Flows		0	0	243	206	485	0
IRRIGATION	COLORADO	BRAZOS-COLORADO	LCRA WMP - Interruptible Water	LCRA System	11,086	8,521	4,388	2,692	0	0
Remaining Surplus/Shortage					0	0	(1,302)	(755)	(1,170)	222
Shortage/Surplus					(5,126)	(4,371)	(3,636)	(2,921)	(2,225)	(1,548)
IRRIGATION	COLORADO	COLORADO	Drought Management		5,001	4,866	4,735	4,608	4,484	4,363
IRRIGATION	COLORADO	COLORADO	Conservation - On farm Conservation		306	356	383	385	357	298
IRRIGATION	COLORADO	COLORADO	Conservation - Irrigation Conveyance Improvements		80	233	347	415	431	383
IRRIGATION	COLORADO	COLORADO	Conservation - Sprinkler Irrigation		22	98	171	181	181	181
Remaining Surplus/Shortage					283	1,182	2,000	2,668	3,228	3,677

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(32,200)	(29,826)	(27,516)	(25,268)	(23,081)	(20,952)
IRRIGATION	COLORADO	LAVACA	Drought Management		15,719	15,296	14,885	14,484	14,095	13,716
IRRIGATION	COLORADO	LAVACA	Conservation - On farm Conservation		1,923	2,431	2,901	3,328	3,708	4,034
IRRIGATION	COLORADO	LAVACA	Conservation - Irrigation Conveyance Improvements		500	1,589	2,629	3,591	4,466	5,188
IRRIGATION	COLORADO	LAVACA	Conservation - Sprinkler Irrigation		137	668	1,296	1,565	1,565	1,565
IRRIGATION	COLORADO	LAVACA	COA Return Flows		0	0	223	130	0	0
IRRIGATION	COLORADO	LAVACA	LCRA WMP - Interruptible Water	LCRA System	13,921	9,842	4,387	1,695	0	0
Remaining Surplus/Shortage					0	0	(1,195)	(475)	753	3,551
Shortage/Surplus					2	1	1	1	0	0
AQUA WSC	FAYETTE	COLORADO	Drought Management	15%	1	1	1	1	1	1
Remaining Surplus/Shortage					3	2	2	2	1	1
Shortage/Surplus					(74)	(157)	(210)	(259)	(306)	(345)
COUNTY-OTHER	FAYETTE	COLORADO	Drought Management	15%	133	145	153	161	168	173
COUNTY-OTHER	FAYETTE	COLORADO	Expansion of Groundwater Supply	Gulf Coast	345	345	345	345	345	345
Remaining Surplus/Shortage					404	333	288	247	207	173
Shortage/Surplus					38	35	33	30	28	26
COUNTY-OTHER	FAYETTE	GUADALUPE	Drought Management	15%	6	6	6	7	7	8
Remaining Surplus/Shortage					44	41	39	37	35	34
Shortage/Surplus					(198)	(228)	(246)	(264)	(281)	(294)
COUNTY-OTHER	FAYETTE	LAVACA	Drought Management	15%	47	51	54	57	59	61
COUNTY-OTHER	FAYETTE	LAVACA	Expansion of Groundwater Supply	Gulf Coast	294	294	294	294	294	294
Remaining Surplus/Shortage					143	117	102	87	72	61
Shortage/Surplus					266	196	150	110	74	45
FAYETTE WSC	FAYETTE	COLORADO	Drought Management	15%	96	106	113	119	125	129
Remaining Surplus/Shortage					362	302	263	229	199	174
Shortage/Surplus					15	11	8	5	3	1
FAYETTE WSC	FAYETTE	GUADALUPE	Drought Management	15%	6	7	7	8	8	8
Remaining Surplus/Shortage					21	18	15	13	11	9
Shortage/Surplus					25	18	12	7	3	0
FAYETTE WSC	FAYETTE	LAVACA	Drought Management	15%	11	12	13	14	15	15
Remaining Surplus/Shortage					36	30	25	21	18	15

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					28	21	16	12	7	4
FLATONIA	FAYETTE	GUADALUPE	Conservation		4	6	9	12	16	20
FLATONIA	FAYETTE	GUADALUPE	Drought Management	15%	10	11	11	12	12	13
Remaining Surplus/Shortage					42	38	36	36	35	37
Shortage/Surplus					117	86	66	48	33	21
FLATONIA	FAYETTE	LAVACA	Conservation		13	23	34	48	68	85
FLATONIA	FAYETTE	LAVACA	Drought Management	15%	41	45	48	51	53	55
FLATONIA	FAYETTE	LAVACA	Reuse		134	149	159	168	176	182
FLATONIA	FAYETTE	LAVACA	Expansion of Groundwater Supply	Gulf Coast	100	100	100	100	100	100
Remaining Surplus/Shortage					405	403	407	415	430	443
Shortage/Surplus					429	335	274	219	171	132
LA GRANGE	FAYETTE	COLORADO	Conservation		42	21	0	0	0	0
LA GRANGE	FAYETTE	COLORADO	Drought Management	15%	130	144	153	161	168	174
Remaining Surplus/Shortage					471	356	274	219	171	132
Shortage/Surplus					1	(85)	(142)	(191)	(234)	(267)
SCHULENBERG	FAYETTE	LAVACA	Conservation		37	63	96	141	188	232
SCHULENBERG	FAYETTE	LAVACA	Drought Management	15%	110	123	132	139	146	150
Remaining Surplus/Shortage					148	101	86	89	100	115
Shortage/Surplus					(206)	(243)	(279)	(310)	(349)	(391)
MANUFACTURING	FAYETTE	LAVACA	Expansion of Groundwater Supply	Gulf Coast	391	391	391	391	391	391
Remaining Surplus/Shortage					185	148	112	81	42	0
Shortage/Surplus					(1,576)	(1,176)	(717)	(274)	179	186
MINING	FAYETTE	COLORADO	Expansion of Groundwater Supply	Gulf Coast	1,576	1,176	717	274	0	0
Remaining Surplus/Shortage					0	0	0	0	179	186
Shortage/Surplus					(66)	(42)	(13)	15	42	43
MINING	FAYETTE	GUADALUPE	Expansion of Groundwater Supply	Sparta	66	42	13	0	0	0
Remaining Surplus/Shortage					0	0	0	15	42	43
Shortage/Surplus					(344)	(274)	(195)	(119)	(40)	(39)
MINING	FAYETTE	LAVACA	Expansion of Groundwater Supply	Gulf Coast	344	344	344	344	344	344
Remaining Surplus/Shortage					0	70	149	225	304	305
Shortage/Surplus					10,286	10,286	8,186	1,886	(2,614)	(7,414)
STEAM ELECTRIC POWER	FAYETTE	COLORADO	Long Lake Storage		2,000	2,000	2,000	2,000	2,000	2,000
STEAM ELECTRIC POWER	FAYETTE	COLORADO	LCRA Contract Amendment	LCRA System	6,000	7,000	9,000	11,000	13,000	15,000
Remaining Surplus/Shortage					18,286	19,286	19,186	14,886	12,386	9,586

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					559	486	424	325	217	107
COUNTY-OTHER	GILLESPIE	COLORADO	Drought Management	15%	263	274	284	299	315	331
COUNTY-OTHER	GILLESPIE	COLORADO	Brush Control		0	0	0	0	0	0
Remaining Surplus/Shortage					822	760	708	624	532	438
Shortage/Surplus					28	26	24	20	16	12
COUNTY-OTHER	GILLESPIE	GUADALUPE	Drought Management	15%	10	10	11	11	12	12
Remaining Surplus/Shortage					38	36	35	31	28	24
Shortage/Surplus					690	509	360	164	(30)	(222)
FREDERICKSBURG	GILLESPIE	COLORADO	Conservation		317	599	733	916	1094	1301
FREDERICKSBURG	GILLESPIE	COLORADO	Drought Management	15%	472	499	521	551	580	609
Remaining Surplus/Shortage					1,007	1,108	1,093	1,080	1,064	1,079
Shortage/Surplus					(309)	(362)	(411)	(452)	(536)	(626)
MANUFACTURING	GILLESPIE	COLORADO	Expansion of Groundwater Supply	Ellenburger-San Saba	626	626	626	626	626	626
Remaining Surplus/Shortage					317	264	215	174	90	0
Shortage/Surplus					0	0	0	0	0	0
AUSTIN	HAYS	COLORADO	Drought Management	10%	1	13	25	63	152	275
Remaining Surplus/Shortage					1	13	25	63	152	275
Shortage/Surplus					161	(667)	(1,690)	(2,974)	(4,429)	(6,088)
BUDA	HAYS	COLORADO	Conservation		88	206	434	552	709	888
BUDA	HAYS	COLORADO	Drought Management	10%	177	251	342	456	586	734
BUDA	HAYS	COLORADO	Reuse		2,240	2,240	1,740	1,740	1,740	1,740
BUDA	HAYS	COLORADO	Groundwater Importation - HCPUA Pipeline	Region L Carrizo-Wilcox (HCPUA)	0	667	1,690	2,467	2,467	2,467
BUDA	HAYS	COLORADO	Saline Edwards ASR Project	Saline Edwards ASR	0	500	500	500	500	500
BUDA	HAYS	COLORADO	Edwards/Middle Trinity ASR	Trinity (ASR)	0	600	600	600	600	600
Remaining Surplus/Shortage					2,666	3,797	3,616	3,341	2,173	841

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					983	394	(530)	(1,587)	(2,489)	(3,382)
COUNTY-OTHER	HAYS	COLORADO	Drought Management	15%	466	554	693	852	987	1,121
COUNTY-OTHER	HAYS	COLORADO	Groundwater Importation (Hays County project)	Region L Carrizo-Wilcox	0	2,000	2,000	2,000	2,000	2,000
COUNTY-OTHER	HAYS	COLORADO	Saline Edwards ASR Project	Saline Edwards ASR	0	200	200	200	200	200
COUNTY-OTHER	HAYS	COLORADO	Edwards/Middle Trinity ASR	Trinity (ASR)	0	200	200	200	200	200
Remaining Surplus/Shortage					1,449	3,348	2,563	1,665	898	139
Shortage/Surplus					27	(31)	(104)	(198)	(307)	(432)
DRIPPING SPRINGS	HAYS	COLORADO	Conservation		48	67	98	141	195	262
DRIPPING SPRINGS	HAYS	COLORADO	Drought Management	20%	96	107	122	141	163	188
DRIPPING SPRINGS	HAYS	COLORADO	Water Purchase (from Dripping Springs WSC)		0	31	104	198	307	432
Remaining Surplus/Shortage					171	174	220	282	358	450
Shortage/Surplus					0	0	0	0	0	(126)
DRIPPING SPRINGS WSC	HAYS	COLORADO	Conservation		54	124	152	187	232	283
DRIPPING SPRINGS WSC	HAYS	COLORADO	Drought Management	20%	107	136	172	218	271	330
DRIPPING SPRINGS WSC	HAYS	COLORADO	Groundwater Importation (Hays County project)	Region L Carrizo-Wilcox	0	1,000	1,000	1,000	1,000	1,000
Remaining Surplus/Shortage					161	1,260	1,324	1,405	1,503	1,487
DRIPPING SPRINGS WSC	HAYS	COLORADO	Water Sale (to Dripping Springs)		0	(31)	(104)	(198)	(307)	(432)
Remaining Surplus/Shortage After Sales					161	1,229	1,220	1,207	1,196	1,055
Shortage/Surplus					728	(937)	(2,974)	(5,522)	(8,405)	(11,687)
WEST TRAVIS COUNTY PUA	HAYS	COLORADO	Conservation		405	1,070	2,064	3,501	5,348	7,674
WEST TRAVIS COUNTY PUA	HAYS	COLORADO	Drought Management	20%	819	1,152	1,559	2,069	2,645	3,302
WEST TRAVIS COUNTY PUA	HAYS	COLORADO	Groundwater Importation - Hays County Pipeline Project	Region L Carrizo-Wilcox	0	1,000	1,000	1,000	1,000	1,000
WEST TRAVIS COUNTY PUA	HAYS	COLORADO	Amend LCRA Contract	LCRA System	300	500	2,700	3,000	5,800	5,800
Remaining Surplus/Shortage					2,252	2,785	4,349	4,048	6,388	6,089

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(531)	(761)	(1,047)	(1,131)	(1,340)	(1,579)
MINING	HAYS	COLORADO	Expansion of Groundwater Supply	Trinity	531	761	1,047	1,047	1,047	1,047
MINING	HAYS	COLORADO	Edwards/Middle Trinity ASR	Trinity (ASR)	0	100	100	100	100	100
MINING	HAYS	COLORADO	Water Purchase from Buda	Reuse	0	0	500	500	500	500
Remaining Surplus/Shortage					0	100	600	516	307	68
Shortage/Surplus					3,646	3,702	3,703	3,689	3,723	3,756
COUNTY-OTHER	LLANO	COLORADO	Drought Management	5%	31	28	28	28	27	25
Remaining Surplus/Shortage					3,677	3,730	3,731	3,717	3,750	3,781
Shortage/Surplus					39	(50)	(41)	(4)	(67)	(133)
HORSESHOE BAY	LLANO	COLORADO	Conservation		189	360	509	638	791	938
HORSESHOE BAY	LLANO	COLORADO	Drought Management	25%	464	486	484	474	490	507
HORSESHOE BAY	LLANO	COLORADO	Reuse		50	50	50	50	50	50
HORSESHOE BAY	LLANO	COLORADO	LCRA Contract Amendment	LCRA System	0	50	50	50	50	50
Remaining Surplus/Shortage					742	896	1,052	1,208	1,314	1,412
Shortage/Surplus					(445)	(475)	(461)	(439)	(467)	(496)
LLANO	LLANO	COLORADO	Conservation		88	118	143	169	209	252
LLANO	LLANO	COLORADO	Drought Management	15%	129	134	132	128	133	137
LLANO	LLANO	COLORADO	Reuse		100	100	100	100	100	100
LLANO	LLANO	COLORADO	Development of New Groundwater	Hickory Aquifer	200	200	200	200	200	200
Remaining Surplus/Shortage					72	77	114	158	175	193
Shortage/Surplus					1,878	1,826	1,811	1,766	1,724	1,689
BAY CITY	MATAGORDA	BRAZOS-COLORADO	Conservation		252	199	114	94	95	96
BAY CITY	MATAGORDA	BRAZOS-COLORADO	Drought Management	20%	567	578	581	590	598	605
Remaining Surplus/Shortage					2,697	2,603	2,506	2,450	2,417	2,390
Shortage/Surplus					146	143	148	145	134	124
COUNTY-OTHER	MATAGORDA	BRAZOS-COLORADO	Drought Management	5%	42	42	42	42	42	43
Remaining Surplus/Shortage					188	185	190	187	176	167
Shortage/Surplus					332	331	332	331	329	327
COUNTY-OTHER	MATAGORDA	COLORADO	Drought Management	5%	9	9	9	9	9	9
Remaining Surplus/Shortage					341	340	341	340	338	336
Shortage/Surplus					85	83	86	84	76	69
COUNTY-OTHER	MATAGORDA	COLORADO-LAVACA	Drought Management	5%	30	30	30	30	30	31
Remaining Surplus/Shortage					115	113	116	114	106	100

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					385	373	370	364	354	346
PALACIOS	MATAGORDA	COLORADO-LAVACA	Drought Management	15%	102	104	104	105	107	108
Remaining Surplus/Shortage					487	477	474	469	461	454
Shortage/Surplus					(70,487)	(67,962)	(65,505)	(63,114)	(60,787)	(58,523)
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	Drought Management		16,484	16,034	15,596	15,170	14,756	14,353
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	Conservation - On farm Conservation		4,210	5,539	6,905	8,312	9,765	11,269
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	Conservation - Irrigation Conveyance Improvements		1,095	3,622	6,258	8,969	11,762	14,492
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	Conservation - Sprinkler Irrigation		301	1,523	3,086	3,910	3,910	3,910
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	COA Return Flows		3,683	3,872	4,688	5,332	6,032	6,997
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	LCRA WMP - Interruptible Water	LCRA System	15,428	9,595	3,807	1,889	0	0
Remaining Surplus/Shortage					(29,286)	(27,777)	(25,165)	(19,532)	(14,562)	(7,502)
Shortage/Surplus					(12,024)	(11,663)	(11,312)	(10,971)	(10,639)	(10,315)
IRRIGATION	MATAGORDA	COLORADO	Drought Management		2,354	2,290	2,227	2,167	2,108	2,050
IRRIGATION	MATAGORDA	COLORADO	Conservation - On farm Conservation		718	951	1,192	1,445	1,709	1,986
IRRIGATION	MATAGORDA	COLORADO	Conservation - Irrigation Conveyance Improvements		187	622	1,081	1,559	2,059	2,554
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	Conservation - Sprinkler Irrigation		51	261	533	680	680	680
IRRIGATION	MATAGORDA	COLORADO	COA Return Flows		663	708	875	1,020	1,196	1,469
IRRIGATION	MATAGORDA	COLORADO	LCRA WMP - Interruptible Water	LCRA System	2,778	1,754	710	362	0	0
Remaining Surplus/Shortage					(5,273)	(5,077)	(4,694)	(3,738)	(2,887)	(1,576)

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(84,037)	(81,218)	(78,474)	(75,804)	(73,206)	(70,678)
IRRIGATION	MATAGORDA	COLORADO-LAVACA	Drought Management		18,406	17,904	17,415	16,939	16,476	16,026
IRRIGATION	MATAGORDA	COLORADO-LAVACA	Conservation - On farm Conservation		5,019	6,619	8,272	9,984	11,760	13,610
IRRIGATION	MATAGORDA	COLORADO-LAVACA	Conservation - Irrigation Conveyance Improvements		1,305	4,328	7,497	10,772	14,165	17,502
IRRIGATION	MATAGORDA	BRAZOS-COLORADO	Conservation - Sprinkler Irrigation		359	1,820	3,697	4,696	4,696	4,696
IRRIGATION	MATAGORDA	COLORADO-LAVACA	COA Return Flows		4,486	4,746	5,793	6,659	7,648	9,094
IRRIGATION	MATAGORDA	COLORADO-LAVACA	LCRA WMP - Interruptible Water	LCRA System	18,791	11,760	4,704	2,360	0	0
Remaining Surplus/Shortage					(35,671)	(34,041)	(31,096)	(24,394)	(18,461)	(9,750)
Shortage/Surplus					(25,363)	(25,377)	(25,401)	(25,431)	(25,461)	(25,483)
STEAM ELECTRIC POWER	MATAGORDA	COLORADO	STPNOC Alternate Canal Delivery	Colorado ROR	12,727	12,727	12,727	12,727	12,727	12,727
STEAM ELECTRIC POWER	MATAGORDA	COLORADO	LCRA Contract Amendment	LCRA System	10,000	10,000	10,000	10,000	10,000	10,000
STEAM ELECTRIC POWER	MATAGORDA	COLORADO	STPNOC Brackish Surface Water Blending	Gulf of Mexico	3,000	3,000	3,000	3,000	3,000	3,000
STEAM ELECTRIC POWER	MATAGORDA	COLORADO	COA Return Flows		770	710	766	763	764	859
Remaining Surplus/Shortage					1,134	1,060	1,092	1,059	1,030	1,103
Shortage/Surplus					(16)	(15)	(14)	(18)	(23)	(29)
COUNTY-OTHER	MILLS	BRAZOS	Drought Management	20%	29	29	28	29	30	31
Remaining Surplus/Shortage					13	14	14	11	7	2
Shortage/Surplus					90	92	94	87	78	68
COUNTY-OTHER	MILLS	COLORADO	Drought Management	20%	48	48	47	49	51	53
Remaining Surplus/Shortage					138	140	141	136	129	121
Shortage/Surplus					(48)	(51)	(53)	(64)	(77)	(94)
GOLDTHWAITE	MILLS	COLORADO	Conservation		10	13	24	38	54	58
GOLDTHWAITE	MILLS	COLORADO	Drought Management	15%	53	53	53	55	57	59
Remaining Surplus/Shortage					15	15	24	29	34	23
Shortage/Surplus					(605)	(575)	(545)	(516)	(487)	(460)
IRRIGATION	MILLS	BRAZOS	Expansion of Groundwater Supply	Trinity (Colorado Basin)	480	480	480	480	480	480
IRRIGATION	MILLS	BRAZOS	Drought Management		125	95	65	36	7	0
Remaining Surplus/Shortage					0	0	0	0	0	20

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					215	211	217	222	216	209
COUNTY-OTHER	SAN SABA	COLORADO	Drought Management	15%	228	236	235	230	235	240
Remaining Surplus/Shortage					443	447	452	452	451	449
Shortage/Surplus					131	129	131	131	131	130
RICHLAND SUD	SAN SABA	COLORADO	Drought Management	15%	25	26	25	25	25	26
Remaining Surplus/Shortage					156	155	156	156	156	156
Shortage/Surplus					(88)	(128)	(124)	(99)	(125)	(152)
SAN SABA	SAN SABA	COLORADO	Conservation		114	211	302	377	463	510
SAN SABA	SAN SABA	COLORADO	Drought Management	20%	228	236	235	230	235	240
Remaining Surplus/Shortage					254	319	413	508	573	598
Shortage/Surplus					721	584	447	286	138	0
AQUA WSC	TRAVIS	COLORADO	Conservation		74	94	87	87	96	103
AQUA WSC	TRAVIS	COLORADO	Drought Management	15%	163	184	204	229	251	272
Remaining Surplus/Shortage					958	862	738	602	485	375
Shortage/Surplus					108,581	74,946	30,447	(1,231)	(29,821)	(63,194)
AUSTIN	TRAVIS	COLORADO	Conservation		22,969	24,559	28,317	31,220	33,822	36,899
AUSTIN	TRAVIS	COLORADO	Drought Management	10%	15,745	18,293	20,997	22,989	24,659	26,641
AUSTIN	TRAVIS	COLORADO	Direct Reuse		10,000	15,000	25,000	27,500	30,000	32,500
AUSTIN	TRAVIS	COLORADO	Reuse - decentralized, gray water		1,000	1,000	1,500	2,000	2,500	3,000
AUSTIN	TRAVIS	COLORADO	Rainwater Harvesting		83	828	4,141	8,282	12,423	16,564
AUSTIN	TRAVIS	COLORADO	Longhorn Dam Operations Improvements		3,000	3,000	3,000	3,000	3,000	3,000
AUSTIN	TRAVIS	COLORADO	Increased use of Long Lake Storage		20,000	20,000	20,000	20,000	20,000	20,000
AUSTIN	TRAVIS	COLORADO	Capture Local Inflows to Lady Bird Lake		1,000	1,000	1,000	1,000	1,000	1,000
AUSTIN	TRAVIS	COLORADO	Aquifer Storage and Recovery		10,000	25,000	25,000	50,000	50,000	50,000
AUSTIN	TRAVIS	COLORADO	Indirect Potable Reuse through Lady Bird Lake		20,000	20,000	20,000	20,000	20,000	20,000
AUSTIN	TRAVIS	COLORADO	Lake Austin Operations		2,500	2,500	2,500	2,500	2,500	2,500
AUSTIN	TRAVIS	COLORADO	COA Return Flows		19,258	17,749	22,990	22,874	26,759	30,312
Remaining Surplus/Shortage					234,136	223,875	204,892	210,134	196,842	179,222
Shortage/Surplus					328	333	336	337	338	338
BARTON CREEK WEST	TRAVIS	COLORADO	Conservation		42	77	108	122	137	152
BARTON CREEK WEST	TRAVIS	COLORADO	Drought Management	15%	65	64	64	63	63	63
Remaining Surplus/Shortage					370	410	444	459	475	490

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(225)	(491)	(745)	(1,030)	(1,282)	(1,518)
BEE CAVE VILLAGE	TRAVIS	COLORADO	Conservation		175	374	608	863	1,136	1,323
BEE CAVE VILLAGE	TRAVIS	COLORADO	Drought Management	20%	355	409	459	516	567	614
BEE CAVE VILLAGE	TRAVIS	COLORADO	Water Purchase (from West Travis County PUA)	LCRA System	300	300	600	600	800	800
Remaining Surplus/Shortage					605	592	922	949	1,221	1,219
Shortage/Surplus					140	105	72	32	(3)	(36)
BRIARCLIFF VILLAGE	TRAVIS	COLORADO	Drought Management	10%	26	30	33	37	40	44
Remaining Surplus/Shortage					166	135	105	69	37	8
Shortage/Surplus					(505)	(941)	(1,121)	(987)	(1,084)	(1,194)
CEDAR PARK	TRAVIS	COLORADO	Refer to Region G Plan							
Remaining Surplus/Shortage					(505)	(941)	(1,121)	(987)	(1,084)	(1,194)
Shortage/Surplus					160	(182)	(284)	(412)	(550)	(686)
CREEDMOOR-MAHA WSC	TRAVIS	COLORADO	Drought Management	5%	28	31	34	38	41	45
CREEDMOOR-MAHA WSC	TRAVIS	COLORADO	Saline Edwards ASR Project	Saline Edwards ASR	0	300	300	300	300	300
CREEDMOOR-MAHA WSC	TRAVIS	COLORADO	New LCRA Contract	LCRA System	0	400	400	400	400	400
Remaining Surplus/Shortage					188	549	450	326	191	59
Shortage/Surplus					0	0	0	0	0	0
CREEDMOOR-MAHA WSC	TRAVIS	GUADALUPE	Drought Management	5%	1	2	2	2	2	2
Remaining Surplus/Shortage					1	2	2	2	2	2
Shortage/Surplus					0	(101)	(196)	(305)	(402)	(493)
ELGIN	TRAVIS	COLORADO	Drought Management	15%	38	53	67	83	98	112
ELGIN	TRAVIS	COLORADO	See Bastrop County Elgin		0	48	129	222	304	381
Remaining Surplus/Shortage					38	0	0	0	0	0
Shortage/Surplus					(93)	(113)	(133)	(158)	(182)	(206)
JONESTOWN	TRAVIS	COLORADO	Conservation		20	36	51	73	96	122
JONESTOWN	TRAVIS	COLORADO	Drought Management	20%	82	86	90	95	99	104
Remaining Surplus/Shortage					9	9	8	10	13	20
Shortage/Surplus					2,157	1,840	1,537	1,193	885	597
LAGO VISTA	TRAVIS	COLORADO	Conservation		187	301	426	604	773	972
LAGO VISTA	TRAVIS	COLORADO	Drought Management	20%	374	437	498	566	628	686
Remaining Surplus/Shortage					2,344	2,141	1,963	1,797	1,658	1,569

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(1,469)	(3,607)	(3,585)	(3,573)	(3,568)	(3,567)
LAKEWAY	TRAVIS	COLORADO	Conservation		702	1,652	2,408	3,052	3,640	3,921
LAKEWAY	TRAVIS	COLORADO	Drought Management	20%	1,395	1,823	1,819	1,816	1,815	1,815
LAKEWAY	TRAVIS	COLORADO	Water Purchase from Travis County WCID #17	LCRA System	1,000	1,000	1,000	1,000	1,000	1,000
LAKEWAY	TRAVIS	COLORADO	Expansion of Groundwater Supply	Trinity	500	500	500	500	500	500
Remaining Surplus/Shortage					2,128	1,368	2,142	2,795	3,387	3,669
Shortage/Surplus					0	0	0	(3,336)	(9,347)	(15,976)
LEANDER	TRAVIS	COLORADO	LCRA Contract Amendment	LCRA System	0	0	0	3,336	9,347	15,976
Remaining Surplus/Shortage					0	0	0	0	0	0
Shortage/Surplus					76	30	(14)	(66)	(113)	(157)
LOOP 360 WSC	TRAVIS	COLORADO	Conservation		116	224	333	441	546	648
LOOP 360 WSC	TRAVIS	COLORADO	Drought Management	15%	176	183	190	197	204	211
Remaining Surplus/Shortage					192	254	319	375	433	491
Shortage/Surplus					0	0	0	0	0	0
LOST CREEK MUD	TRAVIS	COLORADO	Conservation		108	137	171	215	254	294
LOST CREEK MUD	TRAVIS	COLORADO	Drought Management	20%	218	214	211	211	211	211
Remaining Surplus/Shortage					326	351	382	426	465	505
Shortage/Surplus					2,316	757	357	(94)	(494)	(867)
MANOR	TRAVIS	COLORADO	Drought Management	15%	171	234	294	362	422	477
MANOR	TRAVIS	COLORADO	Expansion of Groundwater Supply	Trinity	0	600	600	600	600	600
MANOR	TRAVIS	COLORADO	Water Purchase from Manville WSC		0	0	0	1,000	1,000	1,000
Remaining Surplus/Shortage					2,487	1,591	1,251	1,868	1,528	1,210
Shortage/Surplus					1,525	873	182	(568)	(1,286)	(2,346)
MANVILLE WSC	TRAVIS	COLORADO	Drought Management	15%	448	541	630	733	825	911
MANVILLE WSC	TRAVIS	COLORADO	Expansion of Groundwater Supply	Trinity	0	0	0	1,000	1,000	1,000
MANVILLE WSC	TRAVIS	COLORADO	New LCRA Contract	LCRA System	0	0	0	500	2,000	2,000
Remaining Surplus/Shortage					1,973	1,414	812	1,665	2,539	1,565
MANVILLE WSC	TRAVIS	COLORADO	Water Sale to Manor		0	0	0	(1,000)	(1,000)	(1,000)
Remaining Surplus/Shortage After Sales					1,973	1,414	812	665	1,539	565
Shortage/Surplus					0	0	0	0	0	0
NORTH AUSTIN MUD #1	TRAVIS	COLORADO	Drought Management	15%	12	12	12	11	11	11
Remaining Surplus/Shortage					12	12	12	11	11	11

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					339	339	339	339	339	339
NORTHTOWN MUD	TRAVIS	COLORADO	Drought Management	15%	104	120	135	152	167	180
Remaining Surplus/Shortage					443	459	474	491	506	519
Shortage/Surplus					(605)	(4,935)	(9,073)	(13,727)	(17,872)	(21,741)
PFLUGERVILLE	TRAVIS	COLORADO	Conservation		604	2,105	2,625	3,029	3,514	3,966
PFLUGERVILLE	TRAVIS	COLORADO	Drought Management	25%	3,194	4,276	5,311	6,474	7,503	8,463
PFLUGERVILLE	TRAVIS	COLORADO	Reuse	Reuse	500	1,000	2,000	2,000	4,000	4,000
PFLUGERVILLE	TRAVIS	COLORADO	LCRA Contract Amendment	LCRA System	0	0	0	3,000	3,000	6,000
PFLUGERVILLE	TRAVIS	COLORADO	Expansion of Groundwater Supply	Edwards (BFZ)	0	0	1,000	1,000	1,000	1,000
Remaining Surplus/Shortage					3,693	2,446	1,863	1,776	1,145	1,688
Shortage/Surplus					13	(83)	(174)	(278)	(369)	(455)
POINT VENTURE	TRAVIS	COLORADO	Conservation		34	82	139	191	241	301
POINT VENTURE	TRAVIS	COLORADO	Drought Management	15%	52	66	80	96	109	122
POINT VENTURE	TRAVIS	COLORADO	LCRA Contract Amendment	LCRA System	0	100	100	300	300	300
Remaining Surplus/Shortage					99	165	145	309	281	268
Shortage/Surplus					0	(379)	(376)	(375)	(376)	(378)
ROLLINGWOOD	TRAVIS	COLORADO	Conservation		38	67	79	91	104	118
ROLLINGWOOD	TRAVIS	COLORADO	Drought Management	15%	58	57	56	56	56	57
ROLLINGWOOD	TRAVIS	COLORADO	New LCRA Contract	LCRA System	0	400	400	400	400	400
Remaining Surplus/Shortage					96	145	159	172	184	197
Shortage/Surplus					0	0	0	0	0	0
ROUND ROCK	TRAVIS	COLORADO	Conservation		13	11	10	8	9	10
ROUND ROCK	TRAVIS	COLORADO	Refer to Region G Plan							
Remaining Surplus/Shortage					13	11	10	8	9	10
Shortage/Surplus					0	0	0	0	0	0
SHADY HOLLOW MUD	TRAVIS	COLORADO	Conservation		38	16	0	0	0	0
SHADY HOLLOW MUD	TRAVIS	COLORADO	Drought Management	15%	117	114	111	110	110	110
Remaining Surplus/Shortage					155	130	111	110	110	110
Shortage/Surplus					27	(472)	(579)	(700)	(807)	(907)
SUNSET VALLEY	TRAVIS	COLORADO	Conservation		38	90	158	241	305	366
SUNSET VALLEY	TRAVIS	COLORADO	Drought Management	30%	116	150	182	218	250	280
SUNSET VALLEY	TRAVIS	COLORADO	Edwards/Trinity ASR		0	200	200	200	200	200
SUNSET VALLEY	TRAVIS	COLORADO	Development of New Groundwater	Trinity	0	0	200	200	200	200
SUNSET VALLEY	TRAVIS	COLORADO	New LCRA Contract	LCRA System	0	715	715	715	715	715
Remaining Surplus/Shortage					181	683	876	874	863	854

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					84	89	92	94	95	95
THE HILLS	TRAVIS	COLORADO	Conservation		144	272	386	487	581	665
THE HILLS	TRAVIS	COLORADO	Drought Management	15%	217	217	216	216	216	216
Remaining Surplus/Shortage					445	578	694	797	892	976
Shortage/Surplus					1,207	810	435	13	(361)	(710)
TRAVIS COUNTY MUD #4	TRAVIS	COLORADO	Conservation		262	564	912	1,302	1,705	2,114
TRAVIS COUNTY MUD #4	TRAVIS	COLORADO	Drought Management	20%	522	602	677	762	837	907
Remaining Surplus/Shortage					1,469	1,374	1,347	1,315	1,344	1,404
Shortage/Surplus					0	(2,428)	(2,715)	(3,044)	(3,341)	(3,619)
TRAVIS COUNTY WCID #10	TRAVIS	COLORADO	Conservation		213	445	707	996	1,316	1,533
TRAVIS COUNTY WCID #10	TRAVIS	COLORADO	Drought Management	25%	532	607	679	761	835	905
TRAVIS COUNTY WCID #10	TRAVIS	COLORADO	New LCRA Contract	LCRA System	0	3,000	3,000	3,000	3,000	3,000
Remaining Surplus/Shortage					745	1,624	1,671	1,713	1,810	1,819
Shortage/Surplus					(302)	(1,904)	(2,868)	(3,038)	(3,330)	(3,693)
TRAVIS COUNTY WCID #17	TRAVIS	COLORADO	Conservation		408	890	1,420	1,943	2,404	4,645
TRAVIS COUNTY WCID #17	TRAVIS	COLORADO	Drought Management	15%	1,268	1,508	1,653	1,678	1,722	1,776
TRAVIS COUNTY WCID #17	TRAVIS	COLORADO	LCRA Contract Amendment	LCRA System	2,000	3,000	3,000	3,000	3,000	3,000
Remaining Surplus/Shortage					3,374	3,494	3,205	3,583	3,796	5,728
TRAVIS COUNTY WCID #17	TRAVIS	COLORADO	Water Sale to Lakeway	LCRA System	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
Remaining Surplus/Shortage After Sales					2,374	2,494	2,205	2,583	2,796	4,728
Shortage/Surplus					613	469	329	163	11	(131)
TRAVIS COUNTY WCID #18	TRAVIS	COLORADO	Conservation		60	95	87	87	96	104
TRAVIS COUNTY WCID #18	TRAVIS	COLORADO	Drought Management	15%	168	190	211	236	259	280
Remaining Surplus/Shortage					841	754	627	486	366	253
Shortage/Surplus					0	0	0	0	0	0
TRAVIS COUNTY WCID #19	TRAVIS	COLORADO	Conservation		50	92	131	166	199	229
TRAVIS COUNTY WCID #19	TRAVIS	COLORADO	Drought Management	20%	100	99	99	99	99	99
Remaining Surplus/Shortage					150	191	230	265	298	328

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					545	548	551	552	553	553
TRAVIS COUNTY WCID #20	TRAVIS	COLORADO	Conservation		59	110	153	197	234	268
TRAVIS COUNTY WCID #20	TRAVIS	COLORADO	Drought Management	20%	118	117	117	117	116	116
Remaining Surplus/Shortage					722	775	821	866	903	937
Shortage/Surplus					0	(13)	(25)	(40)	(54)	(66)
VOLENTE	TRAVIS	COLORADO	Drought Management	5%	4	4	5	6	7	7
VOLENTE	TRAVIS	COLORADO	New LCRA Contract	LCRA System	142	142	142	142	142	142
Remaining Surplus/Shortage					146	133	122	108	95	83
Shortage/Surplus					0	0	0	0	0	0
WELLS BRANCH MUD	TRAVIS	COLORADO	Drought Management	5%	82	80	79	78	78	78
Remaining Surplus/Shortage					82	80	79	78	78	78
Shortage/Surplus					41	(1,550)	(1,539)	(1,533)	(1,532)	(1,532)
WEST LAKE HILLS	TRAVIS	COLORADO	Conservation		157	286	398	505	609	700
WEST LAKE HILLS	TRAVIS	COLORADO	Drought Management	20%	313	310	308	307	306	306
WEST LAKE HILLS	TRAVIS	COLORADO	New LCRA Contract	LCRA System	0	1,300	1,300	1,300	1,300	1,300
Remaining Surplus/Shortage					511	346	467	579	683	774
Shortage/Surplus					421	68	(269)	(650)	(986)	(1,300)
WEST TRAVIS COUNTY PUA	TRAVIS	COLORADO	Conservation		234	505	809	1,164	1,526	1,900
WEST TRAVIS COUNTY PUA	TRAVIS	COLORADO	Drought Management	20%	473	544	611	688	755	818
WEST TRAVIS COUNTY PUA	TRAVIS	COLORADO	LCRA Contract Amendment	LCRA System	0	500	500	1,000	1,000	1,000
Remaining Surplus/Shortage					1,128	1,617	1,651	2,202	2,295	2,418
WEST TRAVIS COUNTY PUA	TRAVIS	COLORADO	Sale to Bee Cave	LCRA System	(300)	(300)	(600)	(600)	(800)	(800)
Remaining Surplus/Shortage After Sales					828	1,317	1,051	1,602	1,495	1,618
Shortage/Surplus					2,626	(1,374)	(1,374)	(6,543)	(14,043)	(21,530)
STEAM ELECTRIC POWER	TRAVIS	COLORADO	COA Direct Reuse	Reuse	3,500	7,500	7,500	8,500	9,500	10,500
STEAM ELECTRIC POWER	TRAVIS	COLORADO	Increased LCRA System Supply		0	0	0	0	4,543	11,030
Remaining Surplus/Shortage					6,126	6,126	6,126	1,957	0	0
Shortage/Surplus					77	62	51	39	25	12
EAST BERNARD	WHARTON	BRAZOS-COLORADO	Conservation		19	29	42	56	78	97
EAST BERNARD	WHARTON	BRAZOS-COLORADO	Drought Management	15%	57	59	61	63	65	67
Remaining Surplus/Shortage					153	150	154	158	168	176

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
					590	553	524	488	447	410
WHARTON	WHARTON	BRAZOS-COLORADO	Conservation		76	88	116	113	116	120
WHARTON	WHARTON	BRAZOS-COLORADO	Drought Management	15%	165	171	175	181	187	192
Remaining Surplus/Shortage					831	812	815	782	750	722
Shortage/Surplus					93	73	58	39	19	0
WHARTON	WHARTON	COLORADO	Conservation		39	46	60	58	60	62
WHARTON	WHARTON	COLORADO	Drought Management	15%	85	88	90	93	96	99
Remaining Surplus/Shortage					217	207	208	190	175	161
Shortage/Surplus					(69,536)	(66,452)	(63,453)	(60,534)	(57,693)	(54,929)
IRRIGATION	WHARTON	BRAZOS-COLORADO	Drought Management		15,042	14,637	14,243	13,860	13,487	13,125
IRRIGATION	WHARTON	BRAZOS-COLORADO	Conservation - On farm Conservation		4,153	5,416	6,689	7,973	9,268	10,577
IRRIGATION	WHARTON	BRAZOS-COLORADO	Conservation - Irrigation Conveyance Improvements		1,080	3,541	6,062	8,602	11,164	13,602
IRRIGATION	WHARTON	BRAZOS-COLORADO	Conservation - Sprinkler Irrigation		297	1,489	2,989	3,750	3,750	3,750
IRRIGATION	WHARTON	BRAZOS-COLORADO	COA Return Flows		4,277	4,458	5,095	5,536	5,865	6,696
IRRIGATION	WHARTON	BRAZOS-COLORADO	LCRA WMP - Interruptible Water	LCRA System	10,674	4,937	1,025	533	0	0
Remaining Surplus/Shortage					(34,013)	(31,974)	(27,350)	(20,280)	(14,159)	(7,179)
Shortage/Surplus					(19,287)	(17,632)	(16,021)	(14,453)	(12,927)	(11,443)
IRRIGATION	WHARTON	COLORADO	Drought Management		8,078	7,861	7,649	7,443	7,243	7,048
IRRIGATION	WHARTON	COLORADO	Conservation - On farm Conservation		1,152	1,437	1,689	1,904	2,077	2,203
IRRIGATION	WHARTON	COLORADO	Conservation - Irrigation Conveyance Improvements		299	940	1,531	2,054	2,501	2,834
IRRIGATION	WHARTON	COLORADO	Conservation - Sprinkler Irrigation		82	395	755	895	895	895
IRRIGATION	WHARTON	COLORADO	COA Return Flows		845	754	669	453	62	0
IRRIGATION	WHARTON	COLORADO	LCRA WMP - Interruptible Water	LCRA System	2,109	835	135	44	0	0
Remaining Surplus/Shortage					(6,722)	(5,410)	(3,593)	(1,660)	(149)	1,537

Table 5B-1: Region K WUG Water Needs and Recommended Water Management Strategies

WUG Name	County	River Basin	Water Management Strategy Name	Source Name	Water Management Strategies (ac-ft/yr)					
					2020	2030	2040	2050	2060	2070
Shortage/Surplus					(20,559)	(19,589)	(18,644)	(17,725)	(16,831)	(15,960)
IRRIGATION	WHARTON	COLORADO-LAVACA	Drought Management		4,735	4,608	4,484	4,363	4,246	4,132
IRRIGATION	WHARTON	COLORADO-LAVACA	Conservation - On farm Conservation		1,228	1,597	1,965	2,334	2,704	3,073
IRRIGATION	WHARTON	COLORADO-LAVACA	Conservation - Irrigation Conveyance Improvements		319	1,044	1,781	2,519	3,257	3,952
IRRIGATION	WHARTON	COLORADO-LAVACA	Conservation - Sprinkler Irrigation		88	439	878	1,098	1,098	1,098
IRRIGATION	WHARTON	COLORADO-LAVACA	COA Return Flows		1,239	1,282	1,452	1,557	1,619	1,788
IRRIGATION	WHARTON	COLORADO-LAVACA	LCRA WMP - Interruptible Water	LCRA System	3,093	1,420	292	150	0	0
Remaining Surplus/Shortage					(9,857)	(9,199)	(7,792)	(5,704)	(3,907)	(1,917)
Shortage/Surplus					246	184	109	17	(94)	(200)
STEAM-ELECTRIC	WHARTON	BRAZOS-COLORADO	Development of New Groundwater	Gulf Coast	0	0	0	0	200	200
Remaining Surplus/Shortage					246	184	109	17	106	0
Shortage/Surplus					0	150	320	517	567	0
AUSTIN	WILLIAMSON	BRAZOS	Drought Management	10%	770	954	1,184	1,432	1,713	2,021
Remaining Surplus/Shortage					770	1,104	1,504	1,949	2,280	2,021
Shortage/Surplus					0	0	0	0	0	0
NORTH AUSTIN MUD #1	WILLIAMSON	BRAZOS	Drought Management	15%	116	112	109	107	107	107
Remaining Surplus/Shortage					116	112	109	107	107	107
Shortage/Surplus					0	0	0	0	0	0
WELLS BRANCH MUD	TRAVIS	COLORADO	Drought Management	5%	6	6	6	6	6	6
Remaining Surplus/Shortage					6	6	6	6	6	6

2016 LCRWPG WATER PLAN

APPENDIX 5C

WATER MANAGEMENT STRATEGY COST SUMMARY TABLES

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

LCRA - Enhanced Municipal and Industrial Conservation

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$45,875,000
TOTAL COST OF FACILITIES	\$45,875,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$16,056,000
Environmental & Archaeology Studies and Mitigation	\$0
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$2,168,000</u>
TOTAL COST OF PROJECT	\$64,099,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$5,364,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$5,364,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	20,000
Annual Cost of Water (\$ per acft)	\$268
Annual Cost of Water (\$ per 1,000 gallons)	\$0.82
<i>Note: One or more cost element has been calculated externally</i>	
JB	4/14/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

LCRA - On-site Groundwater to Fayette Power Plant

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$768,000
Transmission Pipeline (0 in dia., 1 miles)	\$83,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,103,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,954,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$680,000
Environmental & Archaeology Studies and Mitigation	\$22,000
Land Acquisition and Surveying (6 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$93,000</u>
TOTAL COST OF PROJECT	\$2,749,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$230,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$31,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (950861 kW-hr @ 0.09 \$/kW-hr)	\$86,000
Purchase of Water (700 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$347,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	700
Annual Cost of Water (\$ per acft)	\$496
Annual Cost of Water (\$ per 1,000 gallons)	\$1.52
CW	4/22/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

LCRA - Off-site Groundwater to Fayette Power Plant

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$1,380,000
Transmission Pipeline (0 in dia., 24 miles)	\$5,164,000
Transmission Pump Station(s) & Storage Tank(s)	\$4,891,000
Well Fields (Wells, Pumps, and Piping)	\$2,040,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$13,475,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$4,458,000
Environmental & Archaeology Studies and Mitigation	\$755,000
Land Acquisition and Surveying (138 acres)	\$739,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$680,000</u>
TOTAL COST OF PROJECT	\$20,107,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$1,683,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$217,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (9805554 kW-hr @ 0.09 \$/kW-hr)	\$882,000
Purchase of Water (2500 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$2,782,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	2,500
Annual Cost of Water (\$ per acft)	\$1,113
Annual Cost of Water (\$ per 1,000 gallons)	\$3.41
<hr/>	
CW	4/22/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

LCRA - Expanded Use of Groundwater in Bastrop County

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$757,000
Transmission Pipeline (0 in dia., 4 miles)	\$528,000
Transmission Pump Station(s) & Storage Tank(s)	\$936,000
Well Fields (Wells, Pumps, and Piping)	\$931,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$3,152,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,077,000
Environmental & Archaeology Studies and Mitigation	\$153,000
Land Acquisition and Surveying (8 acres)	\$27,000
Interest During Construction (4% for 1 years with a 1% ROI)	\$155,000
TOTAL COST OF PROJECT	\$4,564,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$382,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$54,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (206915 kW-hr @ 0.09 \$/kW-hr)	\$19,000
Purchase of Water (300 acft/yr @ 0 \$/acft)	\$0
TOTAL ANNUAL COST	\$455,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	300
Annual Cost of Water (\$ per acft)	\$1,517
Annual Cost of Water (\$ per 1,000 gallons)	\$4.65
CW	4/22/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Lane City Reservoir**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool 40000 acft, 1125 acres)	\$95,100,000
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$6,800,000
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$30,200,000
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$24,700,000
TOTAL COST OF FACILITIES	\$156,800,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$30,400,000
Environmental & Archaeology Studies and Mitigation	\$8,900,000
Land Acquisition and Surveying (1130 acres)	\$15,100,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$7,393,000</u>
TOTAL COST OF PROJECT	\$218,593,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$5,344,000
Reservoir Debt Service (5.5 percent, 40 years)	\$9,643,000
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$925,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$1,427,000
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (29869081 kW-hr @ 0.09 \$/kW-hr)	\$2,688,000
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$20,027,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	90,000
Annual Cost of Water (\$ per acft)	\$223
Annual Cost of Water (\$ per 1,000 gallons)	\$0.68

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Prairie Reservoir**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool 40000 acft, 1125 acres)	\$269,000,000
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 3 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$269,000,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$94,150,000
Environmental & Archaeology Studies and Mitigation	\$73,000
Land Acquisition and Surveying (1130 acres)	\$56,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$12,716,000</u>
TOTAL COST OF PROJECT	\$375,995,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$6,000
Reservoir Debt Service (5.5 percent, 40 years)	\$23,427,000
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$4,035,000
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (3746780 kW-hr @ 0.09 \$/kW-hr)	\$337,000
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$27,805,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	18,000
Annual Cost of Water (\$ per acft)	\$1,545
Annual Cost of Water (\$ per 1,000 gallons)	\$4.74

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Mid-Basin OCR**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool 40000 acft, 1125 acres)	\$213,000,000
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 3 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$213,000,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$74,550,000
Environmental & Archaeology Studies and Mitigation	\$73,000
Land Acquisition and Surveying (1130 acres)	\$56,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$10,070,000</u>
TOTAL COST OF PROJECT	\$297,749,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$6,000
Reservoir Debt Service (5.5 percent, 40 years)	\$18,551,000
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$3,195,000
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (3746780 kW-hr @ 0.09 \$/kW-hr)	\$337,000
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$22,089,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	18,000
Annual Cost of Water (\$ per acft)	\$1,227
Annual Cost of Water (\$ per 1,000 gallons)	\$3.77
<i>Note: One or more cost element has been calculated externally</i>	
NDH	4/17/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Excess Flows OCR**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool 40000 acft, 1125 acres)	\$213,000,000
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 3 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$213,000,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$74,550,000
Environmental & Archaeology Studies and Mitigation	\$73,000
Land Acquisition and Surveying (1130 acres)	\$56,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$10,070,000</u>
TOTAL COST OF PROJECT	\$297,749,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$6,000
Reservoir Debt Service (5.5 percent, 40 years)	\$18,551,000
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$3,195,000
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (3472371 kW-hr @ 0.09 \$/kW-hr)	\$313,000
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$22,065,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	15,257
Annual Cost of Water (\$ per acft)	\$1,446
Annual Cost of Water (\$ per 1,000 gallons)	\$4.44
<i>Note: One or more cost element has been calculated externally</i>	
NDH	4/17/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

City of Austin - Direct Reuse (Municipal, Manufacturing, and Steam-Electric)

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
Intake Pump Stations (0 MGD)	\$42,566,000
Transmission Pipeline (0 in dia., 10 miles)	\$242,368,000
Storage Tanks (Other Than at Booster Pump Stations)	\$52,338,000
Water Treatment Plant	\$42,942,000
TOTAL COST OF FACILITIES	\$380,214,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$120,956,000
Environmental & Archaeology Studies and Mitigation	\$250,000
Land Acquisition and Surveying (3 acres)	\$16,624,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$18,132,000</u>
TOTAL COST OF PROJECT	\$536,176,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$44,867,000
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$4,011,000
Water Treatment Plant (2.5% of Cost of Facilities)	\$2,096,000
Pumping Energy Costs (8907397 kW-hr @ 0.09 \$/kW-hr)	\$802,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$51,776,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	38,429
Annual Cost of Water (\$ per acft)	\$1,347
Annual Cost of Water (\$ per 1,000 gallons)	\$4.13
<i>Note: One or more cost element has been calculated externally</i>	
<i>JB</i>	<i>10/13/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
COA - ASR**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 5 miles)	\$65,000,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$100,000,000
Storage Tanks (Other Than at Booster Pump Stations)	\$50,000,000
Water Treatment Plant (2 MGD)	\$10,000,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$225,000,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$75,500,000
Environmental & Archaeology Studies and Mitigation	\$565,000
Land Acquisition and Surveying (29 acres)	\$689,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$10,562,000</u>
TOTAL COST OF PROJECT	\$312,316,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$26,134,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$2,150,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$1,065,000
Pumping Energy Costs (9288201 kW-hr @ 0.09 \$/kW-hr)	\$836,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$30,185,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	50,000
Annual Cost of Water (\$ per acft)	\$604
Annual Cost of Water (\$ per 1,000 gallons)	\$1.85
<i>Note: One or more cost element has been calculated externally</i>	
NDH	3/27/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
COA - Longhorn Dam Automation**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$741,000
TOTAL COST OF FACILITIES	\$741,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$259,000
Environmental & Archaeology Studies and Mitigation	\$0
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$36,000</u>
TOTAL COST OF PROJECT	\$1,036,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$87,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$87,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	3,000
Annual Cost of Water (\$ per acft)	\$29
Annual Cost of Water (\$ per 1,000 gallons)	\$0.09

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
COA - Rainwater Harvesting**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$690,167,000
TOTAL COST OF FACILITIES	\$690,167,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$0
Environmental & Archaeology Studies and Mitigation	\$0
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 0 years with a 1% ROI)	<u>\$0</u>
TOTAL COST OF PROJECT	\$690,167,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$57,753,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (0 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$57,753,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	16,564
Annual Cost of Water (\$ per acft)	\$3,487
Annual Cost of Water (\$ per 1,000 gallons)	\$10.70
<i>Note: One or more cost element has been calculated externally</i>	
NDH	4/15/2015

Cost Estimate Summary
Water Supply Project Option
41518 Prices
City of Austin - Walter E. Long Enhanced Storage

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$6,735,000
Transmission Pipeline (0 in dia., 7 miles)	\$7,293,000
Transmission Pump Station(s) & Storage Tank(s)	\$4,792,000
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$3,500,000
TOTAL COST OF FACILITIES	\$22,320,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$7,448,000
Environmental & Archaeology Studies and Mitigation	\$195,000
Land Acquisition and Surveying (8 acres)	\$28,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,050,000</u>
TOTAL COST OF PROJECT	\$31,041,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$2,597,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$342,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (13111709 kW-hr @ 0.09 \$/kW-hr)	\$1,180,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$4,119,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	22,000
Annual Cost of Water (\$ per acft)	\$187
Annual Cost of Water (\$ per 1,000 gallons)	\$0.57
<i>Note: One or more cost element has been calculated externally</i>	
<i>B. Yeganeh</i>	<i>4/2/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

City of Austin - City of Austin Decentralization of WW/SW

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$1,619,000
Transmission Pipeline (0 in dia., 2 miles)	\$510,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$825,000
Two Water Treatment Plants (1.3 MGD and 1.3 MGD)	\$11,564,000
Integration, Relocations, & Other	\$1,000,000
TOTAL COST OF FACILITIES	\$15,518,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$5,406,000
Environmental & Archaeology Studies and Mitigation	\$75,000
Land Acquisition and Surveying (11 acres)	\$36,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$737,000</u>
TOTAL COST OF PROJECT	\$21,772,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$1,822,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$54,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$1,156,000
Pumping Energy Costs (390580 kW-hr @ 0.09 \$/kW-hr)	\$35,000
Purchase of Water (1121 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$3,067,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	3,000
Annual Cost of Water (\$ per acft)	\$1,022
Annual Cost of Water (\$ per 1,000 gallons)	\$3.14
<i>Note: One or more cost element has been calculated externally</i>	
CW	3/27/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
City of Austin - Capturing Local Inflows from LBL**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$1,285,000
Transmission Pipeline (0 in dia., 0 miles)	\$73,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$750,000
TOTAL COST OF FACILITIES	\$2,108,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$734,000
Environmental & Archaeology Studies and Mitigation	\$7,000
Land Acquisition and Surveying (5 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$100,000</u>
TOTAL COST OF PROJECT	\$2,949,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$247,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$38,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (135441 kW-hr @ 0.09 \$/kW-hr)	\$12,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$297,000
Available Project Yield (acft/yr), based on a Peaking Factor of 3	1,000
Annual Cost of Water (\$ per acft)	\$297
Annual Cost of Water (\$ per 1,000 gallons)	\$0.91
<i>Note: One or more cost element has been calculated externally</i>	
<i>B. Yeganeh</i>	<i>4/6/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

City of Austin - Indirect Potable Reuse through Lady Bird Lake

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 2 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$30,000,000
TOTAL COST OF FACILITIES	\$30,000,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$10,500,000
Environmental & Archaeology Studies and Mitigation	\$50,000
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,420,000</u>
TOTAL COST OF PROJECT	\$41,970,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$3,512,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (898939 kW-hr @ 0.09 \$/kW-hr)	\$81,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$3,593,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	20,000
Annual Cost of Water (\$ per acft)	\$180
Annual Cost of Water (\$ per 1,000 gallons)	\$0.55
<i>Note: One or more cost element has been calculated externally</i>	
<i>JB</i>	<i>3/28/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

AQUA WSC - Bastrop - Carrizo-Wilcox - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (7.1 MGD)	\$0
Transmission Pipeline (20 in dia., 5 miles)	\$2,133,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$4,758,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$6,891,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$2,305,000
Environmental & Archaeology Studies and Mitigation	\$237,000
Land Acquisition and Surveying (8 acres)	\$13,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$331,000</u>
TOTAL COST OF PROJECT	\$9,777,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$818,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$69,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (1668780 kW-hr @ 0.09 \$/kW-hr)	\$150,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$1,037,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	4,000
Annual Cost of Water (\$ per acft)	\$259
Annual Cost of Water (\$ per 1,000 gallons)	\$0.80

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

BASTROP COUNTY WCID #2 - Carrizo-Wilcox - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,514,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,514,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$530,000
Environmental & Archaeology Studies and Mitigation	\$29,000
Land Acquisition and Surveying (1 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$73,000</u>
TOTAL COST OF PROJECT	\$2,150,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$180,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$15,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (94022 kW-hr @ 0.09 \$/kW-hr)	\$8,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$203,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	550
Annual Cost of Water (\$ per acft)	\$369
Annual Cost of Water (\$ per 1,000 gallons)	\$1.13
<i>Jeff Dahm</i>	<i>1/29/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
COUNTY-OTHER 1 - Bastrop - Carrizo-Wilcox - Expansion of Groundwater Supply**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,514,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,514,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$530,000
Environmental & Archaeology Studies and Mitigation	\$29,000
Land Acquisition and Surveying (1 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$73,000</u>
TOTAL COST OF PROJECT	\$2,150,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$180,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$15,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (10238 kW-hr @ 0.09 \$/kW-hr)	\$1,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$196,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	60
Annual Cost of Water (\$ per acft)	\$3,267
Annual Cost of Water (\$ per 1,000 gallons)	\$10.02

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

ELGIN - Bastrop - Carrizo-Wilcox - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,514,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,514,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$530,000
Environmental & Archaeology Studies and Mitigation	\$29,000
Land Acquisition and Surveying (1 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$73,000</u>
TOTAL COST OF PROJECT	\$2,150,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$180,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$15,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (51235 kW-hr @ 0.09 \$/kW-hr)	\$5,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$200,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	300
Annual Cost of Water (\$ per acft)	\$667
Annual Cost of Water (\$ per 1,000 gallons)	\$2.05
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Jeff Dahm	4/24/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Manufacturing 1 - Bastrop - Carrizo-Wilcox - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,514,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,514,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$530,000
Environmental & Archaeology Studies and Mitigation	\$29,000
Land Acquisition and Surveying (1 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$73,000</u>
TOTAL COST OF PROJECT	\$2,150,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$180,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$15,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (33973 kW-hr @ 0.09 \$/kW-hr)	\$3,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$198,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	199
Annual Cost of Water (\$ per acft)	\$995
Annual Cost of Water (\$ per 1,000 gallons)	\$3.05

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

County-Other 2 - Blanco - Ellenburger-San Saba - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$546,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$546,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$191,000
Environmental & Archaeology Studies and Mitigation	\$40,000
Land Acquisition and Surveying (2 acres)	\$16,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$28,000</u>
TOTAL COST OF PROJECT	\$821,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$69,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$5,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (17529 kW-hr @ 0.09 \$/kW-hr)	\$2,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$76,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	55
Annual Cost of Water (\$ per acft)	\$1,382
Annual Cost of Water (\$ per 1,000 gallons)	\$4.24
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Johnson City - Blanco - Ellenburger-San Saba - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$947,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$947,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$331,000
Environmental & Archaeology Studies and Mitigation	\$136,000
Land Acquisition and Surveying (3 acres)	\$40,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$51,000</u>
TOTAL COST OF PROJECT	\$1,505,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$126,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$9,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (53660 kW-hr @ 0.09 \$/kW-hr)	\$5,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$140,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	175
Annual Cost of Water (\$ per acft)	\$800
Annual Cost of Water (\$ per 1,000 gallons)	\$2.45
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
BERTRAM - Burnet - Ellenburger-San Saba - Expansion of Groundwater Supply**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,369,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,369,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$479,000
Environmental & Archaeology Studies and Mitigation	\$100,000
Land Acquisition and Surveying (3 acres)	\$14,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$69,000</u>
TOTAL COST OF PROJECT	\$2,031,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$170,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$14,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (41721 kW-hr @ 0.09 \$/kW-hr)	\$4,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$188,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	180
Annual Cost of Water (\$ per acft)	\$1,044
Annual Cost of Water (\$ per 1,000 gallons)	\$3.20

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MINING 3 - Burnet - Ellenburger-San Saba - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$9,048,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$9,048,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$3,167,000
Environmental & Archaeology Studies and Mitigation	\$658,000
Land Acquisition and Surveying (16 acres)	\$91,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$454,000</u>
TOTAL COST OF PROJECT	\$13,418,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$1,123,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$90,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (610804 kW-hr @ 0.09 \$/kW-hr)	\$55,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$1,268,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,500
Annual Cost of Water (\$ per acft)	\$845
Annual Cost of Water (\$ per 1,000 gallons)	\$2.59

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MANUFACTURING 3 - Gillespie - Ellenburger-San Saba - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$2,535,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$2,535,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$887,000
Environmental & Archaeology Studies and Mitigation	\$286,000
Land Acquisition and Surveying (7 acres)	\$40,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$132,000</u>
TOTAL COST OF PROJECT	\$3,880,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$325,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$25,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (244002 kW-hr @ 0.09 \$/kW-hr)	\$22,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$372,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	626
Annual Cost of Water (\$ per acft)	\$594
Annual Cost of Water (\$ per 1,000 gallons)	\$1.82

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Pflugerville - Travis - Edwards (BFZ) Aquifer - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$2,564,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$2,564,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$897,000
Environmental & Archaeology Studies and Mitigation	\$120,000
Land Acquisition and Surveying (3 acres)	\$21,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$127,000</u>
TOTAL COST OF PROJECT	\$3,729,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$312,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$26,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (361826 kW-hr @ 0.09 \$/kW-hr)	\$33,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$371,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,000
Annual Cost of Water (\$ per acft)	\$371
Annual Cost of Water (\$ per 1,000 gallons)	\$1.14

Note: One or more cost element has been calculated externally

Cost Estimate Summary
Water Supply Project Option
41518 Prices
COUNTY-OTHER 4 - Colorado - Gulf Coast - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,022,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,022,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$358,000
Environmental & Archaeology Studies and Mitigation	\$30,000
Land Acquisition and Surveying (1 acres)	\$6,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$50,000</u>
TOTAL COST OF PROJECT	\$1,466,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$123,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$10,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (36111 kW-hr @ 0.09 \$/kW-hr)	\$3,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$136,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	226
Annual Cost of Water (\$ per acft)	\$602
Annual Cost of Water (\$ per 1,000 gallons)	\$1.85

Note: One or more cost element has been calculated externally

Cost Estimate Summary
Water Supply Project Option
41518 Prices
COUNTY-OTHER 5 - Fayette - Gulf Coast - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,581,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,581,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$553,000
Environmental & Archaeology Studies and Mitigation	\$58,000
Land Acquisition and Surveying (2 acres)	\$9,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$78,000</u>
TOTAL COST OF PROJECT	\$2,279,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$191,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$16,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (72493 kW-hr @ 0.09 \$/kW-hr)	\$7,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$214,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	345
Annual Cost of Water (\$ per acft)	\$620
Annual Cost of Water (\$ per 1,000 gallons)	\$1.90

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MINING 4 - Fayette - Gulf Coast - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$3,651,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$3,651,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,278,000
Environmental & Archaeology Studies and Mitigation	\$116,000
Land Acquisition and Surveying (4 acres)	\$18,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$178,000</u>
TOTAL COST OF PROJECT	\$5,241,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$439,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$37,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (618117 kW-hr @ 0.09 \$/kW-hr)	\$56,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$532,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,576
Annual Cost of Water (\$ per acft)	\$338
Annual Cost of Water (\$ per 1,000 gallons)	\$1.04
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
COUNTY-OTHER 6 - Fayette - Gulf Coast - Expansion of Groundwater Supply**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,581,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,581,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$553,000
Environmental & Archaeology Studies and Mitigation	\$58,000
Land Acquisition and Surveying (2 acres)	\$9,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$78,000</u>
TOTAL COST OF PROJECT	\$2,279,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$191,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$16,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (61767 kW-hr @ 0.09 \$/kW-hr)	\$6,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$213,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	294
Annual Cost of Water (\$ per acft)	\$724
Annual Cost of Water (\$ per 1,000 gallons)	\$2.22

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Flatonia - Fayette - Gulf Coast - Development of New Groundwater

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.2 MGD)	\$0
Transmission Pipeline (6 in dia., 5 miles)	\$480,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,022,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,502,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$502,000
Environmental & Archaeology Studies and Mitigation	\$155,000
Land Acquisition and Surveying (6 acres)	\$6,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$76,000</u>
TOTAL COST OF PROJECT	\$2,241,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$188,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$15,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (31311 kW-hr @ 0.09 \$/kW-hr)	\$3,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$206,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	100
Annual Cost of Water (\$ per acft)	\$2,060
Annual Cost of Water (\$ per 1,000 gallons)	\$6.32
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
MANUFACTURING 2 - Fayette - Gulf Coast - Expansion of Groundwater Supply**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,581,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,581,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$553,000
Environmental & Archaeology Studies and Mitigation	\$58,000
Land Acquisition and Surveying (2 acres)	\$9,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$78,000</u>
TOTAL COST OF PROJECT	\$2,279,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$191,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$16,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (82170 kW-hr @ 0.09 \$/kW-hr)	\$7,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$214,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	391
Annual Cost of Water (\$ per acft)	\$547
Annual Cost of Water (\$ per 1,000 gallons)	\$1.68

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MINING 5 - Fayette - Gulf Coast - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,581,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,581,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$553,000
Environmental & Archaeology Studies and Mitigation	\$58,000
Land Acquisition and Surveying (2 acres)	\$9,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$78,000</u>
TOTAL COST OF PROJECT	\$2,279,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$191,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$16,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (72282 kW-hr @ 0.09 \$/kW-hr)	\$7,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$214,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	344
Annual Cost of Water (\$ per acft)	\$622
Annual Cost of Water (\$ per 1,000 gallons)	\$1.91
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
COUNTY-OTHER 3 - Blanco - Hickory - Expansion of Groundwater Supply**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$912,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$912,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$319,000
Environmental & Archaeology Studies and Mitigation	\$32,000
Land Acquisition and Surveying (1 acres)	\$8,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$45,000</u>
TOTAL COST OF PROJECT	\$1,316,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$110,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$9,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (11843 kW-hr @ 0.09 \$/kW-hr)	\$1,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$120,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	55
Annual Cost of Water (\$ per acft)	\$2,182
Annual Cost of Water (\$ per 1,000 gallons)	\$6.69

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MINING 6 - Burnet - Hickory Aquifer - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$9,281,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$9,281,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$3,248,000
Environmental & Archaeology Studies and Mitigation	\$399,000
Land Acquisition and Surveying (10 acres)	\$54,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$455,000</u>
TOTAL COST OF PROJECT	\$13,437,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$1,124,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$93,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (845796 kW-hr @ 0.09 \$/kW-hr)	\$76,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$1,293,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,800
Annual Cost of Water (\$ per acft)	\$718
Annual Cost of Water (\$ per 1,000 gallons)	\$2.20

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MINING 7 - Burnet - Marble Falls Aquifer - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$4,956,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$4,956,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,734,000
Environmental & Archaeology Studies and Mitigation	\$284,000
Land Acquisition and Surveying (7 acres)	\$37,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$246,000</u>
TOTAL COST OF PROJECT	\$7,257,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$607,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$50,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (512039 kW-hr @ 0.09 \$/kW-hr)	\$46,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$703,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,500
Annual Cost of Water (\$ per acft)	\$469
Annual Cost of Water (\$ per 1,000 gallons)	\$1.44

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MINING 8 - Fayette - Sparta Aquifer - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$512,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$512,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$179,000
Environmental & Archaeology Studies and Mitigation	\$30,000
Land Acquisition and Surveying (1 acres)	\$6,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$26,000</u>
TOTAL COST OF PROJECT	\$753,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$63,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$5,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (3301 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$68,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	66
Annual Cost of Water (\$ per acft)	\$1,030
Annual Cost of Water (\$ per 1,000 gallons)	\$3.16

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

MINING 9 - Hays - Trinity Aquifer - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$3,265,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$3,265,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,143,000
Environmental & Archaeology Studies and Mitigation	\$54,000
Land Acquisition and Surveying (6 acres)	\$32,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$158,000</u>
TOTAL COST OF PROJECT	\$4,652,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$389,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$33,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (383481 kW-hr @ 0.09 \$/kW-hr)	\$35,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$457,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,047
Annual Cost of Water (\$ per acft)	\$436
Annual Cost of Water (\$ per 1,000 gallons)	\$1.34
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Irrigation - Mills - Trinity - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$5,426,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$5,426,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,899,000
Environmental & Archaeology Studies and Mitigation	\$574,000
Land Acquisition and Surveying (13 acres)	\$109,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$281,000</u>
TOTAL COST OF PROJECT	\$8,289,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$694,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$54,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (326338 kW-hr @ 0.09 \$/kW-hr)	\$29,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$777,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	480
Annual Cost of Water (\$ per acft)	\$1,619
Annual Cost of Water (\$ per 1,000 gallons)	\$4.97
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Lakeway - Travis - Trinity - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$2,016,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$2,016,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$706,000
Environmental & Archaeology Studies and Mitigation	\$136,000
Land Acquisition and Surveying (3 acres)	\$26,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$101,000</u>
TOTAL COST OF PROJECT	\$2,985,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$250,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$20,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (163990 kW-hr @ 0.09 \$/kW-hr)	\$15,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$285,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	500
Annual Cost of Water (\$ per acft)	\$570
Annual Cost of Water (\$ per 1,000 gallons)	\$1.75
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Manor - Travis - Trinity - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$2,328,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$2,328,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$815,000
Environmental & Archaeology Studies and Mitigation	\$152,000
Land Acquisition and Surveying (4 acres)	\$30,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$117,000</u>
TOTAL COST OF PROJECT	\$3,442,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$288,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$23,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (178861 kW-hr @ 0.09 \$/kW-hr)	\$16,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$327,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	600
Annual Cost of Water (\$ per acft)	\$545
Annual Cost of Water (\$ per 1,000 gallons)	\$1.67
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Manville WSC - Travis - Trinity - Expansion of Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$3,672,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$3,672,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,285,000
Environmental & Archaeology Studies and Mitigation	\$243,000
Land Acquisition and Surveying (6 acres)	\$47,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$184,000</u>
TOTAL COST OF PROJECT	\$5,431,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$455,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$37,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (497139 kW-hr @ 0.09 \$/kW-hr)	\$45,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$537,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,000
Annual Cost of Water (\$ per acft)	\$537
Annual Cost of Water (\$ per 1,000 gallons)	\$1.65
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Bastrop - Carrizo-Wilcox - Development of New Groundwater

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.5 MGD)	\$0
Transmission Pipeline (6 in dia., 5 miles)	\$518,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,514,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$2,032,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$685,000
Environmental & Archaeology Studies and Mitigation	\$154,000
Land Acquisition and Surveying (6 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$101,000</u>
TOTAL COST OF PROJECT	\$2,976,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$249,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$20,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (134022 kW-hr @ 0.09 \$/kW-hr)	\$12,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$281,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	300
Annual Cost of Water (\$ per acft)	\$937
Annual Cost of Water (\$ per 1,000 gallons)	\$2.87
<i>Jeff Dahm</i>	<i>1/29/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Mining 1 - Bastrop - Carrizo-Wilcox - Development of New Groundwater

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.8 MGD)	\$0
Transmission Pipeline (10 in dia., 5 miles)	\$826,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,514,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$2,340,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$778,000
Environmental & Archaeology Studies and Mitigation	\$154,000
Land Acquisition and Surveying (6 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	\$115,000
TOTAL COST OF PROJECT	\$3,391,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$284,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$23,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (154421 kW-hr @ 0.09 \$/kW-hr)	\$14,000
Purchase of Water (acft/yr @ \$/acft)	\$0
TOTAL ANNUAL COST	\$321,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	466
Annual Cost of Water (\$ per acft)	\$689
Annual Cost of Water (\$ per 1,000 gallons)	\$2.11
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Steam-Electric - Wharton - Gulf Coast - Development of New Groundwater

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.4 MGD)	\$0
Transmission Pipeline (6 in dia., 5 miles)	\$480,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,022,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,502,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$502,000
Environmental & Archaeology Studies and Mitigation	\$153,000
Land Acquisition and Surveying (6 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$76,000</u>
TOTAL COST OF PROJECT	\$2,237,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$187,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$15,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (55855 kW-hr @ 0.09 \$/kW-hr)	\$5,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$207,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	200
Annual Cost of Water (\$ per acft)	\$1,035
Annual Cost of Water (\$ per 1,000 gallons)	\$3.18

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Llano - Hickory - Development of New Groundwater Supply

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.4 MGD)	\$0
Transmission Pipeline (6 in dia., 5 miles)	\$480,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,368,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,848,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$623,000
Environmental & Archaeology Studies and Mitigation	\$170,000
Land Acquisition and Surveying (7 acres)	\$9,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$93,000</u>
TOTAL COST OF PROJECT	\$2,743,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$229,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$18,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (82853 kW-hr @ 0.09 \$/kW-hr)	\$7,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$254,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	200
Annual Cost of Water (\$ per acft)	\$1,270
Annual Cost of Water (\$ per 1,000 gallons)	\$3.90
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>2/20/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Mining 2 - Bastrop - Queen City - Development of New Groundwater

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.5 MGD)	\$0
Transmission Pipeline (6 in dia., 5 miles)	\$557,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,097,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,654,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$551,000
Environmental & Archaeology Studies and Mitigation	\$154,000
Land Acquisition and Surveying (6 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$83,000</u>
TOTAL COST OF PROJECT	\$2,446,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$205,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$17,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (102238 kW-hr @ 0.09 \$/kW-hr)	\$9,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$231,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	306
Annual Cost of Water (\$ per acft)	\$755
Annual Cost of Water (\$ per 1,000 gallons)	\$2.32
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<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
Smithville - Queen City - Development of New Groundwater**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.3 MGD)	\$0
Transmission Pipeline (6 in dia., 5 miles)	\$480,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$1,296,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,776,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$597,000
Environmental & Archaeology Studies and Mitigation	\$154,000
Land Acquisition and Surveying (6 acres)	\$4,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$89,000</u>
TOTAL COST OF PROJECT	\$2,620,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$219,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$18,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (47682 kW-hr @ 0.09 \$/kW-hr)	\$4,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$241,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	150
Annual Cost of Water (\$ per acft)	\$1,607
Annual Cost of Water (\$ per 1,000 gallons)	\$4.93
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<i>Jeff Dahm</i>	<i>1/29/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Sunset Valley - Travis - Trinity - Development of New Groundwater

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.2 MGD)	\$0
Transmission Pipeline (6 in dia., 5 miles)	\$480,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$984,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$1,464,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$488,000
Environmental & Archaeology Studies and Mitigation	\$187,000
Land Acquisition and Surveying (7 acres)	\$13,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$76,000</u>
TOTAL COST OF PROJECT	\$2,228,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$186,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$15,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (71816 kW-hr @ 0.09 \$/kW-hr)	\$6,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$207,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	200
Annual Cost of Water (\$ per acft)	\$1,035
Annual Cost of Water (\$ per 1,000 gallons)	\$3.18
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/24/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
BSEACD - Edwards-Middle Trinity ASR**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$1,878,000
Transmission Pipeline (0 in dia., 1 miles)	\$309,000
Transmission Pump Station(s) & Storage Tank(s)	\$1,603,000
Well Fields (Wells, Pumps, and Piping)	\$5,301,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Two Water Treatment Plants (1 MGD and 1 MGD)	\$140,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$9,231,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$3,215,000
Environmental & Archaeology Studies and Mitigation	\$59,000
Land Acquisition and Surveying (12 acres)	\$37,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$439,000</u>
TOTAL COST OF PROJECT	\$12,981,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$1,086,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$139,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$84,000
Pumping Energy Costs (958233 kW-hr @ 0.09 \$/kW-hr)	\$86,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$1,395,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,144
Annual Cost of Water (\$ per acft)	\$1,219
Annual Cost of Water (\$ per 1,000 gallons)	\$3.74

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
BSEACD - Saline Edwards ASR**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$1,533,000
Transmission Pipeline (0 in dia., 6 miles)	\$1,855,000
Transmission Pump Station(s) & Storage Tank(s)	\$1,077,000
Well Fields (Wells, Pumps, and Piping)	\$2,844,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Two Water Treatment Plants (0.3 MGD and 0.9 MGD)	\$3,357,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$10,666,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$3,640,000
Environmental & Archaeology Studies and Mitigation	\$182,000
Land Acquisition and Surveying (12 acres)	\$35,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$509,000</u>
TOTAL COST OF PROJECT	\$15,032,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$1,258,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$109,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$622,000
Pumping Energy Costs (464130 kW-hr @ 0.09 \$/kW-hr)	\$42,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$2,031,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	1,000
Annual Cost of Water (\$ per acft)	\$2,031
Annual Cost of Water (\$ per 1,000 gallons)	\$6.23

Cost Estimate Summary
Water Supply Project Option
41518 Prices
Burnet County-Other, City of Burnet, City of Bertram - Buena Vista Project

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (8.7 MGD)	\$980,000
Transmission Pipeline (18 in dia., 12 miles)	\$249,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (8.7 MGD)	\$16,323,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$17,552,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$6,131,000
Environmental & Archaeology Studies and Mitigation	\$379,000
Land Acquisition and Surveying (14 acres)	\$82,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$846,000</u>
TOTAL COST OF PROJECT	\$24,990,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$2,091,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$27,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$1,660,000
Pumping Energy Costs (1463225 kW-hr @ 0.09 \$/kW-hr)	\$132,000
Purchase of Water (4884 acft/yr @ 151 \$/acft)	<u>\$737,000</u>
TOTAL ANNUAL COST	\$4,647,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	4,884
Annual Cost of Water (\$ per acft)	\$951
Annual Cost of Water (\$ per 1,000 gallons)	\$2.92

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
Burnet County-Other - East Lake Buchanan Project**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (1.7 MGD)	\$334,000
Transmission Pipeline (10 in dia., 12 miles)	\$535,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (1.7 MGD)	\$6,235,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$7,104,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$2,460,000
Environmental & Archaeology Studies and Mitigation	\$361,000
Land Acquisition and Surveying (11 acres)	\$62,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$350,000</u>
TOTAL COST OF PROJECT	\$10,337,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$865,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$14,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$694,000
Pumping Energy Costs (432057 kW-hr @ 0.09 \$/kW-hr)	\$39,000
Purchase of Water (935 acft/yr @ 151 \$/acft)	<u>\$141,000</u>
TOTAL ANNUAL COST	\$1,753,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	935
Annual Cost of Water (\$ per acft)	\$1,875
Annual Cost of Water (\$ per 1,000 gallons)	\$5.75
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jeff Dahm</i>	<i>4/17/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
County Other - Burnet - Marble Falls RWS**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (6.5 MGD)	\$1,992,000
Transmission Pipeline (18 in dia., 19 miles)	\$1,638,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (10 MGD)	\$30,738,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$34,368,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$11,947,000
Environmental & Archaeology Studies and Mitigation	\$557,000
Land Acquisition and Surveying (15 acres)	\$85,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,644,000</u>
TOTAL COST OF PROJECT	\$48,601,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$4,067,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$66,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$3,286,000
Pumping Energy Costs (2258294 kW-hr @ 0.09 \$/kW-hr)	\$203,000
Purchase of Water (5878 acft/yr @ 151 \$/acft)	<u>\$888,000</u>
TOTAL ANNUAL COST	\$8,510,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	5,578
Annual Cost of Water (\$ per acft)	\$1,526
Annual Cost of Water (\$ per 1,000 gallons)	\$4.68

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

Volente - Volente Water Contract with LCRA

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0.3 MGD)	\$772,000
Transmission Pipeline (12 in dia., 5 miles)	\$1,235,000
Transmission Pump Station(s) & Storage Tank(s)	\$889,000
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0.5 MGD)	\$2,916,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$5,812,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,973,000
Environmental & Archaeology Studies and Mitigation	\$141,000
Land Acquisition and Surveying (17 acres)	\$57,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$280,000</u>
TOTAL COST OF PROJECT	\$8,263,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$691,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$51,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$292,000
Pumping Energy Costs (94767 kW-hr @ 0.09 \$/kW-hr)	\$9,000
Purchase of Water (142 acft/yr @ 151 \$/acft)	<u>\$21,000</u>
TOTAL ANNUAL COST	\$1,064,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2.5	142
Annual Cost of Water (\$ per acft)	\$7,493
Annual Cost of Water (\$ per 1,000 gallons)	\$22.99
CW	1/12/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
City of Bastrop - Water Supply for Bastrop County**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (5.6 MGD)	\$2,358,000
Transmission Pipeline (20 in dia., 2 miles)	\$1,444,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (6.2 MGD)	\$21,101,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$24,903,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$8,644,000
Environmental & Archaeology Studies and Mitigation	\$74,000
Land Acquisition and Surveying (18 acres)	\$58,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,179,000</u>
TOTAL COST OF PROJECT	\$34,858,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$2,917,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$73,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$2,110,000
Pumping Energy Costs (531589 kW-hr @ 0.09 \$/kW-hr)	\$48,000
Purchase of Water (2500 acft/yr @ 151 \$/acft)	<u>\$378,000</u>
TOTAL ANNUAL COST	\$5,526,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2.8	2,500
Annual Cost of Water (\$ per acft)	\$2,210
Annual Cost of Water (\$ per 1,000 gallons)	\$6.78
<i>CW</i>	<i>1/12/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
City of Elgin - Water Supply for Bastrop County**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (8.7 MGD)	\$4,105,000
Transmission Pipeline (24 in dia., 13 miles)	\$7,779,000
Transmission Pump Station(s) & Storage Tank(s)	\$3,155,000
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (8.7 MGD)	\$28,916,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$43,955,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$14,995,000
Environmental & Archaeology Studies and Mitigation	\$353,000
Land Acquisition and Surveying (72 acres)	\$236,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$2,084,000</u>
TOTAL COST OF PROJECT	\$61,623,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$5,157,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$250,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$2,892,000
Pumping Energy Costs (1760330 kW-hr @ 0.09 \$/kW-hr)	\$158,000
Purchase of Water (3500 acft/yr @ 151 \$/acft)	<u>\$529,000</u>
TOTAL ANNUAL COST	\$8,986,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2.8	3,500
Annual Cost of Water (\$ per acft)	\$2,567
Annual Cost of Water (\$ per 1,000 gallons)	\$7.88
<i>CW</i>	<i>1/9/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
Aqua WSC - Water Supply for Bastrop County**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (18.7 MGD)	\$18,339,000
Transmission Pipeline (36 in dia., 25 miles)	\$27,824,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Two Water Treatment Plants (6.7 MGD and 6.7 MGD)	\$45,328,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$91,491,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$30,630,000
Environmental & Archaeology Studies and Mitigation	\$665,000
Land Acquisition and Surveying (138 acres)	\$439,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$4,313,000</u>
TOTAL COST OF PROJECT	\$127,538,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$10,672,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$737,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$4,533,000
Pumping Energy Costs (8140246 kW-hr @ 0.09 \$/kW-hr)	\$733,000
Purchase of Water (15000 acft/yr @ 151 \$/acft)	<u>\$2,265,000</u>
TOTAL ANNUAL COST	\$18,940,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2.8	15,000
Annual Cost of Water (\$ per acft)	\$1,263
Annual Cost of Water (\$ per 1,000 gallons)	\$3.87
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CW	1/9/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
Region K - Bastrop Water Reuse**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$1,083,000
Transmission Pipeline (0 in dia., 5 miles)	\$1,175,000
Transmission Pump Station(s) & Storage Tank(s)	\$997,000
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$3,255,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,080,000
Environmental & Archaeology Studies and Mitigation	\$125,000
Land Acquisition and Surveying (7 acres)	\$8,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$157,000</u>
TOTAL COST OF PROJECT	\$4,625,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$387,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$61,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (596317 kW-hr @ 0.09 \$/kW-hr)	\$54,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$502,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	1,120
Annual Cost of Water (\$ per acft)	\$448
Annual Cost of Water (\$ per 1,000 gallons)	\$1.38
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<i>B. Yeganeh</i>	<i>3/9/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
Buda - Water Reuse**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$800,000
Transmission Pipeline (0 in dia., 4 miles)	\$3,598,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$4,398,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,359,000
Environmental & Archaeology Studies and Mitigation	\$105,000
Land Acquisition and Surveying (7 acres)	\$7,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$206,000</u>
TOTAL COST OF PROJECT	\$6,075,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$508,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$56,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (310484 kW-hr @ 0.09 \$/kW-hr)	\$28,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$592,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	2,240
Annual Cost of Water (\$ per acft)	\$264
Annual Cost of Water (\$ per 1,000 gallons)	\$0.81
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<i>J. Balcolm</i>	<i>3/9/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
City of Flatonia - City of Flatonia Reuse Water System**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$100,000
Transmission Pipeline (6 in dia., 2 miles)	\$306,000
Transmission Pump Station(s) & Storage Tank(s)	\$325,000
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$122,000
TOTAL COST OF FACILITIES	\$853,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$283,000
Environmental & Archaeology Studies and Mitigation	\$48,000
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$42,000</u>
TOTAL COST OF PROJECT	\$1,226,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$103,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$7,000
Dam and Reservoir (1% of Cost of Facilities)	\$0
Water Treatment Plant (1% of Cost of Facilities)	\$0
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$110,000
Available Project Yield (acft/yr), based on a Peaking Factor of	134
Annual Cost of Water (\$ per acft)	\$821
Annual Cost of Water (\$ per 1,000 gallons)	\$2.52

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
Region K - City of Llano Reuse**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$153,000
Transmission Pipeline (0 in dia., 2 miles)	\$320,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$473,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$149,000
Environmental & Archaeology Studies and Mitigation	\$40,000
Land Acquisition and Surveying (6 acres)	\$3,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$24,000</u>
TOTAL COST OF PROJECT	\$689,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$58,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$7,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (6727 kW-hr @ 0.09 \$/kW-hr)	\$1,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$66,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	100
Annual Cost of Water (\$ per acft)	\$660
Annual Cost of Water (\$ per 1,000 gallons)	\$2.03

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
City of Pflugerville - City of Pflugerville Reuse**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$1,935,000
Transmission Pipeline (0 in dia., 6 miles)	\$1,995,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$1,667,000
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$5,597,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,859,000
Environmental & Archaeology Studies and Mitigation	\$138,000
Land Acquisition and Surveying (34 acres)	\$95,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$270,000</u>
TOTAL COST OF PROJECT	\$7,959,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$666,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$85,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (1775065 kW-hr @ 0.09 \$/kW-hr)	\$160,000
Purchase of Water (4000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$911,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	4,000
Annual Cost of Water (\$ per acft)	\$228
Annual Cost of Water (\$ per 1,000 gallons)	\$0.70
<i>CW</i>	<i>2/27/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
STP - Alternate Canal Delivery**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$5,017,000
Transmission Pipeline (0 in dia., 0 miles)	\$458,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$5,475,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$1,893,000
Environmental & Archaeology Studies and Mitigation	\$21,000
Land Acquisition and Surveying (5 acres)	\$20,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$260,000</u>
TOTAL COST OF PROJECT	\$7,669,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$642,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$130,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (1148478 kW-hr @ 0.09 \$/kW-hr)	\$103,000
Purchase of Water (12727 acft/yr @ 135 \$/acft)	<u>\$1,718,000</u>
TOTAL ANNUAL COST	\$2,593,000
Available Project Yield (acft/yr), based on a Peaking Factor of 4	12,727
Annual Cost of Water (\$ per acft)	\$204
Annual Cost of Water (\$ per 1,000 gallons)	\$0.63
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NDH	4/17/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Carrizo-Wilcox GW Importation**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$440,000,000
TOTAL COST OF FACILITIES	\$440,000,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$154,000,000
Environmental & Archaeology Studies and Mitigation	\$0
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$20,790,000</u>
TOTAL COST OF PROJECT	\$614,790,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$51,445,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$51,445,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	35,000
Annual Cost of Water (\$ per acft)	\$1,470
Annual Cost of Water (\$ per 1,000 gallons)	\$4.51

Note: One or more cost element has been calculated externally

Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Import Return Flows from Williamson County

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$4,322,000
Transmission Pipeline (0 in dia., 0 miles)	\$26,350,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0.1 MGD)	\$7,400,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$38,072,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$12,008,000
Environmental & Archaeology Studies and Mitigation	\$728,000
Land Acquisition and Surveying (5 acres)	\$1,552,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,833,000</u>
TOTAL COST OF PROJECT	\$54,193,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$4,535,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$372,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$185,000
Pumping Energy Costs (4270413 kW-hr @ 0.09 \$/kW-hr)	\$384,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$5,476,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	25,000
Annual Cost of Water (\$ per acft)	\$219
Annual Cost of Water (\$ per 1,000 gallons)	\$0.67

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

LCRA - Supplement B&E Inflows with Brackish Groundwater

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$22,871,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$22,871,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$10,377,000
Environmental & Archaeology Studies and Mitigation	\$500,000
Land Acquisition and Surveying (5 acres)	\$35,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,183,000</u>
TOTAL COST OF PROJECT	\$34,966,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$2,926,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (5.2555638144375% of Cost of Facilities)	\$1,202,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (7500000 kW-hr @ 0.09 \$/kW-hr)	\$675,000
Purchase of Water (12000 acft/yr @ 100 \$/acft)	<u>\$1,200,000</u>
TOTAL ANNUAL COST	\$6,003,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	12,000
Annual Cost of Water (\$ per acft)	\$500
Annual Cost of Water (\$ per 1,000 gallons)	\$1.53
<i>Note: One or more cost element has been calculated externally</i>	
NDH	4/27/2015

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

LCRA - Brackish GW Desalination from Gulf Coast Aquifer

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$198,250,000
TOTAL COST OF FACILITIES	\$198,250,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$69,388,000
Environmental & Archaeology Studies and Mitigation	\$0
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$9,368,000</u>
TOTAL COST OF PROJECT	\$277,006,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$23,180,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$23,180,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	22,400
Annual Cost of Water (\$ per acft)	\$1,035
Annual Cost of Water (\$ per 1,000 gallons)	\$3.18
<i>Note: One or more cost element has been calculated externally</i>	
<i>NDH</i>	<i>4/22/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Baylor Creek Reservoir**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool 48390 acft, 1125 acres)	\$42,180,000
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$33,752,000
Transmission Pipeline (0 in dia., 8 miles)	\$54,145,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$130,077,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$42,820,000
Environmental & Archaeology Studies and Mitigation	\$195,000
Land Acquisition and Surveying (1130 acres)	\$56,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$6,061,000</u>
TOTAL COST OF PROJECT	\$179,209,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$10,059,000
Reservoir Debt Service (5.5 percent, 40 years)	\$3,677,000
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$1,385,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$633,000
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (5041899 kW-hr @ 0.09 \$/kW-hr)	\$454,000
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$16,208,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	18,000
Annual Cost of Water (\$ per acft)	\$900
Annual Cost of Water (\$ per 1,000 gallons)	\$2.76

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

LCRA - Aquifer Storage, Recharge and Recovery

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (9 MGD)	\$4,280,000
Transmission Pipeline (24 in dia., 5 miles)	\$2,589,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$5,486,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (4.5 MGD)	\$15,807,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$28,162,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$9,727,000
Environmental & Archaeology Studies and Mitigation	\$316,000
Land Acquisition and Surveying (14 acres)	\$46,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,339,000</u>
TOTAL COST OF PROJECT	\$39,590,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$3,313,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$188,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$1,581,000
Pumping Energy Costs (3861420 kW-hr @ 0.09 \$/kW-hr)	\$348,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$5,430,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	5,048
Annual Cost of Water (\$ per acft)	\$1,076
Annual Cost of Water (\$ per 1,000 gallons)	\$3.30
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<i>B. Yeganeh</i>	<i>4/15/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
LCRA - Enhanced Recharge**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, 20.66 acres)	\$11,057,000
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$605,000
Transmission Pipeline (0 in dia., 0 miles)	\$328,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$22,569,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$2,793,000
TOTAL COST OF FACILITIES	\$37,352,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$13,057,000
Environmental & Archaeology Studies and Mitigation	\$703,000
Land Acquisition and Surveying (115 acres)	\$582,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,810,000</u>
TOTAL COST OF PROJECT	\$53,504,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$3,114,000
Reservoir Debt Service (5.5 percent, 40 years)	\$1,015,000
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$244,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$166,000
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (5879819 kW-hr @ 0.09 \$/kW-hr)	\$529,000
Well Leases	<u>\$3,267,000</u>
TOTAL ANNUAL COST	\$8,335,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	10,000
Annual Cost of Water (\$ per acft)	\$834
Annual Cost of Water (\$ per 1,000 gallons)	\$2.56

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices**

City of Austin - Brackish Groundwater Desalination

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$3,398,000
Transmission Pipeline (0 in dia., 13 miles)	\$7,069,000
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$15,987,000
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (4.5 MGD)	\$12,218,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$38,672,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$13,182,000
Environmental & Archaeology Studies and Mitigation	\$790,000
Land Acquisition and Surveying (28 acres)	\$92,000
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$1,846,000</u>
TOTAL COST OF PROJECT	\$54,582,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$4,567,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$316,000
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$2,358,000
Pumping Energy Costs (4128292 kW-hr @ 0.09 \$/kW-hr)	\$372,000
Purchase of Water (acft/yr @ \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$7,613,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	5,000
Annual Cost of Water (\$ per acft)	\$1,523
Annual Cost of Water (\$ per 1,000 gallons)	\$4.67
<hr/>	
<i>B. Yeganeh</i>	<i>4/20/2015</i>

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
COA - Reclaim Water in Colorado Alluvium**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (0 MGD)	\$0
Integration, Relocations, & Other	\$108,675,000
TOTAL COST OF FACILITIES	\$108,675,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 35% for all other facilities)	\$38,036,000
Environmental & Archaeology Studies and Mitigation	\$0
Land Acquisition and Surveying (0 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$5,135,000</u>
TOTAL COST OF PROJECT	\$151,846,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$12,706,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$0
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (90000 acft/yr @ 0 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$12,706,000
Available Project Yield (acft/yr), based on a Peaking Factor of 1	30,000
Annual Cost of Water (\$ per acft)	\$424
Annual Cost of Water (\$ per 1,000 gallons)	\$1.30

Note: One or more cost element has been calculated externally

**Cost Estimate Summary
Water Supply Project Option
41518 Prices
City of Buda - City of Buda Direct Potable Reuse**

**Cost based on ENR CCI 9552 for 41518 and
a PPI of 187 for 41518**

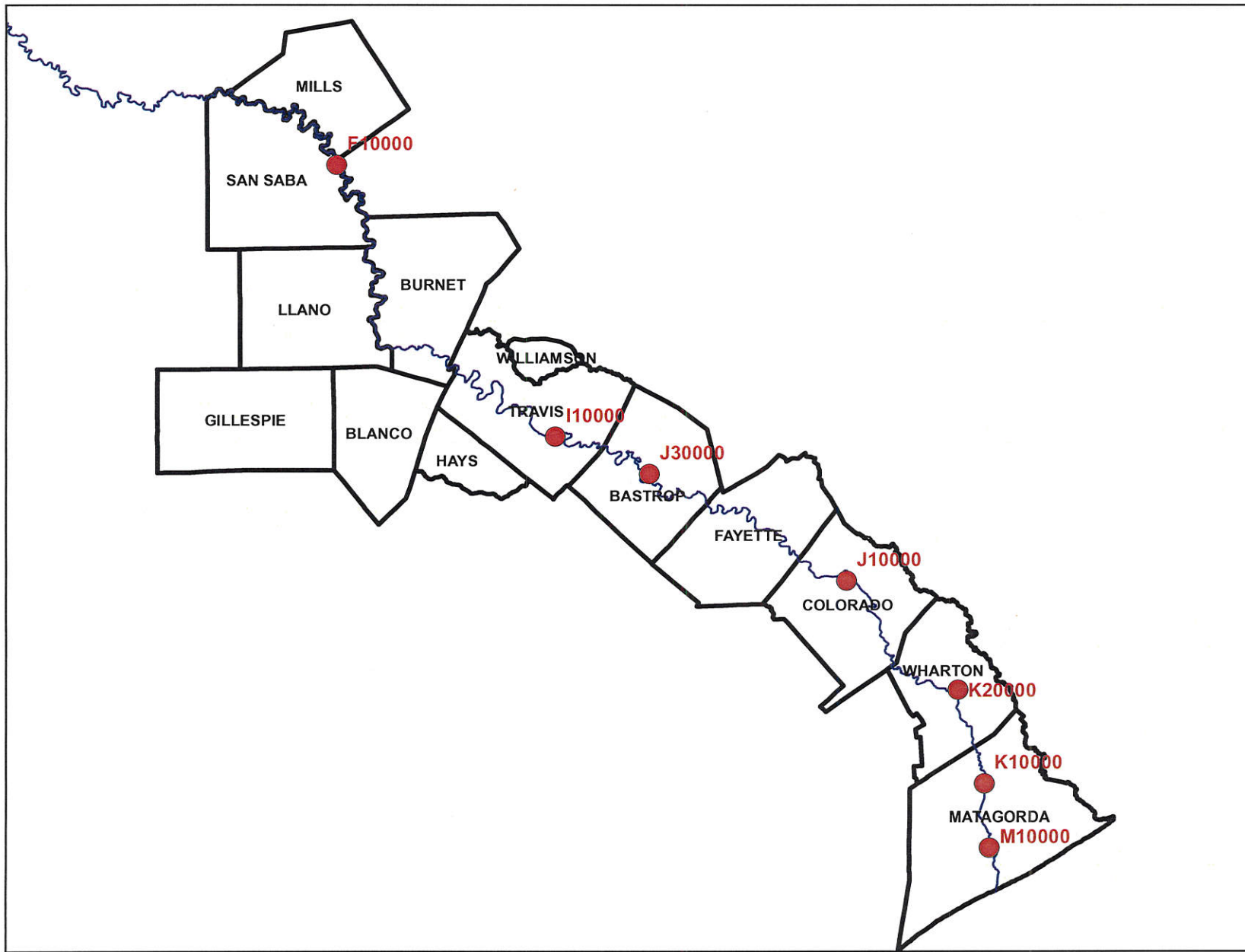
<i>Item</i>	<i>Estimated Costs for Facilities</i>
CAPITAL COST	
Dam and Reservoir (Conservation Pool acft, acres)	\$0
Off-Channel Storage/Ring Dike (Conservation Pool acft, acres)	\$0
Terminal Storage (Conservation Pool acft, acres)	\$0
Intake Pump Stations (0 MGD)	\$0
Transmission Pipeline (0 in dia., 0 miles)	\$0
Transmission Pump Station(s) & Storage Tank(s)	\$0
Well Fields (Wells, Pumps, and Piping)	\$0
Storage Tanks (Other Than at Booster Pump Stations)	\$0
Water Treatment Plant (2 MGD)	\$21,561,000
Integration, Relocations, & Other	\$0
TOTAL COST OF FACILITIES	\$21,561,000
Engineering and Feasibility Studies, Legal Assistance, Financing, Bond Counsel, and Contingencies (30% for pipes & 20% for all other facilities)	\$4,312,000
Environmental & Archaeology Studies and Mitigation	\$0
Land Acquisition and Surveying (1 acres)	\$0
Interest During Construction (4% for 1 years with a 1% ROI)	<u>\$906,000</u>
TOTAL COST OF PROJECT	\$26,779,000
ANNUAL COST	
Debt Service (5.5 percent, 20 years)	\$2,241,000
Reservoir Debt Service (5.5 percent, 40 years)	\$0
Operation and Maintenance	
Intake, Pipeline, Pump Station (1% of Cost of Facilities)	\$0
Dam and Reservoir (1.5% of Cost of Facilities)	\$0
Water Treatment Plant (2.5% of Cost of Facilities)	\$700,000
Pumping Energy Costs (0 kW-hr @ 0.09 \$/kW-hr)	\$0
Purchase of Water (1 acft/yr @ 633000 \$/acft)	<u>\$0</u>
TOTAL ANNUAL COST	\$2,941,000
Available Project Yield (acft/yr), based on a Peaking Factor of 2	2,240
Annual Cost of Water (\$ per acft)	\$1,313
Annual Cost of Water (\$ per 1,000 gallons)	\$4.03
<i>Note: One or more cost element has been calculated externally</i>	
<i>Jaime Burke</i>	<i>11/2/2015</i>

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2016 LCRWPG WATER PLAN

APPENDIX 5D

*ENVIRONMENTAL IMPACTS OF NEW STRATEGIES IN THE 2016
REGION K PLAN*



Legend

- Control Points
- Colorado River
- Counties
- Cities
- 10 Miles

Location of Control Points Analyzed for Environmental Impacts

2016 LCRWPG WATER PLAN **Environmental Impacts of the Aquifer Storage and Recovery Project**

2020 Colorado River Instream Flow Analysis

2020
CP K10000
Matagorda Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	STR2020	ASR	DIFFERENCE	FLOW	STR2020	ASR	DIFFERENCE	FLOW	STR2020	ASR	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
Jan	19,369	79.7%	79.7%	0.0%	30,252	63.5%	63.5%	0.0%	51,527	50.0%	50.0%	0.0%
Feb	16,828	85.1%	85.1%	0.0%	33,156	54.1%	54.1%	0.0%	50,317	43.2%	43.2%	0.0%
Mar	12,543	82.4%	82.4%	0.0%	32,650	45.9%	45.9%	0.0%	63,701	35.1%	35.1%	0.0%
Apr	16,066	64.9%	64.9%	0.0%	33,382	40.5%	40.5%	0.0%	60,159	35.1%	35.1%	0.0%
May	18,692	67.6%	67.6%	0.0%	60,565	33.8%	33.8%	0.0%	85,898	27.0%	27.0%	0.0%
Jun	22,076	48.6%	48.6%	0.0%	58,552	28.4%	28.4%	0.0%	89,970	25.7%	27.0%	1.4%
Jul	13,035	35.1%	35.1%	0.0%	35,478	13.5%	13.5%	0.0%	55,708	12.2%	12.2%	0.0%
Aug	6,579	31.1%	31.1%	0.0%	19,307	16.2%	16.2%	0.0%	32,097	2.7%	2.7%	0.0%
Sep	11,187	59.5%	59.5%	0.0%	24,397	37.8%	37.8%	0.0%	36,714	18.9%	18.9%	0.0%
Oct	9,039	75.7%	75.7%	0.0%	22,136	58.1%	58.1%	0.0%	46,054	28.4%	28.4%	0.0%
Nov	10,294	87.8%	87.8%	0.0%	28,919	56.8%	56.8%	0.0%	45,461	39.2%	39.2%	0.0%
Dec	12,420	83.8%	83.8%	0.0%	28,899	54.1%	54.1%	0.0%	45,870	41.9%	41.9%	0.0%

2020
CP K20000
Wharton Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	STR2020	ASR	DIFFERENCE	FLOW	STR2020	ASR	DIFFERENCE	FLOW	STR2020	ASR	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
Jan	19,369	81.1%	81.1%	0.0%	30,252	62.2%	62.2%	0.0%	51,527	44.6%	44.6%	0.0%
Feb	16,828	83.8%	83.8%	0.0%	33,156	55.4%	55.4%	0.0%	50,317	39.2%	39.2%	0.0%
Mar	12,543	97.3%	97.3%	0.0%	32,650	60.8%	60.8%	0.0%	63,701	36.5%	36.5%	0.0%
Apr	16,066	94.6%	94.6%	0.0%	33,382	58.1%	58.1%	0.0%	60,159	36.5%	36.5%	0.0%
May	18,692	95.9%	95.9%	0.0%	60,565	40.5%	40.5%	0.0%	85,898	32.4%	32.4%	0.0%
Jun	22,076	91.9%	91.9%	0.0%	58,552	47.3%	47.3%	0.0%	89,970	27.0%	27.0%	0.0%
Jul	13,035	90.5%	90.5%	0.0%	35,478	66.2%	66.2%	0.0%	55,708	23.0%	23.0%	0.0%
Aug	6,579	94.6%	94.6%	0.0%	19,307	81.1%	81.1%	0.0%	32,097	68.9%	68.9%	0.0%
Sep	11,187	93.2%	93.2%	0.0%	24,397	81.1%	81.1%	0.0%	36,714	45.9%	45.9%	0.0%
Oct	9,039	91.9%	91.9%	0.0%	22,136	67.6%	67.6%	0.0%	46,054	32.4%	32.4%	0.0%
Nov	10,294	87.8%	87.8%	0.0%	28,919	52.7%	52.7%	0.0%	45,461	39.2%	39.2%	0.0%
Dec	12,420	86.5%	86.5%	0.0%	28,899	54.1%	54.1%	0.0%	45,870	33.8%	33.8%	0.0%

2016 LCRWPG WATER PLAN Environmental Impacts of the Aquifer Storage and Recovery Project

2020 Colorado River Instream Flow Analysis

2020
CP J10000
Colorado Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	ASR	DIFFERENCE	FLOW	BASE	ASR	DIFFERENCE	FLOW	BASE	ASR	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
Jan	20,906	77.0%	77.0%	0.0%	29,944	62.2%	62.2%	0.0%	50,912	40.5%	40.5%	0.0%
Feb	20,826	77.0%	77.0%	0.0%	32,767	59.5%	59.5%	0.0%	49,706	39.2%	39.2%	0.0%
Mar	23,058	93.2%	93.2%	0.0%	32,281	77.0%	77.0%	0.0%	62,717	40.5%	40.5%	0.0%
Apr	17,792	100.0%	100.0%	0.0%	32,965	89.2%	89.2%	0.0%	58,136	45.9%	45.9%	0.0%
May	26,132	100.0%	100.0%	0.0%	59,397	90.5%	90.5%	0.0%	80,918	70.3%	70.3%	0.0%
Jun	31,775	97.3%	97.3%	0.0%	57,540	90.5%	90.5%	0.0%	85,686	77.0%	77.0%	0.0%
Jul	21,029	100.0%	100.0%	0.0%	35,048	94.6%	94.6%	0.0%	55,031	79.7%	79.7%	0.0%
Aug	11,683	100.0%	100.0%	0.0%	19,061	100.0%	100.0%	0.0%	31,728	89.2%	89.2%	0.0%
Sep	16,602	100.0%	100.0%	0.0%	24,099	97.3%	97.3%	0.0%	36,298	87.8%	87.8%	0.0%
Oct	11,683	100.0%	100.0%	0.0%	21,890	90.5%	90.5%	0.0%	45,562	52.7%	52.7%	0.0%
Nov	12,020	87.8%	87.8%	0.0%	28,562	50.0%	50.0%	0.0%	44,926	32.4%	33.8%	1.4%
Dec	18,508	82.4%	82.4%	0.0%	28,530	47.3%	47.3%	0.0%	45,316	31.1%	31.1%	0.0%

2020
CP J30000
Bastrop Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	ASR	DIFFERENCE	FLOW	BASE	ASR	DIFFERENCE	FLOW	BASE	ASR	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
Jan	12,789	79.7%	79.7%	0.0%	19,246	58.1%	58.1%	0.0%	26,624	41.9%	41.9%	0.0%
Feb	15,217	67.6%	67.6%	0.0%	17,605	64.9%	64.9%	0.0%	27,602	44.6%	44.6%	0.0%
Mar	16,848	93.2%	93.2%	0.0%	16,848	93.2%	93.2%	0.0%	30,559	66.2%	66.2%	0.0%
Apr	11,127	98.6%	98.6%	0.0%	17,078	95.9%	95.9%	0.0%	37,785	68.9%	68.9%	0.0%
May	16,909	95.9%	95.9%	0.0%	35,601	91.9%	91.9%	0.0%	50,666	82.4%	82.4%	0.0%
Jun	12,020	100.0%	100.0%	0.0%	24,873	100.0%	100.0%	0.0%	43,617	85.1%	85.1%	0.0%
Jul	8,424	100.0%	100.0%	0.0%	21,336	97.3%	97.3%	0.0%	37,507	91.9%	91.9%	0.0%
Aug	7,563	100.0%	100.0%	0.0%	11,929	100.0%	100.0%	0.0%	23,427	98.6%	98.6%	0.0%
Sep	7,319	100.0%	100.0%	0.0%	14,043	97.3%	97.3%	0.0%	25,170	89.2%	89.2%	0.0%
Oct	7,809	100.0%	100.0%	0.0%	15,064	86.5%	86.5%	0.0%	26,624	66.2%	66.2%	0.0%
Nov	10,711	79.7%	79.7%	0.0%	16,840	60.8%	60.8%	0.0%	25,230	40.5%	40.5%	0.0%
Dec	11,437	75.7%	75.7%	0.0%	19,123	51.4%	51.4%	0.0%	27,669	33.8%	33.8%	0.0%

2016 LCRWPG WATER PLAN **Environmental Impacts of the Aquifer Storage and Recovery Project**

2020 Freshwater Inflows to Matagorda Bay

SPRINGTIME ONSET FLOW CRITERIA MET (3 CONSECUTIVE MONTHS DURING JAN-MAY)						
CRITERIA	TARGET	STR2020		ASR		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	114,000	45	60.8%	45	60.8%	0.0%
MBHE 2	168,700	43	58.1%	43	58.1%	0.0%
MBHE 3	246,200	40	54.1%	40	54.1%	0.0%
MBHE 4	433,200	25	33.8%	25	33.8%	0.0%

FALL ONSET FLOW CRITERIA MET (3 CONSECUTIVE MONTHS DURING AUG-OCT)						
CRITERIA	TARGET	STR2020		ASR		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	81,000	50	67.6%	50	67.6%	0.0%
MBHE 2	119,900	45	60.8%	45	60.8%	0.0%
MBHE 3	175,000	43	58.1%	43	58.1%	0.0%
MBHE 4	307,800	35	47.3%	35	47.3%	0.0%

INTERVENING SIX MONTHS FLOW CRITERIA MET						
CRITERIA	TARGET	STR2020		ASR		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	105,000	47	63.5%	47	63.5%	0.0%
MBHE 2	155,400	43	58.1%	43	58.1%	0.0%
MBHE 3	226,800	41	55.4%	41	55.4%	0.0%
MBHE 4	399,000	28	37.8%	27	36.5%	-1.4%

Note: Intervening six months includes June, July, November, December, and the remaining Springtime Onset months that are not used for the 3 consecutive month calculation.

NUMBER OF MONTHS THAT THRESHOLD LEVEL IS MET						
CRITERIA	TARGET	STR2020		ASR		DIFFERENCE
	(AC-FT/mo)	# OF MONTHS	%	# OF MONTHS	%	%
THRESHOLD	15,000	561	63.2%	561	63.2%	0.0%

APPENDIX 5E
ENVIRONMENTAL IMPACTS OF STRATEGIES FROM THE
2011 REGION K PLAN

2010 Freshwater Inflows to Matagorda Bay

SPRINGTIME ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	114,000	43	72.9%	43	72.9%	0.0%
MBHE 2	168,700	41	69.5%	41	69.5%	0.0%
MBHE 3	246,200	38	64.4%	38	64.4%	0.0%
MBHE 4	433,200	28	47.5%	28	47.5%	0.0%

FALL ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	81,000	34	57.6%	34	57.6%	0.0%
MBHE 2	119,900	29	49.2%	29	49.2%	0.0%
MBHE 3	175,000	20	33.9%	20	33.9%	0.0%
MBHE 4	307,800	13	22.0%	13	22.0%	0.0%

INTERVENING SIX MONTHS FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	105,000	52	88.1%	52	88.1%	0.0%
MBHE 2	155,400	45	76.3%	45	76.3%	0.0%
MBHE 3	226,800	40	67.8%	40	67.8%	0.0%
MBHE 4	399,000	31	52.5%	31	52.5%	0.0%

Note: Intervening six months includes June, July, November, December, and the remaining Springtime Onset months that are not used for the 3 consecutive month calculation.

NUMBER OF MONTHS THAT THRESHOLD LEVEL IS MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT/mo)	# OF MONTHS	%	# OF MONTHS	%	%
THRESHOLD	15,000	546	77.1%	546	77.1%	0.0%

2060 Freshwater Inflows to Matagorda Bay

SPRINGTIME ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	114,000	48	81.4%	46	78.0%	-3.4%
MBHE 2	168,700	39	66.1%	39	66.1%	0.0%
MBHE 3	246,200	35	59.3%	37	62.7%	3.4%
MBHE 4	433,200	22	37.3%	22	37.3%	0.0%

FALL ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	81,000	38	64.4%	38	64.4%	0.0%
MBHE 2	119,900	31	52.5%	30	50.8%	-1.7%
MBHE 3	175,000	19	32.2%	17	28.8%	-3.4%
MBHE 4	307,800	11	18.6%	11	18.6%	0.0%

INTERVENING SIX MONTHS FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	105,000	53	89.8%	54	91.5%	1.7%
MBHE 2	155,400	46	78.0%	45	76.3%	-1.7%
MBHE 3	226,800	39	66.1%	39	66.1%	0.0%
MBHE 4	399,000	32	54.2%	32	54.2%	0.0%

Note: Intervening six months includes June, July, November, December, and the remaining Springtime Onset months that are not used for the 3 consecutive month calculation.

NUMBER OF MONTHS THAT THRESHOLD LEVEL IS MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT/mo)	# OF MONTHS	%	# OF MONTHS	%	%
THRESHOLD	15,000	540	76.3%	530	74.9%	-1.4%

2010 Colorado River Instream Flow Analysis

2010
CP K10000
Matagorda Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	91.5%	91.5%	0.0%	30,252	74.6%	74.6%	0.0%	51,527	57.6%	57.6%	0.0%
FEB	16,828	93.2%	93.2%	0.0%	33,156	76.3%	76.3%	0.0%	50,317	61.0%	61.0%	0.0%
MAR	12,543	100.0%	100.0%	0.0%	32,650	79.7%	79.7%	0.0%	63,701	50.8%	50.8%	0.0%
APR	16,066	79.7%	79.7%	0.0%	33,382	57.6%	57.6%	0.0%	60,159	52.5%	52.5%	0.0%
MAY	18,692	83.1%	83.1%	0.0%	60,565	61.0%	61.0%	0.0%	85,898	59.3%	59.3%	0.0%
JUN	22,076	62.7%	62.7%	0.0%	58,552	47.5%	47.5%	0.0%	89,970	42.4%	42.4%	0.0%
JUL	13,035	42.4%	42.4%	0.0%	35,478	32.2%	32.2%	0.0%	55,708	32.2%	32.2%	0.0%
AUG	6,579	74.6%	74.6%	0.0%	19,307	35.6%	35.6%	0.0%	32,097	25.4%	25.4%	0.0%
SEP	11,187	66.1%	66.1%	0.0%	24,397	50.8%	50.8%	0.0%	36,714	44.1%	44.1%	0.0%
OCT	9,039	88.1%	88.1%	0.0%	22,136	74.6%	74.6%	0.0%	46,054	55.9%	55.9%	0.0%
NOV	10,294	100.0%	100.0%	0.0%	28,919	74.6%	74.6%	0.0%	45,461	49.2%	49.2%	0.0%
DEC	12,420	98.3%	98.3%	0.0%	28,899	78.0%	78.0%	0.0%	45,870	64.4%	64.4%	0.0%

2010
CP K20000
Wharton Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	91.5%	91.5%	0.0%	30,252	74.6%	74.6%	0.0%	51,527	52.5%	52.5%	0.0%
FEB	16,828	91.5%	91.5%	0.0%	33,156	72.9%	72.9%	0.0%	50,317	57.6%	57.6%	0.0%
MAR	12,543	100.0%	100.0%	0.0%	32,650	86.4%	86.4%	0.0%	63,701	49.2%	49.2%	0.0%
APR	16,066	91.5%	91.5%	0.0%	33,382	64.4%	64.4%	0.0%	60,159	54.2%	54.2%	0.0%
MAY	18,692	100.0%	100.0%	0.0%	60,565	62.7%	62.7%	0.0%	85,898	61.0%	61.0%	0.0%
JUN	22,076	93.2%	93.2%	0.0%	58,552	50.8%	50.8%	0.0%	89,970	45.8%	45.8%	0.0%
JUL	13,035	98.3%	98.3%	0.0%	35,478	40.7%	40.7%	0.0%	55,708	30.5%	30.5%	0.0%
AUG	6,579	98.3%	98.3%	0.0%	19,307	84.7%	84.7%	0.0%	32,097	49.2%	49.2%	0.0%
SEP	11,187	93.2%	93.2%	0.0%	24,397	61.0%	61.0%	0.0%	36,714	49.2%	49.2%	0.0%
OCT	9,039	91.5%	91.5%	0.0%	22,136	74.6%	74.6%	0.0%	46,054	50.8%	50.8%	0.0%
NOV	10,294	100.0%	100.0%	0.0%	28,919	74.6%	74.6%	0.0%	45,461	44.1%	44.1%	0.0%
DEC	12,420	98.3%	98.3%	0.0%	28,899	79.7%	79.7%	0.0%	45,870	54.2%	54.2%	0.0%

2010 Colorado River Instream Flow Analysis

2010
CP J10000
Colorado Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	20,906	86.4%	86.4%	0.0%	29,944	69.5%	69.5%	0.0%	50,912	44.1%	44.1%	0.0%
FEB	20,826	81.4%	81.4%	0.0%	32,767	64.4%	64.4%	0.0%	49,706	50.8%	50.8%	0.0%
MAR	23,058	100.0%	100.0%	0.0%	32,281	81.4%	81.4%	0.0%	62,717	47.5%	47.5%	0.0%
APR	17,792	100.0%	100.0%	0.0%	32,965	86.4%	86.4%	0.0%	58,136	50.8%	50.8%	0.0%
MAY	26,132	100.0%	100.0%	0.0%	59,397	89.8%	89.8%	0.0%	80,918	72.9%	72.9%	0.0%
JUN	31,775	100.0%	100.0%	0.0%	57,540	96.6%	96.6%	0.0%	85,686	67.8%	67.8%	0.0%
JUL	21,029	100.0%	100.0%	0.0%	35,048	98.3%	98.3%	0.0%	55,031	86.4%	86.4%	0.0%
AUG	11,683	100.0%	100.0%	0.0%	19,061	100.0%	100.0%	0.0%	31,728	96.6%	96.6%	0.0%
SEP	16,602	100.0%	100.0%	0.0%	24,099	98.3%	98.3%	0.0%	36,298	91.5%	91.5%	0.0%
OCT	11,683	100.0%	100.0%	0.0%	21,890	89.8%	89.8%	0.0%	45,562	55.9%	55.9%	0.0%
NOV	12,020	94.9%	94.9%	0.0%	28,562	62.7%	62.7%	0.0%	44,926	42.4%	42.4%	0.0%
DEC	18,508	88.1%	88.1%	0.0%	28,530	74.6%	74.6%	0.0%	45,316	44.1%	44.1%	0.0%

2010
CP J30000
Bastrop Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	12,789	86.4%	86.4%	0.0%	19,246	69.5%	69.5%	0.0%	26,624	47.5%	47.5%	0.0%
FEB	15,217	83.1%	83.1%	0.0%	17,605	83.1%	83.1%	0.0%	27,602	57.6%	57.6%	0.0%
MAR	16,848	100.0%	100.0%	0.0%	16,848	100.0%	100.0%	0.0%	30,559	81.4%	81.4%	0.0%
APR	11,127	100.0%	100.0%	0.0%	17,078	100.0%	100.0%	0.0%	37,785	66.1%	66.1%	0.0%
MAY	16,909	100.0%	100.0%	0.0%	35,601	91.5%	91.5%	0.0%	50,666	88.1%	88.1%	0.0%
JUN	12,020	100.0%	100.0%	0.0%	24,873	100.0%	100.0%	0.0%	43,617	96.6%	96.6%	0.0%
JUL	8,424	100.0%	100.0%	0.0%	21,336	98.3%	98.3%	0.0%	37,507	94.9%	94.9%	0.0%
AUG	7,563	100.0%	100.0%	0.0%	11,929	100.0%	100.0%	0.0%	23,427	100.0%	100.0%	0.0%
SEP	7,319	100.0%	100.0%	0.0%	14,043	98.3%	98.3%	0.0%	25,170	83.1%	83.1%	0.0%
OCT	7,809	100.0%	100.0%	0.0%	15,064	96.6%	96.6%	0.0%	26,624	74.6%	74.6%	0.0%
NOV	10,711	94.9%	94.9%	0.0%	16,840	81.4%	81.4%	0.0%	25,230	52.5%	52.5%	0.0%
DEC	11,437	89.8%	89.8%	0.0%	19,123	78.0%	78.0%	0.0%	27,669	54.2%	54.2%	0.0%

2060 Colorado River Instream Flow Analysis

2060
CP K10000
Matagorda Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	86.4%	89.8%	3.4%	30,252	78.0%	78.0%	0.0%	51,527	64.4%	64.4%	0.0%
FEB	16,828	91.5%	91.5%	0.0%	33,156	81.4%	81.4%	0.0%	50,317	67.8%	67.8%	0.0%
MAR	12,543	98.3%	98.3%	0.0%	32,650	89.8%	89.8%	0.0%	63,701	44.1%	44.1%	0.0%
APR	16,066	86.4%	84.7%	-1.7%	33,382	66.1%	67.8%	1.7%	60,159	44.1%	47.5%	3.4%
MAY	18,692	81.4%	79.7%	-1.7%	60,565	54.2%	55.9%	1.7%	85,898	47.5%	45.8%	-1.7%
JUN	22,076	71.2%	71.2%	0.0%	58,552	47.5%	47.5%	0.0%	89,970	39.0%	39.0%	0.0%
JUL	13,035	52.5%	69.5%	16.9%	35,478	39.0%	39.0%	0.0%	55,708	28.8%	32.2%	3.4%
AUG	6,579	72.9%	98.3%	25.4%	19,307	39.0%	44.1%	5.1%	32,097	27.1%	30.5%	3.4%
SEP	11,187	71.2%	76.3%	5.1%	24,397	61.0%	59.3%	-1.7%	36,714	59.3%	59.3%	0.0%
OCT	9,039	89.8%	91.5%	1.7%	22,136	76.3%	74.6%	-1.7%	46,054	55.9%	55.9%	0.0%
NOV	10,294	96.6%	96.6%	0.0%	28,919	78.0%	79.7%	1.7%	45,461	64.4%	64.4%	0.0%
DEC	12,420	100.0%	100.0%	0.0%	28,899	83.1%	83.1%	0.0%	45,870	62.7%	66.1%	3.4%

2060
CP K20000
Wharton Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	84.7%	86.4%	1.7%	30,252	78.0%	78.0%	0.0%	51,527	54.2%	57.6%	3.4%
FEB	16,828	89.8%	89.8%	0.0%	33,156	76.3%	76.3%	0.0%	50,317	59.3%	61.0%	1.7%
MAR	12,543	98.3%	98.3%	0.0%	32,650	93.2%	91.5%	-1.7%	63,701	44.1%	44.1%	0.0%
APR	16,066	96.6%	91.5%	-5.1%	33,382	71.2%	72.9%	1.7%	60,159	47.5%	49.2%	1.7%
MAY	18,692	93.2%	94.9%	1.7%	60,565	59.3%	59.3%	0.0%	85,898	49.2%	49.2%	0.0%
JUN	22,076	88.1%	93.2%	5.1%	58,552	57.6%	57.6%	0.0%	89,970	40.7%	40.7%	0.0%
JUL	13,035	94.9%	98.3%	3.4%	35,478	40.7%	44.1%	3.4%	55,708	30.5%	28.8%	-1.7%
AUG	6,579	96.6%	98.3%	1.7%	19,307	64.4%	81.4%	16.9%	32,097	32.2%	44.1%	11.9%
SEP	11,187	91.5%	94.9%	3.4%	24,397	62.7%	64.4%	1.7%	36,714	57.6%	57.6%	0.0%
OCT	9,039	91.5%	93.2%	1.7%	22,136	76.3%	74.6%	-1.7%	46,054	54.2%	54.2%	0.0%
NOV	10,294	96.6%	96.6%	0.0%	28,919	76.3%	78.0%	1.7%	45,461	54.2%	54.2%	0.0%
DEC	12,420	96.6%	96.6%	0.0%	28,899	81.4%	81.4%	0.0%	45,870	59.3%	59.3%	0.0%

2060 Colorado River Instream Flow Analysis

2060
CP J10000
Colorado Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	20,906	81.4%	81.4%	0.0%	29,944	72.9%	72.9%	0.0%	50,912	44.1%	45.8%	1.7%
FEB	20,826	83.1%	84.7%	1.7%	32,767	74.6%	74.6%	0.0%	49,706	54.2%	54.2%	0.0%
MAR	23,058	98.3%	98.3%	0.0%	32,281	88.1%	86.4%	-1.7%	62,717	42.4%	42.4%	0.0%
APR	17,792	100.0%	100.0%	0.0%	32,965	76.3%	74.6%	-1.7%	58,136	49.2%	49.2%	0.0%
MAY	26,132	100.0%	100.0%	0.0%	59,397	78.0%	81.4%	3.4%	80,918	57.6%	57.6%	0.0%
JUN	31,775	98.3%	98.3%	0.0%	57,540	83.1%	89.8%	6.8%	85,686	57.6%	59.3%	1.7%
JUL	21,029	98.3%	98.3%	0.0%	35,048	91.5%	96.6%	5.1%	55,031	50.8%	64.4%	13.6%
AUG	11,683	98.3%	98.3%	0.0%	19,061	98.3%	98.3%	0.0%	31,728	83.1%	91.5%	8.5%
SEP	16,602	98.3%	100.0%	1.7%	24,099	94.9%	98.3%	3.4%	36,298	74.6%	81.4%	6.8%
OCT	11,683	98.3%	100.0%	1.7%	21,890	76.3%	78.0%	1.7%	45,562	61.0%	61.0%	0.0%
NOV	12,020	89.8%	89.8%	0.0%	28,562	61.0%	66.1%	5.1%	44,926	47.5%	49.2%	1.7%
DEC	18,508	84.7%	84.7%	0.0%	28,530	76.3%	78.0%	1.7%	45,316	49.2%	49.2%	0.0%

2060
CP J30000
Bastrop Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	12,789	84.7%	88.1%	3.4%	19,246	69.5%	72.9%	3.4%	26,624	52.5%	55.9%	3.4%
FEB	15,217	84.7%	83.1%	-1.7%	17,605	78.0%	79.7%	1.7%	27,602	62.7%	64.4%	1.7%
MAR	16,848	98.3%	98.3%	0.0%	16,848	98.3%	98.3%	0.0%	30,559	81.4%	84.7%	3.4%
APR	11,127	100.0%	100.0%	0.0%	17,078	100.0%	100.0%	0.0%	37,785	57.6%	59.3%	1.7%
MAY	16,909	100.0%	100.0%	0.0%	35,601	91.5%	91.5%	0.0%	50,666	81.4%	81.4%	0.0%
JUN	12,020	100.0%	100.0%	0.0%	24,873	100.0%	100.0%	0.0%	43,617	89.8%	93.2%	3.4%
JUL	8,424	100.0%	100.0%	0.0%	21,336	94.9%	94.9%	0.0%	37,507	79.7%	83.1%	3.4%
AUG	7,563	100.0%	100.0%	0.0%	11,929	98.3%	98.3%	0.0%	23,427	98.3%	98.3%	0.0%
SEP	7,319	100.0%	100.0%	0.0%	14,043	96.6%	98.3%	1.7%	25,170	81.4%	84.7%	3.4%
OCT	7,809	100.0%	100.0%	0.0%	15,064	89.8%	93.2%	3.4%	26,624	66.1%	67.8%	1.7%
NOV	10,711	89.8%	91.5%	1.7%	16,840	69.5%	71.2%	1.7%	25,230	50.8%	50.8%	0.0%
DEC	11,437	91.5%	89.8%	-1.7%	19,123	74.6%	74.6%	0.0%	27,669	52.5%	55.9%	3.4%

2010 Freshwater Inflows to Matagorda Bay

SPRINGTIME ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	114,000	43	72.9%	45	76.3%	3.4%
MBHE 2	168,700	41	69.5%	42	71.2%	1.7%
MBHE 3	246,200	38	64.4%	39	66.1%	1.7%
MBHE 4	433,200	28	47.5%	31	52.5%	5.0%

FALL ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	81,000	34	57.6%	37	62.7%	5.1%
MBHE 2	119,900	29	49.2%	31	52.5%	3.3%
MBHE 3	175,000	20	33.9%	22	37.3%	3.4%
MBHE 4	307,800	13	22.0%	13	22.0%	0.0%

INTERVENING SIX MONTHS FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	105,000	52	88.1%	54	91.5%	3.4%
MBHE 2	155,400	45	76.3%	50	84.7%	8.4%
MBHE 3	226,800	40	67.8%	41	69.5%	1.7%
MBHE 4	399,000	31	52.5%	32	54.2%	1.7%

Note: Intervening six months includes June, July, November, December, and the remaining Springtime Onset months that are not used for the 3 consecutive month calculation.

NUMBER OF MONTHS THAT THRESHOLD LEVEL IS MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT/mo)	# OF MONTHS	%	# OF MONTHS	%	%
THRESHOLD	15,000	546	77.1%	595	84.0%	6.9%

2060 Freshwater Inflows to Matagorda Bay

SPRINGTIME ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	114,000	48	81.4%	50	84.7%	3.3%
MBHE 2	168,700	39	66.1%	44	74.6%	8.5%
MBHE 3	246,200	35	59.3%	37	62.7%	3.4%
MBHE 4	433,200	22	37.3%	25	42.4%	5.1%

FALL ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	81,000	38	64.4%	42	71.2%	6.8%
MBHE 2	119,900	31	52.5%	33	55.9%	3.4%
MBHE 3	175,000	19	32.2%	23	39.0%	6.8%
MBHE 4	307,800	11	18.6%	13	22.0%	3.4%

INTERVENING SIX MONTHS FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	105,000	53	89.8%	59	100.0%	10.2%
MBHE 2	155,400	46	78.0%	54	91.5%	13.6%
MBHE 3	226,800	39	66.1%	44	74.6%	8.5%
MBHE 4	399,000	32	54.2%	32	54.2%	0.0%

Note: Intervening six months includes June, July, November, December, and the remaining Springtime Onset months that are not used for the 3 consecutive month calculation.

NUMBER OF MONTHS THAT THRESHOLD LEVEL IS MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT/mo)	# OF MONTHS	%	# OF MONTHS	%	%
THRESHOLD	15,000	540	76.3%	594	83.9%	7.6%

2010 Colorado River Instream Flow Analysis

2010 CP K10000 Matagorda Co.	MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
		FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
		(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
	JAN	19,369	84.7%	93.2%	8.5%	30,252	76.3%	83.1%	6.8%	51,527	62.7%	64.4%	1.7%
	FEB	16,828	89.8%	98.3%	8.5%	33,156	79.7%	79.7%	0.0%	50,317	66.1%	62.7%	-3.4%
	MAR	12,543	96.6%	100.0%	3.4%	32,650	88.1%	81.4%	-6.7%	63,701	42.4%	54.2%	11.8%
	APR	16,066	84.7%	86.4%	1.7%	33,382	64.4%	61.0%	-3.4%	60,159	42.4%	52.5%	10.1%
	MAY	18,692	81.4%	88.1%	6.7%	60,565	54.2%	62.7%	8.5%	85,898	47.5%	62.7%	15.2%
	JUN	22,076	71.2%	67.8%	-3.4%	58,552	47.5%	52.5%	5.0%	89,970	39.0%	44.1%	5.1%
	JUL	13,035	52.5%	91.5%	39.0%	35,478	39.0%	32.2%	-6.8%	55,708	28.8%	32.2%	3.4%
	AUG	6,579	71.2%	100.0%	28.8%	19,307	37.3%	39.0%	1.7%	32,097	25.4%	30.5%	5.1%
	SEP	11,187	69.5%	78.0%	8.5%	24,397	59.3%	57.6%	-1.7%	36,714	57.6%	45.8%	-11.8%
	OCT	9,039	88.1%	100.0%	11.9%	22,136	74.6%	79.7%	5.1%	46,054	54.2%	55.9%	1.7%
	NOV	10,294	94.9%	100.0%	5.1%	28,919	76.3%	83.1%	6.8%	45,461	62.7%	54.2%	-8.5%
	DEC	12,420	98.3%	100.0%	1.7%	28,899	81.4%	84.7%	3.3%	45,870	61.0%	72.9%	11.9%

2010 CP K20000 Wharton Co.	MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
		FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
		(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
	JAN	19,369	84.7%	91.5%	6.8%	30,252	78.0%	83.1%	5.1%	51,527	54.2%	59.3%	5.1%
	FEB	16,828	89.8%	98.3%	8.5%	33,156	76.3%	83.1%	6.8%	50,317	59.3%	61.0%	1.7%
	MAR	12,543	98.3%	100.0%	1.7%	32,650	93.2%	84.7%	-8.5%	63,701	44.1%	54.2%	10.2%
	APR	16,066	96.6%	100.0%	3.4%	33,382	71.2%	71.2%	0.0%	60,159	47.5%	54.2%	6.8%
	MAY	18,692	93.2%	100.0%	6.8%	60,565	59.3%	66.1%	6.8%	85,898	49.2%	62.7%	13.6%
	JUN	22,076	88.1%	98.3%	10.2%	58,552	57.6%	54.2%	-3.4%	89,970	40.7%	47.5%	6.8%
	JUL	13,035	94.9%	98.3%	3.4%	35,478	40.7%	72.9%	32.2%	55,708	30.5%	32.2%	1.7%
	AUG	6,579	96.6%	100.0%	3.4%	19,307	64.4%	94.9%	30.5%	32,097	32.2%	66.1%	33.9%
	SEP	11,187	91.5%	100.0%	8.5%	24,397	62.7%	83.1%	20.3%	36,714	57.6%	52.5%	-5.1%
	OCT	9,039	91.5%	100.0%	8.5%	22,136	76.3%	84.7%	8.5%	46,054	54.2%	52.5%	-1.7%
	NOV	10,294	96.6%	100.0%	3.4%	28,919	76.3%	83.1%	6.8%	45,461	54.2%	49.2%	-5.1%
	DEC	12,420	96.6%	100.0%	3.4%	28,899	81.4%	84.7%	3.4%	45,870	59.3%	64.4%	5.1%

2010 Colorado River Instream Flow Analysis

2010
CP J10000
Colorado Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	20,906	81.4%	89.8%	8.5%	29,944	72.9%	81.4%	8.5%	50,912	44.1%	50.8%	6.8%
FEB	20,826	83.1%	89.8%	6.8%	32,767	74.6%	74.6%	0.0%	49,706	54.2%	57.6%	3.4%
MAR	23,058	98.3%	100.0%	1.7%	32,281	88.1%	78.0%	-10.2%	62,717	42.4%	47.5%	5.1%
APR	17,792	100.0%	100.0%	0.0%	32,965	76.3%	98.3%	22.0%	58,136	49.2%	52.5%	3.4%
MAY	26,132	100.0%	100.0%	0.0%	59,397	78.0%	94.9%	16.9%	80,918	57.6%	79.7%	22.0%
JUN	31,775	98.3%	100.0%	1.7%	57,540	83.1%	98.3%	15.3%	85,686	57.6%	78.0%	20.3%
JUL	21,029	98.3%	100.0%	1.7%	35,048	91.5%	100.0%	8.5%	55,031	50.8%	94.9%	44.1%
AUG	11,683	98.3%	100.0%	1.7%	19,061	98.3%	100.0%	1.7%	31,728	83.1%	98.3%	15.3%
SEP	16,602	98.3%	100.0%	1.7%	24,099	94.9%	100.0%	5.1%	36,298	74.6%	94.9%	20.3%
OCT	11,683	98.3%	100.0%	1.7%	21,890	76.3%	100.0%	23.7%	45,562	61.0%	57.6%	-3.4%
NOV	12,020	89.8%	100.0%	10.2%	28,562	61.0%	74.6%	13.6%	44,926	47.5%	45.8%	-1.7%
DEC	18,508	84.7%	96.6%	11.9%	28,530	76.3%	81.4%	5.1%	45,316	49.2%	50.8%	1.7%

2010
CP J30000
Bastrop Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	12,789	83.1%	100.0%	16.9%	19,246	67.8%	89.8%	22.0%	26,624	50.8%	64.4%	13.6%
FEB	15,217	83.1%	94.9%	11.8%	17,605	76.3%	89.8%	13.5%	27,602	61.0%	72.9%	11.9%
MAR	16,848	96.6%	100.0%	3.4%	16,848	96.6%	100.0%	3.4%	30,559	79.7%	86.4%	6.7%
APR	11,127	98.3%	100.0%	1.7%	17,078	98.3%	100.0%	1.7%	37,785	55.9%	84.7%	28.8%
MAY	16,909	98.3%	100.0%	1.7%	35,601	89.8%	91.5%	1.7%	50,666	81.4%	91.5%	10.1%
JUN	12,020	98.3%	100.0%	1.7%	24,873	98.3%	100.0%	1.7%	43,617	88.1%	98.3%	10.2%
JUL	8,424	98.3%	100.0%	1.7%	21,336	93.2%	100.0%	6.8%	37,507	78.0%	96.6%	18.6%
AUG	7,563	98.3%	100.0%	1.7%	11,929	96.6%	100.0%	3.4%	23,427	96.6%	100.0%	3.4%
SEP	7,319	98.3%	100.0%	1.7%	14,043	94.9%	100.0%	5.1%	25,170	81.4%	96.6%	15.2%
OCT	7,809	98.3%	100.0%	1.7%	15,064	88.1%	100.0%	11.9%	26,624	64.4%	91.5%	27.1%
NOV	10,711	88.1%	100.0%	11.9%	16,840	67.8%	98.3%	30.5%	25,230	49.2%	69.5%	20.3%
DEC	11,437	89.8%	100.0%	10.2%	19,123	72.9%	88.1%	15.2%	27,669	50.8%	66.1%	15.3%

2060 Colorado River Instream Flow Analysis

2060 CP K10000 Matagorda Co.	MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
		FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
		(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	86.4%	100.0%	13.6%	30,252	78.0%	91.5%	13.5%	51,527	64.4%	72.9%	8.5%	
FEB	16,828	91.5%	100.0%	8.5%	33,156	81.4%	91.5%	10.1%	50,317	67.8%	74.6%	6.8%	
MAR	12,543	98.3%	100.0%	1.7%	32,650	89.8%	88.1%	-1.7%	63,701	44.1%	49.2%	5.1%	
APR	16,066	86.4%	96.6%	10.2%	33,382	66.1%	72.9%	6.8%	60,159	44.1%	49.2%	5.1%	
MAY	18,692	81.4%	91.5%	10.1%	60,565	54.2%	59.3%	5.1%	85,898	47.5%	50.8%	3.3%	
JUN	22,076	71.2%	78.0%	6.8%	58,552	47.5%	52.5%	5.0%	89,970	39.0%	42.4%	3.4%	
JUL	13,035	52.5%	76.3%	23.8%	35,478	39.0%	39.0%	0.0%	55,708	28.8%	32.2%	3.4%	
AUG	6,579	72.9%	100.0%	27.1%	19,307	39.0%	47.5%	8.5%	32,097	27.1%	37.3%	10.2%	
SEP	11,187	71.2%	93.2%	22.0%	24,397	61.0%	66.1%	5.1%	36,714	59.3%	59.3%	0.0%	
OCT	9,039	89.8%	100.0%	10.2%	22,136	76.3%	88.1%	11.8%	46,054	55.9%	62.7%	6.8%	
NOV	10,294	96.6%	100.0%	3.4%	28,919	78.0%	88.1%	10.1%	45,461	64.4%	71.2%	6.8%	
DEC	12,420	100.0%	100.0%	0.0%	28,899	83.1%	93.2%	10.1%	45,870	62.7%	78.0%	15.3%	

2060 CP K20000 Wharton Co.	MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
		FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
		(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	84.7%	100.0%	15.3%	30,252	78.0%	91.5%	13.6%	51,527	54.2%	67.8%	13.6%	
FEB	16,828	89.8%	100.0%	10.2%	33,156	76.3%	86.4%	10.2%	50,317	59.3%	67.8%	8.5%	
MAR	12,543	98.3%	100.0%	1.7%	32,650	93.2%	91.5%	-1.7%	63,701	44.1%	50.8%	6.8%	
APR	16,066	96.6%	100.0%	3.4%	33,382	71.2%	78.0%	6.8%	60,159	47.5%	49.2%	1.7%	
MAY	18,692	93.2%	100.0%	6.8%	60,565	59.3%	64.4%	5.1%	85,898	49.2%	52.5%	3.4%	
JUN	22,076	88.1%	96.6%	8.5%	58,552	57.6%	57.6%	0.0%	89,970	40.7%	45.8%	5.1%	
JUL	13,035	94.9%	98.3%	3.4%	35,478	40.7%	49.2%	8.5%	55,708	30.5%	32.2%	1.7%	
AUG	6,579	96.6%	100.0%	3.4%	19,307	64.4%	84.7%	20.3%	32,097	32.2%	44.1%	11.9%	
SEP	11,187	91.5%	100.0%	8.5%	24,397	62.7%	79.7%	16.9%	36,714	57.6%	62.7%	5.1%	
OCT	9,039	91.5%	100.0%	8.5%	22,136	76.3%	88.1%	11.9%	46,054	54.2%	61.0%	6.8%	
NOV	10,294	96.6%	100.0%	3.4%	28,919	76.3%	88.1%	11.9%	45,461	54.2%	66.1%	11.9%	
DEC	12,420	96.6%	100.0%	3.4%	28,899	81.4%	93.2%	11.9%	45,870	59.3%	76.3%	16.9%	

2060
CP J10000
Colorado Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	20,906	81.4%	100.0%	18.6%	29,944	72.9%	86.4%	13.6%	50,912	44.1%	62.7%	18.6%
FEB	20,826	83.1%	98.3%	15.3%	32,767	74.6%	84.7%	10.2%	49,706	54.2%	69.5%	15.3%
MAR	23,058	98.3%	100.0%	1.7%	32,281	88.1%	86.4%	-1.7%	62,717	42.4%	44.1%	1.7%
APR	17,792	100.0%	100.0%	0.0%	32,965	76.3%	93.2%	16.9%	58,136	49.2%	49.2%	0.0%
MAY	26,132	100.0%	100.0%	0.0%	59,397	78.0%	93.2%	15.3%	80,918	57.6%	66.1%	8.5%
JUN	31,775	98.3%	100.0%	1.7%	57,540	83.1%	94.9%	11.9%	85,686	57.6%	66.1%	8.5%
JUL	21,029	98.3%	100.0%	1.7%	35,048	91.5%	96.6%	5.1%	55,031	50.8%	71.2%	20.3%
AUG	11,683	98.3%	100.0%	1.7%	19,061	98.3%	98.3%	0.0%	31,728	83.1%	91.5%	8.5%
SEP	16,602	98.3%	100.0%	1.7%	24,099	94.9%	100.0%	5.1%	36,298	74.6%	91.5%	16.9%
OCT	11,683	98.3%	100.0%	1.7%	21,890	76.3%	98.3%	22.0%	45,562	61.0%	64.4%	3.4%
NOV	12,020	89.8%	100.0%	10.2%	28,562	61.0%	84.7%	23.7%	44,926	47.5%	57.6%	10.2%
DEC	18,508	84.7%	98.3%	13.6%	28,530	76.3%	91.5%	15.3%	45,316	49.2%	64.4%	15.3%

2060
CP J30000
Bastrop Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	12,789	84.7%	100.0%	15.3%	19,246	69.5%	98.3%	28.8%	26,624	52.5%	86.4%	33.9%
FEB	15,217	84.7%	100.0%	15.3%	17,605	78.0%	100.0%	22.0%	27,602	62.7%	83.1%	20.4%
MAR	16,848	98.3%	100.0%	1.7%	16,848	98.3%	100.0%	1.7%	30,559	81.4%	88.1%	6.7%
APR	11,127	100.0%	100.0%	0.0%	17,078	100.0%	100.0%	0.0%	37,785	57.6%	84.7%	27.1%
MAY	16,909	100.0%	100.0%	0.0%	35,601	91.5%	93.2%	1.7%	50,666	81.4%	88.1%	6.7%
JUN	12,020	100.0%	100.0%	0.0%	24,873	100.0%	100.0%	0.0%	43,617	89.8%	94.9%	5.1%
JUL	8,424	100.0%	100.0%	0.0%	21,336	94.9%	100.0%	5.1%	37,507	79.7%	86.4%	6.7%
AUG	7,563	100.0%	100.0%	0.0%	11,929	98.3%	100.0%	1.7%	23,427	98.3%	100.0%	1.7%
SEP	7,319	100.0%	100.0%	0.0%	14,043	96.6%	100.0%	3.4%	25,170	81.4%	94.9%	13.5%
OCT	7,809	100.0%	100.0%	0.0%	15,064	89.8%	100.0%	10.2%	26,624	66.1%	88.1%	22.0%
NOV	10,711	89.8%	100.0%	10.2%	16,840	69.5%	100.0%	30.5%	25,230	50.8%	79.7%	28.9%
DEC	11,437	91.5%	100.0%	8.5%	19,123	74.6%	96.6%	22.0%	27,669	52.5%	81.4%	28.9%

2060 Freshwater Inflows to Matagorda Bay

SPRINGTIME ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	114,000	48	81.4%	48	81.4%	0.0%
MBHE 2	168,700	39	66.1%	39	66.1%	0.0%
MBHE 3	246,200	35	59.3%	35	59.3%	0.0%
MBHE 4	433,200	22	37.3%	20	33.9%	-3.4%

FALL ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	81,000	38	64.4%	38	64.4%	0.0%
MBHE 2	119,900	31	52.5%	31	52.5%	0.0%
MBHE 3	175,000	19	32.2%	17	28.8%	-3.4%
MBHE 4	307,800	11	18.6%	11	18.6%	0.0%

INTERVENING SIX MONTHS FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	105,000	53	89.8%	53	89.8%	0.0%
MBHE 2	155,400	46	78.0%	46	78.0%	0.0%
MBHE 3	226,800	39	66.1%	39	66.1%	0.0%
MBHE 4	399,000	32	54.2%	32	54.2%	0.0%

Note: Intervening six months includes June, July, November, December, and the remaining Springtime Onset months that are not used for the 3 consecutive month calculation.

NUMBER OF MONTHS THAT THRESHOLD LEVEL IS MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT/mo)	# OF MONTHS	%	# OF MONTHS	%	%
THRESHOLD	15,000	540	76.3%	540	76.3%	0.0%

2060 Colorado River Instream Flow Analysis

2060
CP K10000
Matagorda Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	86.4%	86.4%	0.0%	30,252	78.0%	78.0%	0.0%	51,527	64.4%	64.4%	0.0%
FEB	16,828	91.5%	91.5%	0.0%	33,156	81.4%	81.4%	0.0%	50,317	67.8%	67.8%	0.0%
MAR	12,543	98.3%	98.3%	0.0%	32,650	89.8%	89.8%	0.0%	63,701	44.1%	44.1%	0.0%
APR	16,066	86.4%	86.4%	0.0%	33,382	66.1%	66.1%	0.0%	60,159	44.1%	44.1%	0.0%
MAY	18,692	81.4%	81.4%	0.0%	60,565	54.2%	54.2%	0.0%	85,898	47.5%	47.5%	0.0%
JUN	22,076	71.2%	71.2%	0.0%	58,552	47.5%	47.5%	0.0%	89,970	39.0%	39.0%	0.0%
JUL	13,035	52.5%	52.5%	0.0%	35,478	39.0%	39.0%	0.0%	55,708	28.8%	28.8%	0.0%
AUG	6,579	72.9%	72.9%	0.0%	19,307	39.0%	39.0%	0.0%	32,097	27.1%	27.1%	0.0%
SEP	11,187	71.2%	71.2%	0.0%	24,397	61.0%	61.0%	0.0%	36,714	59.3%	59.3%	0.0%
OCT	9,039	89.8%	89.8%	0.0%	22,136	76.3%	76.3%	0.0%	46,054	55.9%	55.9%	0.0%
NOV	10,294	96.6%	96.6%	0.0%	28,919	78.0%	78.0%	0.0%	45,461	64.4%	64.4%	0.0%
DEC	12,420	100.0%	100.0%	0.0%	28,899	83.1%	83.1%	0.0%	45,870	62.7%	62.7%	0.0%

2060
CP K20000
Wharton Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	84.7%	84.7%	0.0%	30,252	78.0%	78.0%	0.0%	51,527	54.2%	54.2%	0.0%
FEB	16,828	89.8%	89.8%	0.0%	33,156	76.3%	76.3%	0.0%	50,317	59.3%	59.3%	0.0%
MAR	12,543	98.3%	98.3%	0.0%	32,650	93.2%	93.2%	0.0%	63,701	44.1%	44.1%	0.0%
APR	16,066	96.6%	96.6%	0.0%	33,382	71.2%	71.2%	0.0%	60,159	47.5%	47.5%	0.0%
MAY	18,692	93.2%	93.2%	0.0%	60,565	59.3%	59.3%	0.0%	85,898	49.2%	49.2%	0.0%
JUN	22,076	88.1%	88.1%	0.0%	58,552	57.6%	57.6%	0.0%	89,970	40.7%	40.7%	0.0%
JUL	13,035	94.9%	94.9%	0.0%	35,478	40.7%	40.7%	0.0%	55,708	30.5%	30.5%	0.0%
AUG	6,579	96.6%	96.6%	0.0%	19,307	64.4%	64.4%	0.0%	32,097	32.2%	32.2%	0.0%
SEP	11,187	91.5%	91.5%	0.0%	24,397	62.7%	62.7%	0.0%	36,714	57.6%	57.6%	0.0%
OCT	9,039	91.5%	91.5%	0.0%	22,136	76.3%	76.3%	0.0%	46,054	54.2%	54.2%	0.0%
NOV	10,294	96.6%	96.6%	0.0%	28,919	76.3%	76.3%	0.0%	45,461	54.2%	54.2%	0.0%
DEC	12,420	96.6%	96.6%	0.0%	28,899	81.4%	81.4%	0.0%	45,870	59.3%	59.3%	0.0%

2060 Colorado River Instream Flow Analysis

2060
CP J10000
Colorado Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	20,906	81.4%	81.4%	0.0%	29,944	72.9%	72.9%	0.0%	50,912	44.1%	44.1%	0.0%
FEB	20,826	83.1%	83.1%	0.0%	32,767	74.6%	74.6%	0.0%	49,706	54.2%	54.2%	0.0%
MAR	23,058	98.3%	98.3%	0.0%	32,281	88.1%	88.1%	0.0%	62,717	42.4%	42.4%	0.0%
APR	17,792	100.0%	100.0%	0.0%	32,965	76.3%	76.3%	0.0%	58,136	49.2%	49.2%	0.0%
MAY	26,132	100.0%	100.0%	0.0%	59,397	78.0%	78.0%	0.0%	80,918	57.6%	57.6%	0.0%
JUN	31,775	98.3%	98.3%	0.0%	57,540	83.1%	83.1%	0.0%	85,686	57.6%	57.6%	0.0%
JUL	21,029	98.3%	98.3%	0.0%	35,048	91.5%	91.5%	0.0%	55,031	50.8%	50.8%	0.0%
AUG	11,683	98.3%	98.3%	0.0%	19,061	98.3%	98.3%	0.0%	31,728	83.1%	83.1%	0.0%
SEP	16,602	98.3%	98.3%	0.0%	24,099	94.9%	94.9%	0.0%	36,298	74.6%	74.6%	0.0%
OCT	11,683	98.3%	98.3%	0.0%	21,890	76.3%	76.3%	0.0%	45,562	61.0%	61.0%	0.0%
NOV	12,020	89.8%	89.8%	0.0%	28,562	61.0%	61.0%	0.0%	44,926	47.5%	47.5%	0.0%
DEC	18,508	84.7%	84.7%	0.0%	28,530	76.3%	76.3%	0.0%	45,316	49.2%	49.2%	0.0%

2060
CP J30000
Bastrop Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	12,789	84.7%	84.7%	0.0%	19,246	69.5%	69.5%	0.0%	26,624	52.5%	52.5%	0.0%
FEB	15,217	84.7%	84.7%	0.0%	17,605	78.0%	78.0%	0.0%	27,602	62.7%	62.7%	0.0%
MAR	16,848	98.3%	98.3%	0.0%	16,848	98.3%	98.3%	0.0%	30,559	81.4%	81.4%	0.0%
APR	11,127	100.0%	100.0%	0.0%	17,078	100.0%	100.0%	0.0%	37,785	57.6%	57.6%	0.0%
MAY	16,909	100.0%	100.0%	0.0%	35,601	91.5%	91.5%	0.0%	50,666	81.4%	81.4%	0.0%
JUN	12,020	100.0%	100.0%	0.0%	24,873	100.0%	100.0%	0.0%	43,617	89.8%	89.8%	0.0%
JUL	8,424	100.0%	100.0%	0.0%	21,336	94.9%	94.9%	0.0%	37,507	79.7%	79.7%	0.0%
AUG	7,563	100.0%	100.0%	0.0%	11,929	98.3%	98.3%	0.0%	23,427	98.3%	98.3%	0.0%
SEP	7,319	100.0%	100.0%	0.0%	14,043	96.6%	96.6%	0.0%	25,170	81.4%	81.4%	0.0%
OCT	7,809	100.0%	100.0%	0.0%	15,064	89.8%	89.8%	0.0%	26,624	66.1%	66.1%	0.0%
NOV	10,711	89.8%	89.8%	0.0%	16,840	69.5%	69.5%	0.0%	25,230	50.8%	50.8%	0.0%
DEC	11,437	91.5%	91.5%	0.0%	19,123	74.6%	74.6%	0.0%	27,669	52.5%	52.5%	0.0%

2060 Freshwater Inflows to Matagorda Bay

SPRINGTIME ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	114,000	48	81.4%	48	81.4%	0.0%
MBHE 2	168,700	39	66.1%	39	66.1%	0.0%
MBHE 3	246,200	35	59.3%	35	59.3%	0.0%
MBHE 4	433,200	22	37.3%	22	37.3%	0.0%

FALL ONSET FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	81,000	38	64.4%	38	64.4%	0.0%
MBHE 2	119,900	31	52.5%	31	52.5%	0.0%
MBHE 3	175,000	19	32.2%	19	32.2%	0.0%
MBHE 4	307,800	11	18.6%	11	18.6%	0.0%

INTERVENING SIX MONTHS FLOW CRITERIA MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT)	# OF YEARS	%	# OF YEARS	%	%
MBHE 1	105,000	53	89.8%	53	89.8%	0.0%
MBHE 2	155,400	46	78.0%	46	78.0%	0.0%
MBHE 3	226,800	39	66.1%	39	66.1%	0.0%
MBHE 4	399,000	32	54.2%	32	54.2%	0.0%

Note: Intervening six months includes June, July, November, December, and the remaining Springtime Onset months that are not used for the 3 consecutive month calculation.

NUMBER OF MONTHS THAT THRESHOLD LEVEL IS MET						
CRITERIA	TARGET	BASE		STRATEGY		DIFFERENCE
	(AC-FT/mo)	# OF MONTHS	%	# OF MONTHS	%	%
THRESHOLD	15,000	540	76.3%	545	77.0%	0.7%

2060 Colorado River Instream Flow Analysis

2060 CP K10000 Matagorda Co.	MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
		FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
		(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	86.4%	89.8%	3.4%	30,252	78.0%	81.4%	3.4%	51,527	64.4%	64.4%	0.0%	
FEB	16,828	91.5%	91.5%	0.0%	33,156	81.4%	81.4%	0.0%	50,317	67.8%	67.8%	0.0%	
MAR	12,543	98.3%	98.3%	0.0%	32,650	89.8%	89.8%	0.0%	63,701	44.1%	44.1%	0.0%	
APR	16,066	86.4%	86.4%	0.0%	33,382	66.1%	67.8%	1.7%	60,159	44.1%	45.8%	1.7%	
MAY	18,692	81.4%	81.4%	0.0%	60,565	54.2%	55.9%	1.7%	85,898	47.5%	47.5%	0.0%	
JUN	22,076	71.2%	71.2%	0.0%	58,552	47.5%	47.5%	0.0%	89,970	39.0%	39.0%	0.0%	
JUL	13,035	52.5%	54.2%	1.7%	35,478	39.0%	39.0%	0.0%	55,708	28.8%	28.8%	0.0%	
AUG	6,579	72.9%	67.8%	-5.1%	19,307	39.0%	39.0%	0.0%	32,097	27.1%	32.2%	5.1%	
SEP	11,187	71.2%	72.9%	1.7%	24,397	61.0%	61.0%	0.0%	36,714	59.3%	59.3%	0.0%	
OCT	9,039	89.8%	89.8%	0.0%	22,136	76.3%	76.3%	0.0%	46,054	55.9%	57.6%	1.7%	
NOV	10,294	96.6%	96.6%	0.0%	28,919	78.0%	83.1%	5.1%	45,461	64.4%	64.4%	0.0%	
DEC	12,420	100.0%	98.3%	-1.7%	28,899	83.1%	83.1%	0.0%	45,870	62.7%	66.1%	3.4%	

2060 CP K20000 Wharton Co.	MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
		FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
		(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	19,369	84.7%	88.1%	3.4%	30,252	78.0%	81.4%	3.4%	51,527	54.2%	57.6%	3.4%	
FEB	16,828	89.8%	91.5%	1.7%	33,156	76.3%	76.3%	0.0%	50,317	59.3%	61.0%	1.7%	
MAR	12,543	98.3%	98.3%	0.0%	32,650	93.2%	89.8%	-3.4%	63,701	44.1%	44.1%	0.0%	
APR	16,066	96.6%	94.9%	-1.7%	33,382	71.2%	72.9%	1.7%	60,159	47.5%	47.5%	0.0%	
MAY	18,692	93.2%	94.9%	1.7%	60,565	59.3%	59.3%	0.0%	85,898	49.2%	49.2%	0.0%	
JUN	22,076	88.1%	88.1%	0.0%	58,552	57.6%	57.6%	0.0%	89,970	40.7%	42.4%	1.7%	
JUL	13,035	94.9%	96.6%	1.7%	35,478	40.7%	40.7%	0.0%	55,708	30.5%	30.5%	0.0%	
AUG	6,579	96.6%	96.6%	0.0%	19,307	64.4%	66.1%	1.7%	32,097	32.2%	37.3%	5.1%	
SEP	11,187	91.5%	91.5%	0.0%	24,397	62.7%	62.7%	0.0%	36,714	57.6%	57.6%	0.0%	
OCT	9,039	91.5%	91.5%	0.0%	22,136	76.3%	74.6%	-1.7%	46,054	54.2%	55.9%	1.7%	
NOV	10,294	96.6%	96.6%	0.0%	28,919	76.3%	78.0%	1.7%	45,461	54.2%	54.2%	0.0%	
DEC	12,420	96.6%	98.3%	1.7%	28,899	81.4%	81.4%	0.0%	45,870	59.3%	61.0%	1.7%	

2060 Colorado River Instream Flow Analysis

2060
CP J10000
Colorado Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	20,906	81.4%	81.4%	0.0%	29,944	72.9%	76.3%	3.4%	50,912	44.1%	45.8%	1.7%
FEB	20,826	83.1%	84.7%	1.7%	32,767	74.6%	74.6%	0.0%	49,706	54.2%	55.9%	1.7%
MAR	23,058	98.3%	98.3%	0.0%	32,281	88.1%	84.7%	-3.4%	62,717	42.4%	42.4%	0.0%
APR	17,792	100.0%	100.0%	0.0%	32,965	76.3%	79.7%	3.4%	58,136	49.2%	49.2%	0.0%
MAY	26,132	100.0%	100.0%	0.0%	59,397	78.0%	79.7%	1.7%	80,918	57.6%	59.3%	1.7%
JUN	31,775	98.3%	98.3%	0.0%	57,540	83.1%	83.1%	0.0%	85,686	57.6%	59.3%	1.7%
JUL	21,029	98.3%	98.3%	0.0%	35,048	91.5%	93.2%	1.7%	55,031	50.8%	52.5%	1.7%
AUG	11,683	98.3%	100.0%	1.7%	19,061	98.3%	98.3%	0.0%	31,728	83.1%	84.7%	1.7%
SEP	16,602	98.3%	100.0%	1.7%	24,099	94.9%	94.9%	0.0%	36,298	74.6%	78.0%	3.4%
OCT	11,683	98.3%	98.3%	0.0%	21,890	76.3%	78.0%	1.7%	45,562	61.0%	62.7%	1.7%
NOV	12,020	89.8%	91.5%	1.7%	28,562	61.0%	69.5%	8.5%	44,926	47.5%	49.2%	1.7%
DEC	18,508	84.7%	84.7%	0.0%	28,530	76.3%	79.7%	3.4%	45,316	49.2%	49.2%	0.0%

2060
CP J30000
Bastrop Co.

MONTH	SUBSISTENCE FLOWS				BASE FLOWS - DRY CONDITIONS				BASE FLOWS - AVERAGE CONDITIONS			
	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE	FLOW	BASE	STRATEGY	DIFFERENCE
	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%	(AC-FT/MO)	% TIME MET	% TIME MET	%
JAN	12,789	84.7%	88.1%	3.4%	19,246	69.5%	74.6%	5.1%	26,624	52.5%	55.9%	3.4%
FEB	15,217	84.7%	84.7%	0.0%	17,605	78.0%	81.4%	3.4%	27,602	62.7%	66.1%	3.4%
MAR	16,848	98.3%	98.3%	0.0%	16,848	98.3%	98.3%	0.0%	30,559	81.4%	84.7%	3.4%
APR	11,127	100.0%	100.0%	0.0%	17,078	100.0%	100.0%	0.0%	37,785	57.6%	61.0%	3.4%
MAY	16,909	100.0%	100.0%	0.0%	35,601	91.5%	91.5%	0.0%	50,666	81.4%	81.4%	0.0%
JUN	12,020	100.0%	100.0%	0.0%	24,873	100.0%	100.0%	0.0%	43,617	89.8%	89.8%	0.0%
JUL	8,424	100.0%	100.0%	0.0%	21,336	94.9%	94.9%	0.0%	37,507	79.7%	83.1%	3.4%
AUG	7,563	100.0%	100.0%	0.0%	11,929	98.3%	100.0%	1.7%	23,427	98.3%	98.3%	0.0%
SEP	7,319	100.0%	100.0%	0.0%	14,043	96.6%	98.3%	1.7%	25,170	81.4%	83.1%	1.7%
OCT	7,809	100.0%	100.0%	0.0%	15,064	89.8%	89.8%	0.0%	26,624	66.1%	69.5%	3.4%
NOV	10,711	89.8%	91.5%	1.7%	16,840	69.5%	72.9%	3.4%	25,230	50.8%	52.5%	1.7%
DEC	11,437	91.5%	88.1%	-3.4%	19,123	74.6%	78.0%	3.4%	27,669	52.5%	55.9%	3.4%

APPENDIX 5F

TWDB DB17 REPORTS

WUG Second Tier Needs Summary

WUG Second Tier Needs

WUG Unmet Needs Summary

WUG Unmet Needs

WUG Recommended Water Management Strategies

Recommended Projects Associated with Water Management Strategies

WUG Alternative Water Management Strategies

Alternative Projects Associated with Water Management Strategies

WUG Management Supply Factors

Water User Group (WUG) Second-Tier Identified Water Need Summary

REGION K

	2020	2030	2040	2050	2060	2070
MUNICIPAL	959	6,211	9,922	17,295	26,925	42,579
COUNTY-OTHER	151	189	249	1,043	1,893	2,787
MANUFACTURING	570	692	810	913	1,059	1,216
MINING	4,260	8,618	9,247	10,219	11,653	13,664
STEAM ELECTRIC POWER	25,363	25,377	25,401	25,431	32,712	44,127
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	214,375	178,442	141,153	107,636	78,682	54,428

*Second-tier needs are WUG split needs adjusted to include the implementation of recommended demand reduction and direct reuse water management strategies.

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Water User Group (WUG) Second-Tier Identified Water Need

REGION K	WUG SECOND-TIER NEEDS (ACRE-FEET PER YEAR)					
	2020	2030	2040	2050	2060	2070
BASTROP COUNTY						
BRAZOS BASIN						
AQUA WSC	0	0	0	0	0	0
LEE COUNTY WSC	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MINING	173	409	450	496	545	600
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
COLORADO BASIN						
AQUA WSC	554	2,015	3,927	7,115	12,233	19,000
BASTROP	0	0	14	309	765	2,064
BASTROP COUNTY WCID #2	0	0	0	0	19	542
CREEDMOOR-MAHA WSC	0	0	0	0	0	0
ELGIN	277	484	694	1,116	1,880	2,899
LEE COUNTY WSC	0	0	0	0	0	0
POLONIA WSC	0	0	0	0	0	0
SMITHVILLE	0	0	0	0	0	86
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	55	87	120	151	174	199
MINING	449	3,947	4,556	5,235	5,967	6,777
STEAM ELECTRIC POWER	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
GUADALUPE BASIN						
AQUA WSC	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	110	306	341	379	420	466
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
BLANCO COUNTY						
COLORADO BASIN						
JOHNSON CITY	0	0	19	35	46	53
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
GUADALUPE BASIN						
BLANCO	0	0	0	0	0	0
CANYON LAKE WATER SERVICE COMPANY	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
BURNET COUNTY						
BRAZOS BASIN						
BERTRAM	0	0	10	30	41	45
BURNET	0	0	0	0	0	0
CHISHOLM TRAIL SUD	0	0	0	0	0	0

Water User Group (WUG) Second-Tier Identified Water Need

REGION K	WUG SECOND-TIER NEEDS (ACRE-FEET PER YEAR)					
	2020	2030	2040	2050	2060	2070
BURNET COUNTY						
BRAZOS BASIN						
KEMPNER WSC	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	60
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
COLORADO BASIN						
BURNET	0	0	0	0	0	0
COTTONWOOD SHORES	0	0	0	0	0	0
GRANITE SHOALS	0	0	0	89	173	249
HORSESHOE BAY	0	0	0	0	0	0
KINGSLAND WSC	0	0	0	0	0	0
MARBLE FALLS	0	0	0	0	0	0
MEADOWLAKES	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	1,011	1,703	2,428	3,085	3,841	4,703
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
COLORADO COUNTY						
BRAZOS-COLORADO BASIN						
EAGLE LAKE	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	11,086	8,521	5,933	3,653	1,655	0
COLORADO BASIN						
COLUMBUS	0	0	0	0	0	0
EAGLE LAKE	0	0	0	0	0	0
WEIMAR	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	3	31	61
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
LAVACA BASIN						
WEIMAR	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	13,921	9,842	5,805	2,300	0	0
FAYETTE COUNTY						
COLORADO BASIN						
AQUA WSC	0	0	0	0	0	0
FAYETTE WSC	0	0	0	0	0	0
LA GRANGE	0	0	0	0	0	0
LEE COUNTY WSC	0	0	0	0	0	0

Water User Group (WUG) Second-Tier Identified Water Need

REGION K	WUG SECOND-TIER NEEDS (ACRE-FEET PER YEAR)					
	2020	2030	2040	2050	2060	2070
FAYETTE COUNTY						
COLORADO BASIN						
COUNTY-OTHER	0	12	57	98	138	172
MINING	1,576	1,176	717	274	0	0
STEAM ELECTRIC POWER	0	0	0	0	2,614	7,414
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
GUADALUPE BASIN						
FAYETTE WSC	0	0	0	0	0	0
FLATONIA	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MINING	66	42	13	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
LAVACA BASIN						
FAYETTE WSC	0	0	0	0	0	0
FLATONIA	0	0	0	0	0	0
SCHULENBURG	0	0	0	0	0	0
COUNTY-OTHER	151	177	192	207	222	233
MANUFACTURING	206	243	279	310	349	391
MINING	344	274	195	119	40	39
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
GILLESPIE COUNTY						
COLORADO BASIN						
FREDERICKSBURG	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	309	362	411	452	536	626
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
GUADALUPE BASIN						
COUNTY-OTHER	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
HAYS COUNTY						
COLORADO BASIN						
AUSTIN	0	0	0	0	0	0
BUDA	0	0	0	226	1,394	2,726
CIMARRON PARK WATER COMPANY	0	0	0	0	0	0
DRIPPING SPRINGS	0	0	0	0	0	0
DRIPPING SPRINGS WSC	0	0	0	0	0	0
GOFORTH SUD	0	0	0	0	0	0
MOUNTAIN CITY	0	0	0	0	0	0
PLUM CREEK WATER COMPANY	0	0	0	0	0	0
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	0	0	0	0	412	711
COUNTY-OTHER	0	0	0	735	1,502	2,261
MANUFACTURING	0	0	0	0	0	0
MINING	531	761	547	631	840	1,079
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0

Water User Group (WUG) Second-Tier Identified Water Need

REGION K	WUG SECOND-TIER NEEDS (ACRE-FEET PER YEAR)					
	2020	2030	2040	2050	2060	2070
LLANO COUNTY						
COLORADO BASIN						
HORSESHOE BAY	0	0	0	0	0	0
KINGSLAND WSC	0	0	0	0	0	0
LLANO	128	123	86	42	25	7
SUNRISE BEACH VILLAGE	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
STEAM ELECTRIC POWER	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
MATAGORDA COUNTY						
BRAZOS-COLORADO BASIN						
BAY CITY	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	48,397	41,244	33,660	26,753	20,594	14,499
COLORADO BASIN						
BAY CITY	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
STEAM ELECTRIC POWER	25,363	25,377	25,401	25,431	25,461	25,483
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	8,714	7,539	6,279	5,120	4,083	3,045
COLORADO-LAVACA BASIN						
PALACIOS	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	58,948	50,547	41,593	33,413	26,109	18,844
MILLS COUNTY						
BRAZOS BASIN						
GOLDTHWAITE	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	480	480	480	480	480	460
COLORADO BASIN						
BROOKESMITH SUD	0	0	0	0	0	0
GOLDTHWAITE	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0

Water User Group (WUG) Second-Tier Identified Water Need

REGION K	WUG SECOND-TIER NEEDS (ACRE-FEET PER YEAR)					
	2020	2030	2040	2050	2060	2070
SAN SABA COUNTY						
COLORADO BASIN						
RICHLAND SUD	0	0	0	0	0	0
SAN SABA	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
TRAVIS COUNTY						
COLORADO BASIN						
AQUA WSC	0	0	0	0	0	0
AUSTIN	0	0	0	0	0	0
BARTON CREEK WEST WSC	0	0	0	0	0	0
BEE CAVE	0	0	0	0	0	0
BRIARCLIFF	0	0	0	0	0	0
CEDAR PARK	0	0	0	0	0	0
CREEDMOOR-MAHA WSC	0	0	9	133	268	400
ELGIN	0	48	129	222	304	381
JONESTOWN	0	0	0	0	0	0
LAGO VISTA	0	0	0	0	0	0
LAKEWAY	0	132	0	0	0	0
LEANDER	0	788	2,529	3,340	3,701	4,055
LOOP 360 WSC	0	0	0	0	0	0
LOST CREEK MUD	0	0	0	0	0	0
MANOR	0	0	0	0	72	390
MANVILLE WSC	0	0	0	0	461	1,435
MUSTANG RIDGE	0	0	0	0	0	0
NORTH AUSTIN MUD #1	0	0	0	0	0	0
NORTHTOWN MUD	0	0	0	0	0	0
PFLUGERVILLE	0	0	0	2,224	2,855	5,312
POINT VENTURE	0	0	0	0	19	32
ROLLINGWOOD	0	255	241	228	216	203
ROUND ROCK	0	27	82	144	187	223
SHADY HOLLOW MUD	0	0	0	0	0	0
SUNSET VALLEY	0	0	0	0	0	0
THE HILLS	0	0	0	0	0	0
TRAVIS COUNTY MUD #4	0	0	0	0	0	0
TRAVIS COUNTY WCID #10	0	1,376	1,329	1,287	1,190	1,181
TRAVIS COUNTY WCID #17	0	0	0	0	0	0
TRAVIS COUNTY WCID #18	0	0	0	0	0	0
TRAVIS COUNTY WCID #19	0	0	0	0	0	0
TRAVIS COUNTY WCID #20	0	0	0	0	0	0
VOLENTE	0	9	20	34	47	59
WELLS BRANCH MUD	0	0	0	0	0	0
WEST LAKE HILLS	0	954	833	721	617	526
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	0	0	0	0	0	0
WILLIAMSON-TRAVIS COUNTY MUD #1	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0

Water User Group (WUG) Second-Tier Identified Water Need

REGION K	WUG SECOND-TIER NEEDS (ACRE-FEET PER YEAR)					
	2020	2030	2040	2050	2060	2070
TRAVIS COUNTY						
COLORADO BASIN						
MINING	0	0	0	0	0	0
STEAM ELECTRIC POWER	0	0	0	0	4,543	11,030
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	0	0	0	0	0	0
GUADALUPE BASIN						
CREEDMOOR-MAHA WSC	0	0	0	0	0	0
GOFORTH SUD	0	0	0	0	0	0
MUSTANG RIDGE	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
WHARTON COUNTY						
BRAZOS-COLORADO BASIN						
EAST BERNARD	0	0	0	0	0	0
WHARTON	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	0	0	0	0	0	0
STEAM ELECTRIC POWER	0	0	0	0	94	200
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	48,964	41,369	33,470	26,349	20,024	13,875
COLORADO BASIN						
EL CAMPO	0	0	0	0	0	0
WHARTON	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MINING	0	0	0	0	0	0
STEAM ELECTRIC POWER	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	9,676	6,999	4,397	2,157	211	0
COLORADO-LAVACA BASIN						
COUNTY-OTHER	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	14,189	11,901	9,536	7,411	5,526	3,705
LAVACA BASIN						
COUNTY-OTHER	0	0	0	0	0	0
WILLIAMSON COUNTY						
BRAZOS BASIN						
AUSTIN	0	0	0	0	0	0
NORTH AUSTIN MUD #1	0	0	0	0	0	0
WELLS BRANCH MUD	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MINING	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0

Water User Group (WUG) Second-Tier Identified Water Need

***Second-tier needs are WUG split needs adjusted to include the implementation of recommended demand reduction and direct reuse water management strategies.**

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Water User Group (WUG) Unmet Needs Summary

REGION K

	2020	2030	2040	2050	2060	2070
MUNICIPAL	0	0	0	0	0	0
COUNTY-OTHER	0	0	0	0	0	0
MANUFACTURING	0	0	0	0	0	0
MINING	622	4,356	5,006	5,731	6,512	7,377
STEAM ELECTRIC POWER	0	0	0	0	0	0
LIVESTOCK	0	0	0	0	0	0
IRRIGATION	120,822	113,478	102,187	76,539	55,295	27,924

*WUG supplies and projected demands are entered for each of a WUG’s region-county-basin divisions. The unmet needs shown in the WUG Unmet Needs Summary report are calculated by first deducting the WUG split’s projected demand from the sum of its total existing water supply volume and all associated recommended water management strategy water volumes. If the WUG split has a greater future supply volume than projected demand in any given decade, this amount is considered a surplus volume. Before aggregating the difference between supplies and demands to the WUG category level, calculated surpluses are updated to zero so that only the WUGs with unmet needs in the decade are included with the Needs totals. Unmet needs water volumes are shown as absolute values.

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Water User Group (WUG) Unmet Needs

REGION K	WUG UNMET NEEDS (ACRE-FEET PER YEAR)						
		2020	2030	2040	2050	2060	2070
BASTROP COUNTY							
BRAZOS BASIN							
	MINING	173	409	450	496	545	600
COLORADO BASIN							
	MINING	449	3,947	4,556	5,235	5,967	6,777
COLORADO COUNTY							
BRAZOS-COLORADO BASIN							
	IRRIGATION	0	0	1,302	755	1,170	0
LAVACA BASIN							
	IRRIGATION	0	0	1,195	475	0	0
MATAGORDA COUNTY							
BRAZOS-COLORADO BASIN							
	IRRIGATION	29,286	27,777	25,165	19,532	14,562	7,502
COLORADO BASIN							
	IRRIGATION	5,273	5,077	4,694	3,738	2,887	1,576
COLORADO-LAVACA BASIN							
	IRRIGATION	35,671	34,041	31,096	24,394	18,461	9,750
WHARTON COUNTY							
BRAZOS-COLORADO BASIN							
	IRRIGATION	34,013	31,974	27,350	20,281	14,159	7,179
COLORADO BASIN							
	IRRIGATION	6,722	5,410	3,593	1,660	149	0
COLORADO-LAVACA BASIN							
	IRRIGATION	9,857	9,199	7,792	5,704	3,907	1,917

*WUG supplies and projected demands are entered for each of a WUG's region-county-basin divisions. The unmet needs shown in the WUG Unmet Needs report are calculated by first deducting the WUG split's projected demand from the sum of its total existing water supply volume and all associated recommended water management strategy water volumes. If the WUG split has a greater future supply volume than projected demand in any given decade, this amount is considered a surplus volume. In order to display only unmet needs associated with the WUG split, these surplus volumes are updated to a zero and the unmet needs water volumes are shown as absolute values.

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Recommended Water User Group (WUG) Water Management Strategies (WMS)

WUG Entity Primary Region: K

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
AQUA WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	1,549	1,960	2,502	3,248	4,254	5,639	\$50	\$50
AQUA WSC	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - CARRIZO-WILCOX AQUIFER	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	2,500	2,500	4,000	4,000	4,000	4,000	\$259	\$259
AQUA WSC	K	LCRA - PRAIRIE SITE RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIR (2030 DECADE)	0	0	5,000	5,000	10,000	15,000	N/A	\$1414
AQUA WSC	K	MUNICIPAL CONSERVATION - AQUA WSC	DEMAND REDUCTION	704	1,006	1,066	1,235	1,623	2,130	\$352	\$352
AUSTIN	K	CITY OF AUSTIN - AQUIFER STORAGE AND RECOVERY	K TRINITY AQUIFER ASR TRAVIS COUNTY	10,000	25,000	25,000	50,000	50,000	50,000	\$604	\$604
AUSTIN	K	CITY OF AUSTIN - CAPTURE LOCAL INFLOWS TO LADY BIRD LAKE	K COLORADO RUN-OF-RIVER	1,000	1,000	1,000	1,000	1,000	1,000	\$297	\$297
AUSTIN	K	CITY OF AUSTIN - CONSERVATION	DEMAND REDUCTION	22,969	24,559	28,317	31,220	33,822	36,899	\$342	\$342
AUSTIN	K	CITY OF AUSTIN - DIRECT REUSE	K DIRECT REUSE	5,429	10,429	20,429	22,929	25,429	27,929	\$1347	\$1347
AUSTIN	K	CITY OF AUSTIN - INDIRECT POTABLE REUSE THROUGH LADY BIRD LAKE	K COLORADO INDIRECT REUSE	20,000	20,000	20,000	20,000	20,000	20,000	\$180	\$180
AUSTIN	K	CITY OF AUSTIN - LAKE AUSTIN OPERATIONS	K COLORADO RUN-OF-RIVER	2,500	2,500	2,500	2,500	2,500	2,500	\$10	\$10
AUSTIN	K	CITY OF AUSTIN - LAKE LONG ENHANCED STORAGE	K LAKE LONG/RESERVOIR	20,000	20,000	20,000	20,000	20,000	20,000	\$187	\$187
AUSTIN	K	CITY OF AUSTIN - LONGHORN DAM OPERATION IMPROVEMENTS	K COLORADO RUN-OF-RIVER	3,000	3,000	3,000	3,000	3,000	3,000	\$29	\$29
AUSTIN	K	CITY OF AUSTIN - OTHER REUSE	K DIRECT REUSE	1,000	1,000	1,500	2,000	2,500	3,000	\$1022	\$1022
AUSTIN	K	CITY OF AUSTIN - RAINWATER HARVESTING	K RAINWATER HARVESTING	83	828	4,141	8,282	12,423	16,564	\$3487	\$3487
AUSTIN	K	CITY OF AUSTIN RETURN FLOWS	K COLORADO INDIRECT REUSE - CITY OF AUSTIN RETURN FLOWS	19,258	17,749	22,990	22,874	26,759	30,312	\$0	\$0
AUSTIN	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	16,516	19,260	22,206	24,484	26,524	28,937	\$50	\$50
BARTON CREEK WEST WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	65	64	64	63	63	63	\$50	\$50
BARTON CREEK WEST WSC	K	MUNICIPAL CONSERVATION - BARTON CREEK WEST WSC	DEMAND REDUCTION	42	77	108	122	137	152	\$282	\$282
BASTROP	K	DEVELOPMENT OF NEW GROUNDWATER SUPPLIES - CARRIZO-WILCOX AQUIFER	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	300	300	300	300	300	0	\$937	N/A
BASTROP	K	DIRECT REUSE - BASTROP	K DIRECT REUSE	0	0	300	600	1,120	1,120	N/A	\$448
BASTROP	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	294	390	517	692	930	1,248	\$50	\$50
BASTROP	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	0	0	2,500	2,500	2,500	N/A	\$2361
BASTROP	K	MUNICIPAL CONSERVATION - BASTROP	DEMAND REDUCTION	195	440	688	1,084	1,459	1,958	\$303	\$303
BASTROP COUNTY WCID #2	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	19	27	38	53	74	102	\$50	\$50
BASTROP COUNTY WCID #2	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - CARRIZO-WILCOX AQUIFER	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	0	0	0	0	550	550	N/A	\$369
BAY CITY	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	568	579	582	591	599	606	\$50	\$50
BAY CITY	K	MUNICIPAL CONSERVATION - BAY CITY	DEMAND REDUCTION	252	199	114	94	95	96	\$336	\$336
BEE CAVE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	355	409	459	516	567	614	\$50	\$50

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
BEE CAVE	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	300	300	600	600	800	800	\$0	\$0
BEE CAVE	K	MUNICIPAL CONSERVATION - BEE CAVE VILLAGE	DEMAND REDUCTION	175	374	608	863	1,136	1,323	\$272	\$272
BERTRAM	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	62	73	83	93	102	109	\$50	\$50
BERTRAM	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - ELLENBURGER-SAN SABA AQUIFER	K ELLENBURGER-SAN SABA AQUIFER BURNET COUNTY	180	180	180	180	180	180	\$1044	\$1044
BERTRAM	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	500	884	884	884	884	884	\$952	\$952
BERTRAM	K	MUNICIPAL CONSERVATION - BERTRAM	DEMAND REDUCTION	41	64	91	126	164	204	\$292	\$292
BLANCO	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	55	63	68	71	73	74	\$50	\$50
BLANCO	K	MUNICIPAL CONSERVATION - BLANCO	DEMAND REDUCTION	19	32	28	26	27	27	\$378	\$378
BRIARCLIFF	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	26	30	33	37	40	44	\$50	\$50
BUDA	K	DIRECT REUSE - BUDA	K DIRECT REUSE	2,240	2,240	1,740	1,740	1,740	1,740	\$264	\$264
BUDA	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	177	251	342	456	586	734	\$50	\$50
BUDA	K	EDWARDS / MIDDLE TRINITY ASR	K TRINITY AQUIFER ASR HAYS COUNTY	0	600	600	600	600	600	N/A	\$1291
BUDA	K	HCPUA PIPELINE - REGION K RECOMMENDED	L CARRIZO-WILCOX AQUIFER GONZALES COUNTY	0	667	1,690	2,467	2,467	2,467	N/A	\$1926
BUDA	K	MUNICIPAL CONSERVATION - BUDA	DEMAND REDUCTION	88	206	434	552	709	888	\$374	\$374
BUDA	K	SALINE EDWARDS ASR	K EDWARDS AQUIFER ASR FRESH/BRACKISH TRAVIS COUNTY	0	100	100	100	100	100	N/A	\$2031
BUDA	K	SALINE EDWARDS ASR (SALINE)	K EDWARDS-BFZ AQUIFER SALINE TRAVIS COUNTY	0	400	400	400	400	400	N/A	\$2031
BURNET	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	370	441	500	559	612	658	\$50	\$50
BURNET	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	1,000	2,000	2,000	2,000	2,000	2,000	\$952	\$952
BURNET	K	MUNICIPAL CONSERVATION - BURNET	DEMAND REDUCTION	184	282	405	571	740	917	\$291	\$291
COLUMBUS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	170	175	178	185	191	197	\$50	\$50
COLUMBUS	K	MUNICIPAL CONSERVATION - COLUMBUS	DEMAND REDUCTION	112	206	296	347	404	464	\$282	\$282
COTTONWOOD SHORES	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	45	54	61	68	74	80	\$50	\$50
COTTONWOOD SHORES	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	376	700	700	700	700	700	\$1517	\$1517
COTTONWOOD SHORES	K	MUNICIPAL CONSERVATION - COTTONWOOD SHORES	DEMAND REDUCTION	22	21	20	19	21	23	\$322	\$322
COUNTY-OTHER, BASTROP	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	281	338	413	517	657	845	\$50	\$50
COUNTY-OTHER, BASTROP	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - CARRIZO-WILCOX AQUIFER	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	60	60	60	60	60	0	\$3267	N/A
COUNTY-OTHER, BASTROP	K	MUNICIPAL CONSERVATION - BASTROP COUNTY-OTHER	DEMAND REDUCTION	92	196	344	414	527	677	\$374	\$374
COUNTY-OTHER, BLANCO	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500
COUNTY-OTHER, BLANCO	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	144	166	179	185	190	193	\$50	\$50

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
COUNTY-OTHER, BLANCO	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - ELLENBURGER-SAN SABA AQUIFER	K ELLENBURGER-SAN SABA AQUIFER BLANCO COUNTY	0	0	0	55	55	55	N/A	\$1382
COUNTY-OTHER, BLANCO	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - HICKORY AQUIFER	K HICKORY AQUIFER BLANCO COUNTY	0	0	0	55	55	55	N/A	\$2182
COUNTY-OTHER, BURNET	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500
COUNTY-OTHER, BURNET	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	526	566	550	593	646	711	\$50	\$50
COUNTY-OTHER, BURNET	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	2,235	3,813	3,813	3,813	3,813	3,813	\$1308	\$1308
COUNTY-OTHER, BURNET	K	MUNICIPAL CONSERVATION - BURNET COUNTY-OTHER	DEMAND REDUCTION	60	93	83	80	87	94	\$0	\$0
COUNTY-OTHER, COLORADO	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	221	223	223	229	237	245	\$50	\$50
COUNTY-OTHER, COLORADO	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - GULF COAST AQUIFER	K GULF COAST AQUIFER COLORADO COUNTY	226	226	226	226	226	226	\$602	\$602
COUNTY-OTHER, FAYETTE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	186	202	213	225	234	242	\$50	\$50
COUNTY-OTHER, FAYETTE	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - GULF COAST AQUIFER	K GULF COAST AQUIFER FAYETTE COUNTY	639	639	639	639	639	639	\$667	\$667
COUNTY-OTHER, GILLESPIE	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500
COUNTY-OTHER, GILLESPIE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	273	284	295	310	327	343	\$50	\$50
COUNTY-OTHER, HAYS	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500
COUNTY-OTHER, HAYS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	466	554	693	852	987	1,121	\$50	\$50
COUNTY-OTHER, HAYS	K	EDWARDS / MIDDLE TRINITY ASR	K TRINITY AQUIFER ASR HAYS COUNTY	0	200	200	200	200	200	N/A	\$1291
COUNTY-OTHER, HAYS	K	HAYS COUNTY PIPELINE - REGION K RECOMMENDED	L CARRIZO-WILCOX AQUIFER GONZALES COUNTY	0	2,000	2,000	2,000	2,000	2,000	N/A	\$708
COUNTY-OTHER, HAYS	K	SALINE EDWARDS ASR	K EDWARDS AQUIFER ASR FRESH/BRACKISH TRAVIS COUNTY	0	100	100	100	100	100	N/A	\$2031
COUNTY-OTHER, HAYS	K	SALINE EDWARDS ASR (SALINE)	K EDWARDS-BFZ AQUIFER SALINE TRAVIS COUNTY	0	100	100	100	100	100	N/A	\$2031
COUNTY-OTHER, HAYS	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	L GUADALUPE RUN-OF-RIVER	0	0	0	0	2,029	7,220	N/A	\$596
COUNTY-OTHER, HAYS	L	TWA REGIONAL CARRIZO AQUIFER DEVELOPMENT	L CARRIZO-WILCOX AQUIFER GONZALES COUNTY	0	0	0	1,169	4,685	4,388	N/A	\$2490
COUNTY-OTHER, HAYS	L	TWA TRINITY AQUIFER DEVELOPMENT	L TRINITY AQUIFER COMAL COUNTY	0	0	0	0	0	1,263	N/A	\$704
COUNTY-OTHER, HAYS	L	VISTA RIDGE PROJECT	G CARRIZO-WILCOX AQUIFER BURLESON COUNTY	3,781	5,000	5,000	5,000	5,000	5,000	\$680	\$611
COUNTY-OTHER, LLANO	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500
COUNTY-OTHER, LLANO	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	31	28	28	28	27	25	\$50	\$50
COUNTY-OTHER, MATAGORDA	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	81	81	81	81	81	83	\$50	\$50
COUNTY-OTHER, MILLS	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500
COUNTY-OTHER, MILLS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	77	77	75	78	81	84	\$50	\$50
COUNTY-OTHER, SAN SABA	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
COUNTY-OTHER, SAN SABA	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	47	48	47	46	47	48	\$50	\$50
COUNTY-OTHER, TRAVIS	K	BRUSH CONTROL	K COLORADO RUN-OF-RIVER	425	425	425	425	425	425	\$500	\$500
COUNTY-OTHER, WHARTON	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	299	306	310	322	333	343	\$50	\$50
CREEDMOOR-MAHA WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	30	34	38	42	46	51	\$50	\$50
CREEDMOOR-MAHA WSC	K	LCRA - MID BASIN RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	400	400	400	400	400	N/A	\$151
CREEDMOOR-MAHA WSC	K	SALINE EDWARDS ASR	K EDWARDS AQUIFER ASR FRESH/BRACKISH TRAVIS COUNTY	0	101	101	101	101	101	N/A	\$2031
CREEDMOOR-MAHA WSC	K	SALINE EDWARDS ASR (SALINE)	K EDWARDS-BFZ AQUIFER SALINE TRAVIS COUNTY	0	199	199	199	199	199	N/A	\$2031
DRIPPING SPRINGS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	96	107	122	141	163	188	\$50	\$50
DRIPPING SPRINGS	K	HAYS COUNTY PIPELINE - REGION K RECOMMENDED	L CARRIZO-WILCOX AQUIFER GONZALES COUNTY	0	0	0	0	134	407	N/A	\$0
DRIPPING SPRINGS	K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS	DEMAND REDUCTION	48	67	98	141	195	262	\$293	\$293
DRIPPING SPRINGS	K	WATER PURCHASE	K HIGHLAND LAKES LAKE/RESERVOIR SYSTEM	0	31	104	198	173	0	N/A	N/A
DRIPPING SPRINGS WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	107	136	172	218	271	330	\$50	\$50
DRIPPING SPRINGS WSC	K	HAYS COUNTY PIPELINE - REGION K RECOMMENDED	L CARRIZO-WILCOX AQUIFER GONZALES COUNTY	0	1,000	1,000	1,000	866	593	N/A	\$708
DRIPPING SPRINGS WSC	K	MUNICIPAL CONSERVATION - DRIPPING SPRINGS WSC	DEMAND REDUCTION	54	124	152	187	232	283	\$313	\$313
EAGLE LAKE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	78	79	79	82	85	87	\$50	\$50
EAST BERNARD	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	57	59	61	63	65	67	\$50	\$50
EAST BERNARD	K	MUNICIPAL CONSERVATION - EAST BERNARD	DEMAND REDUCTION	19	29	42	56	78	97	\$395	\$395
ELGIN	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	233	301	386	500	650	844	\$50	\$50
ELGIN	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - CARRIZO-WILCOX AQUIFER	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	300	300	0	0	0	0	\$667	N/A
ELGIN	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	3,500	3,500	3,500	3,500	3,500	N/A	\$2718
FAYETTE WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	113	125	133	141	148	152	\$50	\$50
FLATONIA	K	DIRECT REUSE - FLATONIA	K DIRECT REUSE	134	149	159	168	176	182	\$821	\$821
FLATONIA	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	51	56	59	63	65	68	\$50	\$50
FLATONIA	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - GULF COAST AQUIFER	K GULF COAST AQUIFER FAYETTE COUNTY	100	100	100	100	100	100	\$2060	\$2060
FLATONIA	K	MUNICIPAL CONSERVATION - FLATONIA	DEMAND REDUCTION	17	29	43	60	84	105	\$356	\$356
FREDERICKSBURG	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	472	499	521	551	580	609	\$50	\$50
FREDERICKSBURG	K	MUNICIPAL CONSERVATION - FREDERICKSBURG	DEMAND REDUCTION	317	599	733	916	1,094	1,301	\$284	\$284
GOLDTHWAITE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	53	53	53	55	57	59	\$50	\$50
GOLDTHWAITE	K	MUNICIPAL CONSERVATION - GOLDTHWAITE	DEMAND REDUCTION	10	13	24	38	54	58	\$449	\$449
GRANITE SHOALS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	33	38	43	48	53	57	\$50	\$50

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
GRANITE SHOALS	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	0	0	250	250	250	N/A	\$151
HORSESHOE BAY	K	DIRECT REUSE - HORSESHOE BAY	K DIRECT REUSE	100	100	100	100	100	100	\$0	\$0
HORSESHOE BAY	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	651	748	810	860	930	994	\$50	\$50
HORSESHOE BAY	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	200	550	550	1,050	1,050	N/A	\$151
HORSESHOE BAY	K	MUNICIPAL CONSERVATION - HORSESHOE BAY	DEMAND REDUCTION	264	554	852	1,157	1,501	1,839	\$257	\$257
IRRIGATION, COLORADO	K	CITY OF AUSTIN RETURN FLOWS	K COLORADO INDIRECT REUSE - CITY OF AUSTIN RETURN FLOWS	0	0	466	336	485	0	N/A	N/A
IRRIGATION, COLORADO	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	29,542	28,746	27,974	27,221	26,489	25,776	\$163	\$163
IRRIGATION, COLORADO	K	IRRIGATION CONSERVATION - ON FARM	DEMAND REDUCTION	3,521	4,441	5,287	6,049	6,717	7,281	\$162	\$162
IRRIGATION, COLORADO	K	IRRIGATION CONSERVATION - OPERATION CONVEYANCE IMPROVEMENTS	DEMAND REDUCTION	916	2,904	4,791	6,527	8,092	9,364	\$200	\$200
IRRIGATION, COLORADO	K	IRRIGATION CONSERVATION - SPRINKLER	DEMAND REDUCTION	251	1,221	2,362	2,845	2,845	2,845	\$36	\$36
IRRIGATION, COLORADO	K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	K HIGHLAND LAKES LAKE/RESERVOIR SYSTEM	25,007	18,363	8,775	4,387	0	0	\$50	N/A
IRRIGATION, MATAGORDA	K	CITY OF AUSTIN RETURN FLOWS	K COLORADO INDIRECT REUSE - CITY OF AUSTIN RETURN FLOWS	8,832	9,326	11,356	13,011	14,876	17,560	\$0	\$0
IRRIGATION, MATAGORDA	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	37,244	36,228	35,238	34,276	33,340	32,429	\$649	\$649
IRRIGATION, MATAGORDA	K	IRRIGATION CONSERVATION - ON FARM	DEMAND REDUCTION	9,947	13,109	16,369	19,741	23,234	26,865	\$162	\$162
IRRIGATION, MATAGORDA	K	IRRIGATION CONSERVATION - OPERATION CONVEYANCE IMPROVEMENTS	DEMAND REDUCTION	2,587	8,572	14,836	21,300	27,986	34,548	\$200	\$200
IRRIGATION, MATAGORDA	K	IRRIGATION CONSERVATION - SPRINKLER	DEMAND REDUCTION	711	3,604	7,316	9,286	9,286	9,286	\$36	\$36
IRRIGATION, MATAGORDA	K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	K HIGHLAND LAKES LAKE/RESERVOIR SYSTEM	36,997	23,109	9,221	4,611	0	0	\$50	N/A
IRRIGATION, MILLS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	125	95	65	36	7	0	\$123	N/A
IRRIGATION, MILLS	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - TRINITY AQUIFER	K TRINITY AQUIFER MILLS COUNTY	480	480	480	480	480	480	\$1619	\$1619
IRRIGATION, WHARTON	K	CITY OF AUSTIN RETURN FLOWS	K COLORADO INDIRECT REUSE - CITY OF AUSTIN RETURN FLOWS	6,361	6,494	7,216	7,546	7,546	8,484	\$0	\$0
IRRIGATION, WHARTON	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	27,855	27,106	26,376	25,666	24,976	24,305	\$260	\$260
IRRIGATION, WHARTON	K	IRRIGATION CONSERVATION - ON FARM	DEMAND REDUCTION	6,533	8,450	10,343	12,211	14,049	15,853	\$162	\$162
IRRIGATION, WHARTON	K	IRRIGATION CONSERVATION - OPERATION CONVEYANCE IMPROVEMENTS	DEMAND REDUCTION	1,698	5,525	9,374	13,175	16,922	20,388	\$200	\$200
IRRIGATION, WHARTON	K	IRRIGATION CONSERVATION - SPRINKLER	DEMAND REDUCTION	467	2,323	4,622	5,743	5,743	5,743	\$36	\$36
IRRIGATION, WHARTON	K	LCRA - INTERRUPTIBLE WATER FOR AGRICULTURE (LCRA WMP AMENDMENTS)	K HIGHLAND LAKES LAKE/RESERVOIR SYSTEM	15,876	7,192	1,452	726	0	0	\$50	N/A
IRRIGATION, WHARTON	P	IRRIGATION CONSERVATION - ON FARM	DEMAND REDUCTION	41,338	41,338	41,338	41,338	41,338	41,338	\$76	\$76
IRRIGATION, WHARTON	P	IRRIGATION CONSERVATION - TAILWATER RECOVERY	DEMAND REDUCTION	8,429	8,429	8,429	8,429	8,429	8,429	\$423	\$423

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
IRRIGATION, WHARTON	P	LOCAL OFF-CHANNEL RESERVOIR - WHARTON COUNTY (LANE CITY)	K COLORADO RUN-OF-RIVER	12,000	12,000	12,000	12,000	12,000	12,000	\$33	\$33
JOHNSON CITY	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	71	82	89	92	95	96	\$50	\$50
JOHNSON CITY	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - ELLENBURGER-SAN SABA AQUIFER	K ELLENBURGER-SAN SABA AQUIFER BLANCO COUNTY	175	175	175	175	175	175	\$800	\$800
JOHNSON CITY	K	MUNICIPAL CONSERVATION - JOHNSON CITY	DEMAND REDUCTION	18	30	30	28	26	26	\$378	\$378
JONESTOWN	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	82	86	90	95	99	104	\$50	\$50
JONESTOWN	K	MUNICIPAL CONSERVATION - JONESTOWN	DEMAND REDUCTION	20	36	51	73	96	122	\$356	\$356
KINGSLAND WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	47	54	53	50	56	60	\$50	\$50
LA GRANGE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	130	144	153	161	168	174	\$50	\$50
LA GRANGE	K	MUNICIPAL CONSERVATION - LA GRANGE	DEMAND REDUCTION	42	21	0	0	0	0	\$396	N/A
LAGO VISTA	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	374	437	498	566	628	686	\$50	\$50
LAGO VISTA	K	MUNICIPAL CONSERVATION - LAGO VISTA	DEMAND REDUCTION	187	301	426	604	773	972	\$291	\$291
LAKEWAY	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	1,395	1,823	1,819	1,816	1,815	1,815	\$50	\$50
LAKEWAY	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - TRINITY AQUIFER	K TRINITY AQUIFER TRAVIS COUNTY	500	500	500	500	500	500	\$570	\$570
LAKEWAY	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	1,000	1,000	1,000	1,000	1,000	1,000	\$0	\$0
LAKEWAY	K	MUNICIPAL CONSERVATION - LAKEWAY	DEMAND REDUCTION	702	1,652	2,408	3,052	3,640	3,921	\$272	\$272
LLANO	K	DEVELOPMENT OF NEW GROUNDWATER SUPPLIES - HICKORY AQUIFER	K HICKORY AQUIFER LLANO COUNTY	200	200	200	200	200	200	\$1270	\$1270
LLANO	K	DIRECT REUSE - LLANO	K DIRECT REUSE	100	100	100	100	100	100	\$660	\$660
LLANO	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	129	134	132	128	133	137	\$50	\$50
LLANO	K	MUNICIPAL CONSERVATION - LLANO	DEMAND REDUCTION	88	118	143	169	209	252	\$291	\$291
LOOP 360 WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	176	183	190	197	204	211	\$50	\$50
LOOP 360 WSC	K	MUNICIPAL CONSERVATION - LOOP 360 WSC	DEMAND REDUCTION	116	224	333	441	546	648	\$258	\$258
LOST CREEK MUD	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	218	214	211	211	211	211	\$50	\$50
LOST CREEK MUD	K	MUNICIPAL CONSERVATION - LOST CREEK MUD	DEMAND REDUCTION	108	137	171	215	254	294	\$291	\$291
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	CITY OF AUSTIN RETURN FLOWS	K COLORADO INDIRECT REUSE - CITY OF AUSTIN RETURN FLOWS	20,594	18,530	19,919	19,519	19,999	22,526	\$0	\$0
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	CITY OF PFLUGERVILLE - DOWNSTREAM RETURN FLOWS	K COLORADO INDIRECT REUSE - DOWNSTREAM RETURN FLOWS	5,086	5,834	6,784	8,636	8,997	10,453	\$0	\$0
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - ACQUIRE ADDITIONAL WATER RIGHTS	K COLORADO RUN-OF-RIVER	250	250	250	250	250	250	\$500	\$0
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - EXCESS FLOWS RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	15,257	15,543	15,830	16,117	16,404	16,691	\$1446	\$1446
MANOR	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	171	234	294	362	422	477	\$50	\$50
MANOR	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - TRINITY AQUIFER	K TRINITY AQUIFER TRAVIS COUNTY	0	600	600	600	600	600	N/A	\$545

Recommended Water User Group (WUG) Water Management Strategies (WMS)**Water Management Strategy Supplies**

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
MANUFACTURING, BASTROP	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - CARRIZO-WILCOX AQUIFER	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	55	87	120	151	174	199	\$995	\$995
MANUFACTURING, FAYETTE	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - GULF COAST AQUIFER	K GULF COAST AQUIFER FAYETTE COUNTY	391	391	391	391	391	391	\$547	\$547
MANUFACTURING, GILLESPIE	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - ELLENBURGER-SAN SABA AQUIFER	K ELLENBURGER-SAN SABA AQUIFER GILLESPIE COUNTY	626	626	626	626	626	626	\$594	\$594
MANVILLE WSC	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	448	541	630	733	825	911	\$50	\$50
MANVILLE WSC	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - TRINITY AQUIFER	K TRINITY AQUIFER TRAVIS COUNTY	0	0	0	1,000	1,000	1,000	N/A	\$537
MANVILLE WSC	K	LCRA - MID BASIN RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	0	0	500	2,000	2,000	N/A	\$151
MARBLE FALLS	K	DIRECT REUSE - MARBLE FALLS	K DIRECT REUSE	11	11	11	11	11	11	\$0	\$0
MARBLE FALLS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	466	674	968	1,122	1,225	1,277	\$50	\$50
MARBLE FALLS	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	500	4,000	4,000	4,000	4,000	4,000	\$1517	\$1517
MARBLE FALLS	K	MUNICIPAL CONSERVATION - MARBLE FALLS	DEMAND REDUCTION	234	587	1,016	1,397	1,764	2,059	\$286	\$286
MEADOWLAKES	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	170	204	233	261	286	308	\$50	\$50
MEADOWLAKES	K	MUNICIPAL CONSERVATION - MEADOWLAKES	DEMAND REDUCTION	84	188	309	443	573	708	\$271	\$271
MINING, BASTROP	K	DEVELOPMENT OF NEW GROUNDWATER SUPPLIES - CARRIZO-WILCOX AQUIFER	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	0	0	466	466	466	466	N/A	\$689
MINING, BASTROP	K	DEVELOPMENT OF NEW GROUNDWATER SUPPLIES - QUEEN CITY AQUIFER	K QUEEN CITY AQUIFER BASTROP COUNTY	110	306	0	0	0	0	\$755	N/A
MINING, BURNET	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - ELLENBURGER-SAN SABA AQUIFER	K ELLENBURGER-SAN SABA AQUIFER BURNET COUNTY	1,500	1,500	1,500	1,500	1,500	1,500	\$950	\$950
MINING, BURNET	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - HICKORY AQUIFER	K HICKORY AQUIFER BURNET COUNTY	0	500	1,000	1,800	1,800	1,800	N/A	\$718
MINING, BURNET	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - MARBLE FALLS AQUIFER	K MARBLE FALLS AQUIFER BURNET COUNTY	0	0	0	0	1,000	1,500	N/A	\$469
MINING, FAYETTE	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - GULF COAST AQUIFER	K GULF COAST AQUIFER FAYETTE COUNTY	1,920	1,520	1,061	618	344	344	\$388	\$622
MINING, FAYETTE	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - SPARTA AQUIFER	K SPARTA AQUIFER FAYETTE COUNTY	66	42	13	0	0	0	\$1030	N/A
MINING, HAYS	K	DIRECT REUSE - BUDA	K DIRECT REUSE	0	0	500	500	500	500	N/A	\$0
MINING, HAYS	K	EDWARDS / MIDDLE TRINITY ASR	K TRINITY AQUIFER ASR HAYS COUNTY	0	100	100	100	100	100	N/A	\$1291
MINING, HAYS	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - TRINITY AQUIFER	K TRINITY AQUIFER HAYS COUNTY	531	761	1,047	1,047	1,047	1,047	\$436	\$436
MOUNTAIN CITY	K	EDWARDS / MIDDLE TRINITY ASR	K TRINITY AQUIFER ASR HAYS COUNTY	0	44	44	44	44	44	N/A	\$1291
MOUNTAIN CITY	L	DROUGHT MANAGEMENT - MOUNTAIN CITY	DEMAND REDUCTION	1	0	0	0	0	0	\$14	N/A
MOUNTAIN CITY	L	LOCAL TRINITY AQUIFER DEVELOPMENT	K TRINITY AQUIFER HAYS COUNTY	60	60	60	60	60	60	\$1300	\$1300
MOUNTAIN CITY	L	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION	0	0	0	0	0	1	N/A	\$770
NORTH AUSTIN MUD #1	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	128	124	121	118	118	118	\$50	\$50
NORTHTOWN MUD	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	104	120	135	152	167	180	\$50	\$50

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
PALACIOS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	102	104	104	105	107	108	\$50	\$50
PFLUGERVILLE	K	DIRECT REUSE - PFLUGERVILLE	K DIRECT REUSE	500	1,000	2,000	2,000	4,000	4,000	\$228	\$228
PFLUGERVILLE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	3,194	4,276	5,311	6,474	7,503	8,463	\$50	\$50
PFLUGERVILLE	K	EXPANSION OF CURRENT GROUNDWATER SUPPLIES - EDWARDS-BFZ AQUIFER	K EDWARDS-BFZ AQUIFER TRAVIS COUNTY	0	0	1,000	1,000	1,000	1,000	N/A	\$371
PFLUGERVILLE	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	0	0	3,000	3,000	4,000	N/A	\$151
PFLUGERVILLE	K	LCRA - MID BASIN RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	0	0	0	0	2,000	N/A	\$151
PFLUGERVILLE	K	MUNICIPAL CONSERVATION - PFLUGERVILLE	DEMAND REDUCTION	604	2,105	2,625	3,029	3,514	3,966	\$295	\$295
POINT VENTURE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	52	66	80	96	109	122	\$50	\$50
POINT VENTURE	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	100	100	300	300	300	N/A	\$151
POINT VENTURE	K	MUNICIPAL CONSERVATION - POINT VENTURE	DEMAND REDUCTION	34	82	139	191	241	301	\$282	\$282
ROLLINGWOOD	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	58	57	56	56	56	57	\$50	\$50
ROLLINGWOOD	K	LCRA - MID BASIN RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	400	400	400	400	400	N/A	\$151
ROLLINGWOOD	K	MUNICIPAL CONSERVATION - ROLLINGWOOD	DEMAND REDUCTION	38	67	79	91	104	118	\$286	\$286
SAN SABA	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	228	236	235	230	235	240	\$50	\$50
SAN SABA	K	MUNICIPAL CONSERVATION - SAN SABA	DEMAND REDUCTION	114	211	302	377	463	510	\$275	\$275
SCHULENBURG	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	110	123	132	139	146	150	\$50	\$50
SCHULENBURG	K	MUNICIPAL CONSERVATION - SCHULENBURG	DEMAND REDUCTION	37	63	96	141	188	232	\$343	\$343
SHADY HOLLOW MUD	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	117	114	111	110	110	110	\$50	\$50
SHADY HOLLOW MUD	K	MUNICIPAL CONSERVATION - SHADY HOLLOW MUD	DEMAND REDUCTION	38	16	0	0	0	0	\$397	N/A
SMITHVILLE	K	DEVELOPMENT OF NEW GROUNDWATER SUPPLIES - QUEEN CITY AQUIFER	K QUEEN CITY AQUIFER BASTROP COUNTY	0	0	0	0	0	150	N/A	\$1607
SMITHVILLE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	126	161	208	273	362	480	\$50	\$50
SMITHVILLE	K	MUNICIPAL CONSERVATION - SMITHVILLE	DEMAND REDUCTION	44	72	76	88	117	155	\$376	\$376
STEAM ELECTRIC POWER, BASTROP	K	LCRA - EXPAND USE OF GROUNDWATER (CARRIZO-WILCOX AQUIFER)	K CARRIZO-WILCOX AQUIFER BASTROP COUNTY	300	300	300	300	300	300	\$1517	\$1517
STEAM ELECTRIC POWER, FAYETTE	K	CITY OF AUSTIN - LAKE LONG ENHANCED STORAGE	K LAKE LONG/RESERVOIR	2,000	2,000	2,000	2,000	2,000	2,000	\$187	\$187
STEAM ELECTRIC POWER, FAYETTE	K	LCRA - GROUNDWATER SUPPLY FOR FPP (OFF-SITE)	K CARRIZO-WILCOX AQUIFER FAYETTE COUNTY	500	500	500	500	500	500	\$1113	\$1113
STEAM ELECTRIC POWER, FAYETTE	K	LCRA - GROUNDWATER SUPPLY FOR FPP (OFF-SITE)	K YEGUA-JACKSON AQUIFER FAYETTE COUNTY	2,000	2,000	2,000	2,000	2,000	2,000	\$1113	\$1113
STEAM ELECTRIC POWER, FAYETTE	K	LCRA - GROUNDWATER SUPPLY FOR FPP (ON-SITE)	K GULF COAST AQUIFER FAYETTE COUNTY	700	700	700	700	700	700	\$496	\$496
STEAM ELECTRIC POWER, FAYETTE	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	6,000	7,000	9,000	11,000	13,000	15,000	\$151	\$151
STEAM ELECTRIC POWER, MATAGORDA	K	BLEND BRACKISH SURFACE WATER IN STPNOC RESERVOIR	K GULF OF MEXICO SALINE	3,000	3,000	3,000	3,000	3,000	3,000	\$0	\$0

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
STEAM ELECTRIC POWER, MATAGORDA	K	CITY OF AUSTIN RETURN FLOWS	K COLORADO INDIRECT REUSE - CITY OF AUSTIN RETURN FLOWS	770	710	766	763	764	859	\$0	\$0
STEAM ELECTRIC POWER, MATAGORDA	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	22,727	22,727	22,727	22,727	22,727	22,727	\$151	\$151
STEAM ELECTRIC POWER, TRAVIS	K	CITY OF AUSTIN - DIRECT REUSE	K DIRECT REUSE	3,500	7,500	7,500	8,500	9,500	10,500	\$1347	\$1347
STEAM ELECTRIC POWER, TRAVIS	K	LCRA - MID BASIN RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	0	0	0	4,543	11,030	N/A	\$151
STEAM ELECTRIC POWER, WHARTON	K	DEVELOPMENT OF NEW GROUNDWATER SUPPLIES - GULF COAST AQUIFER	K GULF COAST AQUIFER WHARTON COUNTY	0	0	0	0	200	200	N/A	\$1035
SUNRISE BEACH VILLAGE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	4	4	4	3	3	3	\$50	\$50
SUNSET VALLEY	K	DEVELOPMENT OF NEW GROUNDWATER SUPPLIES - TRINITY AQUIFER	K TRINITY AQUIFER TRAVIS COUNTY	0	0	200	200	200	200	N/A	\$1035
SUNSET VALLEY	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	116	150	182	218	250	280	\$50	\$50
SUNSET VALLEY	K	EDWARDS / MIDDLE TRINITY ASR	K TRINITY AQUIFER ASR HAYS COUNTY	0	200	200	200	200	200	N/A	\$1291
SUNSET VALLEY	K	LCRA - MID BASIN RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	715	715	715	715	715	N/A	\$151
SUNSET VALLEY	K	MUNICIPAL CONSERVATION - SUNSET VALLEY	DEMAND REDUCTION	38	90	158	241	305	366	\$276	\$276
THE HILLS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	217	217	216	216	216	216	\$50	\$50
THE HILLS	K	MUNICIPAL CONSERVATION - THE HILLS	DEMAND REDUCTION	144	272	386	487	581	665	\$263	\$263
TRAVIS COUNTY MUD #4	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	522	602	677	762	837	907	\$50	\$50
TRAVIS COUNTY MUD #4	K	MUNICIPAL CONSERVATION - TRAVIS COUNTY MUD #4	DEMAND REDUCTION	262	564	912	1,302	1,705	2,114	\$251	\$251
TRAVIS COUNTY WCID #10	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	532	607	679	761	835	905	\$50	\$50
TRAVIS COUNTY WCID #10	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	3,000	3,000	3,000	3,000	3,000	N/A	\$151
TRAVIS COUNTY WCID #10	K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #10	DEMAND REDUCTION	213	445	707	996	1,316	1,533	\$275	\$275
TRAVIS COUNTY WCID #17	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	1,268	1,508	1,653	1,678	1,722	1,776	\$50	\$50
TRAVIS COUNTY WCID #17	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	1,000	2,000	2,000	2,000	2,000	2,000	\$151	\$151
TRAVIS COUNTY WCID #17	K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #17	DEMAND REDUCTION	853	1,825	2,399	2,889	3,325	4,645	\$289	\$289
TRAVIS COUNTY WCID #18	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	168	190	211	236	259	280	\$50	\$50
TRAVIS COUNTY WCID #18	K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #18	DEMAND REDUCTION	60	95	87	87	96	104	\$375	\$375
TRAVIS COUNTY WCID #19	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	100	99	99	99	99	99	\$50	\$50
TRAVIS COUNTY WCID #19	K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #19	DEMAND REDUCTION	50	92	131	166	199	229	\$255	\$255
TRAVIS COUNTY WCID #20	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	118	117	117	117	116	116	\$50	\$50
TRAVIS COUNTY WCID #20	K	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #20	DEMAND REDUCTION	59	110	153	197	234	268	\$261	\$261
VOLENTE	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	4	4	5	6	7	7	\$50	\$50
VOLENTE	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	142	142	142	142	142	142	\$7644	\$7644
WEIMAR	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	83	85	87	90	92	96	\$50	\$50

Recommended Water User Group (WUG) Water Management Strategies (WMS)

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
WEIMAR	K	MUNICIPAL CONSERVATION - WEIMAR	DEMAND REDUCTION	56	74	90	117	144	171	\$290	\$290
WELLS BRANCH MUD	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	88	86	85	84	84	84	\$50	\$50
WEST LAKE HILLS	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	313	310	308	307	306	306	\$50	\$50
WEST LAKE HILLS	K	LCRA - MID BASIN RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	1,300	1,300	1,300	1,300	1,300	N/A	\$151
WEST LAKE HILLS	K	MUNICIPAL CONSERVATION - WEST LAKE HILLS	DEMAND REDUCTION	157	286	398	505	609	700	\$267	\$267
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	1,292	1,696	2,170	2,757	3,400	4,120	\$50	\$50
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	K	HAYS COUNTY PIPELINE - REGION K RECOMMENDED	L CARRIZO-WILCOX AQUIFER GONZALES COUNTY	0	1,000	1,000	1,000	1,000	1,000	N/A	\$708
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	K	LCRA - LANE CITY RESERVOIR	K LCRA NEW OFF-CHANNEL RESERVOIRS (2020 DECADE)	0	700	2,900	3,400	6,200	6,200	N/A	\$151
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	K	MUNICIPAL CONSERVATION - WEST TRAVIS COUNTY PUA	DEMAND REDUCTION	639	1,575	2,873	4,665	6,874	9,574	\$267	\$267
WHARTON	K	DROUGHT MANAGEMENT	DEMAND REDUCTION	250	259	265	274	283	291	\$50	\$50
WHARTON	K	MUNICIPAL CONSERVATION - WHARTON	DEMAND REDUCTION	168	134	176	171	176	182	\$312	\$312
Region K Total Recommended WMS Supplies				538,369	598,375	649,286	725,008	789,681	866,675		

Recommended Projects Associated with Water Management Strategies

Project Sponsor Region: K

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
AQUA WSC	N	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - AQUA WSC	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$9,777,000	2020
AQUA WSC	N	MUNICIPAL CONSERVATION - AQUA WSC	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$1,384,870	2020
AQUA WSC	N	NEW SURFACE WATER INFRASTRUCTURE - AQUA WSC	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$127,538,000	2040
AUSTIN	Y	CITY OF AUSTIN - AQUIFER STORAGE AND RECOVERY	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; PUMP STATION; WATER TREATMENT PLANT EXPANSION	\$312,316,000	2020
AUSTIN	Y	CITY OF AUSTIN - CAPTURE LOCAL INFLOWS TO LADY BIRD LAKE	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION	\$2,949,000	2020
AUSTIN	Y	CITY OF AUSTIN - DIRECT REUSE	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION; WATER TREATMENT PLANT EXPANSION	\$536,176,000	2020
AUSTIN	Y	CITY OF AUSTIN - INDIRECT POTABLE REUSE THROUGH LADY BIRD LAKE	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION	\$41,970,000	2020
AUSTIN	Y	CITY OF AUSTIN - LAKE LONG ENHANCED STORAGE	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$31,041,000	2020
AUSTIN	Y	CITY OF AUSTIN - LONGHORN DAM OPERATIONS IMPROVEMENTS	WATER LOSS CONTROL	\$1,036,000	2020
AUSTIN	Y	CITY OF AUSTIN - OTHER REUSE	CONVEYANCE/TRANSMISSION PIPELINE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$21,772,000	2020
AUSTIN	Y	CITY OF AUSTIN - RAINWATER HARVESTING	MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); STORAGE TANK	\$690,167,000	2020
AUSTIN	Y	CITY OF AUSTIN CONSERVATION	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$41,434,437	2020
BARTON CREEK WEST WSC	N	MUNICIPAL CONSERVATION - BARTON CREEK WEST WSC	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$38,391	2020
BASTROP	N	DEVELOPMENT OF NEW CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,976,000	2020
BASTROP	N	DIRECT REUSE - BASTROP	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$4,625,000	2040
BASTROP	N	MUNICIPAL CONSERVATION - BASTROP	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$224,866	2020
BASTROP	N	NEW SURFACE WATER INFRASTRUCTURE - BASTROP	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION	\$34,858,000	2050
BASTROP COUNTY WCID #2	N	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY WCID #2	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,150,000	2060
BAY CITY	N	MUNICIPAL CONSERVATION - BAY CITY	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$405,403	2020
BEE CAVE	N	MUNICIPAL CONSERVATION - BEE CAVE VILLAGE	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$137,097	2020
BERTRAM	N	BUENA VISTA REGIONAL PROJECT	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; STORAGE TANK; WATER TREATMENT PLANT EXPANSION	\$4,523,170	2020
BERTRAM	N	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BERTRAM	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,031,000	2020

Recommended Projects Associated with Water Management Strategies

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
BERTRAM	N	MUNICIPAL CONSERVATION - BERTRAM	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$41,421	2020
BLANCO	N	MUNICIPAL CONSERVATION - BLANCO	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$47,867	2020
BUDA	N	BS/EACD EDWARDS / MIDDLE TRINITY ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$6,818,182	2030
BUDA	N	BS/EACD SALINE EDWARDS ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$7,500,000	2030
BUDA	N	DIRECT REUSE - BUDA	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$6,075,000	2020
BUDA	N	MUNICIPAL CONSERVATION - BUDA	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$221,686	2020
BURNET	N	BUENA VISTA REGIONAL PROJECT	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; STORAGE TANK; WATER TREATMENT PLANT EXPANSION	\$10,233,415	2020
BURNET	N	MUNICIPAL CONSERVATION - BURNET	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$184,386	2020
CEDAR PARK	Y	MUNICIPAL CONSERVATION - CEDAR PARK	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$238,695	2020
COLUMBUS	N	MUNICIPAL CONSERVATION - COLUMBUS	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$100,974	2020
COTTONWOOD SHORES	N	MARBLE FALLS REGIONAL PROJECT	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$6,099,086	2020
COTTONWOOD SHORES	N	MUNICIPAL CONSERVATION - COTTONWOOD SHORES	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$30,672	2020
COUNTY-OTHER, BASTROP	N	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY-OTHER	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,150,000	2020
COUNTY-OTHER, BASTROP	N	MUNICIPAL CONSERVATION - BASTROP COUNTY OTHER	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$232,736	2020
COUNTY-OTHER, BLANCO	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
COUNTY-OTHER, BLANCO	N	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BLANCO COUNTY-OTHER	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$821,000	2050
COUNTY-OTHER, BLANCO	N	EXPANSION OF HICKORY AQUIFER SUPPLIES - BLANCO COUNTY-OTHER	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$1,316,000	2050
COUNTY-OTHER, BURNET	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
COUNTY-OTHER, BURNET	N	BUENA VISTA REGIONAL PROJECT	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; STORAGE TANK; WATER TREATMENT PLANT EXPANSION	\$10,233,415	2020
COUNTY-OTHER, BURNET	N	EAST LAKE BUCHANAN REGIONAL PROJECT	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$10,337,000	2020
COUNTY-OTHER, BURNET	N	MARBLE FALLS REGIONAL PROJECT	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$7,649,996	2020

Recommended Projects Associated with Water Management Strategies

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
COUNTY-OTHER, BURNET	N	MUNICIPAL CONSERVATION - BURNET COUNTY-OTHER	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$164,771	2020
COUNTY-OTHER, COLORADO	N	EXPANSION OF GULF COAST AQUIFER SUPPLIES - COLORADO COUNTY-OTHER	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$1,466,000	2020
COUNTY-OTHER, FAYETTE	N	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY-OTHER	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$4,558,000	2020
COUNTY-OTHER, GILLESPIE	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
COUNTY-OTHER, HAYS	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
COUNTY-OTHER, HAYS	N	BS/EACD EDWARDS / MIDDLE TRINITY ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$2,272,727	2030
COUNTY-OTHER, HAYS	N	BS/EACD SALINE EDWARDS ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$3,000,000	2030
COUNTY-OTHER, HAYS	N	HAYS COUNTY PIPELINE - REGION K PORTION	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$11,739,500	2030
COUNTY-OTHER, LLANO	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
COUNTY-OTHER, MILLS	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
COUNTY-OTHER, SAN SABA	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
COUNTY-OTHER, TRAVIS	N	BRUSH CONTROL	BRUSH CONTROL CAPITAL COST	\$2,137,000	2020
CREEDMOOR-MAHA WSC	N	BS/EACD SALINE EDWARDS ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$4,500,000	2030
DRIPPING SPRINGS	N	MUNICIPAL CONSERVATION - DRIPPING SPRINGS	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$49,510	2020
DRIPPING SPRINGS WSC	N	HAYS COUNTY PIPELINE - REGION K PORTION	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$5,869,750	2030
DRIPPING SPRINGS WSC	N	MUNICIPAL CONSERVATION - DRIPPING SPRINGS WSC	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$68,043	2020
EAST BERNARD	N	MUNICIPAL CONSERVATION - EAST BERNARD	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$52,607	2020
ELGIN	N	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - ELGIN	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,150,000	2020
ELGIN	N	NEW SURFACE WATER INFRASTRUCTURE - ELGIN	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$61,623,000	2030
FLATONIA	N	DIRECT REUSE - FLATONIA	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$1,226,000	2020
FLATONIA	N	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FLATONIA	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,241,000	2020
FLATONIA	N	MUNICIPAL CONSERVATION - FLATONIA	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$37,553	2020
FREDERICKSBURG	N	MUNICIPAL CONSERVATION - FREDERICKSBURG	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$291,489	2020
GOLDTHWAITE	N	MUNICIPAL CONSERVATION - GOLDTHWAITE	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$41,809	2020

Recommended Projects Associated with Water Management Strategies

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
HORSESHOE BAY	N	MUNICIPAL CONSERVATION - HORSESHOE BAY	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$154,204	2020
IRRIGATION, COLORADO	N	IRRIGATION CONSERVATION - ON FARM	ON FARM IRRIGATION CONSERVATION	\$14,210,709	2020
IRRIGATION, COLORADO	N	IRRIGATION CONSERVATION - SPRINKLER	ON FARM IRRIGATION CONSERVATION	\$1,234,855	2020
IRRIGATION, COLORADO	N	IRRIGATION OPERATIONS CONVEYANCE IMPROVEMENTS	CANAL LINING; ON FARM IRRIGATION CONSERVATION	\$22,581,627	2020
IRRIGATION, MATAGORDA	N	IRRIGATION CONSERVATION - ON FARM	ON FARM IRRIGATION CONSERVATION	\$52,428,108	2020
IRRIGATION, MATAGORDA	N	IRRIGATION CONSERVATION - SPRINKLER	ON FARM IRRIGATION CONSERVATION	\$4,030,116	2020
IRRIGATION, MATAGORDA	N	IRRIGATION OPERATIONS CONVEYANCE IMPROVEMENTS	CANAL LINING; ON FARM IRRIGATION CONSERVATION	\$83,311,250	2020
IRRIGATION, MILLS	N	EXPANSION OF TRINITY AQUIFER SUPPLIES - MILLS COUNTY IRRIGATION	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$8,289,000	2020
IRRIGATION, WHARTON	N	IRRIGATION CONSERVATION - ON FARM	ON FARM IRRIGATION CONSERVATION	\$30,939,183	2020
IRRIGATION, WHARTON	N	IRRIGATION CONSERVATION - SPRINKLER	ON FARM IRRIGATION CONSERVATION	\$2,492,779	2020
IRRIGATION, WHARTON	N	IRRIGATION OPERATIONS CONVEYANCE IMPROVEMENTS	CANAL LINING; ON FARM IRRIGATION CONSERVATION	\$49,164,123	2020
JOHNSON CITY	N	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - JOHNSON CITY	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$1,505,000	2020
JOHNSON CITY	N	MUNICIPAL CONSERVATION - JOHNSON CITY	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$45,790	2020
JONESTOWN	N	MUNICIPAL CONSERVATION - JONESTOWN	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$46,456	2020
LA GRANGE	N	MUNICIPAL CONSERVATION - LA GRANGE	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$117,647	2020
LAGO VISTA	N	MUNICIPAL CONSERVATION - LAGO VISTA	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$187,406	2020
LAKEWAY	N	EXPANSION OF TRINITY AQUIFER SUPPLIES - LAKEWAY	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,985,000	2020
LAKEWAY	N	MUNICIPAL CONSERVATION - LAKEWAY	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$544,773	2020
LLANO	N	DEVELOPMENT OF NEW HICKORY AQUIFER SUPPLIES - LLANO	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,743,000	2020
LLANO	N	DIRECT REUSE - LLANO	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$689,000	2020
LLANO	N	MUNICIPAL CONSERVATION - LLANO	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$87,599	2020
LOOP 360 WSC	N	MUNICIPAL CONSERVATION - LOOP 360	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$71,683	2020
LOST CREEK MUD	N	MUNICIPAL CONSERVATION - LOST CREEK MUD	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$108,519	2020
LOWER COLORADO RIVER AUTHORITY	Y	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - LCRA	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD; PUMP STATION; STORAGE TANK	\$4,564,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - ACQUIRE ADDITIONAL WATER RIGHTS	WATER RIGHT/PERMIT LEASE OR PURCHASE	\$125,000	2020

Recommended Projects Associated with Water Management Strategies

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - ENHANCED MUNICIPAL AND INDUSTRIAL CONSERVATION	MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$64,099,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - EXCESS FLOWS PERMIT OFF-CHANNEL RESERVOIR	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; RESERVOIR CONSTRUCTION	\$298,000,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - GROUNDWATER SUPPLY FOR FPP (OFF-SITE)	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD; PUMP STATION; STORAGE TANK	\$20,107,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - GROUNDWATER SUPPLY FOR FPP (ON-SITE)	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD; PUMP STATION	\$2,749,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - LANE CITY OFF-CHANNEL RESERVOIR	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; RESERVOIR CONSTRUCTION	\$218,593,000	2017
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - MID-BASIN OFF-CHANNEL RESERVOIR	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; RESERVOIR CONSTRUCTION	\$298,000,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - PRAIRIE SITE OFF-CHANNEL RESERVOIR	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; RESERVOIR CONSTRUCTION	\$376,000,000	2030
MANOR	N	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANOR	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$3,442,000	2030
MANUFACTURING, BASTROP	N	EXPANSION OF CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY MANUFACTURING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,150,000	2020
MANUFACTURING, FAYETTE	N	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY MANUFACTURING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,279,000	2020
MANUFACTURING, GILLESPIE	N	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - GILLESPIE COUNTY MANUFACTURING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$3,880,000	2020
MANVILLE WSC	N	EXPANSION OF TRINITY AQUIFER SUPPLIES - MANVILLE WSC	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$5,431,000	2050
MARBLE FALLS	N	MARBLE FALLS REGIONAL PROJECT	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$34,851,918	2020
MARBLE FALLS	N	MUNICIPAL CONSERVATION - MARBLE FALLS	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$221,276	2020
MEADOWLAKES	N	MUNICIPAL CONSERVATION - MEADOWLAKES	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$64,541	2020
MINING, BASTROP	N	DEVELOPMENT OF NEW CARRIZO-WILCOX AQUIFER SUPPLIES - BASTROP COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$3,391,000	2040
MINING, BASTROP	N	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - BASTROP COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,446,000	2020
MINING, BURNET	N	EXPANSION OF ELLENBURGER-SAN SABA AQUIFER SUPPLIES - BURNET COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$13,418,000	2020
MINING, BURNET	N	EXPANSION OF HICKORY AQUIFER SUPPLIES - BURNET COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$13,437,000	2030
MINING, BURNET	N	EXPANSION OF MARBLE FALLS AQUIFER SUPPLIES - BURNET COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$7,257,000	2060
MINING, FAYETTE	N	EXPANSION OF GULF COAST AQUIFER SUPPLIES - FAYETTE COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$7,520,000	2020
MINING, FAYETTE	N	EXPANSION OF SPARTA AQUIFER SUPPLIES - FAYETTE COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$753,000	2020
MINING, HAYS	N	BS/EACD EDWARDS / MIDDLE TRINITY ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$1,136,364	2030
MINING, HAYS	N	EXPANSION OF TRINITY AQUIFER SUPPLIES - HAYS COUNTY MINING	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$4,652,000	2020
MOUNTAIN CITY	N	BS/EACD EDWARDS / MIDDLE TRINITY ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$500,000	2030
PFLUGERVILLE	N	DIRECT REUSE - PFLUGERVILLE	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION; STORAGE TANK	\$7,959,000	2020

Recommended Projects Associated with Water Management Strategies

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
PFLUGERVILLE	N	EXPANSION OF EDWARDS (BFZ) AQUIFER SUPPLIES - PFLUGERVILLE	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$3,729,000	2040
PFLUGERVILLE	N	MUNICIPAL CONSERVATION - PFLUGERVILLE	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$1,701,900	2020
POINT VENTURE	N	MUNICIPAL CONSERVATION - POINT VENTURE	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$31,028	2020
ROLLINGWOOD	N	MUNICIPAL CONSERVATION - ROLLINGWOOD	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$36,238	2020
ROUND ROCK	Y	MUNICIPAL CONSERVATION - ROUND ROCK	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$36,147	2020
SAN SABA	N	MUNICIPAL CONSERVATION - SAN SABA	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$91,823	2020
SCHULENBURG	N	MUNICIPAL CONSERVATION - SCHULENBURG	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$78,947	2020
SHADY HOLLOW MUD	N	MUNICIPAL CONSERVATION - SHADY HOLLOW MUD	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$106,952	2020
SMITHVILLE	N	DEVELOPMENT OF NEW QUEEN CITY AQUIFER SUPPLIES - SMITHVILLE	CONVEYANCE/TRANSMISSION PIPELINE; SINGLE WELL	\$2,620,000	2070
SMITHVILLE	N	MUNICIPAL CONSERVATION - SMITHVILLE	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$109,412	2020
STEAM ELECTRIC POWER, MATAGORDA	N	ALTERNATE CANAL DELIVERY - STPNOC	CONVEYANCE/TRANSMISSION PIPELINE	\$7,669,000	2020
STEAM ELECTRIC POWER, WHARTON	N	DEVELOPMENT OF NEW GULF COAST AQUIFER SUPPLIES - WHARTON COUNTY STEAM-ELECTRIC	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,237,000	2060
SUNSET VALLEY	N	BS/EACD EDWARDS / MIDDLE TRINITY ASR	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION	\$2,272,727	2030
SUNSET VALLEY	N	DEVELOPMENT OF NEW TRINITY AQUIFER SUPPLIES - SUNSET VALLEY	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD	\$2,228,000	2040
SUNSET VALLEY	N	MUNICIPAL CONSERVATION - SUNSET VALLEY	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$31,520	2020
THE HILLS	N	MUNICIPAL CONSERVATION - THE HILLS	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$97,374	2020
TRAVIS COUNTY MUD #4	N	MUNICIPAL CONSERVATION - TRAVIS COUNTY MUD #4	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$137,248	2020
TRAVIS COUNTY WCID #10	N	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #10	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$171,890	2020
TRAVIS COUNTY WCID #17	N	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #17	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$828,248	2020
TRAVIS COUNTY WCID #18	N	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #18	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$147,665	2020

Recommended Projects Associated with Water Management Strategies

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
TRAVIS COUNTY WCID #19	N	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #19	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$28,215	2020
TRAVIS COUNTY WCID #20	N	MUNICIPAL CONSERVATION - TRAVIS COUNTY WCID #20	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$38,290	2020
VOLENTE	N	NEW SURFACE WATER INFRASTRUCTURE - VOLENTE	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$8,263,000	2020
WEIMAR	N	MUNICIPAL CONSERVATION - WEIMAR	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$55,778	2020
WEST LAKE HILLS	N	MUNICIPAL CONSERVATION - WEST LAKE HILLS	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$112,784	2020
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	N	HAYS COUNTY PIPELINE - REGION K PORTION	CONVEYANCE/TRANSMISSION PIPELINE; PUMP STATION	\$5,869,750	2030
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	N	MUNICIPAL CONSERVATION - WEST TRAVIS COUNTY PUA	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$461,454	2020
WHARTON	N	MUNICIPAL CONSERVATION - WHARTON	METER REPLACEMENT; MUNICIPAL CONSERVATION CAPITAL COST (DOES NOT INCLUDE METER REPLACEMENT OR WATER LOSS); WATER LOSS CONTROL	\$210,832	2020
Region K Total Recommended Capital Cost				\$3,772,705,672	

*Projects with a capital cost of zero are excluded from the report list.

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Alternative Water User Group (WUG) Water Management Strategies (WMS)

WUG Entity Primary Region: K

Water Management Strategy Supplies

WUG Entity Name	WMS Sponsor Region	WMS Name	Source Name	2020	2030	2040	2050	2060	2070	Unit Cost 2020	Unit Cost 2070
AUSTIN	K	CITY OF AUSTIN - BRACKISH GROUNDWATER DESALINATION	K EDWARDS-BFZ AQUIFER TRAVIS COUNTY	0	5,000	5,000	5,000	5,000	5,000	N/A	\$1523
AUSTIN	K	CITY OF AUSTIN - RECLAIMED WATER BANK INFILTRATION TO COLORADO ALLUVIUM	K OTHER AQUIFER TRAVIS COUNTY	0	15,000	20,000	25,000	30,000	30,000	N/A	\$424
BUDA	K	DIRECT POTABLE REUSE	K DIRECT REUSE (POTABLE)	2,240	2,240	2,240	2,240	2,240	2,240	\$1440	\$1440
BUDA	K	HCPUA PIPELINE - REGION K ALTERNATIVE	L CARRIZO-WILCOX AQUIFER GONZALES COUNTY	0	667	1,690	2,974	4,033	4,426	N/A	\$1664
IRRIGATION, WHARTON	P	EXPAND USE OF GROUNDWATER	P GULF COAST AQUIFER WHARTON COUNTY	50,285	50,285	50,285	50,285	50,285	50,285	\$44	\$44
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - AQUIFER STORAGE AND RECOVERY	K CARRIZO-WILCOX AQUIFER ASR BASTROP COUNTY	0	0	5,048	5,048	5,048	5,048	N/A	\$1076
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - BAYLOR CREEK RESERVOIR	K BAYLOR CREEK RESERVOIR	0	0	18,000	18,000	18,000	18,000	N/A	\$900
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - BRACKISH GROUNDWATER DESALINATION	K GULF COAST AQUIFER MATAGORDA COUNTY	0	0	22,400	22,400	22,400	22,400	N/A	\$1035
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - ENHANCED RECHARGE AND CONJUNCTIVE USE	K GULF COAST AQUIFER WHARTON COUNTY	10,000	10,000	10,000	10,000	10,000	10,000	\$834	\$834
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - GROUNDWATER IMPORTATION	G CARRIZO-WILCOX AQUIFER BURLESON COUNTY	0	0	35,000	35,000	35,000	35,000	N/A	\$1470
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - IMPORT RETURN FLOWS FROM WILLIAMSON COUNTY	G BRAZOS RUN-OF-RIVER	25,000	25,000	25,000	25,000	25,000	25,000	\$219	\$219
LOWER COLORADO RIVER AUTHORITY - UNASSIGNED WATER VOLUMES	K	LCRA - SUPPLEMENT BAY AND ESTUARY INFLOWS WITH BRACKISH GROUNDWATER	K GULF COAST AQUIFER MATAGORDA COUNTY	12,000	12,000	12,000	12,000	12,000	12,000	\$500	\$500
Region K Total Alternative WMS Supplies				99,525	120,192	206,663	212,947	219,006	219,399		

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Alternative Projects Associated with Water Management Strategies

Project Sponsor Region: K

Sponsor Name	Is Sponsor a WWP?	Project Name	Project Description	Capital Cost	Online Decade
AUSTIN	Y	CITY OF AUSTIN - BRACKISH GROUNDWATER DESALINATION	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; STORAGE TANK	\$54,582,000	2030
AUSTIN	Y	CITY OF AUSTIN - RECLAIMED WATER BANK INFILTRATION TO COLORADO ALLUVIUM	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD; PUMP STATION; RESERVOIR CONSTRUCTION	\$151,846,000	2030
BUDA	N	DIRECT POTABLE REUSE	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$26,779,000	2020
HAYS CALDWELL PUA	Y	HAYS/CALDWELL PUA PROJECT - ALTERNATIVE	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$51,128,546	2030
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - AQUIFER STORAGE AND RECOVERY	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$39,590,000	2040
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - BAYLOR CREEK RESERVOIR	CONVEYANCE/TRANSMISSION PIPELINE; NEW SURFACE WATER INTAKE; PUMP STATION; RESERVOIR CONSTRUCTION	\$179,000,000	2040
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - BRACKISH GROUNDWATER DESALINATION	CONVEYANCE/TRANSMISSION PIPELINE; INJECTION WELL; MULTIPLE WELLS/WELL FIELD; NEW WATER TREATMENT PLANT; PUMP STATION; STORAGE TANK	\$277,006,000	2040
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - ENHANCED RECHARGE AND CONJUNCTIVE USE	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD; NEW SURFACE WATER INTAKE; PUMP STATION; RESERVOIR CONSTRUCTION	\$53,504,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - GROUNDWATER IMPORTATION	CONVEYANCE/TRANSMISSION PIPELINE; MULTIPLE WELLS/WELL FIELD; PUMP STATION	\$614,790,000	2040
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - IMPORT RETURN FLOWS FROM WILLIAMSON COUNTY	CONVEYANCE/TRANSMISSION PIPELINE; NEW WATER RIGHT/PERMIT; PUMP STATION; STORAGE TANK; WATER TREATMENT PLANT EXPANSION	\$54,193,000	2020
LOWER COLORADO RIVER AUTHORITY	Y	LCRA - SUPPLEMENT BAY AND ESTUARY INFLOWS WITH BRACKISH GROUNDWATER	CONVEYANCE/TRANSMISSION PIPELINE; DIVERSION AND CONTROL STRUCTURE	\$34,966,000	2020
Region K Total Alternative Capital Cost				\$1,537,384,546	

*Projects with a capital cost of zero are excluded from the report list.

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Water User Group (WUG) Management Supply Factor

REGION K	WUG MANAGEMENT SUPPLY FACTOR					
	2020	2030	2040	2050	2060	2070
AQUA WSC	1.3	1.1	1.4	1.1	1.1	1.0
AUSTIN	2.4	2.1	1.9	1.8	1.7	1.6
BARTON CREEK WEST WSC	2.0	2.1	2.2	2.2	2.3	2.3
BASTROP	1.4	1.2	1.1	1.5	1.3	1.1
BASTROP COUNTY WCID #2	3.0	2.2	1.8	1.3	1.4	1.0
BAY CITY	2.0	1.9	1.9	1.8	1.8	1.8
BEE CAVE	1.3	1.3	1.4	1.4	1.4	1.4
BERTRAM	2.8	3.2	2.9	2.7	2.5	2.4
BLANCO	3.5	3.1	2.8	2.7	2.7	2.6
BRIARCLIFF	1.6	1.5	1.3	1.2	1.1	1.0
BUDA	2.3	2.3	1.9	1.6	1.3	1.1
BURNET	3.4	3.3	3.0	2.8	2.6	2.5
CIMARRON PARK WATER COMPANY	1.0	1.0	1.1	1.1	1.1	1.1
COLUMBUS	1.3	1.3	1.4	1.4	1.4	1.4
COTTONWOOD SHORES	4.1	4.7	4.2	3.8	3.5	3.3
COUNTY-OTHER, BASTROP	1.1	1.1	1.0	1.0	1.0	1.0
COUNTY-OTHER, BLANCO	2.3	2.0	1.9	1.9	1.9	1.8
COUNTY-OTHER, BURNET	2.9	3.1	3.2	3.0	2.8	2.5
COUNTY-OTHER, COLORADO	1.7	1.7	1.7	1.6	1.6	1.5
COUNTY-OTHER, FAYETTE	1.5	1.4	1.3	1.2	1.2	1.2
COUNTY-OTHER, GILLESPIE	1.7	1.6	1.6	1.5	1.5	1.4
COUNTY-OTHER, HAYS	2.7	2.9	1.9	1.6	1.3	1.2
COUNTY-OTHER, LLANO	7.7	8.5	8.5	8.3	8.8	9.4
COUNTY-OTHER, MATAGORDA	1.4	1.4	1.4	1.4	1.4	1.4
COUNTY-OTHER, MILLS	2.5	2.5	2.5	2.5	2.4	2.3
COUNTY-OTHER, SAN SABA	3.2	3.1	3.2	3.2	3.2	3.1
COUNTY-OTHER, TRAVIS	2.3	2.5	2.7	3.1	4.0	5.7
COUNTY-OTHER, WHARTON	1.7	1.6	1.6	1.5	1.5	1.4
CREEDMOOR-MAHA WSC	1.3	1.9	1.7	1.5	1.4	1.2
DRIPPING SPRINGS	1.4	1.3	1.4	1.4	1.4	1.5
DRIPPING SPRINGS WSC	1.3	2.9	2.5	2.3	2.0	1.7
EAGLE LAKE	1.3	1.2	1.2	1.2	1.2	1.2
EAST BERNARD	1.4	1.4	1.4	1.4	1.4	1.4
ELGIN	1.0	2.6	2.0	1.6	1.3	1.0
FAYETTE WSC	1.6	1.4	1.3	1.3	1.2	1.2
FLATONIA	2.3	2.2	2.1	2.1	2.1	2.1
FREDERICKSBURG	1.5	1.5	1.5	1.4	1.4	1.4
GOLDTHWAITE	1.0	1.0	1.1	1.1	1.1	1.1
GRANITE SHOALS	1.3	1.1	1.0	1.2	1.1	1.0
HORSESHOE BAY	1.4	1.5	1.6	1.6	1.7	1.7
IRRIGATION, BASTROP	1.5	1.6	1.7	1.8	1.9	2.0
IRRIGATION, BLANCO	1.3	1.4	1.4	1.5	1.5	1.6
IRRIGATION, BURNET	1.4	1.4	1.4	1.4	1.4	1.4
IRRIGATION, COLORADO	1.0	1.0	1.0	1.0	1.0	1.1
IRRIGATION, FAYETTE	1.9	2.0	2.2	2.3	2.5	2.6
IRRIGATION, GILLESPIE	1.2	1.2	1.2	1.3	1.3	1.3
IRRIGATION, LLANO	1.2	1.2	1.3	1.3	1.3	1.3
IRRIGATION, MATAGORDA	0.7	0.7	0.7	0.8	0.8	0.9
IRRIGATION, MILLS	1.3	1.3	1.3	1.3	1.3	1.4
IRRIGATION, SAN SABA	1.1	1.1	1.2	1.2	1.2	1.3

Water User Group (WUG) Management Supply Factor

REGION K	WUG MANAGEMENT SUPPLY FACTOR					
	2020	2030	2040	2050	2060	2070
IRRIGATION, TRAVIS	1.2	1.3	1.4	1.5	1.7	1.8
IRRIGATION, WHARTON	0.9	0.9	0.9	1.0	1.0	1.0
JOHNSON CITY	1.6	1.4	1.4	1.3	1.3	1.3
JONESTOWN	1.0	1.0	1.0	1.0	1.0	1.0
KINGSLAND WSC	1.3	1.2	1.2	1.2	1.1	1.1
LA GRANGE	1.7	1.5	1.4	1.4	1.3	1.3
LAGO VISTA	2.5	2.2	2.0	1.8	1.7	1.7
LAKEWAY	1.3	1.2	1.2	1.3	1.4	1.4
LIVESTOCK, BASTROP	1.0	1.0	1.0	1.0	1.0	1.0
LIVESTOCK, BLANCO	1.1	1.1	1.1	1.1	1.1	1.1
LIVESTOCK, BURNET	1.4	1.4	1.4	1.4	1.4	1.4
LIVESTOCK, COLORADO	1.0	1.0	1.0	1.0	1.0	1.0
LIVESTOCK, FAYETTE	1.4	1.4	1.4	1.4	1.4	1.4
LIVESTOCK, GILLESPIE	1.5	1.5	1.5	1.5	1.5	1.5
LIVESTOCK, LLANO	1.0	1.0	1.0	1.0	1.0	1.0
LIVESTOCK, MATAGORDA	1.0	1.0	1.0	1.0	1.0	1.0
LIVESTOCK, MILLS	1.0	1.0	1.0	1.0	1.0	1.0
LIVESTOCK, SAN SABA	1.0	1.0	1.0	1.0	1.0	1.0
LIVESTOCK, TRAVIS	1.0	1.0	1.0	1.0	1.0	1.0
LLANO	1.1	1.1	1.1	1.2	1.2	1.2
LOOP 360 WSC	1.3	1.4	1.4	1.4	1.5	1.5
LOST CREEK MUD	1.3	1.3	1.4	1.4	1.4	1.5
MANOR	3.2	2.0	1.6	1.4	1.2	1.1
MANUFACTURING, BASTROP	1.0	1.0	1.0	1.0	1.0	1.0
MANUFACTURING, BLANCO	1.0	1.0	1.0	1.0	1.0	1.0
MANUFACTURING, BURNET	1.8	1.6	1.5	1.3	1.2	1.1
MANUFACTURING, COLORADO	2.2	2.1	1.9	1.9	1.7	1.6
MANUFACTURING, FAYETTE	1.5	1.4	1.3	1.2	1.1	1.0
MANUFACTURING, GILLESPIE	1.3	1.2	1.2	1.1	1.1	1.0
MANUFACTURING, HAYS	2.8	2.4	2.2	2.0	1.8	1.7
MANUFACTURING, LLANO	1.0	1.0	1.0	1.0	1.0	1.0
MANUFACTURING, MATAGORDA	1.3	1.2	1.2	1.1	1.1	1.0
MANUFACTURING, MILLS	1.0	1.0	1.0	1.0	1.0	1.0
MANUFACTURING, SAN SABA	1.0	1.0	1.0	1.0	1.0	1.0
MANUFACTURING, TRAVIS	1.0	1.0	1.0	1.0	1.0	1.0
MANUFACTURING, WHARTON	1.4	1.4	1.3	1.2	1.1	1.0
MANVILLE WSC	2.3	1.5	1.3	1.3	1.3	1.2
MARBLE FALLS	2.1	2.7	2.0	1.8	1.8	1.7
MEADOWLAKES	1.1	1.0	1.0	1.0	1.0	1.1
MINING, BASTROP	0.8	0.4	0.3	0.3	0.3	0.3
MINING, BLANCO	1.0	1.0	1.0	1.0	1.0	1.0
MINING, BURNET	1.1	1.1	1.0	1.0	1.1	1.0
MINING, COLORADO	1.1	1.1	1.0	1.0	1.0	1.0
MINING, FAYETTE	1.0	1.0	1.1	1.3	2.5	2.5
MINING, GILLESPIE	13.8	13.8	13.8	13.8	13.8	13.8
MINING, HAYS	1.0	1.1	1.4	1.4	1.2	1.0
MINING, LLANO	1.0	1.0	1.0	1.0	1.0	1.0
MINING, MATAGORDA	1.0	1.0	1.3	1.8	2.9	4.5
MINING, MILLS	1.0	1.0	1.0	1.0	1.0	1.0
MINING, SAN SABA	1.4	1.4	1.6	1.7	1.8	1.8

Water User Group (WUG) Management Supply Factor

REGION K	WUG MANAGEMENT SUPPLY FACTOR					
	2020	2030	2040	2050	2060	2070
MINING, TRAVIS	1.0	1.0	1.0	1.0	1.0	1.0
MINING, WHARTON	1.0	1.0	1.3	1.8	2.8	4.4
MOUNTAIN CITY	1.8	2.2	2.1	1.9	1.7	1.5
NORTH AUSTIN MUD #1	1.1	1.1	1.2	1.1	1.2	1.2
NORTHTOWN MUD	1.6	1.6	1.5	1.5	1.5	1.4
PALACIOS	1.7	1.7	1.7	1.7	1.6	1.6
PFLUGERVILLE	1.3	1.1	1.1	1.1	1.0	1.0
POINT VENTURE	1.3	1.4	1.3	1.5	1.4	1.3
ROLLINGWOOD	1.3	1.4	1.4	1.5	1.5	1.5
SAN SABA	1.2	1.3	1.4	1.4	1.5	1.5
SCHULENBURG	1.2	1.1	1.1	1.1	1.1	1.1
SHADY HOLLOW MUD	1.2	1.2	1.1	1.2	1.2	1.2
SMITHVILLE	2.4	2.1	1.9	1.6	1.2	1.0
STEAM ELECTRIC POWER, BASTROP	1.2	1.0	1.0	1.0	1.0	1.0
STEAM ELECTRIC POWER, FAYETTE	1.6	1.6	1.6	1.4	1.3	1.2
STEAM ELECTRIC POWER, LLANO	1.0	1.0	1.0	1.0	1.0	1.0
STEAM ELECTRIC POWER, MATAGORDA	1.0	1.0	1.0	1.0	1.0	1.0
STEAM ELECTRIC POWER, TRAVIS	1.3	1.3	1.3	1.1	1.0	1.0
STEAM ELECTRIC POWER, WHARTON	1.1	1.1	1.0	1.0	1.0	1.0
SUNRISE BEACH VILLAGE	3.7	3.8	3.9	4.0	4.0	4.0
SUNSET VALLEY	1.5	3.4	3.4	3.2	3.0	2.9
THE HILLS	1.3	1.4	1.5	1.6	1.6	1.7
TRAVIS COUNTY MUD #4	1.8	1.7	1.6	1.5	1.5	1.5
TRAVIS COUNTY WCID #10	1.4	1.7	1.6	1.6	1.5	1.5
TRAVIS COUNTY WCID #17	1.3	1.3	1.3	1.3	1.3	1.4
TRAVIS COUNTY WCID #18	1.7	1.6	1.4	1.3	1.2	1.1
TRAVIS COUNTY WCID #19	1.3	1.4	1.5	1.5	1.6	1.7
TRAVIS COUNTY WCID #20	2.2	2.3	2.4	2.5	2.6	2.6
VOLENTE	2.9	2.5	2.2	1.9	1.7	1.6
WEIMAR	1.4	1.4	1.4	1.4	1.4	1.4
WELLS BRANCH MUD	1.1	1.1	1.1	1.1	1.1	1.1
WEST LAKE HILLS	1.3	1.2	1.3	1.4	1.4	1.5
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	1.5	1.5	1.5	1.4	1.5	1.4
WHARTON	1.7	1.6	1.6	1.5	1.5	1.5

*WUG supplies and projected demands are entered for each of a WUG's region-county-basin divisions. To calculate the Management Supply Factor for each WUG as a whole, not split by region-county-basin the combined total of existing and future supply is divided by the total projected demand.

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