5 County and WWP Plans

5.1 Bell County Water Supply Plan

Table 5.1-1 lists each water user group in Bell 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 5.1-1. Bell County Surplus/(Shortage)

Water User Group	Surplus/(Shortage)[1]		Comment
	2040 (acft/yr)	2070 (acft/yr)	
439 WSC	242	(94)	Projected shortage – see plan below
Armstrong WSC	837	769	Projected surplus
City of Bartlett			See Williamson County
Bell-Milam Falls WSC	1,677	1,528	Projected surplus
City of Belton	2,413	(41)	Projected shortage – see plan below
Chisholm Trail SUD			See Williamson County
Dog Ridge WSC	1,076	806	Projected surplus
East Bell WSC	857	641	Projected surplus
Elm Creek WSC	23	(230)	Projected shortage – see plan below
Fort Hood	2,878	1,796	Projected surplus
City of Harker Heights	(938)	(3,170)	Projected shortage – see plan below
City of Holland	383	382	Projected surplus
Jarrell-Schwertner WSC			See Williamson County
Kempner WSC			See Lampasas County
City of Killeen	14,664	2,059	Projected surplus
Little River Academy	(59)	(190)	Projected shortage – see plan below
Moffat WSC	825	701	Projected surplus
Morgan's Point Resort	1,148	814	Projected surplus
City of Nolanville	(858)	(2,188)	Projected shortage – see plan below
Pendleton WSC	241	179	Projected surplus
City of Rogers	424	394	Projected surplus
Salado WSC	219	(278)	Projected shortage – see plan below
City of Temple	(4,373)	(13,337)	Projected shortage – see Chapter 5.38
City of Troy	987	933	Projected surplus
West Bell WSC	860	863	Projected surplus

Table 5.1-1. Bell County Surplus/(Shortage)

Water User Group	Surplus/(Shortage)[1]		Comment
	2040 (acft/yr)	2070 (acft/yr)	
County-Other	(768)	(3,788)	Projected shortage – see plan below
Manufacturing	(1,110)	(1,497)	Projected shortage – see plan below
Steam-Electric	(5,804)	(9,693)	Projected shortage – see plan below
Mining	(4,599)	(6,968)	Projected shortage – see plan below
Irrigation	(1,103)	(1,038)	Projected shortage – see plan below
Livestock	0	0	Demand equals supply

1 – From Tables C-1 and C-2, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

5.1.1 439 WSC

Description of Supply

439 WSC has a contract to purchase water from the Brazos River Authority from Lake Belton. 439 WSC contracts with Bell County WCID No. 1 to divert, treat, and deliver water from Lake Belton to the WSC, as well as purchase some allotment from Bell County WCID No. 1. Shortages are projected for 439 WSC 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 for 439 WSC.

a. Purchase reuse water from Bell County WCID#1

- Cost Source: Volume II, Chapter 3
- Date to be Implemented: by 2070
- Project Cost: Costs to be borne by Bell County WCID No. 1
- Unit Cost: $930/acft

a. Water Supply from Bell County WCID No. 1

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2030
- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

Conservation was also considered; however, the entity's current per capita use rate is below the selected target rate of 140 gpcd.

Table 5.1-2. Recommended Plan Costs by Decade for 439 WSC

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*455*	*355*	*242*	*48*	*(47)*	*(94)*
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost ($/yr)	—	—	—	—	—	—
Projected Surplus/(Shortage) after Conservation (acft/yr)	*455*	*355*	*242*	*48*	*(47)*	*(94)*
Reuse Supply from Bell County WCID No. 1						
Supply From Plan Element (acft/yr)	—	—	—	—	—	20
Annual Cost ($/yr)	—	—	—	—	—	$18,600
Unit Cost ($/acft)	—	—	—	—	—	$930
Projected Surplus/(Shortage) after Reuse (acft/yr)	*455*	*355*	*242*	*48*	*(47)*	*(74)*
Water Supply from Bell County WCID No.1						
Supply From Plan Element (acft/yr)	—	4	11	49	59	74
Annual Cost ($/yr)	—	$0	$0	$0	$0	$0
Unit Cost ($/acft)	—	$0	$0	$0	$0	$0

5.1.2 Armstrong WSC

Description of Supply

Armstrong WSC obtains its water supply from the Trinity Aquifer and surface water from Central Texas WSC. No shortages are projected and no change in water supply is recommended.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended for Armstrong WSC.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Unit Cost: $470/acft
- Annual Cost: maximum of $18,330 in 2030

Table 5.1-3. Recommended Plan Costs by Decade for Armstrong WSC

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*865*	*853*	*837*	*817*	*793*	*769*
Conservation						
Supply From Plan Element (acft/yr)	14	39	32	29	30	32
Annual Cost ($/yr)	$6,580	$18,330	$15,040	$13,630	$14,100	$15,040
Projected Surplus/(Shortage) after Conservation (acft/yr)	*878*	*892*	*869*	*846*	*823*	*800*

5.1.3 Bell-Milam Falls WSC

Bell-Milam Falls WSC is located in multiple counties (Bell, Falls, Milam and Williamson) and obtains its water supply from the Trinity Aquifer and has a contract for surface water from Lake Stillhouse Hollow from Central Texas WSC. Totals shown in Table 5.1-1 represent cumulative totals for Bell-Milam Falls WSC. No shortages are projected and no changes to water supply are recommended for Bell-Milam Falls WSC. Conservation was also considered; however, the entity's current per capita use rate is below the selected target rate of 140 gpcd.

5.1.4 City of Belton

Description of Supply

The City of Belton has a contract to purchase water from the Brazos River Authority from Lake Belton. Belton contracts with Bell County WCID No. 1 to divert, treat, and deliver water from Lake Belton to the City. The City also has a contract with Central Texas WSC. Shortages are projected for the City of Belton in 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended for the City of Belton.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Unit Cost: $470/acft
- Annual Cost: maximum of $178,130 in 2070

b. Water Supply from Bell County WCID No. 1

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2030

- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

Table 5.1-4. Recommended Plan Costs by Decade for City of Belton

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*3,592*	*3,049*	*2,413*	*1,434*	*722*	*(41)*
Conservation						
Supply From Plan Element (acft/yr)	119	340	318	321	347	379
Annual Cost ($/yr)	$55,930	$159,800	$149,460	$150,870	$163,090	$178,130
Projected Surplus/(Shortage) after Conservation (acft/yr)	*3,711*	*3,390*	*2,731*	*1,755*	*1,069*	*338*
Water Supply from Bell County WCID No.1						
Supply From Plan Element (acft/yr)	—	29	87	390	466	586
Annual Cost ($/yr)	—	$0	$0	$0	$0	$0
Unit Cost ($/acft)	—	$0	$0	$0	$0	$0

5.1.5 Dog Ridge WSC

Dog Ridge WSC has surface water contracts with BRA and Central Texas WSC. No shortages are projected for Dog Ridge WSC and 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.

5.1.6 East Bell WSC

East Bell WSC obtains its water supply from the Trinity Aquifer and treated surface water from Central Texas WSC. This WUG is located in multiple counties (Bell and Falls) and the surplus/shortages shown in Table 5.1-1 represent the cumulative totals for East Bell WSC. Supplies are projected to be adequate to meet future demands and no change is recommended in water supplies. Conservation was also considered; however, the entity's current per capita use rate is below the selected target rate of 140 gpcd.

5.1.7 Elm Creek WSC

Description of Supply

Elm Creek WSC service area includes portions of Bell, Coryell, and McLennan Counties. Elm Creek WSC has a contract to purchase water from Bluebonnet WSC from Lake Belton. The surpluses and shortages shown in Table 5.1-5 represent the cumulative totals for Elm Creek WSC in the counties it serves. 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 for Elm Creek WSC.

a. Water Supply from Bluebonnet WSC

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2050
- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

Table 5.1-5. Recommended Plan Costs by Decade for Elm Creek WSC

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*156*	*94*	*23*	*(63)*	*(144)*	*(230)*
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost ($/yr)	—	—	—	—	—	—
Projected Surplus/(Shortage) after Conservation (acft/yr)	*156*	*94*	*23*	*(63)*	*(144)*	*(230)*
Water Supply from Bluebonnet WSC						
Supply From Plan Element (acft/yr)	—	—	—	63	144	230
Annual Cost ($/yr)	—	—	—	$0	$0	$0
Unit Cost ($/acft)	—	—	—	$0	$0	$0

5.1.8 Fort Hood

Description of Supply

The U.S. Department of the Army (Fort Hood) has a water right to store and divert 12,000 acft/yr in Lake Belton. The Fort Hood service area includes portions of Bell and Coryell Counties. Bell County WCID No. 1 and City of Gatesville divert, treat and deliver its Lake Belton supply to the Army base. No shortages are projected for Fort Hood and no changes in water supply are recommended. The surplus shown in Table 5.1-6 represents the cumulative totals for Fort Hood in the counties it serves.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended for Fort Hood.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Unit Cost: $470/acft
- Annual Cost: maximum of $1,002,980 in 2060

Table 5.1-6. Recommended Plan Costs by Decade for Fort Hood

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/ (Shortage) (acft/yr)	*3,430*	*3,139*	*2,878*	*2,520*	*2,163*	*1,796*
Conservation						
Supply From Plan Element (acft/yr)	293	842	1,376	1,946	2,134	2,133
Annual Cost ($/yr)	$137,710	$395,740	$646,720	$914,620	$1,002,980	$1,002,510
Projected Surplus/ (Shortage) after Conservation (acft/yr)	*3,723*	*3,981*	*4,254*	*4,466*	*4,297*	*3,929*

5.1.9 City of Harker Heights

Description of Supply

The City of Harker Heights has a contract to purchase water from the Brazos River Authority from Lake Stillhouse Hollow and Lake Belton. Harker Heights also contracts with Bell County WCID No. 1 to divert, treat, and deliver water from Lake Belton to the City.

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 the City of Harker Heights. Associated costs are included for each strategy.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: before 2020
- Annual Cost: maximum of $112,338 in 2030
- Unit Cost: $474/acft

b. Purchase reuse water from Bell County WCID No. 1. The reuse supply will reduce demands for landscape irrigation at existing or future parks, schools, ball fields, and other green spaces. Reuse water may also potentially supply existing or future industrial customers

- Cost Source: Volume II, Chapter 3
- Date to be Implemented: 2020

- Project Cost: $1,615,000 (City's portion)
- Unit Cost: $930/acft

c. Water Supply from Bell County WCID No. 1

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2030
- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

d. Firm up Supplies through BRA Little River Strategies

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2020
- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

e. Purchase Water from City of Killeen

- Cost Source: Volume II, Chapter 12
- Date to be Implemented: 2070
- Project Cost: $2,580,000
- Unit Cost: $1,791/acft (wholesale water rate from City of Killeen and transmission costs)

Table 5.1-7. Recommended Plan Costs by Decade for City of Harker Heights

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*932*	*26*	*(938)*	*(1,496)*	*(1,974)*	*(3,170)*
Conservation						
Supply From Plan Element (acft/yr)	262	836	1,367	1,499	1,656	1,819
Annual Cost ($/yr)	$124,188	$396,264	$647,958	$710,526	$784,944	$862,206
Projected Surplus/(Shortage) after Conservation	*1,195*	*862*	*429*	*4*	*(318)*	*(1,351)*
Bell County WCID No. 1 Reuse						
Supply From Plan Element (acft/yr)	185	185	185	185	185	185
Annual Cost ($/yr)	$172,050	$172,050	$37,185	$37,185	$37,185	$37,185
Unit Cost ($/yr)	$930	$930	$201	$201	$201	$201

Table 5.1-7. Recommended Plan Costs by Decade for City of Harker Heights

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) after Reuse (acft/yr)	*1,378*	*1,046*	*612*	*188*	*(134)*	*(1,167)*
Water Supply from Bell County WCID No. 1						
Supply From Plan Element (acft/yr)	—	26	76	344	412	518
Annual Cost ($/yr)	—	$0	$0	$0	$0	$0
Unit Cost ($/yr)	—	$0	$0	$0	$0	$0
Firm up Supplies through BRA Little River System Strategies-See section 5.38.2						
Supply From Plan Element (acft/yr)	1,645	1,671	1,621	891	276	347
Annual Cost ($/yr)	$0	$0	$0	$0	$0	$0
Unit Cost ($/yr)	$0	$0	$0	$0	$0	$0
Purchase from City of Killeen						
Supply From Plan Element (acft/yr)	—	—	—	—	—	302
Annual Cost ($/yr)	—	—	—	—	—	$540,882
Unit Cost ($/yr)	—	—	—	—	—	$1,791

5.1.10 City of Holland

The City of Holland has Trinity supplies and a contract to purchase water from the Central Texas WSC from Lake Stillhouse Hollow. No shortages are projected for the City of Holland 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.

5.1.11 City of Killeen

Description of Supply

The City of Killeen has a contract to purchase water from Bell County WCID No. 1 to divert, treat, and deliver water from Lake Belton to the City. The city receives some 0.5 mgd of reuse supplies from Bell County WCID No. 1. No shortages are projected for the City of Killeen 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.

Bell County WCID No.1 is pursuing a strategy to provide reuse supplies for non-potable demands at Killeen. The strategy would supply 2,488 acft/yr for irrigation at golf courses, parks and cemeteries.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended for the City of Killeen.

a. Water Supply from Bell County WCID No. 1

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2030
- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

b. Purchase reuse water from Bell County WCID No. 1. The reuse supply will reduce demands for landscape irrigation at existing or future parks, schools, ball fields, and other green spaces. Reuse water may also potentially supply existing or future industrial customers. The current use of 0.5 mgd of reuse supply is included as part of this strategy and not counted as current supply.

- Cost Source: Volume II, Chapter 3
- Date to be Implemented: 2020
- Project Cost: construction costs to be borne by Bell County WCID No. 1
- Unit Cost: $811/acft

Table 5.1-8. Recommended Plan Costs by Decade for the City of Killeen

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*20,490*	*17,859*	*14,664*	*9,595*	*5,969*	*2,059*
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost ($/yr)	—	—	—	—	—	—
Projected Surplus/(Shortage) after Conservation	*20,490*	*17,859*	*14,664*	*9,595*	*5,969*	*2,059*
Bell County WCID No. 1 Reuse						
Supply From Plan Element (acft/yr)	2,488	2,488	2,488	2,488	2,488	2,488
Annual Cost ($/yr)	$2,018,000	$2,018,000	$2,018,000	$2,018,000	$2,018,000	$2,018,000
Unit Cost ($/yr)	$811	$811	$811	$811	$811	$811
Projected Surplus/(Shortage) after Reuse	*22,985*	*20,354*	*17,159*	*12,090*	*8,464*	*4,554*
Water Supply from Bell County WCID No. 1						
Supply From Plan Element (acft/yr)	—	196	580	2,614	3,124	3,929
Annual Cost ($/yr)	—	$0	$0	$0	$0	$0
Unit Cost ($/yr)	—	$0	$0	$0	$0	$0

5.1.12 Little River Academy

Description of Supply

Little River Academy obtains its water supply from the Trinity Aquifer and a contract for treated supplies from City of Temple. Little River Academy is projected to have a shortage beginning in 2030.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended for Little River Academy.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: maximum of $112,338 in 2030
- Unit Cost: $474/acft

b. Voluntary Redistribution from City of Temple

- Cost Source: City of Temple wholesale water rate
- Date to be Implemented: 2030
- Project Cost: assumes infrastructure in place to deliver supply
- Unit Cost: $977/acft/yr - wholesale water rate from City of Temple

Table 5.1-9. Recommended Plan Costs by Decade for Little River Academy

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/ (Shortage) (acft/yr)	*11*	*(21)*	*(59)*	*(102)*	*(146)*	*(190)*
Conservation						
Supply From Plan Element (acft/yr)	12	19	13	11	11	11
Annual Cost ($/yr)	$5,640	$8,930	$6,110	$5,170	$5,170	$5,170
Projected Surplus/(Shortage) after Conservation	*23*	*(2)*	*(46)*	*(91)*	*(135)*	*(179)*
Voluntary Redistribution from City of Temple						
Supply From Plan Element (acft/yr)	—	180	180	180	180	180
Annual Cost ($/yr)	—	$175,860	$175,860	$175,860	$175,860	$175,860
Unit Cost ($/yr)	—	$977	$977	$977	$977	$977

5.1.13 Moffat WSC

Moffat WSC has a contract to purchase water from the Brazos River Authority and Bluebonnet WSC from Lake Belton, as well as supplemental wells in the Trinity Aquifer. No shortages are projected for Moffat WSC 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.

5.1.14 Morgan's Point Resort

Morgan's Point Resort contracts with the City of Temple for all of its water supply. No shortages are projected for Morgan's Point Resort 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.

5.1.15 City of Nolanville

Description of Supply

The City of Nolanville contracts with Bell County WCID No. 1 to divert, treat, and deliver water from Lake Belton to the City. Exempt well use in the Trinity Aquifer inside the city limits meets a portion of the demand. Shortages are projected for Nolanville beginning in 2020.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended for the City of Nolanville.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: maximum of $471,410 in 2070
- Unit Cost: $470/acft

b. Water Supply from Bell County WCID No. 1

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2030
- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

c. Voluntary Redistribution of Bell County WCID No.1 supply

- Cost Source: Volume II, Chapter 12
- Date to be Implemented: 2020

- Project Cost: assumes infrastructure in place to deliver supply
- Unit Cost: $185.76/acft ($0.58/1,000 gallons)

Table 5.1-10. Recommended Plan Costs by Decade for City of Nolanville

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(72)*	*(444)*	*(858)*	*(1,330)*	*(1,758)*	*(2,188)*
Conservation						
Supply From Plan Element (acft/yr)	67	224	444	721	884	1,003
Annual Cost ($/yr)	$31,490	$105,280	$208,680	$338,400	$415,480	$471,410
Projected Surplus/(Shortage) after Conservation	*(5)*	*(220)*	*(415)*	*(609)*	*(875)*	*(1,185)*
Water Supply from Bell County WCID No. 1						
Supply From Plan Element (acft/yr)	—	5	14	65	77	97
Annual Cost ($/yr)	—	$0	$0	$0	$0	$0
Unit Cost ($/yr)	—	$0	$0	$0	$0	$0
Voluntary Redistribution of Bell County WCID No.1 supply						
Supply From Plan Element (acft/yr)	5	215	401	544	798	1,088
Annual Cost ($/yr)	$929	$39,939	$74,491	$101,055	$148,239	$202,110
Unit Cost ($/yr)	$186	$186	$186	$186	$186	$186

5.1.16 Pendleton WSC

Pendleton WSC has wells in the Trinity Aquifer and a contract to purchase water from Bluebonnet WSC from Lake Belton. No shortages are projected for Pendleton WSC 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.

5.1.17 City of Rogers

The City of Rogers has wells in the Trinity Aquifer and purchases treated surface water from Central Texas WSC. No shortages are projected for the City of Rogers 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.

5.1.18 Salado WSC

Description of Supply

Salado WSC currently obtains water from the Edwards Aquifer, and purchases treated supply from Kempner WSC. The entity also has a contract with the BRA that has yet to be utilized. A shortage is projected in 2060 for Salado WSC.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategy is recommended for Salado WSC.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: maximum $490,680 in 2070
- Unit Cost: $470/acft

Table 5.1-11. Recommended Plan Costs by Decade for Salado WSC

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*510*	*373*	*219*	*54*	*(112)*	*(278)*
Conservation						
Supply From Plan Element (acft/yr)	97	255	431	624	830	1,044
Annual Cost ($/yr)	$45,590	$119,850	$202,570	$293,280	$390,100	$490,680
Projected Surplus/ (Shortage) after Conservation	*607*	*628*	*650*	*678*	*718*	*766*

5.1.19 City of Temple

The City of Temple obtains its water supply from surface water from Lake Belton through the BRA and run-of-the river water rights. The City supplies several neighboring communities with treated water. The City is projected to have a shortage of supplies through the planning period. Refer to Chapter 5.38 for the City's plan as a Wholesale Water Provider.

5.1.20 City of Troy

The City of Troy obtains its water from a contract with the City of Temple and wells located in the Trinity Aquifer. No shortages are projected for the City of Troy 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.

5.1.21 West Bell County WSC

West Bell County WSC obtains its water through a contract with the Central Texas WSC. No shortages are projected for West Bell County WSC 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.

5.1.22 Bell County-Other

Description of Supply

Bell County-Other entities obtain water supply from groundwater from the Trinity Aquifer and treated surface water from Bell County WCID No. 1, Central Texas WSC and City of Temple. Shortages are projected for County Other by 2040.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended for Bell County-Other.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: 2020
- Annual Cost: maximum $68,448 in 2070
- Unit Cost: $496/acft

b. Water Supply from Bell County WCID No. 1

BRA provides this supply under contract to entity. BRA to develop any combinations of strategies as described in Section 5.38.2 to firm up this amount.

- Cost Source: BRA to firm up water supply
- Date to be Implemented: 2030
- Project Cost: cost borne by BRA
- Unit Cost: already contracted supplies

c. Voluntary Redistribution from Central Texas WSC

- Cost Source: Central Texas WSC wholesale water rate
- Date to be Implemented: 2030
- Project Cost: assumes infrastructure in place to deliver supply
- Unit Cost: $250/acft/yr

d. Groundwater Development – Edwards BFZ

- Cost Source: Volume II, Chapter 12
- Date to be Implemented: 2040
- Project Cost: $3,736,000
- Unit Cost: $183/acft

Table 5.1-12. Recommended Plan Costs by Decade for Bell County – Other

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*1,084*	*234*	*(768)*	*(1,828)*	*(2,824)*	*(3,788)*
Conservation						
Supply From Plan Element (acft/yr)	14	62	73	94	117	138
Annual Cost ($/yr)	$6,944	$30,752	$36,208	$46,624	$58,032	$68,448
Projected Surplus/(Shortage) after Conservation	*1,098*	*297*	*(695)*	*(1,734)*	*(2,707)*	*(3,649)*
Water Supply from Bell County WCID#1						
Supply From Plan Element (acft/yr)	—	4	11	49	59	74
Annual Cost ($/yr)	—	$0	$0	$0	$0	$0
Unit Cost ($/acft)	—	$0	$0	$0	$0	$0
Increase Contract with Bell County WCID No. 1						
Supply From Plan Element (acft/yr)	—	—	23	467	731	995
Annual Cost ($/yr)	—	—	$4,342	$86,782	$136,025	$185,036
Unit Cost ($/acft)	—	—	$185.76	$185.76	$185.76	$185.76
Voluntary Redistribution from Central Texas WSC						
Supply From Plan Element (acft/yr)	—	—	500	500	500	500
Annual Cost ($/yr)	—	—	$125,000	$125,000	$125,000	$125,000
Unit Cost ($/acft)	—	—	$250	$250	$250	$250
Groundwater Development – Edwards BFZ						
Supply From Plan Element (acft/yr)	—	—	2,081	2,081	2,081	2,081
Annual Cost ($/yr)	—	—	$380,626	$380,626	$103,626	$103,626
Unit Cost ($/acft)	—	—	$183	$183	$50	$50

5.1.23 Manufacturing

Description of Supply

Water supply for manufacturing in Bell County is obtained by purchase from a city or water supply corporation. Bell County Manufacturing is projected to have shortages beginning in 2020.

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 Bell County Manufacturing.

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

b. Groundwater Development – Edwards BFZ
   - Cost Source: Volume II, Chapter 12
   - Date to be Implemented: 2020
   - Project Cost: $10,290,000
   - Unit Cost: Max of $883/acft/yr

c. Alternative: Reuse Supplies from Bell County WCID No. 1
   - Cost Source: Volume II, Chapter 3
   - Date to be Implemented: 2020
   - Project Cost: costs to be borne by Bell County WCID No. 1
   - Unit Cost: $765/acft

Table 5.1-13. Recommended Plan Costs by Decade for Bell County – Manufacturing

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/ (Shortage) (acft/yr)	*(873)*	*(993)*	*(1,110)*	*(1,214)*	*(1,350)*	*(1,497)*
Conservation						
Supply From Plan Element (acft/yr)	41	75	112	120	129	140
Annual Cost ($/yr)	ND	ND	ND	ND	ND	ND
Projected Surplus/ (Shortage) after Conservation	*(832)*	*(919)*	*(998)*	*(1,094)*	*(1,221)*	*(1,357)*
Groundwater Development – Edwards BFZ						
Supply From Plan Element (acft/yr)	1,000	1,000	1,000	1,360	1,360	1,360
Annual Cost ($/yr)	$883,000	$883,000	$297,000	$403,351	$403,351	$403,351
Unit Cost ($/acft)	$883	$883	$297	$297	$297	$297
Alternative: Purchase Reuse Supplies from Bell County WCID No. 1						
Supply From Plan Element (acft/yr)	1,000	1,000	1,000	1,360	1,360	1,360
Annual Cost ($/yr)	$765,000	$765,000	$765,000	$1,040,400	$1,040,400	$1,040,400
Unit Cost ($/acft)	$765	$765	$765	$765	$765	$765

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

5.1.24 Steam-Electric

Description of Supply

Steam-Electric is projected to have a shortage through the planning period. The City of Temple has also recently entered into an agreement with Panda Temple Power L.L.C. to supply up to 7.5 MGD to a proposed new generating facility.

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 Bell County Steam-Electric. Conservation was also considered, however much of the new demands would be new construction, and would incorporate water efficient technologies.

a. Reuse supplies from City of Temple

- Cost Source: Volume II, Chapter 12
- Date to be Implemented: 2020
- Project Cost: N/A
- Unit Cost: $138/acft or $0.42/1000 gal

b. Purchase Additional Reuse Supplies from the City of Temple

- Cost Source: Volume II, Chapter 12
- Date to be Implemented: 2070
- Project Cost: N/A
- Unit Cost: $138/acft or $0.42/1000 gal

Table 5.1-14. Recommended Plan Costs by Decade for Bell County – Steam-Electric

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(4,220)*	*(4,934)*	*(5,804)*	*(6,865)*	*(8,157)*	*(9,693)*
Conservation						
Supply From Plan Element (acft/yr)	—	—	—	—	—	—
Annual Cost ($/yr)	—	—	—	—	—	—
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(4,220)*	*(4,934)*	*(5,804)*	*(6,865)*	*(8,157)*	*(9,693)*
Reuse Supplies from City of Temple						
Supply From Plan Element (acft/yr)	8,407	8,407	8,407	8,407	8,407	8,407
Annual Cost ($/yr)	$1,160,000	$1,160,000	$1,160,000	$1,160,000	$1,160,000	$1,160,000
Unit Cost ($/acft)	$138	$138	$138	$138	$138	$138
Projected Surplus/(Shortage) after Conservation (acft/yr)	*4,187*	*3,473*	*2,603*	*1,542*	*250*	*(1,286)*

Table 5.1-14. Recommended Plan Costs by Decade for Bell County – Steam-Electric

Plan Element	2020	2030	2040	2050	2060	2070
Purchase Additional Reuse Supplies from the City of Temple						
Supply From Plan Element (acft/yr)	—	—	—	—	—	1,300
Annual Cost ($/yr)	—	—	—	—	—	$179,400
Unit Cost ($/acft)	—	—	—	—	—	$138

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

5.1.25 Mining

Description of Supply

Mining in Bell County has no current supply allocation and is projected to have a shortage through the planning period.

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 Bell County-Mining.

a. Conservation
   - Cost Source: Volume II, Chapter 2
   - Date to be Implemented: 2020
   - Annual Cost: not determined

b. Groundwater Development – Edwards BFZ
   - Cost Source: Volume II, Chapter 12
   - Date to be Implemented: 2020
   - Project Cost: $13,846,000

c. Groundwater Development – Trinity
   - Cost Source: Volume II, Chapter 12
   - Date to be Implemented: 2020
   - Project Cost: $5,588,000

d. Leave Needs Unmet
   - Cost Source: Cost of not meeting needs – see Appendix H
   - Date to be Implemented: 2040

Table 5.1-15. Recommended Plan Costs by Decade for Bell County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(3,242)*	*(3,980)*	*(4,599)*	*(5,349)*	*(6,105)*	*(6,968)*
Conservation						
Supply From Plan Element (acft/yr)	97	199	322	374	427	488
Annual Cost ($/yr)	ND	ND	ND	ND	ND	ND
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(3,145)*	*(3,781)*	*(4,277)*	*(4,975)*	*(5,678)*	*(6,480)*
Groundwater Development – Edwards BFZ						
Supply From Plan Element (acft/yr)	2,104	2,176	2,081	1,177	503	—
Annual Cost ($/yr)	$1,281,486	$1,281,486	$121,486	$121,486	$121,486	—
Unit Cost ($/acft)	$589	$589	$56	$56	$56	—
Groundwater Development – Trinity Aquifer						
Supply From Plan Element (acft/yr)	582	582	582	582	260	120
Annual Cost ($/yr)	$514,267	$514,267	$46,267	$46,267	$20,540	$9,480
Unit Cost ($/acft)	$884	$884	$79	$79	$79	$79
Leave Needs Unmet						
Supply From Plan Element (acft/yr)	459	1,023	1,614	3,216	4,915	6,360
Annual Cost ($/yr)	—	—	—	—	—	—
Unit Cost ($/acft)	—	—	—	—	—	—

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

5.1.26 Irrigation

Description of Supply

Bell County Irrigation is supplied by groundwater from the Trinity Aquifer and the Edwards Aquifer (BFZ), and run of the river water rights. Irrigation is projected to have shortages beginning in 2020.

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 Bell County-Irrigation.

a. Conservation

- Cost Source: Volume II, Chapter 2
- Date to be Implemented: before 2020
- Annual Cost: $230/acft

b. Groundwater Development – Edwards Aquifer
   - Cost Source: Volume II, Chapter 12
   - Date to be Implemented: before 2020
   - Project Cost: $13,384,000
   - Unit Cost: Max of $1,120 in 2020

c. Groundwater Development – Trinity Aquifer
   - Cost Source: Volume II, Chapter 12
   - Date to be Implemented: 2070
   - Project Cost: $2,541,000
   - Unit Cost: $1,656

d. Alternative: BRA System Operation
   - Cost Source: Volume II, Chapter 7.11
     - Supply dependent on BRA obtaining the System Operations permit from TCEQ
   - Date to be Implemented: 2020
   - Project Cost: Infrastructure assumed sufficient
   - Unit Cost: $65.65/acft

Table 5.1-16. Recommended Plan Costs by Decade for Bell County – Irrigation

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(1,157)*	*(1,127)*	*(1,103)*	*(1,088)*	*(1,061)*	*(1,038)*
Conservation						
Supply From Plan Element (acft/yr)	66	109	150	148	146	144
Annual Cost ($/yr)	$15,180	$25,070	$34,500	$34,040	$33,580	$33,120
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(1,091)*	*(1,019)*	*(953)*	*(940)*	*(915)*	*(894)*
Groundwater Development – Edwards Aquifer						
Supply From Plan Element (acft/yr)	1,091	1,019	953	940	915	754
Annual Cost ($/yr)	$1,222,446	$1,222,446	$101,446	$101,446	$101,446	$101,446
Unit Cost ($/acft)	$1,120	$1,120	$93	$93	$93	$93
Groundwater Development – Trinity Aquifer						
Supply From Plan Element (acft/yr)	—	—	—	—	—	140
Annual Cost ($/yr)	—	—	—	—	—	$231,894
Unit Cost ($/acft)	—	—	—	—	—	$1,656

Table 5.1-16. Recommended Plan Costs by Decade for Bell County – Irrigation

Plan Element	2020	2030	2040	2050	2060	2070
Alternative: Purchase Supply from Brazos River Authority (System Operations)						
Supply From Plan Element (acft/yr)	1,200	1,200	1,200	1,200	1,200	1,250
Annual Cost ($/yr)	$78,780	$78,780	$78,780	$78,780	$78,780	$82,062
Unit Cost ($/acft)	$65.65	$65.65	$65.65	$65.65	$65.65	$65.65

5.1.27 Livestock

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