



5.17 Johnson County Water Supply Plan

Table 5.17-1 lists each water user group in Johnson 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 5.17-1. Johnson County Surplus/(Shortage)

Water User Group	Surplus/(Shortage) ¹		Comment
	2040 (acft/yr)	2070 (acft/yr)	
Acton MUD			See Hood County
City of Alvarado	2,015	1,829	Projected surplus
Bethany WSC	1,124	973	Projected surplus
Bethesda WSC ²	(2,560)	(4,475)	Projected shortage – see plan below
City of Burleson ²	(3,933)	(7,778)	Projected shortage – see plan below
City of Cleburne	1,177	(2,373)	Projected shortage – see 5.38
City of Cresson			See Hood County
City of Crowley ³	(17)	(35)	Projected shortage – see plan below
City of Fort Worth ³	0	(1,573)	Projected shortage – see plan below
City of Godley	22	(25)	Projected shortage – see plan below
City of Grandview	155	82	Projected surplus – see 5.38
Johnson County SUD ²	2,757	(2,267)	Projected shortage – see 5.38
City of Joshua	0	0	Supply equals Demand
City of Keene	893	519	Projected surplus
City of Mansfield ³	(293)	(1,024)	Projected shortage – see plan below
Mountain Peak SUD ³	982	533	Projected surplus
Parker WSC	102	(179)	Projected shortage – see plan below
City of Rio Vista	42	(71)	Projected shortage (2060 and 2070)
City of Venus ²	(237)	(604)	Projected shortage – see plan below
County-Other	166	309	Projected surplus
Manufacturing	92	92	Projected surplus
Steam-Electric	(5,656)	(5,656)	Projected shortage – see plan below
Mining	1,347	1,526	Projected surplus – see plan below
Irrigation	152	143	Projected surplus
Livestock	0	0	Supply equals Demand

1 – From Tables C-33 and C-34, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

2 – Balance is total between Brazos G and Region C for WUG.

3 – Balance is only for portion of WUG in Brazos G.

5.17.1 City of Alvarado

The City of Alvarado obtains its water supply from the Trinity Aquifer and treated surface water from Johnson County SUD. No shortages are projected for the City of Alvarado 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.

5.17.2 Bethany WSC

Bethany WSC obtains its water supply from the Trinity Aquifer and treated surface water from Johnson County SUD. No shortages are projected for Bethany WSC 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.

5.17.3 Bethesda WSC

Description of Supply

Bethesda WSC is located in Johnson and Tarrant (Region C) counties and obtains its water supply from the Trinity Aquifer and surface water from Tarrant Regional Water District (TRWD) through the Fort Worth System. Bethesda WSC is projected to have a shortage from 2020 to 2070. Balance and strategies represented in Table 5.17-1 are for the entire WSC in both counties and regions.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, and in coordination with Region C, the following water management strategies are recommended to meet the projected water shortage for Bethesda WSC.

- a. Conservation
 - Cost Source: Volume II, Chapter 2
 - Date to be Implemented: before 2020
 - Unit Cost: \$470/acft
 - Annual Cost: maximum of \$597,370 in 2070
- b. Purchase Additional Supplies from Fort Worth
 - Cost Source: 2016 Region C Water Plan (Appendix K)
 - Date to be Implemented: 2020
 - Project Cost: none
 - Unit Cost: \$639/acft (\$1.96/1,000 gal)



- c. Purchase Water Supplies from Arlington
 - Cost Source: 2016 Region C Water Plan (Appendix K)
 - Date to be Implemented: 2020
 - Project Cost: \$18,698,000
 - Unit Cost: \$1,518/acft

Table 5.17-2. Recommended Plan Costs by Decade for Bethesda WSC

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(1,486)	(1,981)	(2,560)	(3,139)	(3,778)	(4,475)
Conservation						
Supply From Plan Element (acft/yr)	161	465	832	1,101	1,237	1,388
Annual Cost (\$/yr)	\$75,754	\$218,556	\$391,040	\$517,536	\$581,247	\$652,409
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(1,325)	(1,516)	(1,728)	(2,038)	(2,542)	(3,087)
Purchase additional supplies from Fort Worth						
Supply From Plan Element (acft/yr)	1,067	1,461	1,941	2,410	2,928	3,496
Annual Cost (\$/yr)	\$682,000	\$934,000	\$1,240,000	\$1,540,000	\$1,871,000	\$2,234,000
Unit Cost (\$/acft)	\$639	\$639	\$639	\$639	\$639	\$639
Purchase additional supplies from Arlington						
Supply From Plan Element (acft/yr)	1,416	1,619	1,833	2,072	2,336	2,614
Annual Cost (\$/yr)	\$2,149,000	\$2,458,000	\$1,685,000	\$1,904,000	\$2,147,000	\$2,402,000
Unit Cost (\$/acft)	\$1,518	\$1,518	\$919	\$919	\$919	\$919

5.17.4 City of Burleson

Description of Supply

The City of Burleson obtains its water supply from Tarrant Regional Water District (TRWD) through the Fort Worth System. Burleson is projected to have a shortage from 2020 to 2070. Balance and strategies represented in Table 5.17-1 are for the entire city in both counties and regions. Conservation was considered but the current per capita use is below the targeted gpcd of 140.

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 water shortage for the City of Burleson. Conservation was considered; however, the entity's current per capita use rate in Brazos G is below the selected target rate of 140 gpcd.

- a. Conservation in Region C
 - Cost Source: 2016 Region C Water Plan (Appendix K)
 - Date to be Implemented: 2020
 - Capital Cost:\$37,638
 - Unit Cost: \$287/acft
- b. Purchase Additional Supplies from Fort Worth
 - Cost Source: 2016 Region C Water Plan (Appendix K)
 - Date to be Implemented: 2020
 - Project Cost: \$21,780,000
 - Unit Cost: \$1,039/acft

Table 5.17-3.Recommended Plan Costs by Decade for the City of Burleson

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(1,796)	(2,840)	(3,933)	(5,126)	(6,417)	(7,778)
Conservation in Region C						
Supply From Plan Element (acft/yr)	11	15	15	27	41	55
Annual Cost (\$/yr)	\$3,150	\$3,150	\$0	\$0	\$0	\$0
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(1,785)	(2,825)	(3,918)	(5,099)	(6,376)	(7,723)
Purchase from Fort Worth						
Supply From Plan Element (acft/yr)	3,109	4,358	5,670	7,089	8,625	10,244
Annual Cost (\$/yr)	\$3,230,000	\$4,528,000	\$4,026,000	\$5,033,000	\$6,124,000	\$7,273,000
Unit Cost (\$/acft)	\$1,039	\$1,039	\$710	\$710	\$710	\$710

5.17.5 City of Cleburne

The City of Cleburne is projected to have a shortage beginning in 2060. Refer to Chapter 5.38 for the City’s plan as a Wholesale Water Provider.

5.17.6 City of Crowley

Description of Supply

The City of Crowley is mostly located in Tarrant County; however, a portion of the city limits is within Johnson County. The City obtains its water supply from the Trinity Aquifer in Tarrant County and is projected to have a shortage in Johnson County. 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 through coordination with Region C, the following water management strategy is recommended to meet water needs for the portion of the city within Johnson County. The full water plan for City of Crowley is discussed in the 2016 Region C Water Plan.

- a. Purchase additional supplies from Fort Worth
 - Cost Source: 2016 Region C Water Plan (Appendix K)
 - Date to be Implemented: 2020
 - Project Cost: \$11,558,000
 - Unit Cost: \$1,033/acft

Table 5.17-4. Recommended Plan Costs by Decade for the City of Crowley (Brazos G)

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(9)	(12)	(17)	(23)	(29)	(35)
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost (\$/yr)	—	—	—	—	—	—
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	(9)	(12)	(17)	(23)	(29)	(35)
Purchase from Fort Worth						
Supply From Plan Element (acft/yr)	9	12	17	23	29	35
Annual Cost (\$/yr)	\$9,000	\$12,000	\$18,000	\$24,000	\$30,000	\$36,000
Unit Cost (\$/acft)	\$1,033	\$1,033	\$1,033	\$1,033	\$1,033	\$1,033

5.17.7 City of Fort Worth

Description of Supply

The City of Fort Worth is a wholesale water provider in Region C in Tarrant County; however, a portion of the city limits is within Johnson County in Brazos G. The City obtains its water supply from surface water supplies located in Region C and is projected to have a shortage in Johnson County.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, and through coordination with Region C, the following water management strategies are recommended to meet water needs for the portion of the city within Johnson County. The full water plan for City of Fort Worth is discussed in the 2016 Region C Water Plan.

- a. Conservation
 - Cost Source: Volume II, Chapter 2
 - Date to be Implemented: 2050
 - Unit Cost: \$470/acft
 - Annual Cost: maximum of \$97,290 in 2070
- b. Purchase additional supplies from Tarrant Regional Water District
 - Cost Source: 2016 Region C Water Plan (Appendix K)
 - Date to be Implemented: 2050
 - Project Cost: \$0 Existing infrastructure assumed sufficient
 - Unit Cost: \$316/acft/yr (TRWD Wholesale Water Rate)

Table 5.17-5. Recommended Plan Costs by Decade for the City of Fort Worth (Brazos G)

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	0	0	0	(759)	(1,238)	(1,573)
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	167	265	331
Annual Cost (\$/yr)	—	—	—	\$78,490	\$124,550	\$155,570
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	0	0	0	(592)	(973)	(1,242)
Purchase from Tarrant Regional Water District						
Supply From Plan Element (acft/yr)	—	—	—	592	973	1,242
Annual Cost (\$/yr)	—	—	—	\$187,117	\$307,468	\$392,472
Unit Cost (\$/acft)	—	—	—	\$316	\$316	\$316

5.17.8 City of Godley

Description of Supply

The City of Godley obtains its water supply from groundwater from the Trinity Aquifer. Based on the available groundwater supply, the City of Godley is projected to have shortages beginning in 2060.

Water Supply Plan

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



- a. Groundwater Development – Woodbine Aquifer
 - Cost Source: Volume II, Chapter 12
 - Date to be Implemented: 2060
 - Project Cost: \$375,000
 - Unit Cost: \$1,474/acft

Table 5.17-6. Recommended Plan Costs by Decade for the City of Godley

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	44	34	22	8	(8)	(25)
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost (\$/yr)	—	—	—	—	—	—
<i>Projected Surplus/(Shortage) after Conservation (acft/yr)</i>	44	34	22	8	(8)	(25)
Groundwater Development – Woodbine Aquifer						
Supply From Plan Element (acft/yr)	—	—	—	—	30	30
Annual Cost (\$/yr)	—	—	—	—	\$44,206	\$44,206
Unit Cost (\$/acft)	—	—	—	—	\$1,474	\$1,474

5.17.9 City of Grandview

The City of Grandview obtains its water supply from groundwater from the Woodbine Aquifer and 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.

5.17.10 Johnson County SUD

Johnson County SUD is projected to have a surplus through until 2060. This WUG is located in multiple counties (Johnson, Tarrant (Region C), Ellis (Region C), and Hill). The balance shown in Table 5.17-1 represent the cumulative totals for Johnson County SUD. Refer to Chapter 5.38 for Johnson County SUD’s plan as a Wholesale Water Provider.

5.17.11 City of Joshua

The City of Joshua obtains its water supply from Johnson County SUD. The demand is projected to equal the supply 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.

5.17.12 City of Keene

The City of Keene obtains its water supply from groundwater from the Trinity Aquifer and a contract with the Johnson County SUD. No shortages are projected for the City of Keene 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.

5.17.13 City of Mansfield

Description of Supply

The City of Mansfield is located in Tarrant, Ellis and Johnson counties with a majority of its population and demand in Tarrant County. The City obtains its water supply from surface water from the Tarrant Regional Water District (TRWD), principally located in Region C. Table 5.17-7 includes the balance for the Johnson County (Brazos G) portion only. More information on City of Mansfield is discussed in the 2016 Region C Water Plan. Conservation was considered but the current per capita use is below the targeted gpcd of 140. The City of Mansfield is projected to have shortages starting in 2020.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, and in coordination with Region C, the following water management strategy is recommended for the City of Mansfield.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Unit Cost: \$470/acft
- Annual Cost: maximum of \$481,280 in 2070

Table 5.17-7. Recommended Plan Costs by Decade for City of Mansfield (Brazos G)

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(43)	(144)	(293)	(490)	(738)	(1,024)
Conservation						
Supply From Plan Element (acft/yr)	43	144	293	490	738	1,024
Annual Cost (\$/yr)	\$20,210	\$67,680	\$137,710	\$230,300	\$346,860	\$481,280
<i>Projected Surplus/(Shortage) after Conservation</i>	0	0	0	0	0	0



5.17.14 Mountain Peak SUD

Description of Supply

Mountain Peak SUD is located in Johnson and Ellis counties, with a majority of its population and demand in Ellis County (Region C). The WUG obtains its water supply from the Trinity Aquifer in Johnson and Ellis counties and surface water from the City of Midlothian, which is primarily used for peaking in the summer. No shortage is projected for Mountain Peak SUD, surpluses are projected through 2070. Table 5.17-8 includes the balance for the Johnson County (Brazos G) portion only. More information on Mountain Peak SUD is discussed in the 2016 Region C Water Plan.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB and in coordination with Region C, the following water management strategy is recommended for Mountain Peak SUD. Conservation was considered but the current per capita use is below the targeted gpcd of 140.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Unit Cost: \$470/acft
- Annual Cost: maximum of \$261,066 in 2070

Table 5.17-8. Recommended Plan Costs by Decade for Mountain Peak SUD (Brazos G)

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	1,195	1,100	982	847	696	533
Conservation						
Supply From Plan Element (acft/yr)	34	99	184	288	413	555
Annual Cost (\$/yr)	\$16,001	\$46,439	\$86,383	\$135,451	\$194,144	\$261,066
<i>Projected Surplus/(Shortage) after Conservation</i>	1,229	1,199	1,166	1,136	1,109	1,089

5.17.15 Parker WSC

Description of Supply

Parker WSC is located in Hill and Johnson counties and obtains its water supply from the Trinity Aquifer and surface water supplies from Files Valley WSC. Based on the existing supply available from groundwater, a shortage begins in 2060. The surplus/shortages shown in Table 5.17-1 represent the cumulative totals for Parker WSC. 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, the following water management strategy is recommended to meet water needs for Parker WSC.

a. Woodbine Aquifer Development (Trinity Basin)

- Cost Source: Volume II, Chapter 12
- Date to be Implemented: before 2060
- Project Cost: \$1,128,000
- Unit Cost: \$737

Table 5.17-9. Recommended Plan Costs by Decade for Parker WSC

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	245	175	102	17	(77)	(179)
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost (\$/yr)	—	—	—	—	—	—
<i>Projected Surplus/(Shortage) after Conservation</i>	245	175	102	17	(77)	(179)
Groundwater Development – Woodbine Aquifer						
Supply From Plan Element (acft/yr)	0	0	0	0	180	180
Annual Cost (\$/yr)	—	—	—	—	\$132,617	\$132,617
Unit Cost (\$/acft)	—	—	—	—	\$737	\$737

5.17.16 City of Rio Vista

Description of Supply

The City of Rio Vista obtains its water supply from groundwater from the Trinity Aquifer. Based on the existing supply available from groundwater, a shortage begins in 2060. 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, the following water management strategy is recommended to meet water needs for the City of Rio Vista.



- a. Groundwater Development – Woodbine Aquifer (Trinity Basin)
 - Cost Source: Volume II, Chapter 12
 - Date to be Implemented: before 2060
 - Project Cost: \$753,000
 - Unit Cost: Max of \$1,179/acft (2020)

Table 5.17-10. Recommended Plan Costs by Decade for City of Rio Vista

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	99	71	42	8	(30)	(71)
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost (\$/yr)	—	—	—	—	—	—
<i>Projected Surplus/(Shortage) after Conservation</i>	99	71	42	8	(30)	(71)
Groundwater Development – Woodbine Aquifer						
Supply From Plan Element (acft/yr)	—	—	—	—	75	75
Annual Cost (\$/yr)	—	—	—	—	\$88,411	\$88,411
Unit Cost (\$/acft)	—	—	—	—	\$1,179	\$1,179

5.17.17 City of Venus

Description of Supply

The City of Venus obtains its water supply from the Woodbine Aquifer and surface water from the City of Midlothian in Region C. The city has a projected shortage starting in 2020.

Water Supply Plan

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

- a. Conservation
 - Cost Source: Volume II, Chapter 2
 - Date to be Implemented: 2020
 - Annual Cost: maximum of \$73,510 in 2070
 - Unit Cost: \$470/acft

- b. Purchase Water from Midlothian
 - Cost Source: 2016 Region C Water Plan (Appendix K)
 - Date to be Implemented: 2020
 - Project Cost: NA
 - Unit Cost: \$815/acft
- c. Alternative: Groundwater Development – Woodbine Aquifer (Trinity Basin)
 - Cost Source: Volume II, Chapter 12
 - Date to be Implemented: 2020
 - Project Cost: \$1,503,000
 - Unit Cost: Max of \$589/acft (2020)

Table 5.17-11. Recommended Plan Costs by Decade for City of Venus

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(24)	(117)	(237)	(355)	(478)	(604)
Conservation						
Supply From Plan Element (acft/yr)	30	91	116	128	141	158
Annual Cost (\$/yr)	\$14,197	\$42,948	\$54,331	\$59,992	\$66,492	\$74,450
<i>Projected Surplus/(Shortage) after Conservation</i>	6	(26)	(122)	(228)	(337)	(446)
Purchase Water from Midlothian						
Supply From Plan Element (acft/yr)	—	26	122	228	337	446
Annual Cost (\$/yr)	—	\$21,000	\$99,000	\$186,000	\$275,000	\$363,000
Unit Cost (\$/yr)	—	\$815	\$815	\$815	\$815	\$815
Alternative: Groundwater Development – Woodbine Aquifer						
Supply From Plan Element (acft/yr)	—	150	150	450	450	450
Annual Cost (\$/yr)	—	\$88,411	\$88,411	\$207,234	\$207,234	\$91,234
Unit Cost (\$/yr)	—	\$589	\$589	\$461	\$461	\$203

5.17.18 County-Other

Entities in Johnson County-Other obtain water supply from the Trinity and Woodbine Aquifers as well as treated surface water from Johnson County SUD. A surplus of supply is projected for Johnson County-Other through 2070. No changes in water supply are recommended. Conservation was considered; however, the current per capita use rate for the entities in County-Other are below the selected target rate of 140 gpcd.

5.17.19 Manufacturing

Johnson County Manufacturing is supplied by the Trinity Aquifer, and the cities of Burleson, Cleburne and Hillsboro. No shortage is projected for Johnson County Manufacturing and no changes in water supply are recommended.

5.17.20 Steam-Electric

Description of Supply

Johnson County Steam-Electric currently receives 1,344 acft/yr of reuse and potable water supplies from the City of Cleburne. Johnson County Steam-Electric is projected to have shortages through year 2070.

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 Johnson County Steam-Electric.

- a. Conservation
 - Cost Source: Volume II, Chapter 2
 - Date to be Implemented: 2020
 - Annual Cost: Not determined
- b. Purchase reuse water from the City of Cleburne
 - Cost Source: Volume II, Chapter 3
 - Date to be Implemented: 2020
 - Project Cost: \$14,059,000
 - Unit Cost: \$736/acft
- c. Purchase water from the City of Cleburne (Lake Aquilla Augmentation)
 - Cost Source: Volume II, Chapter 3
 - Date to be Implemented: 2020
 - Project Cost: \$79,627,000
 - Unit Cost: Max of \$926/acft (2020)

Table 5.17-12. Recommended Plan Costs by Decade for Johnson County – Steam-Electric

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(5,656)	(5,656)	(5,656)	(5,656)	(5,656)	(5,656)
Conservation						
Supply From Plan Element (acft/yr)	210	350	490	490	490	490
Annual Cost (\$/yr)	ND	ND	ND	ND	ND	ND
<i>Projected Surplus/(Shortage) after Conservation</i>	(5,446)	(5,306)	(5,166)	(5,166)	(5,166)	(5,166)
Purchase reuse water from the City of Cleburne						
Supply From Plan Element (acft/yr)	2,031	2,031	2,031	2,031	2,031	2,031
Annual Cost (\$/yr)	\$1,495,000	\$1,495,000	\$319,000	\$319,000	\$319,000	\$319,000
<i>Projected Surplus/(Shortage) after Reuse (acft/yr)</i>	(3,415)	(3,275)	(3,135)	(3,135)	(3,135)	(3,135)
Purchase water from the City of Cleburne (Lake Aquilla Augmentation)						
Supply From Plan Element (acft/yr)	3,415	3,275	3,135	3,135	3,135	3,135
Annual Cost (\$/yr)	\$3,162,000	\$3,033,000	\$1,483,000	\$1,483,000	\$1,483,000	\$1,483,000
Unit Cost (\$/acft)	\$926	\$926	\$473	\$473	\$473	\$473

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

5.17.21 Mining

Description of Supply

Johnson County Mining obtains its water supply from the Trinity Aquifer and Johnson County SUD. Johnson County Mining is projected to have a shortage in 2020 and surpluses from 2030 through 2070.

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 Johnson County Mining.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: Not determined



b. Groundwater Development – Woodbine Aquifer (Trinity Basin)

- Cost Source: Volume II, Chapter 12
- Date to be Implemented: 2020
- Project Cost: \$4,684,000
- Unit Cost: \$383/acft

Table 5.17-13. Recommended Plan Costs by Decade for Johnson County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
<i>Projected Surplus/(Shortage) (acft/yr)</i>	(1,264)	74	1,347	1,849	1,701	1,526
Conservation						
Supply From Plan Element (acft/yr)	124	—	—	—	—	—
Annual Cost (\$/yr)	ND	—	—	—	—	—
<i>Projected Surplus/(Shortage) after Conservation</i>	(1,140)	74	1,347	1,849	1,701	1,526
Groundwater Development – Woodbine Aquifer						
Supply From Plan Element (acft/yr)	1,140	—	—	—	—	—
Annual Cost (\$/yr)	\$437,051	—	—	—	—	—
Unit Cost (\$/acft)	\$383	—	—	—	—	—

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

5.17.22 Irrigation

Johnson County Irrigation obtains its water supply from the Trinity Aquifer and run of the river supplies. No shortage is projected for Johnson County Irrigation and no changes in water supply are recommended.

5.17.23 Livestock

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

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