

TO: Board Members

THROUGH: Jeff Walker, Executive Administrator
Todd Chenoweth, General Counsel
Jessica Zuba, Deputy Executive Administrator, Water Supply & Infrastructure
Sam Marie Hermitte, Interim Deputy Executive Administrator, Water Science and Conservation

FROM: Sarah Backhouse, Manager, Regional Water Planning
Temple McKinnon, Director, Water Use, Projections & Planning

DATE: November 21, 2017

SUBJECT: Amendment to the 2017 State Water Plan

ACTION REQUESTED

Consider public comments received at public hearings held on November 8, 2017 and December 4, 2017, and if appropriate, amend the 2017 State Water Plan in accordance with 31 Texas Administrative Code (TAC) §357.51(g) and §358.4(a).

BACKGROUND

This amendment bundles together, as a single state water plan amendment, multiple items previously considered by the Board and Executive Administrator (EA), including minor amendments to the 2016 Region G and Region K Regional Water Plans, a substitution of an alternative water management strategy (WMS) in the 2016 Region L Regional Water Plan, and the designation of the Cross Timbers Aquifer as a minor aquifer, as follows:

- The minor amendment to the 2016 Region G Regional Water Plan added a new recommended water management strategy and three associated water management strategy projects for the City of Waco to provide treated surface water from Lake Waco to the City of Riesel and nine entities within McLennan County-Other. This regional water plan amendment was approved by the Board on October 17, 2017.
- The minor amendment to the 2016 Region K Regional Water Plan added a new recommended water management strategy and project for Creedmoor-Maha Water Supply Corporation to replace and upsize water supply transmission lines. This regional water plan amendment was approved by the Board on July 20, 2017.

- The substitution of an alternative WMS in the 2016 Region L Regional Water Plan removed the previously recommended Guadalupe-Blanco River Authority (GBRA) Mid-Basin Water Supply Project-Surface Water and Aquifer Storage and Recovery WMS and its one associated water management strategy project (WMSP) sponsored by the GBRA and designated them as alternative. It also removed the Texas Water Alliance Regional Carrizo Aquifer Development WMS and its one associated WMSP sponsored by Texas Water Alliance and designated them as alternative. Texas Water Development Board rules do not require regional water plan substitutions to be approved by the Board, however proposed substitutions must receive written approval from the EA prior to the substitution. The EA provided written approval to the Region L Regional Water Planning Group (RWPG) on June 13, 2017 (Attachment B), and the RWPG approved the substitution at a regular RWPG meeting on August 3, 2017.
- A request to name four Paleozoic-age geologic formations in north central Texas as the “Cross Timbers Aquifer” and to designate the Cross Timbers Aquifer as a minor aquifer was approved by the Board on September 7, 2017. This proposed new minor aquifer covers all or parts of 31 counties.

KEY ISSUES

1. Detailed changes resulting from the proposed state water plan amendment are outlined in Attachment A. Most notably, the 2017 State Water Plan total capital cost will decrease to approximately \$62.7 billion, the total number of WMSPs will increase to 2,536, the total number of WMSs will increase to 5,501, and the number of minor aquifers will increase to 22.
2. Public hearings on amending the 2017 State Water Plan, as required by 31 TAC §358.4(a), are being held on November 8, 2017, and December 4, 2017.
3. Comments associated with the proposed amendment to the State Water Plan received will be presented to the Board for consideration.
4. If approved, this proposed amendment will be incorporated into the 2017 State Water Plan as Amendment #2.

RECOMMENDATION

The Executive Administrator recommends approval of this 2017 State Water Plan Amendment that, if adopted, will incorporate data from the regional water plan amendments and designate a new minor aquifer in accordance with 31 TAC §357.51 and §358.4.

Attachments:

- A. Draft Water for Texas 2017 State Water Plan: Amendment #2
- B. June 13, 2017 Executive Administrator water management strategy substitution approval letter to the Region L Regional Water Planning Group



DRAFT: Water for Texas 2017 State Water Plan: Amendment #2

The following changes are proposed to be made to the 2017 State Water Plan as a result of minor amendments to the 2016 Region G and Region K Regional Water Plans, a substitution of an alternative water management strategy (WMS) in the 2016 Region L Regional Water Plan, and the designation of the Cross Timbers Aquifer as a minor aquifer. This state water plan amendment contains the following revisions specifically¹:

1. Adds a new recommended WMS for the City of Waco to supply treated surface water from Lake Waco to ten utilities in McLennan County. The amendment adds two WMSs and three water management strategy projects (WMSPs) to the 2016 Region G Regional Water Plan. The WMSs provide 1,049-1,407 acre-feet per year (AFY) in assigned WMS supply from 2020-2070 and the WMSPs, sponsored by Waco, Riesel, and McLennan County-Other, add \$30,686,000 in capital costs to the plan. The amendment also removes one recommended WMS and one recommended WMSP and designates them as alternative, removing 917 AFY of WMS supply from 2020-2070 and \$3,811,00 in capital costs from the plan.
2. Adds a new recommended WMS and associated WMSP for the Creedmoor-Maha Water Supply Corporation (CMWSC) to replace and upsize water supply transmission lines. The amendment adds one WMS and one WMSP sponsored by the CMWSC for 20–33 AFY in demand reduction from 2020-2070 and \$4,501,080 in capital costs to the 2016 Region K Regional Water Plan.
3. Removes the previously recommended Guadalupe-Blanco River Authority (GBRA) Mid-Basin Water Supply Project-Surface Water and Aquifer Storage and Recovery WMS and its one associated WMSP sponsored by the GBRA and designates them as alternative. It also removes the Texas Water Alliance Regional Carrizo Aquifer Development WMS and its one associated WMSP sponsored by Texas Water Alliance and designates them as alternative. These WMSs are replaced by the GBRA Mid-Basin Conjunctive Use WMS with one associated WMSP sponsored by the GBRA. The amendment adds 19 WMSs and one WMSP to the 2016 Region L Regional Water Plan. This reassigns 6,992-40,982 AFY from 2020-2070 that was assigned WMS supply in the removed WMSs and the WMSP adds \$700,897,000 in capital costs to the plan. The amendment also removes 15 recommended WMSs and two recommended WMSPs that are now designated as alternative and removes \$1,016,013,000 in capital costs from the plan.
4. Designates the Cross Timbers Aquifer as a new minor aquifer covering all or parts of 31 counties.

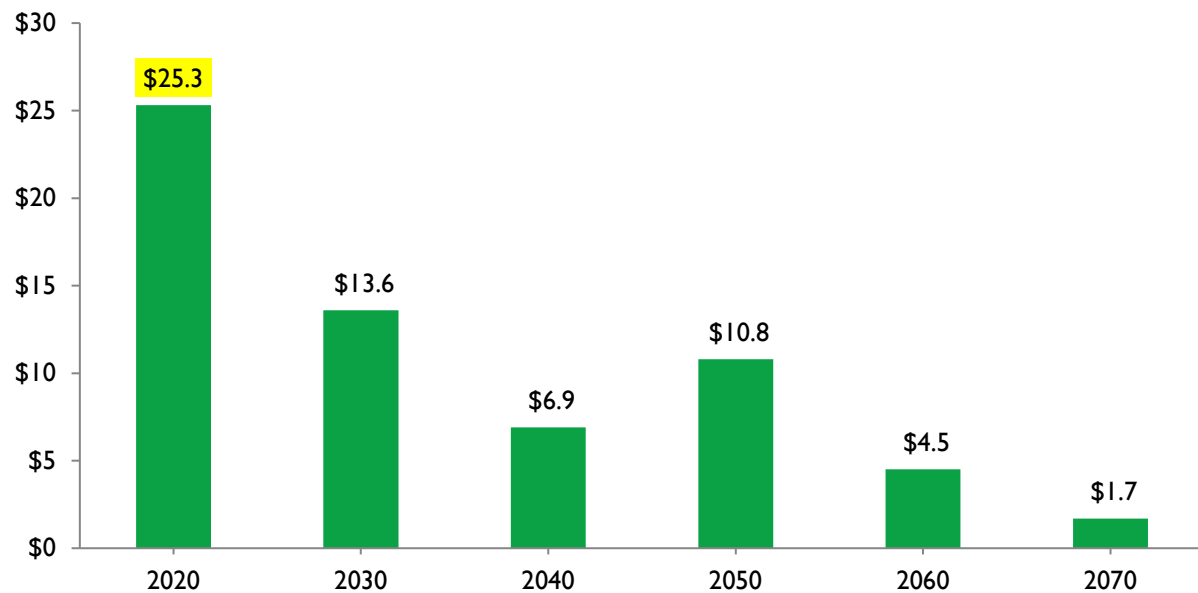
¹ The WMS and WMSP counts specified in this amendment are based on WMS and recipient water user group combinations. Counts for Regions G and L may differ from high-level summaries.

To incorporate the proposed amendment, the following specific changes would be made to the 2017 State Water Plan:

Capital costs, projects sponsored by municipal water user groups (WUGs) and wholesale water providers (WWPs), and number of recommended WMSPs

All references to the total capital costs recommended in the plan (\$63 billion) change to remove \$283,739,920 in capital costs. The updated total capital costs recommended in the plan changes to \$62.7 billion. References to the total capital costs that are associated with projects sponsored by municipal WUGs and WWPs that provide water to municipal water users are also adjusted to account for the decrease in capital costs. Additionally, references to the specific project counts change to incorporate the five recommended WMSPs added and three recommended WMSPs removed by this proposed amendment. This changes text on pages 3, 11, 41, 42, 87, 88, 98, 100; Figures 4.1 and 4.2, and Table 8.2. Updated values are highlighted in the figures and tables below.

Figure 4.1 - Total capital costs, by required online decade, of all recommended water management strategy projects (in billions)*



* Statewide total in this graph is slightly more than the \$62.7 billion estimated costs due to rounding.

Figure 4.2 - Total capital costs of all recommended water management strategy projects by wholesale water providers and water user group sponsor type (in billions)

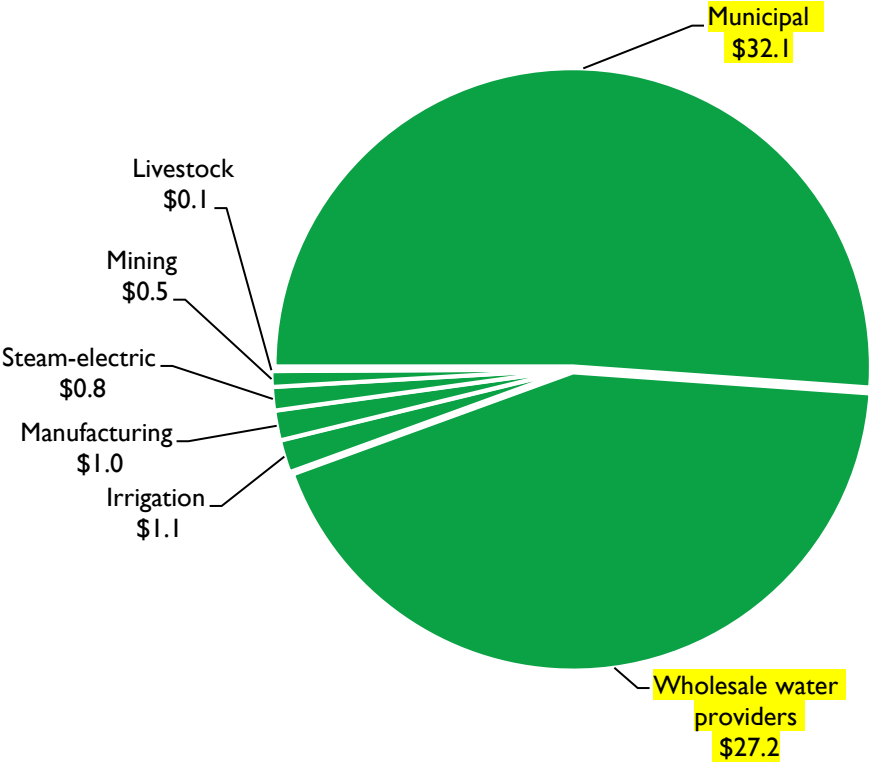


Table 8.2 - Capital costs, by required online decade, of all recommended water management strategy projects by region (in millions)

Region	2020	2030	2040	2050	2060	2070	Total capital cost	Number of projects ^a
A	\$270	\$348	\$60	\$18	\$0	\$170	\$866	81
B	\$291	\$0	\$339	\$0	\$0	\$0	\$630	21
C	\$3,730	\$5,457	\$3,304	\$6,728	\$3,119	\$1,296	\$23,635	557
D	\$697	\$11	\$17	\$413	\$22	\$80	\$1,241	120
E	\$843	\$42	\$514	\$274	\$258	\$0	\$1,930	45
F	\$917	\$190	\$35	\$58	\$0	\$0	\$1,201	145
G	\$3,631	\$579	\$69	\$42	\$21	\$6	\$4,348	217
H	\$2,946	\$4,853	\$1,612	\$836	\$578	\$54	\$10,879	717
I	\$1,362	\$737	\$562	\$77	\$0	\$16	\$2,754	58
J	\$115	\$0	\$29	\$0	\$0	\$0	\$144	55
K	\$3,073	\$506	\$142	\$42	\$12	\$3	\$3,777	124
L	\$5,279	\$201	\$7	\$2,253	\$2	\$19	\$7,761	60
M	\$1,202	\$123	\$81	\$41	\$386	\$33	\$1,866	195
N	\$178	\$331	\$0	\$1	\$0	\$0	\$510	18
O	\$452	\$192	\$87	\$2	\$80	\$1	\$814	112
P	\$332	\$0	\$0	\$0	\$0	\$0	\$332	11
Texas	\$25,318	\$13,570	\$6,857	\$10,787	\$4,478	\$1,678	\$62,688	2,536

^a Some projects are associated with multiple sponsors.

Weight-averaged unit costs

Weight-averaged unit costs are changed to incorporate new unit costs. This changes Table 8.5. Updated values are highlighted in the table below.

Table 8.5 - Weight-averaged unit costs (dollars per acre-foot)* of strategy water supplies by region and strategy type in 2070

Water management strategy type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Texas
Aquifer storage & recovery	na	na	na	na	\$296	\$480	\$252	na	na	\$205	\$645	\$209	na	na	\$243	na	\$419
Conjunctive use	\$106	na	na	na	\$361	na	\$1,031	\$928	na	na	na	\$615	na	na	\$106	na	\$699
Direct potable reuse	na	\$950	na	na	\$1,212	\$1,041	\$740	na	na	na	na	\$743	\$1,137	na	\$2,065	na	\$1,134
Groundwater desalination	na	na	na	na	\$415	\$718	na	\$850	na	na	na	\$698	\$1,146	\$646	\$1,713	na	\$713
Groundwater wells & other	\$314	\$635	\$350	\$522	\$756	\$226	\$357	\$582	\$303	\$236	\$774	\$588	\$66	\$120	\$256	na	\$476
Indirect reuse	na	\$360	\$111	\$288	\$563	na	\$125	\$398	na	na	\$46	na	na	na	na	na	\$283
Irrigation conservation	\$17	\$53	\$310	na	\$55	na	\$230	\$112	na	na	\$163	na	\$531	\$230	\$42	\$134	\$147
Municipal conservation	\$446	\$254	\$154	\$591	\$226	\$437	\$460	\$257	\$182	\$381	\$319	\$652	\$464	\$483	\$599	\$345	\$374
New major reservoir	na	\$482	\$563	\$95	\$267	\$710	\$450	\$72	\$270	na	\$585	\$596	na	\$595	\$179	\$33	\$470
Other conservation	na	\$573	\$310	na	na	\$794	na	na	na	na	na	na	\$1,899	na	na	na	\$190
Other direct reuse	na	na	\$285	na	na	\$267	\$290	\$210	na	\$58	\$1,157	\$356	\$505	\$341	na	na	\$423
Other strategies	\$8	\$280	na	na	na	\$308	na	na	na	na	\$2,978	na	\$10	na	na	na	\$1,249
Other surface water	na	\$361	\$571	\$490	\$356	\$83	\$324	\$245	\$437	\$99	\$176	\$606	\$222	\$508	\$427	na	\$381
Seawater desalination	na	na	na	na	na	na	na	\$1,461	na	na	na	\$611	\$3,708	\$550	na	na	\$1,431

* Unit costs include a mixture of projects, some of which will be beyond their debt service period by 2070.

na = not applicable or not available.

Recommended WMS count and volumes

References to the specific count of recommended WMSs are changed to incorporate the 22 recommended WMSs added and 16 recommended WMSs removed by this proposed amendment. Strategy supply in 2040 is also adjusted. This changes Table 8.1. Updated values are highlighted in the table below.

Table 8.1- Annual volume of recommended water management strategies by region (acre-feet)

Region	2020	2030	2040	2050	2060	2070	Number of strategies
A	178,000	310,000	490,000	554,000	595,000	637,000	140
B	53,000	53,000	71,000	72,000	72,000	73,000	128
C	192,000	427,000	670,000	900,000	1,147,000	1,436,000	2,341
D	176,000	205,000	269,000	294,000	335,000	369,000	137
E	143,000	158,000	186,000	212,000	241,000	268,000	64
F	126,000	160,000	185,000	196,000	202,000	212,000	291
G	384,000	436,000	480,000	542,000	589,000	648,000	430
H	716,000	904,000	1,468,000	1,572,000	1,648,000	1,791,000	621
I	269,000	433,000	488,000	530,000	575,000	594,000	86
J	21,000	22,000	22,000	22,000	22,000	22,000	64
K	436,000	498,000	547,000	619,000	678,000	745,000	265
L	180,000	268,000	331,000	419,000	519,000	610,000	264
M	282,000	351,000	418,000	498,000	599,000	669,000	478
N	51,000	109,000	103,000	97,000	98,000	98,000	54
O	139,000	177,000	224,000	228,000	251,000	253,000	124
P	62,000	62,000	63,000	63,000	63,000	63,000	14
Texas^a	3,408,000	4,573,000	6,015,000	6,818,000	7,634,000	8,488,000	5,501

^a Statewide totals may vary between tables due to rounding.

References to the volumetric share of WMSs by water resource will be revised for surface water and groundwater resources. The approximate volume of strategy supply from groundwater resources is also changed from approximately 810,000 to approximately 840,000 acre-feet per year. This changes text on pages 8 and 90; and Figures ES.6, 8.1, and 8.2. Updated values are highlighted in the figures below.

Figures ES.6 and 8.1 - Share of recommended water management strategies by water resource in 2070

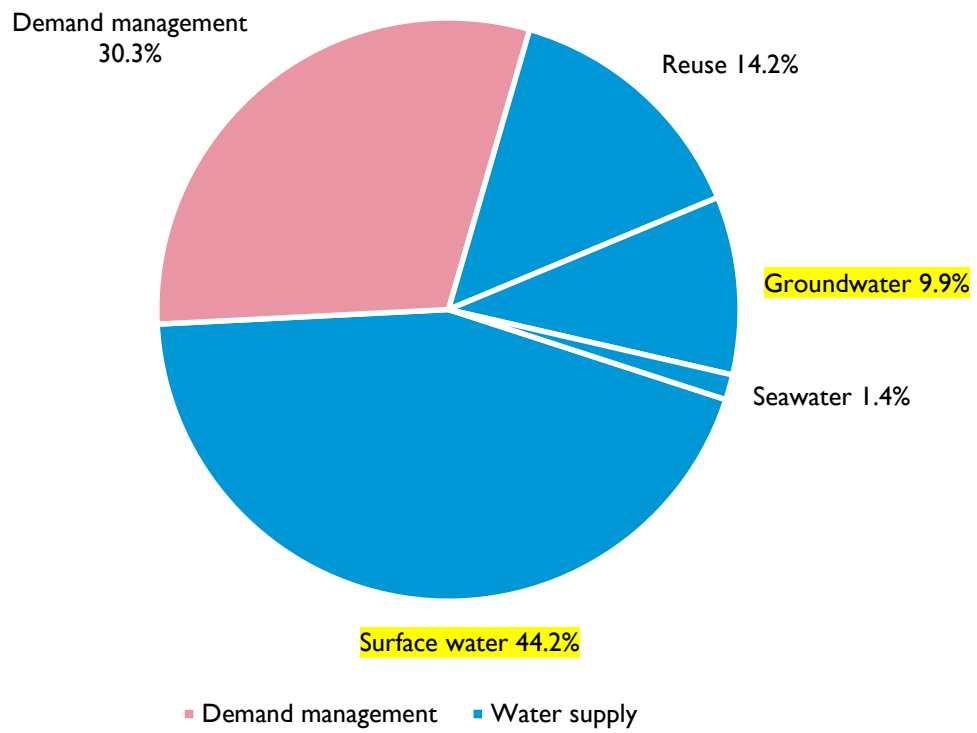
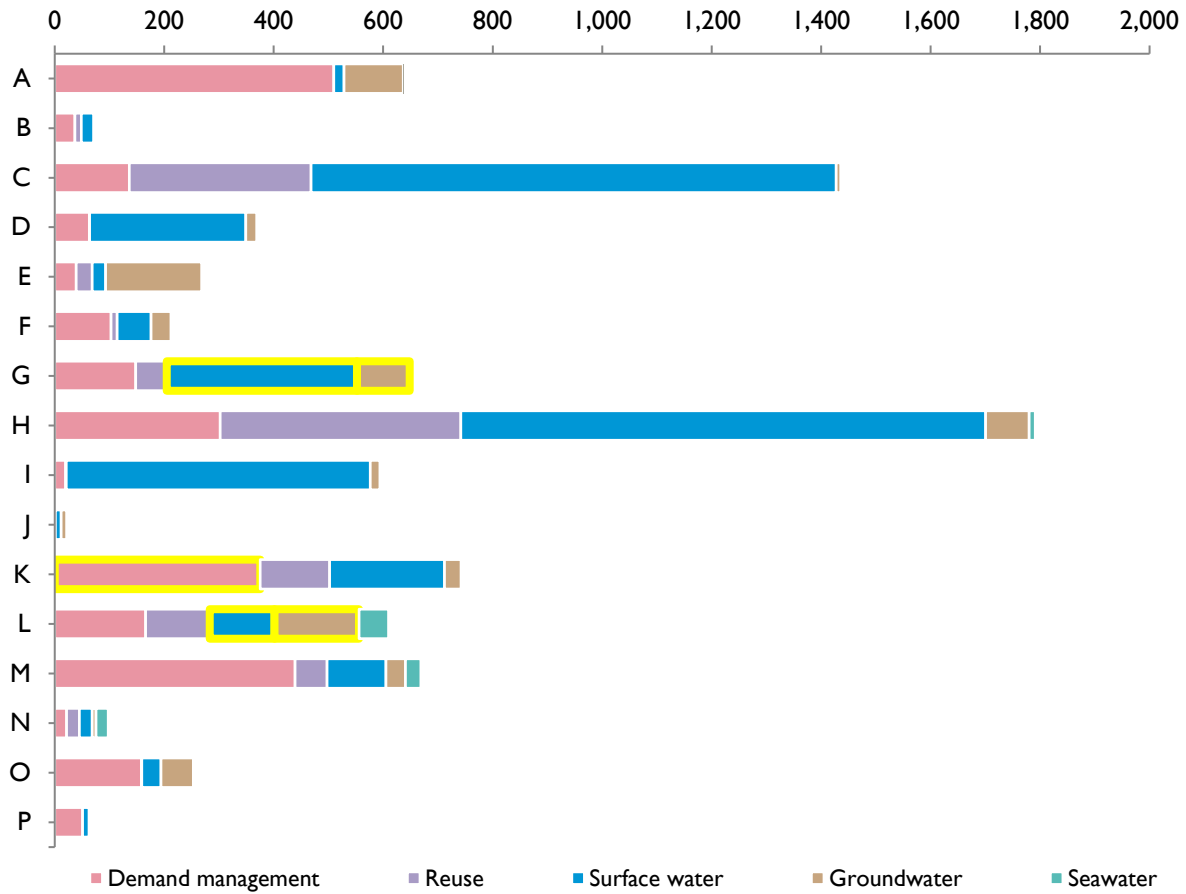


Figure 8.2 - Annual volume of recommended water management strategies by region and water resource in 2070 (thousands of acre-feet)



References to the volumetric share of WMS by strategy type and the number of WUGs relying on different types of water management strategies for aquifer storage and recovery, conjunctive use, and groundwater wells & other are adjusted by this proposed amendment. This changes text on pages 94, 96, and 100; Figure ES. 7 and 8.3; and Tables 8.3 and 8.4. Updated values are highlighted in the figures and tables below.

Figures ES.7 and 8.3 - Share of recommended water management strategies by strategy type in 2070

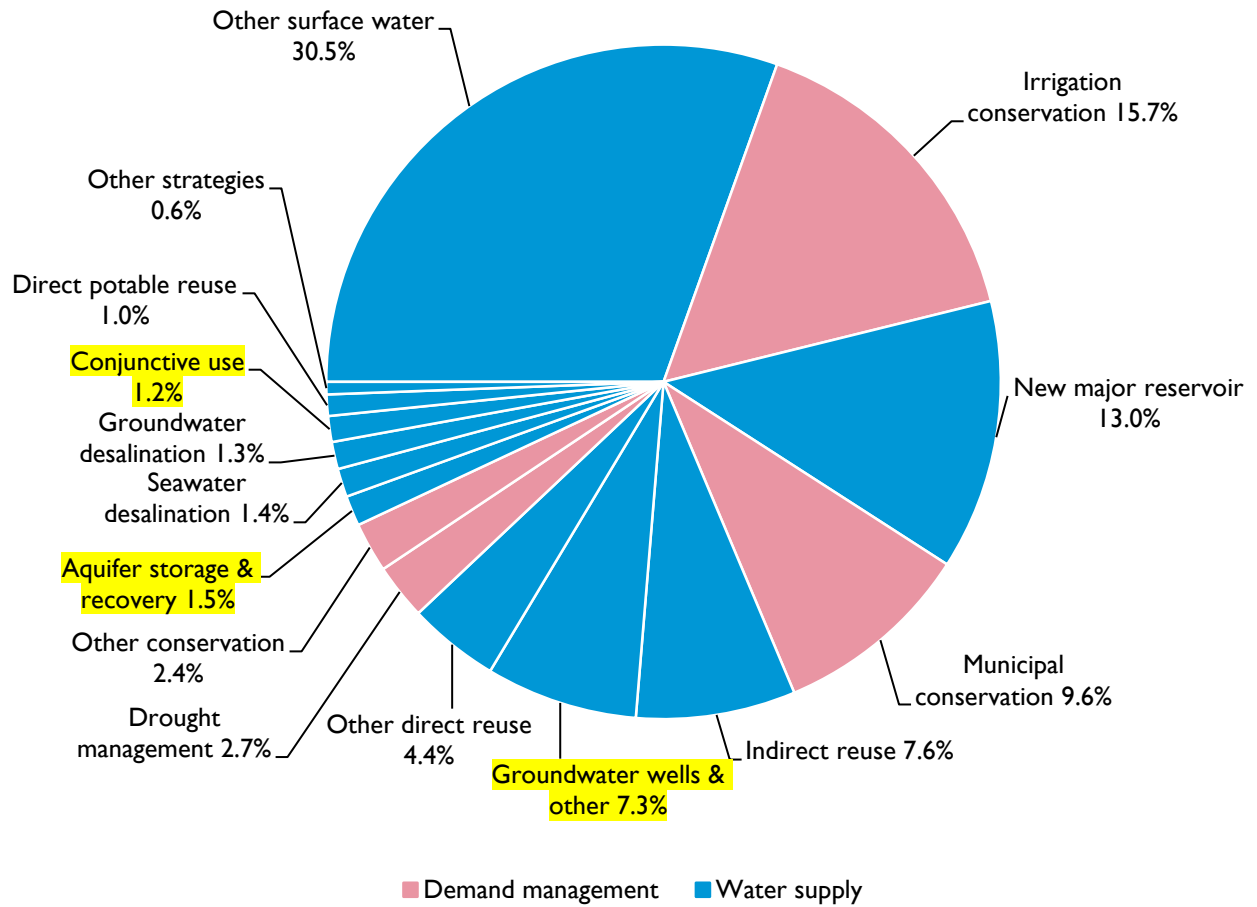


Table 8.3 - Annual volume of recommended water management strategies by strategy type (acre-feet)

Water management strategy type	2020	2030	2040	2050	2060	2070
Aquifer storage & recovery	46,000	80,000	80,000	110,000	116,000	123,000
Conjunctive use	47,000	71,000	92,000	85,000	95,000	105,000
Direct potable reuse	33,000	45,000	54,000	66,000	76,000	87,000
Drought management	152,000	178,000	199,000	208,000	217,000	226,000
Groundwater desalination	70,000	73,000	86,000	92,000	100,000	111,000
Groundwater wells & other	304,000	424,000	467,000	534,000	570,000	618,000
Indirect reuse	230,000	288,000	516,000	569,000	577,000	649,000
Irrigation conservation	639,000	809,000	1,084,000	1,175,000	1,267,000	1,330,000
Municipal conservation	204,000	333,000	435,000	562,000	686,000	811,000
New major reservoir	220,000	406,000	525,000	679,000	786,000	1,100,000
Other conservation	76,000	98,000	126,000	145,000	168,000	203,000
Other direct reuse	163,000	222,000	257,000	297,000	331,000	371,000
Other strategies	30,000	31,000	37,000	41,000	46,000	51,000
Other surface water	1,193,000	1,489,000	2,001,000	2,189,000	2,495,000	2,586,000
Seawater desalination	3,000	25,000	54,000	65,000	105,000	116,000
Texas^a	3,410,000	4,572,000	6,013,000	6,817,000	7,635,000	8,487,000

^a Statewide totals may vary between tables due to rounding.

Table 8.4 - Number of water user groups relying on different types of water management strategies by region

Water management strategy type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Texas
Aquifer storage & recovery	0	0	0	0	1	9	9	0	0	2	7	4	0	0	1	0	33
Conjunctive use	3	0	0	1	1	0	2	59	0	0	1	11	0	0	8	0	86
Direct potable reuse	0	1	0	0	1	5	1	0	0	0	0	2	28	0	2	0	40
Drought management	0	0	0	0	0	1	5	0	0	1	81	31	0	0	0	7	126
Groundwater desalination	0	0	0	0	8	4	0	6	0	1	0	9	24	1	3	0	56
Groundwater wells & other	31	25	27	32	17	42	70	34	9	20	35	53	25	5	32	0	457
Indirect reuse	0	17	220	5	1	0	5	29	3	0	5	0	0	0	0	0	285
Irrigation conservation	20	10	10	0	2	30	18	8	0	0	3	7	8	2	21	0	139
Municipal conservation	36	22	268	9	12	57	96	244	11	11	52	104	67	22	40	5	1,056
New major reservoir	0	17	247	4	1	4	31	26	15	0	27	3	0	4	1	0	380
Other conservation	0	11	11	6	0	36	53	13	0	0	0	3	20	4	0	0	157
Other direct reuse	0	0	10	0	0	10	16	14	0	1	10	7	3	3	0	0	74
Other strategies	8	1	0	0	0	22	1	0	0	6	9	0	7	0	0	0	54
Other surface water	0	17	283	38	2	35	61	53	32	3	7	4	44	5	2	0	586
Seawater desalination	0	0	0	0	0	0	0	1	0	0	0	2	4	3	0	0	10

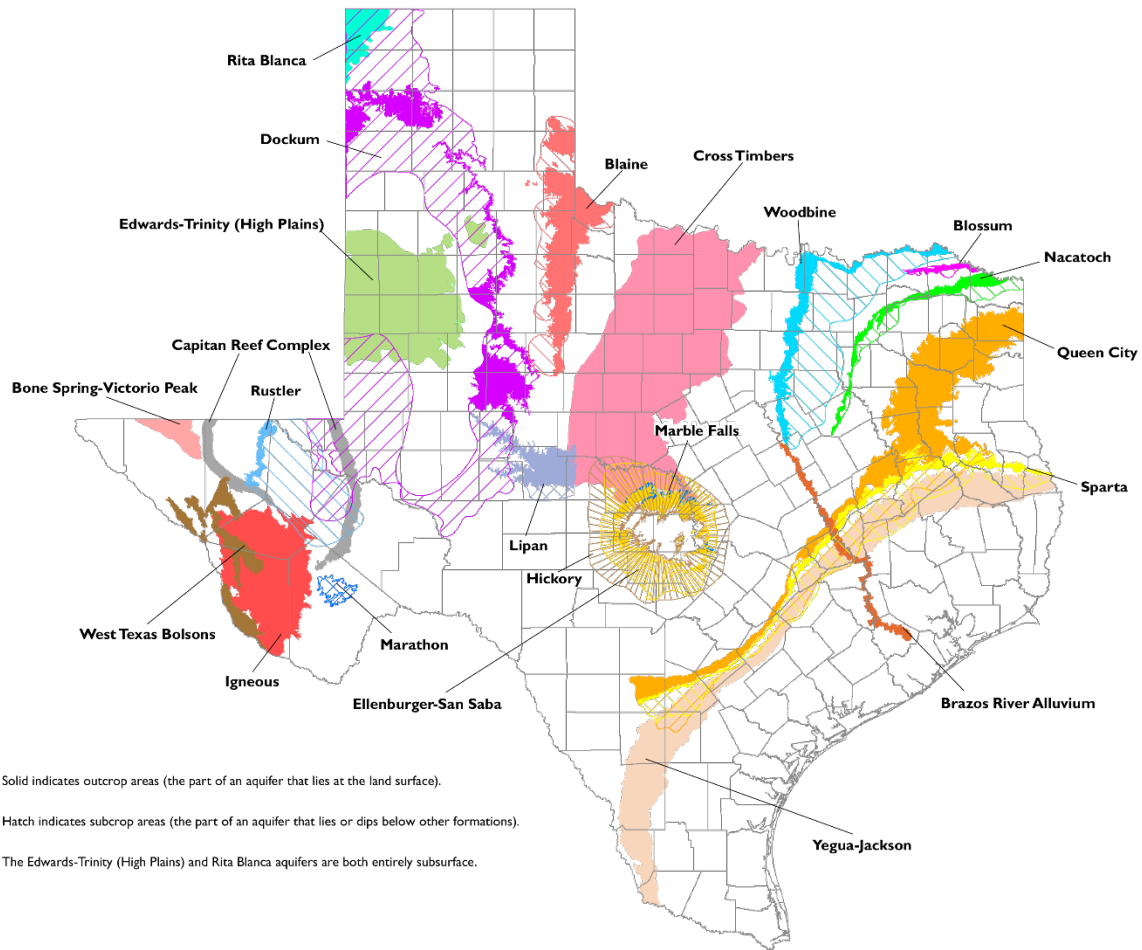
Minor aquifers of Texas

References to the number of minor aquifers (21) and the map of minor aquifers are changed to incorporate one new minor aquifer added by this proposed amendment. This changes text on page 65 (new language in bold) and Figure 6.5:

“Groundwater in Texas comes from nine major and **22** minor aquifers as well as other formations around the state. Major aquifers produce large amounts of water over large areas (Figure 6.4), whereas minor aquifers produce minor amounts of water over large areas or major amounts of water over small areas (Figure 6.5). **In 2017, the TWDB identified a new minor aquifer, the Cross Timbers Aquifer, in north-central Texas. This aquifer was designated on the basis of recent hydrogeologic studies and review of groundwater production data. The Cross Timbers Aquifer covers all or parts of 31 counties and ranks approximately in the middle of annual water use for the minor aquifers, with over 18,000 acre-feet per year of water produced annually from 2010 to 2015.**

The geologic formations of the Cross Timbers Aquifer are primarily composed of limestone, shale, and sandstone. Formations in most of the study area are exposed at the land surface (outcrop areas) and generally dip to the west. Documented water levels in the aquifer are generally stable over time, with most water levels within 100 feet of land surface. Water quality is generally fresh to slightly saline. The Cross Timbers Aquifer supplies water primarily for domestic and stock uses, though industrial and public supply wells also obtain water from these formations.”

Figure 6.5 - Minor aquifers of Texas



Please note that groundwater availability and supply volumes are not adjusted as part of this amendment but will be reflected for the Cross Timbers Aquifer in the 2022 State Water Plan.



DRAFT 2017 State Water Plan: Amendment #2

The following changes are proposed to be made to the 2017 State Water Plan as a result of minor amendments to the 2016 Regions G and K Regional Water Plans and a substitution of an alternative water management strategy in the 2016 Region L Regional Water Plan.

Previously recommended water management strategies being designated as alternative are reflected in strikethrough in the table below.

This amendment will be considered for approval by the Texas Water Development Board on December 7, 2017.

ADDITIONS AND REVISIONS TO THE LIST OF RECOMMENDED WATER MANAGEMENT STRATEGIES

Water User Group Primary Region	Water User Group	Water management strategy sponsor region	Recommended water management strategy	Related water management strategy types	Strategy supply volume by planning decade (acre-feet per year)					
					2020	2030	2040	2050	2060	2070
G	COUNTY-OTHER, MCLENNAN	G	MCLENNAN COUNTY ARSENIC MITIGATION	OTHER SURFACE WATER	971	1,029	1,092	1,163	1,239	1,325
G	RIESEL	G	MCLENNAN COUNTY ARSENIC MITIGATION	OTHER SURFACE WATER	78	78	78	78	80	82
K	COUNTY-OTHER, HAYS	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	0	0	0	1,169	6,714	5,276
K	COUNTY-OTHER, HAYS	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	0	0	6,332
K	CREEDMOOR-MAHA WSC CANYON LAKE WATER	K	URGENT WATER LOSS REDUCTION PROJECT - CMWSC	MUNICIPAL CONSERVATION	20	22	24	27	30	33
L	SERVICE COMPANY	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	0	671	2,373	4,095	5,814	7,468
L	GOFORTH SUD	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	0	0	525
L	LOCKHART	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	1,120	1,120	1,120	1,484	760	0
L	LOCKHART	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	0	1,187	2,402
L	LULING	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	1,680	1,680	1,680	1,680	0	0
L	LULING	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	0	1,684	1,875
L	MANUFACTURING, COMAL	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	4,130	4,881	5,612	1,947	0	0
L	MANUFACTURING, COMAL	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	4,292	7,120	8,074
L	MANUFACTURING,	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	163	494	854
L	NIEDERWALD	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	62	81	105	134	0	0
L	NIEDERWALD	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	0	166	203
L	SAN MARCOS	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	0	0	2,380	3,471	0	0
L	SAN MARCOS	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	0	0	4,581	5,717
L	STEAM ELECTRIC POWER, VICTORIA	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	0	2,994	1,320	0	0	0
L	STEAM ELECTRIC POWER, VICTORIA	L	GBRA - MBWSP - CONJUNCTIVE USE W/ASR (OPTION 3A)	CONJUNCTIVE USE	0	0	11,899	0	0	0
L	WIMBERLEY	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	0	0	174	456	778	1,033
L	WIMBERLEY WSC	L	GBRA - MBWSP - CONJUNCTIVE USE (OPTION 3A) - CARRIZO DEVELOPMENT	CONJUNCTIVE USE	0	0	236	564	934	1,223
G	COUNTY-OTHER, MCLENNAN	G	WTP UPGRADE FOR ARSENIC REMOVAL	-GROUNDWATER WELLS AND OTHER	917	917	917	917	917	917
K	COUNTY-OTHER, HAYS	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	0	0	0	0	2,029	7,220
K	COUNTY-OTHER, HAYS CANYON LAKE WATER	L	TWA REGIONAL CARRIZO AQUIFER DEVELOPMENT	-GROUNDWATER WELLS AND OTHER	0	0	0	1,169	4,685	4,388
L	SERVICE COMPANY	L	TWA REGIONAL CARRIZO AQUIFER DEVELOPMENT	-GROUNDWATER WELLS AND OTHER	0	671	2,373	4,095	5,814	7,468
L	GOFORTH SUD	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	0	0	0	0	0	525
L	LOCKHART	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	1,120	1,120	1,120	1,484	1,947	2,402
L	LULING	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	1,680	1,680	1,680	1,680	1,684	1,875
L	MANUFACTURING, COMAL MANUFACTURING,	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	4,130	4,881	5,612	6,239	7,120	8,074
L	GUADALUPE	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	0	0	0	163	494	854
L	NIEDERWALD	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	62	81	105	134	166	203
L	SAN MARCOS STEAM ELECTRIC POWER,	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	0	0	2,380	3,471	4,581	5,717
L	VICTORIA	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	0	2,994	13,219	0	0	0
L	WIMBERLEY	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	0	0	74	356	678	933
L	WIMBERLEY	L	TWA REGIONAL CARRIZO AQUIFER DEVELOPMENT	-GROUNDWATER WELLS AND OTHER	0	0	100	100	100	100
L	WIMBERLEY WSC	L	GBRA - MBWSP - SURFACE WATER W/ ASR (OPTION 3C)	-AQUIFER STORAGE AND RECOVERY	0	0	136	464	834	1,123
L	WIMBERLEY WSC	L	TWA REGIONAL CARRIZO AQUIFER DEVELOPMENT	-GROUNDWATER WELLS AND OTHER	0	0	100	100	100	100



DRAFT 2017 State Water Plan: Amendment #2

The following changes are proposed to be made to the 2017 State Water Plan as a result of minor amendments to the 2016 Regions G and K Regional Water Plans and a substitution of an alternative water management strategy in the 2016 Region L Regional Water Plan.

Previously recommended water management strategy projects being designated as alternative are reflected in strikethrough in the table below.

This amendment will be considered for approval by the Texas Water Development Board on December 7, 2017.

ADDITIONS AND REVISIONS TO THE LIST OF RECOMMENDED WATER MANAGEMENT STRATEGY PROJECTS

Project sponsor region	Project	Online decade	Project sponsors	Capital cost	Project related water management strategy types
G	MCLENNAN COUNTY REGIONAL ARSENIC MITIGATION - OTHER	2020	COUNTY-OTHER (MCLENNAN)	\$9,756,000	OTHER SURFACE WATER
G	MCLENNAN COUNTY REGIONAL ARSENIC MITIGATION - RIESEL	2020	RIESEL	\$643,000	OTHER SURFACE WATER
G	MCLENNAN COUNTY REGIONAL ARSENIC MITIGATION - WACO	2020	WACO	\$20,287,000	OTHER SURFACE WATER
K	URGENT WATER LOSS REDUCTION PROJECT - CMWSC	2020	CREEDMOOR-MAHA WSC	\$4,501,080	MUNICIPAL CONSERVATION
L	GBRA - MBWSP - CONJUNCTIVE USE WITH ASR (OPTION 3A)	2020	GUADALUPE BLANCO RIVER AUTHORITY	\$700,897,000	CONJUNCTIVE USE
G	UPGRADE WTP FOR ARSENIC-MCLENNAN-COUNTY-OTHER	2020	-COUNTY-OTHER (MCLENNAN)	\$3,811,000	-GROUNDWATER WELLS AND OTHER
L	MID-BASIN WATER SUPPLY PROJECT	2020	-GUADALUPE BLANCO RIVER AUTHORITY	\$736,381,000	-AQUIFER STORAGE AND RECOVERY
L	TWA REGIONAL CARRIZO	2020	-TEXAS WATER ALLIANCE	\$279,632,000	-GROUNDWATER WELLS AND OTHER

Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.
Austin, TX 78711-3231, www.twdb.texas.gov
Phone (512) 463-7847, Fax (512) 475-2053

June 13, 2017

Ms. Suzanne Scott, Chair
Region L Regional Water Planning Group
P.O Box 839980
San Antonio, Texas 78283

Dear Ms. Scott:

I have reviewed Region L's May 16, 2017 request for a water management strategy substitution. Based on the request and supporting materials provided, I am approving the substitution of the alternative Guadalupe Blanco River Authority (GBRA) Mid-Basin Water Supply Project—Conjunctive Use with Aquifer Storage & Recovery (ASR) water management strategy for the recommended GBRA Mid-Basin Project—Surface Water with ASR and Texas Water Alliance Regional Carrizo Aquifer Development water management strategies.

The requested water management strategy substitution meets the requirements of 31 Texas Administrative Code §357.51(e) as the proposed recommended water management strategy is a fully-evaluated alternative water management strategy that is capable of meeting the same water needs without over-allocating any source.

If the Region L Regional Water Planning Group (RWPG) adopts the substitution, please submit written documentation of the substitution to the Texas Water Development Board (TWDB). Written documentation must include an addendum to the 2016 Region L Regional Water Plan, updated DB17 data to reflect all associated changes to the 2016 Region L Regional Water Plan, and an updated recommended project prioritization list. Within 30 days of receipt of all required information, the TWDB Executive Administrator will issue a response letter to the RWPG Chair and political subdivision acknowledging receipt of the associated documentation. If the documentation meets TWDB requirements, the TWDB Board may consider amending the 2017 State Water Plan, following a 30-day public notice and public hearing.

If you have any questions concerning this approval or its associated requirements, please contact Ron Ellis, Region L Project Manager, at 512-463-4146.

Sincerely,



Jeff Walker
Executive Administrator

cc: Steve Raabe, San Antonio River Authority
Ron Ellis, TWDB

Our Mission

To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas

Board Members

Bech Bruun, Chairman | Kathleen Jackson, Board Member | Peter Lake, Board Member
Jeff Walker, Executive Administrator