

5B.18 Jones County Water Supply Plan

Table 5B.18-1 lists each water user group in Jones County and their corresponding surplus or shortage in years 2030 and 2050. For each water user group with a projected shortage, a water supply plan has been developed and is presented in the following subsections. Water supply plans are also presented for some entities that need pumping/conveyance facilities to utilize their existing water resources, or to become a regional provider. In addition, long-term considerations are provided for some entities with projected surpluses. Jones County, through its County Commissioner’s Court, has submitted a series of resolutions supporting a variety of regional water supply planning and development initiatives. The specific resolutions are included at the end of Volume 1. The recommended plan described below either includes specific proposed projects mentioned in the resolutions, or are generally consistent with them.

**Table 5B.18-1.
Jones County Surplus/(Shortage)**

<i>Water User Group</i>	<i>Surplus/(Shortage)¹</i>		<i>Comment</i>
	<i>2030 (acft/yr)</i>	<i>2050 (acft/yr)</i>	
City of Abilene	0	0	City is in multiple counties. Projections shown are for Jones County only
City of Anson	1,492	1,459	Projected surplus
City of Hamlin	(714)	(766)	Projected shortage – see plan below
City of Hawley	0	0	Additional demand and supply for the remainder of Hawley WSC’s service area is included in County-Other
City of Stamford	(372)	(161)	See plan below
County-Other	(93)	(88)	Projected shortage – see plan below
Manufacturing	(380)	(436)	Projected shortage – see plan below
Steam-Electric	(3,824)	(3,824)	Projected shortage – see plan below
Mining	577	577	Projected surplus
Irrigation	4,037	4,242	Projected surplus
Livestock	0	0	Supply equals demand

¹ From Tables 4-35 and 4-36, Section 4 – Comparison of Water Demands with Water Supplies to Determine Needs.

5B.18.1 The City of Abilene

The majority of the use for the City of Abilene is in Taylor County and the recommended plan is described in Section 5B.33.

5B.18.2 The City of Anson

The City of Anson obtains water from Hubbard Creek Reservoir. It has a projected surplus for the study period and no water plan recommendations were developed.

5B.18.3 The City of Hamlin**5B.18.3.1 Description of Supply**

The City of Hamlin uses Lake Stamford for a water supply, which is purchased from the City of Stamford. The City of Hamlin's contract for water supply from Lake Stanford expires in 2005 and is not planned for renewal. The projected shortage in 2030 is 714 acft.

5B.18.3.2 Options Considered

Table 5B.18-2 lists the water management strategies, report section references discussing the strategy, total project cost, and unit costs that were considered for meeting the City of Hamlin's shortages.

**Table 5B.18-2.
Water Management Strategies Considered for City of Hamlin**

<i>Option</i>	<i>Yield (acft/yr)</i>	<i>Approximate Cost</i>	
		<i>Total</i>	<i>Unit (\$/acft)</i>
Voluntary redistribution from Anson and Abilene (Section 5A.20.3)	767	\$5,500,000	\$927
Breckenridge Reservoir (Section 5A.14.1)	20,000	\$171,462,000	\$629 ²
No Action	-	\$2,249,000 ³	\$42,443 ³
¹ Treated water cost delivered to Hamlin. ² Raw water cost in the reservoir. ³ Economic impact of not meeting shortage (i.e., "no action" alternative) in 2030 as estimated by TWDB.			

5B.18.3.3 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected 2030 shortage of the City of Hamlin:

- Voluntary redistribution from Anson and Abilene to supply an additional 767 acft/yr of treated water. This will replace the current water supply system.

The Breckenridge Reservoir has been recommended for the long-term needs of West Central Texas Municipal Water District, as described in Section 5B.38. The project is much too large to be pursued by any individual municipality, but if it is pursued by the WCTMWD, then the source should be considered by local entities.

5B.18.3.4 Costs

Costs of the Recommended Plan for the City of Hamlin to meet 2030 shortages are:

- Voluntary redistribution from Anson and Abilene:
 - Cost Source: Section 5A.20.3, Table 5A.20-8
 - Date to be Implemented: before 2010
 - Total Project Cost: \$5,500,000
 - Total Annual Cost: \$711,000

**Table 5B.18-3.
Recommended Plan Costs by Decade for the City of Hamlin**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Projected Shortage (acft/yr)	(24)	(691)	(694)	(714)	(735)	(766)
Supply from Plan Elements (acft/yr)	0	767	767	767	767	767
Annual Cost (\$/yr)	0	\$711,000	\$711,000	\$711,000	\$314,000	\$314,000
Unit Cost (\$/acft) ¹	0	\$927	\$927	\$927	\$409	\$409

¹ Unit cost is for full utilization of capacity. Operation and maintenance of existing facilities is not included.

5B.18.4 The City of Hawley

The City of Hawley is supplied with surface water from the City of Abilene and the City of Anson. No shortages are projected and no changes in water supply are recommended.

5B.18.5 City of Stamford

5B.18.5.1 Description of Supply

The City of Stamford obtains its surface water supply from Lake Stamford, the yield of which is declining due to sedimentation. The projections for Stamford are the firm yield of Lake Stamford plus their contract to purchase water from the City of Abilene, less their contracts to sell water to the City of Hamlin, City of Lueders, Ericksdahl WSC, Paint Creek WSC, and Sagerton WSC.

5B.18.5.2 Options Considered

Table 5B.18-4 lists the water management strategies, report section references discussing the strategy, total project cost, and unit costs that were considered for meeting the City of Stamford’s shortages.

**Table 5B.18-4.
Water Management Strategies Considered for City of Stamford**

Option	Yield (acft/yr)	Approximate Cost	
		Total	Unit (\$/acft)
Diversion from California Creek to Lake Stamford (Section 5A.7.2)	3750	\$6,300,000	\$171
Wastewater Reuse (Section 5A.3)	80	\$323,083	\$326
Additional Conservation (Section 5A.2)	59	\$34,000/yr	\$574
Breckenridge Reservoir (Section 5A.14.1)	20,000	\$171,462,000	\$629 ¹
No Action	-	\$31,748,000 ²	\$42,443 ²

¹ Raw water cost in the reservoir.
² Economic impact of not meeting shortage (i.e., “no action” alternative) in 2030 as estimated by TWDB.

5B.18.5.3 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected 2030 shortage of the City of Stamford:

- Diversion from California Creek to Lake Stamford to supply an additional 1825 acft/yr, which is half of the increase in yield. The other half is allocated to West Texas Utilities in Haskell County for steam-electric use.
- Wastewater Reuse
- Conservation

The Breckenridge Reservoir has been recommended as a major water provider for the long-term needs of West Central Texas Municipal Water District, as described in Section 5B.38. The project is much too large to be pursued by any individual municipality, but if it is pursued by the WCTMWD, then the source should be considered by local entities.

5B.18.5.4 Costs

Costs of the Recommended Plan for the City of Stamford to meet 2030 shortages are:

- a. Diversion from California Creek to Lake Stamford:
 - Cost Source: Section 5A.7.2
 - Date to be Implemented: 2001
 - Total Project Cost: \$6,300,000
 - Total Annual Cost: \$171/acft
- b. Wastewater Reuse
 - Cost Source: Section 5A.3
 - Date to be Implemented: before 2010
 - Total Project Cost: \$323,000
- c. Conservation
 - Cost Source: Section 5A.2
 - Date to be Implemented: before 2010
 - Total Annual Cost: \$574/acft

**Table 5B.18-5.
Recommended Plan Costs by Decade for the City of Stamford**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Projected Surplus/(Shortage (acft/yr))	(509)	533	469	372	274	161
Diversion from California Creek to Lake Stamford						
Supply From Plan Element (acft/yr)	0	1,875	1,875	1,875	1,875	1,875
Annual Cost (\$/yr)	\$0	\$320,000	\$320,000	\$320,000	\$65,000	\$65,000
Unit Cost (\$/acft)	\$0	\$171	\$171	\$171	\$35	\$35
Wastewater Reuse						
Supply From Plan Element (acft/yr)	0	80	80	80	80	80
Annual Cost (\$/yr)	\$0	\$26,000	\$26,000	\$26,000	\$2,600	\$2,600
Unit Cost (\$/acft)	\$0	\$326	\$326	\$326	\$32	\$32
Conservation						
Supply From Plan Element (acft/yr)	0	59	59	59	59	59
Annual Cost (\$/yr)	\$0	\$34,000	\$34,000	\$34,000	\$34,000	\$34,000
Unit Cost (\$/acft) ¹	\$0	\$574	\$574	\$574	\$574	\$574
Total New Supply (acft/yr)	0	2,014	2,014	2,014	2,014	2,014

5B.18.6 County-Other Category

5B.18.6.1 Options Considered

Table 5B.18-6 lists the water management strategies, report section references discussing the strategy, total project cost, and unit costs that were considered for meeting the County-Other category.

**Table 5B.18-6.
Water Management Strategies Considered for Jones County-Other**

<i>Option</i>	<i>Yield (acft/yr)</i>	<i>Approximate Cost</i>	
		<i>Total</i>	<i>Unit (\$/acft)</i>
Voluntary redistribution from Abilene, Anson, or Stamford	180	\$117,000/yr	\$650 ¹
Breckenridge Reservoir (Section 5A.14.1)	20,000	\$171,462,000	\$629 ²
No Action	-	\$1,681,000 ³	\$18,080 ³
¹ Estimated wholesale rate for treated water. ² Raw water cost in the reservoir. ³ Economic Impact of not meeting shortage (i.e., "no action" alternative) in 2030 as estimated by TWDB.			

5B.18.6.2 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected 2050 shortage of the County-Other category:

- Voluntary redistribution from Abilene, Anson, or Stamford, as appropriate, providing an additional 180 acft/yr.

The Breckenridge Reservoir has been recommended as a major water provider for long-term needs of the West Central Texas Municipal Water District, as described in Section 5B.38. The project is much too large to be pursued by any individual municipality, but if it is pursued by the WCTMWD, then the source should be considered by local entities.

5B.18.6.3 Costs

Costs of the Recommended Plan for the County-Other category to meet 2030 shortages are:

- a. Voluntary redistribution from Anson, Abilene, or Stamford:
 - Cost Source: Estimated wholesale rate of \$650/acft for treated water
 - Date to be Implemented: 2010
 - Total Annual Cost: \$117,000

5B.18.7 Manufacturing

5B.18.7.1 Description of Supply

Currently there is no supply for Manufacturing.

5B.18.7.2 Options Considered

Table 5B.18-7 lists the water management strategies, report section references discussing the strategy, total project cost, and unit costs that were considered for meeting the Manufacturing category's shortages.

**Table 5B.18-7.
Water Management Strategies Considered for Jones County Manufacturing**

Option	Yield (acft/yr)	Approximate Cost	
		Total	Unit (\$/acft)
Voluntary redistribution of Municipal supply	380	\$0	\$0
Breckenridge Reservoir (Section 5A.14.1)	20,000	\$171,462,000	\$629
No Action	-	\$32,256,000 ¹	\$84,884 ¹

¹ Economic impact of not meeting shortage (i.e., "no action" alternative) in 2030 as estimated by TWDB.

5B.18.7.3 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected 2030 shortage of the Manufacturing category:

- Voluntary redistribution of Municipal supply providing an additional 380 acft/yr

The Breckenridge Reservoir has been recommended as a major water provider for the long-term needs of the West Central Texas Municipal Water District, as described in Section 5B.38. The project is much too large to be pursued by any individual municipality, but if it is pursued by the WCTMWD, then the source should be considered by local entities.

5B.18.7.4 Costs

Costs of the Recommended Plan for the Manufacturing category to meet 2030 shortages are:

- a. Voluntary redistribution of Municipal supply:
 - Cost Source: Estimated wholesale rate of \$650/acft for treated water
 - Date to be Implemented: In place
 - Total Annual Cost: \$0

5B.18.8 Steam-Electric

5B.18.8.1 Description of Supply

Surface water supply for Steam-Electric power is provided by Lake Fort Phantom Hill for the West Texas Utilities power plant.

5B.18.8.2 Options Considered

Table 5B.18-8 lists the water management strategies, report section references discussing the strategy, total project cost, and unit costs that were considered for meeting the Steam-Electric category’s shortages.

**Table 5B.18-8.
Water Management Strategies Considered for Jones County Steam-Electric**

Option	Yield (acft/yr)	Approximate Cost	
		Total	Unit (\$/acft)
Redistribution from Municipal Supply of Abilene	3,824	\$0	\$0
Breckenridge Reservoir (Section 5A.14.1)	20,000	\$171,462	\$629
No Action	-	\$17,979,000*	\$4,701*

* Economic impact of not meeting shortage (i.e., “no action” alternative) in 2030 as estimated by TWDB.

5B.18.8.3 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected 2030 shortage of the Steam-Electric category:

- Redistribution from Municipal Supply of Abilene.

The Breckenridge Reservoir has been recommended as a major water provider for long-term needs of West Central Texas Municipal Water District, as described in Section 5B.38. The project is much too large to be pursued by any individual municipality, but if it is pursued by the WCTMWD, then the source should be considered by local entities.

5B.18.8.4 Costs

Costs of the Recommended Plan for the Steam-Electric category to meet 2030 shortages are:

- a. Redistribution from Municipal Supply of Abilene:
 - No modifications to existing system needed
 - Date to be Implemented: In place
 - Total Annual Cost: \$0

5B.18.9 Mining

The water supply entities for Mining show a projected surplus and no changes in water supply are recommended.

5B.18.10 Irrigation

No shortages are projected for Jones County Irrigation and no changes in water supply are recommended.

5B.18.11 Livestock

No shortages are projected for Jones County Livestock and no changes in water supply are recommended.