



5.22 Lee County Water Supply Plan

Table 5.22-1 lists each water user group in Lee County and their corresponding surplus or shortage in years 2040 and 2070. A brief summary of the water user groups and the plan for the selected water user are presented in the following subsections. Unmet needs exist for Lee County-Mining, whose primary source of supply is unknown. There is currently approximately 12,000 acft of Carrizo-Wilcox groundwater available under the MAG in Lee County; however, this supply has been permitted for use in Hays County through the Hays-Forestar project. Refer to the 2016 South Central Texas (Region L) Regional Water Plan for more information.

Table 5.22-1. Lee County Surplus/(Shortage)

Water User Group	Surplus/(Shortage) ¹		Comment
	2040 (acft/yr)	2070 (acft/yr)	
Aqua WSC ²	0	0	Demand equals supply
City of Giddings	443	395	Projected surplus
Lee County WSC ³	2,445	2,160	Projected surplus
City of Lexington	390	381	Projected surplus
Southwest Milam WSC			See Milam County
County-Other	8	0	Projected surplus
Manufacturing	0	0	Demand equals supply
Steam-Electric	0	0	No Projected Demand
Mining	(7,767)	(9,631)	Projected shortage – see plan below
Irrigation	62	98	Projected surplus
Livestock	0	0	Demand equals supply

1 – From Tables C-43 and C-44, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

2 – Balance includes totals for Brazos G and Region K

3 – Balance includes totals for Brazos G only

5.22.1 Aqua WSC

Description of Supply

Aqua WSC is located in Lee and Bastrop (Region K) Counties with a majority of its demand in Bastrop County. Aqua WSC obtains its water supply from groundwater from the Carrizo-Wilcox Aquifer. Based on the existing supply available from groundwater, demands are projected to match supplies from year 2020 through year 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, and in coordination with Region K, the following water management strategy is recommended for Aqua WSC.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: maximum of \$6,829 in 2020
- Unit Cost: \$496/acft

Table 5.22-2. Recommended Plan Costs by Decade for Aqua WSC (Brazos G)

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	0	0	0	0	0	0
Conservation						
Supply From Plan Element (acft/yr)	14	12	5	1	1	0
Annual Cost (\$/yr)	\$6,829	\$5,718	\$2,406	\$618	\$278	\$162
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	14	12	5	1	1	0

5.22.2 City of Giddings

Description of Supply

The City of Giddings obtains its water supply from groundwater from the Carrizo-Wilcox Aquifer. There are surpluses projected through 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended for the City of Giddings.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: maximum of \$115,707 in 2070
- Unit Cost: \$496/acft



Table 5.22-3. Recommended Plan Costs by Decade for City of Giddings

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	614	502	443	424	406	395
Conservation						
Supply From Plan Element (acft/yr)	39	131	231	230	232	233
Annual Cost (\$/yr)	\$19,176	\$65,196	\$114,817	\$114,060	\$114,869	\$115,707
<i>Projected Surplus/(Shortage) after Conservation</i>	653	633	674	654	637	628

5.22.3 Lee County WSC

Lee County WSC is located in Lee, Bastrop (Region K) and Fayette (Region K) counties. The majority of water demand is located in Lee County. The WSC obtains its water supply from groundwater from the Queen City Aquifer. Balance and strategies represented in Table 5.22-1 are for the entire WSC in all counties and regions. No shortages are projected for the planning period. Conservation was considered; however, the entity’s current per capita use rate is below the selected target rate of 140 gpcd.

5.22.4 City of Lexington

Description of Supply

The City of Lexington obtains its water supply from the Carrizo-Wilcox Aquifer. No shortages are projected for the City of Lexington, surpluses are projected through 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended for the City of Lexington.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: maximum of \$12,899 in 2030
- Unit Cost: \$496/acft

Table 5.22-4. Recommended Plan Costs by Decade for City of Lexington

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	425	402	390	386	383	381
Conservation						
Supply From Plan Element (acft/yr)	8	26	23	21	21	21
Annual Cost (\$/yr)	\$3,807	\$12,899	\$11,384	\$10,568	\$10,267	\$10,248
<i>Projected Surplus/(Shortage) after Conservation</i>	432	428	413	407	403	401

5.22.5 County-Other

Entities in Lee County-Other receive supplies from the Carrizo-Wilcox Aquifer. County-Other is projected to have a surplus of water through the year 2070 and no changes in water supply are recommended. Conservation was considered; however, the entity's current per capita use rate is below the selected target rate of 140 gpcd.

5.22.6 Manufacturing

Manufacturing is supplied from City of Giddings and is projected to have a surplus of water through the year 2070 and no changes in water supply are recommended.

5.22.7 Steam-Electric

No Steam-Electric demand exists nor is projected for the county.

5.22.8 Mining

Description of Supply

Mining operations in Lee County are projected to have demand, but currently have no supply sources. Shortages for Mining are projected between 2020 and 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended to meet water needs for Lee County-Mining.

- a. Conservation
 - Cost Source: Volume II, Chapter 2
 - Date to be Implemented: 2020
 - Annual Cost: not determined
- b. Leave needs unmet
 - Cost Source: Cost of not meeting needs – see Appendix H
 - Date to be Implemented: 2020



Table 5.22-5. Recommended Plan Costs by Decade for Lee County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(3,180)	(7,289)	(7,767)	(8,304)	(8,904)	(9,631)
Conservation						
Supply From Plan Element (acft/yr)	95	364	543	581	623	674
Annual Cost (\$/yr)	ND	ND	ND	ND	ND	ND
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(3,085)	(6,925)	(7,223)	(7,723)	(8,281)	(8,957)
Leave needs unmet						
Supply From Plan Element (acft/yr)	3,085	6,925	7,223	7,723	8,281	8,957
Annual Cost (\$/yr)	—	—	—	—	—	—
Unit Cost (\$/acft)	—	—	—	—	—	—

ND – Not determined. Costs to implement industrial conservation technologies will vary based on each location

5.22.9 Irrigation

Lee County Irrigation is supplied from run-of-the river water rights and Carrizo-Wilcox Aquifer. Irrigation is projected to have a surplus of water through the year 2070 and no changes in water supply are recommended.

5.22.10 Livestock

Livestock water supply is projected to meet demands through 2070 and no changes in water supply are recommended.

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