

5.13 Hamilton County Water Supply Plan

Table 5.13-1 lists each water user group in Hamilton County and their corresponding surplus or shortage in years 2040 and 2070. A brief summary of the water user groups and the plan for the selected water user are presented in the following subsections.

Table 5.13-1. Hamilton County Surplus/(Shortage)

Water User Group	Surplus/(Shortage) ¹		Comment
	2040 (acft/yr)	2070 (acft/yr)	
City of Hamilton	173	181	Projected surplus
City of Hico	396	400	Projected surplus
Multi-County WSC			See Coryell County
County-Other	28	30	Projected surplus
Manufacturing	0	0	Demand equals supply
Steam-Electric	—	—	No projected demand
Mining	155	256	Projected shortage (2020) – See plan below
Irrigation	176	168	Projected surplus
Livestock	0	0	Demand equals supply

1 – From Tables C-25 and C-26, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

5.13.1 City of Hamilton

Description of Supply

The City of Hamilton obtains its water supply through purchases of treated surface water under contract from the Upper Leon River Municipal Water District. The water supplied by the Upper Leon River Municipal Water District is diverted from Lake Proctor under contracts with the Brazos River Authority. The City of Hamilton is projected to obtain up to 921 acft/yr of treated surface water supply from the Upper Leon River Municipal Water District through the planning period. No shortages in water supply are projected for the City through the planning period and no change in supply is recommended.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, conservation is recommended as the current per capita use rate is above the selected target of 140 gpcd.

a. Conservation

- Cost Source: Volume II, Section 2
- Date to be Implemented: before 2030

- Unit Cost: \$560/acft
- Annual Cost: \$16,800 in 2030

Table 5.13-1. Recommended Plan Costs by Decade for City of Hamilton

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	158	162	173	180	181	181
Conservation						
Supply From Plan Element (acft/yr)	—	30	19	12	11	11
Annual Cost (\$/yr)	—	\$16,800	\$10,640	\$6,720	\$6,160	\$6,160
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	158	192	192	192	192	192
Additional Demands from Recommended Strategies from Others						
Increase Contract to Multi-County WSC (acft/yr)	46	67	91	115	144	174
<i>Projected Surplus/(Shortage) Including Recommended Strategies</i>	112	125	101	77	48	18

5.13.2 City of Hico

The City of Hico obtains its water supply through groundwater production from the Trinity Aquifer, which is projected to provide a constant 567 acft/yr of supply through the planning period. No shortages in supply are projected for the City during the planning period 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.

5.13.3 County-Other

Entities in Hamilton County-Other obtain their water supply through groundwater production from the Trinity Aquifer, which is projected to provide a constant 450 acft/yr of supply. No shortages are projected throughout the planning period 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.

5.13.4 Manufacturing

Manufacturing water supply in Hamilton County is obtained through groundwater production from the Trinity Aquifer. No shortage is projected through the planning period and no change in water supply is recommended.

5.13.5 Steam-Electric

There is no projected water demand for Steam-Electric in Hamilton County.

5.13.6 Mining

Description of Supply

Mining operations in Hamilton County are supplied through groundwater production from the Trinity Aquifer. Shortages are projected to occur at the beginning of the planning period for Mining in Hamilton County.

Recommended Strategy

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following plan is recommended for Hamilton County Mining. Associated costs are included for each strategy.

- a. Conservation
 - Cost Source: Volume II, Chapter 2
 - Date to be Implemented: 2020
 - Annual Cost: not determined
- b. Trinity Aquifer Groundwater Development
 - Cost Source: Volume II, Chapter 14
 - Date to be Implemented: 2020
 - Project Cost: \$1,364,000
- c. Unit Cost: maximum of \$869/acft in 2020

Table 5.13-2. Recommended Plan Costs by Decade for Hamilton County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(137)	20	155	256	256	256
Conservation						
Supply From Plan Element (acft/yr)	12	12	7	—	—	—
Annual Cost (\$/yr)	ND	ND	ND	—	—	—
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(125)	32	162	256	256	256
Groundwater Development – Trinity Aquifer						
Supply From Plan Element (acft/yr)	125	125	125	125	125	125
Annual Cost (\$/yr)	\$109,663	\$109,663	\$12,632	\$12,632	\$12,632	\$12,632
Unit Cost (\$/acft)	\$877	\$877	\$101	\$101	\$101	\$101

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

5.13.7 Irrigation

Irrigation water supply in Hamilton County is obtained through groundwater production from the Trinity Aquifer. No water supply shortages are projected for Irrigation through the planning period and no change in water supply is recommended.

5.13.8 Livestock

Livestock water supply is obtained through local stock surface water impoundments and is projected to meet demands through the planning period. No change in water supply is recommended.