5.25 Milam County Water Supply Plan

Table 5.25-1 lists each water user group in Milam County and their corresponding surplus or shortage in years 2040 and 2070. For each water user group with a projected shortage, a water supply plan has been developed and is presented in the following subsections.

Table 5.25-1. Milam County Surplus/(Shortage)

Water User Group	Surplus/(Shortage)		Comment
	2040 (acft/yr)	2070 (acft/yr)	
Bell-Milam Falls WSC			See Bell County
City of Cameron[1]	(1,623)	(1,794)	Projected shortage - see plan below.
Milano WSC	37	25	Projected surplus
North Milam WSC	114	140	Projected surplus - see plan below.
City of Rockdale	(613)	(609)	Projected shortage - see plan below.
Salem Elm Ridge WSC	285	269	Projected surplus
Southwest Milam WSC	(419)	(619)	Projected shortage - see plan below.
City of Thorndale	12	(10)	Projected shortage - see plan below.
County-Other	21	4	Projected surplus
Manufacturing	1	1	Projected surplus
Steam-Electric	(32,254)	(32,254)	Projected shortage – see plan below
Mining	47	57	Projected surplus
Irrigation	(205)	93	Projected surplus (shortage only 2030 & 2040) - see plan below.

1. Note that DB22 does not account for the infrastructure constraint shown that results in loss of supply for Cameron.

5.25.1 City of Cameron

Description of Supply

The City of Cameron obtains its water supply from run-of-the-river rights at 2,615 acft/yr. The city provides supply to North Milam WSC, Salem Elm Ridge WSC, and to Manufacturing. No shortages are projected for the City of Cameron.

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 Cameron. Conservation is recommended to reduce usage to a goal of 140 gpcd.

a. Conservation
   - Cost Source: Volume II
   - Date to be Implemented: 2030
   - Unit Cost: $560/acft
   - Annual Cost: maximum of $260,663 in 2070

b. New Little River Intake and Raw Water Pipeline
   - Cost Source: Volume II
   - Date to be Implemented: 2030
   - Project Cost: $13,006,000
   - Unit Cost: $407/acft (maximum of phased costs)

Table 5.25-2. Recommended Plan Costs by Decade for City of Cameron

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*1,252*	*(1,590)*	*(1,623)*	*(1,681)*	*(1,738)*	*(1,794)*
Conservation						
Supply From Plan Element (acft/yr)	0	107	218	339	449	465
Annual Cost ($/yr)	$0	$60,061	$122,024	$190,045	$251,609	$260,663
Projected Surplus/(Shortage) after Conservation	*1,252*	*(1,483)*	*(1,405)*	*(1,342)*	*(1,289)*	*(1,329)*
New Little River Intake and Raw Water Pipeline						
Supply From Plan Element (acft/yr)	-	2,615	2,615	2,615	2,615	2,615
Annual Cost ($/yr)	-	$1,064,000	$1,064,000	$209,200	$209,200	$209,200
Unit Costt ($/acft)	-	$407	$407	$80	$80	$80

5.25.2 Milano WSC

Milano WSC obtains its water supply from the Carrizo-Wilcox Aquifer at 520 to 496 acft/yr. This WUG is located in Milam and Burleson Counties. No shortages are projected for Milano WSC 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.

5.25.3 North Milam WSC

Description of Supply

North Milam WSC obtains its water supply from the Carrizo-Wilcox Aquifer at 520 to 496 acft/yr. This WUG is located in multiple counties (Milam and Burleson). The surplus shown

in the table below and represents the cumulative total for North Milam WSC. No shortages are projected for North Milam WSC.

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 North Milam WSC. Conservation is recommended to reduce usage to a goal of 140 gpcd.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: 2030
- Unit Cost: $560/acft
- Annual Cost: maximum of $$10,529260,663 in 2070

Table 5.25-3. Recommended Plan Costs by Decade for North Milam WSC

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*214*	*140*	*114*	*144*	*151*	*140*
Conservation						
Supply From Plan Element (acft/yr)	0	19	19	18	18	19
Annual Cost ($/yr)	$0	$10,640	$10,640	$10,080	$10,080	$10,640
Projected Surplus/(Shortage) after Conservation	*214*	*159*	*133*	*162*	*169*	*159*

5.25.4 City of Rockdale

Description of Supply

The City of Rockdale obtains its water supply from groundwater from the Carrizo-Wilcox Aquifer at 1,094 to 771 acft/yr from 2020 to 2070. Shortage are projected for the City of Rockdale 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 Rockdale. Conservation is recommended to reduce usage to a goal of 140 gpcd.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: 2030
- Annual Cost: maximum of $116,966 in 2070
- Unit Cost: $560/acft

b. Water Supply from Lee County Carrizo-Wilcox Wells

- Cost Source: Volume II
- Date to be Implemented: 2020
- Project Cost: $5,086,000
- Unit Cost: $1,034/acft

Table 5.25-4. Recommended Plan Costs by Decade for City of Rockdale

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(79)*	*(289)*	*(613)*	*(558)*	*(562)*	*(609)*
Conservation						
Supply From Plan Element (acft/yr)	0	89	180	198	202	209
Annual Cost ($/yr)	$0	$49,787	$100,957	$110,661	$113,303	$116,966
Projected Surplus/(Shortage) after Conservation	*(79)*	*(200)*	*(433)*	*(360)*	*(360)*	*(400)*
Water Supply from Lee County Carrizo Wilcox Wells						
Supply From Plan Element (acft/yr)	79	200	433	360	360	400
Annual Cost ($/yr)	$81,686	$206,800	$89,631	$74,520	$74,520	$82,800
Unit Cost ($/acft)	$1,03	$1,034	$207	$207	$207	$207

5.25.5 Salem Elm Ridge WSC

Salem Elm Ridge WSC obtains its water supply from Cameron at 125 acft/yr and Central Texas WSC at 297 acft/yr. No shortages are projected for Salem Elm Ridge WSC 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.

5.25.6 Southwest Milam WSC

Description of Supply

Southwest Milam WSC obtains its water supply from groundwater from the Carrizo-Wilcox Aquifer at 1,635 to 1,512 acft/yr. This WUG is located in multiple counties (Milam, Lee, Williamson, and Burleson). The surplus/shortages shown in the table below represent the cumulative totals for Southwest Milam WSC. Southwest Milam WSC is projected to have a surplus from 2020 and a shortage from 2030 through the year 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 Southwest Milam WSC. Conservation is recommended to reduce usage to a goal of 140 gpcd.

a. Conservation
   - Cost Source: Volume II
   - Date to be Implemented: 2030
   - Annual Cost: maximum of $47,447 in 2070
   - Unit Cost: $560/acft

b. Water Supply from Lee County Carrizo Wilcox Wells
   - Cost Source: Volume II
   - Date to be Implemented: 2030
   - Project Cost: $5,080,000
   - Unit Cost: $853/acft

Table 5.25-5. Recommended Plan Costs by Decade for Southwest Milam WSC

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*169*	*(225)*	*(419)*	*(386)*	*(465)*	*(619)*
Conservation						
Supply From Plan Element (acft/yr)	*0*	*25*	*54*	*61*	*73*	*85*
Annual Cost ($/yr)	$0	$14,082	$30,407	$34,396	$40,872	$47,447
Projected Surplus/(Shortage) after Conservation	*169*	*(200)*	*(365)*	*(325)*	*(392)*	*(534)*
Water Supply from Lee County Carrizo-Wilcox Wells						
Supply From Plan Element (acft/yr)	–	200	365	325	392	534
Annual Cost ($/yr)	–	$170,600	$311,345	$59,800	$72,128	$98,256
Unit Cost ($/acft)	–	$853	$853	$184	$184	$184

5.25.7 City of Thorndale

The City of Thorndale is located in Milam and partially in Williamson County. The city obtains its water supply from Southwest Milam WSC at 202 acft/yr. Shortages are projected for the City of Thorndale in 2060 to 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended. Conservation was considered; however, the entity's current per capita use rate is below the selected target rate of 140 gpcd.

a. Water Supply from Lake Granger ASR

- Cost Source: Volume II
- Date to be Implemented: 2060
- Project Cost: $99,820,000 (sum of 2 phases)
- Unit Cost: Max of $77/acft (BRA System Rate)

Table 5.25-6. Recommended Plan Costs by Decade for Thorndale

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*19*	*14*	*12*	*5*	*(2)*	*(10)*
Conservation						
Supply From Plan Element (acft/yr)	–	–	–	–	–	–
Annual Cost ($/yr)	–	–	–	–	–	–
Water Supply from Lake Granger ASR						
Supply From Plan Element (acft/yr)	–	–	–	–	2	10
Annual Cost ($/yr)	–	–	–	–	$154	$770
Unit Cost ($/acft)	–	–	–	–	$77	$77

5.25.8 County-Other

Entities in County-Other obtain supplies from Brazos River Alluvium Aquifer at 160 acft/yr. 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.

5.25.9 Manufacturing

Manufacturing receives supplies from City of Cameron at 14 acft/yr. Manufacturing is projected to have sufficient water supplies through the year 2070 and no changes in water supply are recommended.

5.25.10 Steam-Electric

Description of Supply

Milam County Steam-Electric obtains its water supply from Lake Alcoa, a water right for diversions from the Little River, contractual supply from BRA and the Carrizo-Wilcox Aquifer. Milam County Steam Electric has contracted for 5,000 acft/yr of surface water supplies from the Brazos River Authority, which can supply 4,156 acft/yr in 2020 and 4,019 acft/yr in 2070, based on water availability analyses prescribed under water planning guidelines. Based on the available supplies, Milam County Steam-Electric is projected to have surpluses throughout the planning period.

Water Supply Plan

Power generation has ceased at the facility associated with the Milam County Steam-Electric demands and supplies. Therefore, the BGRWPG has opted to recommend strategies to use those supplies for other purposes, and the demands for Milam County Steam-Electric use will not be met.

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 Milam County-Steam Electric.

a. Leave Needs Unmet

- Date to be Implemented: 2020

Table 5.25-7. Recommended Plan Costs by Decade for Milam County – Steam Electric

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*
Conservation						
Supply From Plan Element (acft/yr)	–	–	–	–	–	–
Annual Cost ($/yr)	–	–	–	–	–	–
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*
Leave Needs Unmet (acft/yr)	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*	*(32,254)*

5.25.11 Mining

Milam County Mining obtains its water supply from the Carrizo-Wilcox Aquifer at 76 to 71 acft/yr, from 2020 to 2070, used for mine reclamation. Milam County Mining is projected to have adequate supplies between 2020 and 2070.

5.25.12 Irrigation

Description of Supply

Milam County Irrigation is supplied by groundwater from the Carrizo-Wilcox, Queen City and Brazos River Alluvium Aquifers as well as run of the river water rights. Irrigation is projected to have shortages in 2030 and 2040, which can be met through conservation.

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 Milam County-Irrigation. Conservation is recommended.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: by 2030
- Annual Cost: maximum $59,755 in 2070
- Unit Costs: $ 1,542/acft

Table 5.25-8. Recommended Plan Costs by Decade for Milam County – Irrigation

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*239*	*(104)*	*(205)*	*4*	*93*	*93*
Conservation						
Supply From Plan Element (acft/yr)	195	325	455	455	455	455
Annual Cost ($/yr)	$300,861	$501,435	$702,009	$702,009	$702,009	$702,009
Projected Surplus/(Shortage) after Conservation (acft/yr)	*434*	*221*	*250*	*459*	*548*	*548*

5.25.13 Livestock

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