

5.11 Fisher County Water Supply Plan

Table 5.11-1 lists each water user group in Fisher 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 5.11-1. Fisher County Surplus/(Shortage)

Water User Group	Surplus/(Shortage) ¹		Comment
	2040 (acft/yr)	2070 (acft/yr)	
City of Roby	34	34	Projected surplus
City of Rotan	(100)	(118)	Projected shortage - see plan below.
The Bitter Creek WSC			See Nolan County
County-Other	6	7	Projected surplus
Manufacturing	54	54	Projected surplus
Steam-Electric	–	–	No projected demand
Mining	(143)	(22)	Projected shortage - see plan below.
Irrigation	782	782	Projected surplus
Livestock	0	0	Demand equals supply

1 – From Tables C-19 and C-20, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

5.11.1 City of Roby

Description of Supply

Water supplies are obtained from the Seymour Aquifer at 34 ac-ft/yr and the City of Sweetwater from 124 ac-ft/yr to 117 ac-ft/yr from 2020 to 2070, respectively. No shortage is projected for the City of Roby throughout the planning period.

Water Supply Plan

The supplies projected are adequate to meet the City’s water demand through 2070. Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended for the City of Roby.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: 2030
- Annual Cost: maximum of \$8,152 in 2040
- Unit Cost: \$560/ac-ft

Table 5.11-2. Recommended Plan Costs by Decade for the City of Roby

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	34	34	34	34	34	34
Conservation						
Supply From Plan Element (acft/yr)	0	9	15	13	13	13
Annual Cost (\$/yr)	\$0	\$4,960	\$8,152	\$7,032	\$7,032	\$7,032
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	34	34	34	34	34	34

5.11.2 City of Rotan

Description of Supply

The City of Rotan is currently purchasing water under contract from the City of Snyder from 73 ac-ft/yr to 61 ac-ft/yr in 2020 to 2070, respectively. Shortages are projected by 2020. The city also provides supply for manufacturing demand in Fisher County at 4 ac-ft/yr. Conservation was considered; however, the entity’s current per capita use rate is below the selected target rate of 140 gpcd.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB and in coordination with Region F, the following water management strategies are recommended to meet water needs for the City of Rotan.

- a. Water Supply from City of Snyder to meet Contract
 - Cost Source: Costs applied to CRMWD to meet contracts (2016 Region F Water Supply Plan)
 - Date to be Implemented: 2020
 - Project Cost: none, existing infrastructure assumed sufficient
 - Annual Cost: already contracted supplies

Table 5.11-3. Recommended Plan Costs by Decade for City of Rotan

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(121)	(93)	(100)	(106)	(113)	(118)
Conservation						
Supply from Plan Element (acft/yr)	–	–	–	–	–	–
Annual Cost (\$/yr)	–	–	–	–	–	–
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(89)	(50)	(60)	(67)	(76)	(84)
Water Supply from City of Snyder						
Supply from Plan Element (acft/yr)	89	50	60	67	76	84
Annual Cost (\$/yr)	\$0	\$0	\$0	\$0	\$0	\$0
Unit Cost (\$/acft)	\$0	\$0	\$0	\$0	\$0	\$0

5.11.3 County-Other

Entities in Fisher County-Other receive supplies from the Seymour Aquifer at 76 ac-ft/yr and are projected to have a surplus of water through the year 2070. No changes in water supply are recommended. Conservation was also considered; however, the entity's current per capita use rate is below the selected target rate of 140 gpcd.

5.11.4 Manufacturing

Description of Supply

Manufacturing obtains most of its supply from the Dockum Aquifer at 233 ac-ft/yr in combination with minimal supplies from Hamlin at 2 ac-ft/yr and Rotan at 4 ac-ft/yr. Manufacturing is projected to have a surplus of water through the year 2070.

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Table 5.11-4. Recommended Plan Costs by Decade for Fisher County – Manufacturing

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	82	54	54	54	54	54
Conservation						
Supply from Plan Element (acft/yr)	–	–	–	–	–	–
Annual Cost (\$/yr)	–	–	–	–	–	–
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	82	54	54	54	54	54

ND – Not Determined. Costs to implement industrial conservation technologies will vary based on each location and have not been determined.

5.11.5 Steam-Electric

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

5.11.6 Mining

Description of Supply

Mining is projected to have a shortage of water through the year 2070. The main supply is from the Blaine Aquifer at 216 ac-ft/yr. Conservation will be applied as a recommended strategy to reduce the Mining demand.

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 shortage of Fisher County Mining.

- a. Conservation
 - Cost Source: Volume II
 - Date to be Implemented: before 2030
 - Annual Cost: Costs to implement industrial conservation technologies will vary based on each location and have not been determined.
- b. Groundwater Development – Blaine Aquifer
 - Cost Source: Volume II
 - Date to be Implemented: 2020
 - Project Cost: \$511,000
 - Unit Cost: Max of \$291 /ac-ft (2020)

Table 5.11-5. Recommended Plan Costs by Decade for Fisher County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(191)	(186)	(143)	(97)	(57)	(22)
Conservation						
Supply from Plan Element (acft/yr)	12	20	25	22	19	17
Annual Cost (\$/yr)	ND	ND	ND	ND	ND	ND
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(191)	(186)	(143)	(97)	(57)	(22)
Groundwater Development – Blaine Aquifer						
Supply from Plan Element (acft/yr)	191	186	143	97	51	22
Annual Cost (\$/yr)	\$278,431	\$278,431	\$23,431	\$23,431	\$23,431	\$23,431



Table 5.11-5. Recommended Plan Costs by Decade for Fisher County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
Unit Cost (\$/acft)	\$291	\$291	\$103	\$103	\$103	\$103

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

5.11.7 Irrigation

Irrigation uses water supplies from the Blaine at 3,642 ac-ft/yr and Seymour Aquifers at 1,820 ac-ft/yr. Irrigation in Fisher County is projected to have a surplus of water through the year 2070 and no change in water supply is recommended.

5.11.8 Livestock

Livestock is projected to have a no additional need for water through the year 2070 and no changes in water supply are recommended.

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