5.29 Shackelford County Water Supply Plan

Table 5.29-1 lists each water user group in Shackelford 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 5.29-1. Shackelford County Surplus/(Shortage)

Water User Group	Surplus/(Shortage)		Comment
	2040 (acft/yr)	2070 (acft/yr)	
City of Albany	113	114	Projected surplus - see plan below.
Fort Griffin SUD			See Stephens County
Hamby WSC			See Jones County
Stephens Regional SUD			See Stephens County
Callahan County WSC			See Callahan County
County-Other	12	15	Projected surplus
Manufacturing	37	37	Projected surplus
Steam-Electric	0	0	No projected demand
Mining	(348)	(33)	Projected shortage - see plan below.
Irrigation	100	100	Projected surplus
Livestock	0	0	No projected surplus or shortage

5.29.1 City of Albany

Description of Supply

Water supply for the City of Albany is from Hubbard Creek Reservoir, owned by the West Central Texas MWD at 659 to 738 acft/yr and from Lake McCarty at 75 to 0 acft/yr based on yields from 2020 to 2070, respectively. The City of Albany sells water to Fort Griffin SUD.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended. Conservation is recommended to reduce usage to a goal of 140 gpcd.

a. Conservation:

- Cost Source: Volume II
- Date to be Implemented: before 2030
- Annual Cost: maximum of $130,213 in 2070
- Unit Cost $560/acft

Table 5.29-2. Recommended Plan Costs by Decade for the City of Albany

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*130*	*99*	*113*	*113*	*114*	*114*
Conservation						
Supply From Plan Element (acft/yr)	0	50	98	146	191	233
Annual Cost ($/yr)	$0	$28,174	$54,976	$81,965	$107,034	$130,213
Projected Surplus/(Shortage) after Conservation (acft/yr)	*130*	*149*	*211*	*259*	*305*	*347*
Additional Demands from Recommended Strategies from Others						
Increase Reuse Amount to Fort Griffin SUD (acft/yr)	2	2	2	2	2	2
Total Surplus/(Shortage) Including Recommended Strategies	*128*	*147*	*209*	*257*	*303*	*345*

5.29.2 County-Other

Description of Supply

Water supplies from County-Other are from a minor unnamed aquifer at 25 acft/yr. Projections indicate sufficient water supply for County-Other 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.

5.29.3 Manufacturing

Projections indicate a surplus of water for Manufacturing and no changes in water supply are recommended.

5.29.4 Steam-Electric

No Steam-Electric demand is projected for the county.

5.29.5 Mining

Description of Supply

Surface water for Mining in Shackelford County is obtained from Fort Griffin SUD at 2 acft/yr, run of river water rights at 5 to 6 acft/yr and Cross Timbers Aquifer at 202 acft/yr. 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 water needs for Mining. Associated costs are included for each strategy. Conservation is recommended.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: by 2030
- Unit Cost: not determined

b. Leave Needs Unmet

New supplies for irrigation would be cost prohibitive to develop and most farms would switch to dry-land crops or allow fields to go fallow during a prolonged drought.

- Cost Source: Cost of not meeting needs – will be provided by TWDB
- Date to be Implemented: 2020

Table 5.29-3. Recommended Plan Costs by Decade for Shackelford County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(353)*	*(538)*	*(348)*	*(232)*	*(118)*	*(33)*
Conservation						
Supply From Plan Element (acft/yr)	17	37	39	31	23	17
Annual Cost ($/yr)	ND	ND	ND	ND	ND	ND
Unit Cost ($/acft)	ND	ND	ND	ND	ND	ND
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(336)*	*(501)*	*(309)*	*(201)*	*(95)*	*(16)*
Leave Needs Unmet (acft/yr)	*(336)*	*(501)*	*(309)*	*(201)*	*(95)*	*(16)*

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

5.29.6 Irrigation

Irrigation obtains water supply from the Cross Timbers Aquifer at 350 acft/yr. There are some irrigation rights located along the Clear Fork of the Brazos River; however, there is no surface water availability for those rights during a repeat of the drought of record. Supplies appear to be sufficient to meet demands and no water supply changes or conservation are recommended.

5.29.7 Livestock

No future shortages are projected in the Livestock category and no changes in water supply are recommended.

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