

## 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) <sup>1</sup>		Comment
	2040 (acft/yr)	2070 (acft/yr)	
City of Aspermont	93	59	Projected surplus
County-Other	28	29	Projected surplus
Manufacturing	0	0	No projected demand
Steam-Electric	0	0	No projected demand
Mining	(337)	(163)	Projected shortage – see plan below
Irrigation	72	85	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. There is a projected surplus through 2070 and no changes in water supply are recommended. Although the City has sufficient supplies, conservation is recommended as the current per capita use rate is above the selected target rate of 140 gpcd.

#### 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, Chapter 2
  - Date to be Implemented: before 2020
  - Annual Cost: maximum of \$45,253 in 2070
  - Unit Cost: \$474/acft

- b. 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, Chapter 7.5
    - Project requires a subordination agreement with the BRA, which is dependent on the BRA obtaining the System Operations permit
  - Date to be Implemented: 2020
  - Project Cost: none (cost would be borne by NCTMWA)
  - Unit Cost: none (supply already purchased from NCTMWA)
- c. Alternative: Lake Creek Reservoir. This strategy would be developed by NCTMWA to augment existing supplies.
  - Cost Source: Volume II, Chapter 4.10
    - Project requires a subordination agreement with the BRA, which is dependent on the BRA obtaining the System Operations permit
  - Date to be Implemented: 2020
  - 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	2010	2020	2030	2040	2050	2060
<i>Projected Surplus/(Shortage) (acft/yr)</i>	139	119	93	79	73	59
<b>Conservation</b>						
Supply From Plan Element (acft/yr)	13	30	48	66	82	95
Annual Cost (\$/yr)	\$6,215	\$14,363	\$22,671	\$31,472	\$38,957	\$45,253
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	152	149	140	146	155	154
<b>Millers Creek Reservoir Augmentation</b>						
Supply From Plan Element (acft/yr)	33	47	62	76	90	105
Annual Cost (\$/yr)	—	—	—	—	—	—
	—	—	—	—	—	—
<b>Alternative: Lake Creek Reservoir</b>						
Supply From Plan Element (acft/yr)	33	47	62	76	90	105
Annual Cost (\$/yr)	—	—	—	—	—	—
	—	—	—	—	—	—



### 5.32.2 County-Other

The water supply entities for Stonewall County-Other show a projected surplus and no changes in water supply are recommended.

### 5.32.3 Manufacturing

No Manufacturing demand exists or is projected for the county.

### 5.32.4 Steam-Electric

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

### 5.32.5 Mining

#### Description of Supply

Surface water for Mining in Stonewall County is obtained from contracts with BRA and run of river water rights. Projections indicate an increase in water demand for Mining and shortages projected beginning in 2020. Changes in water supply are recommended.

#### 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, Chapter 2
  - Date to be Implemented: before 2020
  - Unit Cost: not determined
- b. Groundwater Development (Blaine Aquifer):
  - Cost Source: Volume II, Chapter 12
  - Date to be Implemented: 2020
  - Project Cost: \$3,434,000
  - Unit Cost: Max of \$790/acft (2020)

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

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(409)	(401)	(337)	(271)	(213)	(163)
<b>Conservation</b>						
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>	(391)	(372)	(301)	(240)	(186)	(139)
<b>Groundwater Well Development – Blaine Aquifer</b>						
Supply From Plan Element (acft/yr)	400	400	400	400	400	400
Annual Cost (\$/yr)	\$316,023	\$316,023	\$27,023	\$27,023	\$27,023	\$27,023
Unit Cost (\$/acft)	\$790	\$790	\$68	\$68	\$68	\$68

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

### 5.32.6 Irrigation

Stonewall County Irrigation shows a projected surplus 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.