

5.4 Burleson County Water Supply Plan

Table 5.4-1. lists each water user group in Burleson 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 water users are presented in the following subsections.

Table 5.4-1. Burleson County Surplus/(Shortage)

Water User Group	Surplus/(Shortage) ¹		Comment
	2040 (acft/yr)	2070 (acft/yr)	
City of Caldwell	1,204	1,168	Projected surplus
Deanville WSC	226	218	Projected surplus
Milano WSC			See Milam County
City of Snook	180	149	Projected surplus
City of Somerville	576	479	Projected surplus
Southwest Milam WSC			See Milam County
County-Other	95	2	Projected surplus
Manufacturing	(6)	(6)	Projected shortage - see plan below.
Steam-Electric	0	0	No projected demand
Mining	506	1,590	Projected surplus
Irrigation	(347)	(347)	Projected shortage - see plan below.
Livestock	0	0	Demand equals supply

1 – From Tables C-7 and C-8, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

5.4.1 City of Caldwell

Description of Supply

The City of Caldwell obtains its water supply from groundwater from the Carrizo-Wilcox Aquifer. The supply is projected to be sufficient through the planning period. Conservation is recommended.

- a. Conservation
 - Cost Source: Volume II
 - Date to be Implemented: by 2030
 - Annual Cost: maximum of \$137,650 in 2070
 - Unit Cost: \$560/acft

Table 5.4-2. Recommended Plan Costs by Decade for City of Caldwell

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	1,249	1,233	1,204	1,204	1,185	1,168
Conservation						
Supply From Plan Element (acft/yr)	0	83	167	239	242	246
Annual Cost (\$/yr)	\$0	\$46,529	\$93,416	\$133,824	\$135,682	\$137,650
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	1,249	1,233	1,204	1,204	1,185	1,168

5.4.2 Deenville WSC

The Deenville WSC obtains its water supply from groundwater from the Carrizo-Wilcox Aquifer. Water supply is projected to be sufficient through the planning period 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.

5.4.3 City of Snook

Description of Supply

The City of Snook obtains its water supply from groundwater from the Sparta Aquifer. No shortages are projected through the planning period. Conservation is recommended.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: 2020
- Annual Cost: maximum of \$72,274 in 2070
- Unit Cost: \$560/acft

Table 5.4-3. Recommended Plan Costs by Decade for City of Snook

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	206	189	180	167	157	149
Conservation						
Supply From Plan Element (acft/yr)	0	25	50	78	104	129
Annual Cost (\$/yr)	\$0	\$13,981	\$27,916	\$43,409	\$58,377	\$72,274
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	206	189	180	167	157	149

5.4.4 City of Somerville

Description of Supply

The City of Somerville obtains its water supply from groundwater from the Sparta Aquifer. Water supply is projected to be sufficient through the planning period. Conservation is recommended.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: by 2030
- Annual Cost: \$17,144 in 2070
- Unit Cost: \$560/acft

Table 5.4-4. Recommended Plan Costs by Decade for City of Somerville

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	618	599	576	545	513	479
Conservation						
Supply From Plan Element (acft/yr)	0	20	25	27	29	31
Annual Cost (\$/yr)	\$0	\$11,161	\$14,110	\$15,223	\$16,194	\$17,144
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	618	599	576	545	513	479

5.4.5 County-Other

Burleson County-Other entities obtain water supply from groundwater from the Queen City and Carrizo-Wilcox Aquifers. The supply is projected to be sufficient through the planning period and no change in water supply is recommended. Conservation was considered; however, the entity’s current per capita use rate is below the selected target rate of 140 gpcd.

5.4.6 Manufacturing

Description of Supply

Water supply for manufacturing in Burleson County is obtained from Sparta wells operated by the various manufacturing entities. Manufacturing is projected to have a shortage of water beginning in the year 2020 and continuing through 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 Manufacturing. Associated costs are included for each strategy.

a. Conservation

- Cost Source: Volume II
 - Date to be Implemented: before 2030
 - Annual Cost: not determined
- b. Groundwater Development – Sparta Aquifer
- Cost Source: Volume II
 - Date to be Implemented: before 2030
 - Project Cost: \$641,000
 - Unit Cost: \$25,000/acft
- c. Alternative: Leave Needs Unmet in 2020
- Cost Source: Cost of not meeting needs – see Appendix H
 - Date to be Implemented: 2020

Table 5.4-5. Recommended Plan Costs by Decade for Burleson County – Manufacturing

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(6)	(6)	(6)	(6)	(6)	(6)
Conservation						
Supply From Plan Element (acft/yr)	4	6	8	8	8	8
Annual Cost (\$/yr)	ND	ND	ND	ND	ND	ND
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(2)	—	2	2	2	2
Groundwater Development – Sparta Aquifer						
Supply From Plan Element (acft/yr)	2	2	2	2	2	2
Annual Cost (\$/yr)	\$50,000	\$50,000	\$5,000	\$5,000	\$5,000	\$5,000
Unit Cost (\$/acft)	\$25,000	\$25,000	\$2,500	\$2,500	\$2,500	\$2,500
Alternative: Leave Needs Unmet in 2020						
Supply From Plan Element (acft/yr)	0					
Annual Cost (\$/yr)	—	—	—	—	—	—
Unit Cost (\$/acft)	—	—	—	—	—	—

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

5.4.7 Steam-Electric

No Steam-Electric demand exists or is projected for the county.

5.4.8 Mining

Burleson County Mining is supplied by Yegua-Jackson groundwater. No shortages are projected for Mining and no changes in water supply are recommended.



5.4.9 Irrigation

Description of Supply

Water supply for irrigation in Burleson County is obtained from the Carrizo-Wilcox, Yegua-Jackson, and Brazos River Alluvium Aquifers. Irrigation is projected to have a shortage of water beginning in the year 2020 and continuing 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 to meet water needs for Irrigation. Associated costs are included.

- a. Conservation
 - Cost Source: Volume II
 - Date to be Implemented: before 2030
 - Annual Cost: not determined

Table 5.4-6. Recommended Plan Costs by Decade for Burleson County – Irrigation

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(347)	(347)	(347)	(347)	(347)	(347)
Conservation						
Supply From Plan Element (acft/yr)	804	1,340	1,876	1,876	1,876	1,876
Annual Cost (\$/yr)	ND	ND	ND	ND	ND	ND
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	457	993	1,529	1,529	1,529	1,529

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

5.4.10 Livestock

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