

5.32 Stonewall County Water Supply Plan

Table 5.32-1 lists each water user group in Stonewall County and their corresponding surplus or shortage in years 2040 and 2070. A brief description of each water user group has been developed and is presented in the following subsections.

Table 5.32-1. Stonewall County Surplus/(Shortage)

Water User Group	Surplus/(Shortage) ¹		Comment
	2040 (acft/yr)	2070 (acft/yr)	
City of Aspermont	(41)	(52)	Projected shortage - see plan below.
County-Other	6	6	Projected surplus
Manufacturing	(58)	(58)	Projected shortage - see plan below.
Steam-Electric	0	0	No projected demand
Mining	(318)	(144)	Projected shortage - see plan below.
Irrigation	4	3	Projected surplus
Livestock	0	0	Demand equals supply

1 – From Tables C-63 and C-64, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

5.32.1 City of Aspermont

Description of Supply

The City of Aspermont is supplied from North Central Texas Municipal Water Authority (NCTMWA) and from local groundwater sources, primarily from the Seymour Aquifer. The City has a projected water supply shortage beginning in 2020 and increasing through 2070; however, with conservation the City is able to decrease their projected shortage to where there is a surplus beginning in 2050.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended for City of Aspermont. Associated costs are included for each strategy.

- a. Conservation:
 - Cost Source: Volume II
 - Date to be Implemented: before 2030
 - Annual Cost: maximum of \$49,856 in 2070
 - Unit Cost: \$560/acft

- b. Purchase Water from the Salt Fork Water Quality Cooperation Salinity Control Project
 - Cost Source: Volume II
 - Date to be Implemented: by 2030
 - Project Cost: \$8,254,000 for City's portion
 - Unit Cost: \$3,823/acft
- c. Alternative: Millers Creek Reservoir Augmentation strategy by NCTMWA. This will provide supply at least up to the current amount contracted from NCTMWA.
 - Cost Source: Volume II
 - Project requires a subordination agreement with the BRA
 - Date to be Implemented: by 2030
 - Project Cost: none (cost would be borne by NCTMWA)
 - Unit Cost: none (supply already purchased from NCTMWA)
- d. Alternative: Lake Creek Reservoir. This strategy would be developed by NCTMWA to augment existing supplies.
 - Cost Source: Volume II
 - Project requires a subordination agreement with the BRA
 - Date to be Implemented: by 2030
 - Project Cost: none (cost would be borne by NCTMWA)
 - Unit Cost: none (supply already purchased from NCTMWA)

Table 5.32-2. Recommended Plan Costs by Decade for the City of Aspermont

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(39)	(39)	(41)	(50)	(51)	(52)
Conservation						
Supply From Plan Element (acft/yr)	0	19	37	56	73	89
Annual Cost (\$/yr)	\$0	\$10,820	\$20,664	\$31,593	\$40,917	\$49,856
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(39)	(20)	(4)	6	22	37
Purchase Water from the Salt Fork Water Quality Cooperation Salinity Control Project						
Supply From Plan Element (acft/yr)	249	249	249	249	249	249
Annual Cost (\$/yr)	\$952,000	\$952,000	\$371,000	\$371,000	\$371,000	\$371,000
Unit Cost (\$/acft)	\$3,823	\$3,823	\$1,490	\$1,490	\$1,490	\$1,490
Alternative: Millers Creek Reservoir Augmentation						
Supply From Plan Element (acft/yr)	39	20	4	—	—	—
Annual Cost (\$/yr)	—	—	—	—	—	—



Unit Cost (\$/acft)	—	—	—	—	—	—
Alternative: Lake Creek Reservoir						
Supply From Plan Element (acft/yr)	39	20	4	—	—	—
Annual Cost (\$/yr)	—	—	—	—	—	—
Unit Cost (\$/acft)	—	—	—	—	—	—

5.32.2 County-Other

Stonewall County-Other entities obtain their groundwater supply from the Blaine Aquifer. A surplus is projected throughout the planning period and no changes in water supply are recommended. Conservation was considered, however the current per capita use rate is below the target of 140 gpcd.

5.32.3 Manufacturing

Description of Supply

There is no water supply currently allocated for Stonewall County Manufacturing entities, however projections indicate a manufacturing demand and shortages beginning in 2020.

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 the projected water shortage for Mining. Associated costs are included for each strategy.

- a. Conservation:
 - Cost Source: Volume II
 - Date to be Implemented: by 2020
 - Unit Cost: not determined
- b. Groundwater Development (Blaine Aquifer):
 - Cost Source: Volume II
 - Date to be Implemented: by 2020
 - Project Cost: \$192,000
 - Unit Cost: Max of \$268/acft (2020)

Table 5.32-3. Recommended Plan Costs by Decade for Stonewall County – Manufacturing

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(58)	(58)	(58)	(58)	(58)	(58)
Conservation						
Supply From Plan Element (acft/yr)	2	3	4	4	4	4
Annual Cost (\$/yr)	ND	ND	ND	ND	ND	ND
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(56)	(55)	(54)	(54)	(54)	(54)
Groundwater Well Development – Blaine Aquifer						
Supply From Plan Element (acft/yr)	56	56	56	56	56	56
Annual Cost (\$/yr)	\$15,000	\$15,000	\$2,000	\$2,000	\$2,000	\$2,000
Unit Cost (\$/acft)	\$268	\$268	\$34	\$34	\$34	\$34
ND – Not determined. Costs to implement industrial conservation technologies will vary based on each location						

5.32.4 Steam-Electric

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

5.32.5 Mining

Description of Supply

Groundwater supply for Mining in Stonewall County is obtained from the Blaine Aquifer. Projections indicate a decrease in water demand for Mining, however shortages are projected from 2020 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 the projected water shortage for Mining. Associated costs are included for each strategy.

- a. Conservation:
 - Cost Source: Volume II
 - Date to be Implemented: by 2020
 - Unit Cost: not determined
- b. Groundwater Development (Blaine Aquifer):
 - Cost Source: Volume II
 - Date to be Implemented: by 2020
 - Project Cost: \$3,794,000
 - Unit Cost: Max of \$820/acft (2020)



Table 5.32-4. Recommended Plan Costs by Decade for Stonewall County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(390)	(382)	(318)	(252)	(194)	(144)
Conservation						
Supply From Plan Element (acft/yr)	18	29	36	31	27	24
Annual Cost (\$/yr)	ND	ND	ND	ND	ND	ND
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(372)	(353)	(282)	(221)	(167)	(120)
Groundwater Well Development – Blaine Aquifer						
Supply From Plan Element (acft/yr)	372	372	372	372	372	372
Annual Cost (\$/yr)	\$305,000	\$305,000	\$36,000	\$36,000	\$36,000	\$36,000
Unit Cost (\$/acft)	\$820	\$820	\$97	\$97	\$97	\$97
ND – Not determined. Costs to implement industrial conservation technologies will vary based on each location						

5.32.6 Irrigation

Stonewall County Irrigation entities obtain groundwater supply from the Blaine and Seymour Aquifers. A surplus in supply is projected and no changes in water supply are recommended.

5.32.7 Livestock

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

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