

5B.1 Bell County Water Supply Plan

Table 5B.1-1 lists each water user group in Bell 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.

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

Water User Group	Surplus/(Shortage) ¹		Comment
	2030 (acft/yr)	2050 (acft/yr)	
City of Bartlett	17	2	Projected surplus
City of Belton	2,076	1,665	Projected surplus
City of Harker Heights	2,378	1,739	Projected surplus
City of Holland	(87)	(94)	Projected shortage – see plan below
City of Killeen	2,779	1,455	Projected surplus
City of Little River-Academy	(127)	(124)	Projected shortage – see plan below
City of Morgans Point Resort	(584)	(648)	Projected shortage – see plan below
City of Nolanville	74	31	Projected surplus
City of Rogers	25	11	Projected surplus
Salado (CDP)	(228)	(478)	
Salado Total	(1,404)	(2,029)	Projected shortage – see plan below
City of Temple	6,765	6,222	Projected surplus
City of Troy	(255)	(274)	Projected shortage – see plan below
Fort Hood	(3,098)	(3,098)	Projected shortage – see plan below
County-Other	5,197	3,801	Projected surplus
Manufacturing	(7,315)	(8,395)	Projected shortage – see plan below
Steam-Electric	(11,200)	(11,200)	Projected shortage – see plan below
Mining	19	9	Projected surplus
Irrigation	4,744	4,763	Projected surplus
Livestock	0	0	No projected needs

¹ From Tables 4-1 and 4-2, Section 4 – Comparison of Water Demands with Water Supplies to Determine Needs.

5B.1.1 City of Bartlett

The City of Bartlett is in both Bell and Williamson Counties, consequently, it's water demand and supply values are split into the tables for each county. Bartlett's water supply is groundwater from both the Trinity and Edwards Aquifers. No future shortages are projected for the City of Bartlett and no changes in water supply are recommended.

5B.1.2 City of Belton

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. No shortages are projected for the City of Belton and no changes in water supply are recommended.

5B.1.3 City of Harker Heights

The City of Harker Heights has a contract to purchase water from the Brazos River Authority from Lake Belton. Harker Heights contracts with Bell County WCID No. 1 to divert, treat, and deliver water from Lake Belton to the City. No shortages are projected for the City of Harker Heights and no changes in water supply are recommended.

5B.1.4 City of Holland

5B.1.4.1 Description of Supply

- Source: Surface Water – Contract with Central Texas WSC from Stillhouse Hollow Reservoir. Ground Water - Trinity Aquifer
- Estimated Reliable Supply: 289 acft per year
- System Description: The City of Holland purchases treated water from Central Texas WSC. The City has a well that is used to supplement the purchased water.

5B.1.4.2 Options Considered

The City of Holland has a shortage of 87 acft per year in 2030, which is about 23 percent of demand. Table 5B.1-2 lists the water management strategies, references to the report section discussing the strategy, total project cost, and unit costs that were considered for meeting the City of Holland's shortage.

**Table 5B.1-2.
Water Management Strategies Considered for the City of Holland**

Option	Yield (acft/yr)	Approximate Cost ¹	
		Total	Unit (\$/acft)
Additional Water Conservation (Section 5A.2)	19	\$35,000/year	\$574 ²
Wastewater Reuse (Section 5A.3)	11	\$44,400	\$326 ³
Little River Reservoir (Section 5A.14)	169,800	\$361,065,000	\$150 ⁴
Southwest Bell County Regional Water System	-	5	5
Voluntary Redistribution from In-County Source, Transmission and Treatment through existing facilities	100	\$65,000/year ⁶	\$650 ⁶
No Action	-	\$3,693,000 ⁷	\$42,443 ⁷

¹ Unless otherwise noted, costs are Total Project Cost and Unit Cost (\$/acft per year) for treated water delivered to the water supply entity or entities. Unit cost is for full utilization of project capacity.
² Source of Cost Estimate: Section 5A.2.
³ Source of Cost Estimate: Table 5A.3.
⁴ Source of Cost Estimate: Section 5A.14. Unit Cost for raw water. Treatment and transmission costs for individual users would be additional.
⁵ Costs estimate is pending input from consultants to CTWSC and BRA.
⁶ Estimated treated water cost. Costs dependent on location and size of project.
⁷ Economic impact of not meeting shortage (i.e., "no action" alternative) in 2030 as estimated by TWDB.

5B.1.4.3 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 Holland:

- Voluntary Redistribution from In-County Source, Transmission and Treatment through existing Central Texas WSC facilities; source will probably be Lake Stillhouse Hollow; City of Holland will need to negotiate for about 100 acft per year of water from either BRA or contract holder at lake.

5B.1.4.4 Costs

Costs of the Recommended Plan for the City of Holland.

- a. Voluntary Redistribution:
 - Cost Source: estimated wholesale treated water rate
 - Date to be Implemented: By year 2015
 - Annual Cost: \$65,000 per year

The annual cost of \$65,000 per year was calculated by multiplying the City of Holland need of 100 acft per year by an estimated wholesale water rate of \$650/acft.

**Table 5B.1-3.
Recommended Plan Costs by Decade for the City of Holland**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Voluntary Redistribution						
Projected Surplus/(Shortage) (acft/yr)	111	42	(44)	(87)	(96)	(94)
Supply From Plan Element (acft/yr)	-	-	100	100	100	100
Annual Cost (\$/yr)	-	-	\$65,000	\$65,000	\$65,000	\$65,000
Unit Cost (\$/acft)	-	-	\$650	\$650	\$650	\$650

5B.1.5 City of Killeen

The City of Killeen contracts with Bell County WCID No. 1 to divert, treat, and deliver water from Lake Belton to the City. No shortages are projected for the City of Killeen and no changes in water supply are recommended.

5B.1.6 City of Little River-Academy

5B.1.6.1 Description of Supply

- Source: Ground Water - Trinity Aquifer. Surface Water purchased from the City of Temple
- Estimated Reliable Supply: 359 acft per year
- System Description: Surface water supply supplements ground water supply. The City of Temple supplies treated surface water to Little River – Academy by transmission pipeline.

5B.1.6.2 Options Considered

The City of Little River-Academy has a projected shortage of 127 acft per year in 2030, which is about 26 percent of demand. Table 5B.1-4 lists the water management strategies, references to the report section discussing the strategy, total project cost, and unit costs that were considered for meeting the City of Little River-Academy shortage.

**Table 5B.1-4.
Water Management Strategies Considered for the City of Little River-Academy**

Option	Yield (acft/yr)	Approximate Cost ¹	
		Total	Unit (\$/acft)
Additional Water Conservation (Section 5A.2)	24	\$13,950/year	\$574 ²
Little River Reservoir (Section 5A.14)	169,800	\$361,065,000	\$150 ³
No Action	-	\$5,340,000 ⁴	\$42,443 ⁴
Southwest Bell County Regional Water System	-	5	5
Voluntary Redistribution from In-County Source, Transmission and Treatment through existing facilities	150	\$79,600/year ⁶	\$530 ⁶

¹ Unless otherwise noted, costs are Total Project Cost and Unit Cost (\$/acft per year) for treated water delivered to the water supply entity or entities. Unit cost is for full utilization of project capacity.
² Source of Cost Estimate: Section 5A.2.
³ Source of Cost Estimate: Section 5A.14. Unit Cost for raw water. Treatment and transmission costs for individual users would be additional.
⁴ Economic impact of not meeting shortage (i.e., “no action” alternative) in 2030 as estimated by TWDB.
⁵ Costs estimate is pending input from consultants to CTWSC and BRA.
⁶ Source of Cost Estimate: City of Temple wholesale water rates.

5B.1.6.3 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 Little River-Academy:

- Voluntary Redistribution from City of Temple. Little River-Academy would meet shortage by buying an additional 150 acft per year from the City of Temple. The existing facilities have adequate capacity to deliver the additional water.

5B.1.6.4 Costs

Costs of the recommended plan for the City of Little River-Academy to meet 2030 shortages are:

- a. Voluntary Redistribution from City of Temple:
 - Cost Source: City of Temple’s wholesale water rates
 - Date to be Implemented: By year 2010
 - Annual Cost: \$79,600 per year

The Annual Cost of \$79,600 per year is based upon The City of Temple’s wholesale water rates of approximately \$1.75 per 1,000 gallons for the first 1 million gallons per month and \$1.65 per 1,000 gallons for any additional water in that month.

**Table 5B.1-5.
Recommended Plan Costs by Decade for the City of Little River-Academy**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Voluntary Redistribution						
Projected Surplus/(Shortage) (acft/yr)	104	19	(85)	(127)	(141)	(124)
Supply From Plan Element (acft/yr)	-	150	150	150	150	150
Annual Cost (\$/yr)	-	\$79,600	\$79,600	\$79,600	\$79,600	\$79,600
Unit Cost (\$/acft)	-	\$530	\$530	\$530	\$530	\$530

5B.1.7 City of Morgan's Point Resort

5B.1.7.1 Description of Supply

- Source: Surface Water from City of Temple
- Estimated Reliable Supply: 291 acft per year
- System Description: The City of Morgan's Point Resort has a contract with the City of Temple to purchase treated surface water. The City of Temple serves Morgan's Point Resort through a transmission pipeline.

5B.1.7.2 Options Considered

The City of Morgan's Point Resort has a projected shortage of 584 acft per year in 2030, which is about 67 percent of demand. Table 5B.1-6 lists the water management strategies, references to the report section discussing the strategy, total project cost, and unit costs that were considered for meeting the City of Morgan's Point Resort shortage.

5B.1.7.3 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 City of Morgan's Point Resort:

- Voluntary Redistribution from City of Temple. Morgan's Point Resort would meet its shortage through purchase of an additional 650 acft per year from the City of Temple. The existing facilities do not have adequate capacity to deliver the additional water. The City of Temple would incur the capital costs to build the additional facilities. Morgan's Point Resort would pay for the water through Temple's rate structure.

**Table 5B.1-6.
Water Management Strategies Considered for the City of Morgan’s Point Resort**

Option	Yield	Approximate Cost ¹	
		Total	Unit (\$/acft)
Additional Water Conservation (Section 5A.2)	44	\$25,000/year	\$574 ²
Wastewater Reuse (Section 5A.3)	22	\$24,000/year	\$326 ³
Little River Reservoir (Section 5A.14)	169,800	\$361,965,000	\$150 ⁴
Southwest Bell County Regional Water System	-	5	6
Voluntary Redistribution from In-County Source, Transmission and Treatment through existing facilities	650	\$351,000/year ⁶	\$539 ⁶
No Action	-	\$24,787,000 ⁷	\$42,443 ⁷

¹ Unless otherwise noted, costs are Total Project Cost and Unit Cost (\$/acft per year) for treated water delivered to the water supply entity. Unit cost is for full utilization of project capacity.
² Source of Cost Estimate: Section 5A.2.
³ Source of Cost Estimate: Table 5A.3.
⁴ Source of Cost Estimate: Section 5A.14. Unit Cost for raw water. Treatment and transmission costs for individual users would be additional.
⁵ Costs estimate is pending input from consultants to CTWSC and BRA.
⁶ Source of Cost Estimate: City of Temple’s wholesale water rates.
⁷ Economic impact of not meeting shortage (i.e., “no action” alternative) in 2030 as estimated by TWDB.

5B.1.7.4 Costs

Costs of the recommended plan for the City of Morgan’s Point Resort to meet 2030 shortages are:

- a. Voluntary Redistribution from City of Temple:
 - Cost Source: The City of Temple’s water rates
 - Date to be Implemented: By year 2005
 - Annual Cost: \$351,000 per year

The Annual Cost of \$351,000 per year is based upon The City of Temple’s wholesale water rates of approximately \$1.75 per 1,000 gallons for the first 1 million gallons per month and \$1.65 per 1,000 gallons for any additional water in that month.

5B.1.8 City of Nolanville

The City of Nolanville contracts with Bell County WCID No. 1 and Bell County WCID No. 3 to divert, treat, and deliver water from Lake Belton to the City. No shortages are projected for Nolanville and no changes in water supply are recommended.

**Table 5B.1-7.
Recommended Plan Costs by Decade for the City of Morgan's Point Resort**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Voluntary Redistribution						
Projected Shortage (acft/yr)	(138)	(316)	(481)	(584)	(644)	(648)
Supply From Plan Element (acft/yr)	650	650	650	650	650	650
Annual Cost (\$/yr)	-	\$351,000	\$351,000	\$351,000	\$351,000	\$351,000
Unit Cost (\$/acft)	-	\$539	\$539	\$539	\$539	\$539

5B.1.9 City of Rogers

The City of Rogers 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.

5B.1.10 Salado WSC (CDP and County-Other)

The Salado area is provided water by Salado Water Supply Corporation. For water supply estimates, the TWDB uses the population that resides or is projected to reside in the Salado Census Data Place (CDP) area and the TWDB projections are reported in Table 2-1 (population) and Table 2-3 (water demand). However, Salado WSC serves a larger population than is reflected in Table 2-1. These other customers served by Salado WSC are accounted for in the County-Other category for Bell County. Projections were made of population and water demand for most of the entities that make up the County-Other category (i.e., water supply corporations, water districts, and others). To get a clear understanding of Salado WSC water demand projections, the Salado CDP projections and the Salado WSC from County-Other must be combined.

5B.1.10.1 Description of Supply

Salado WSC currently relies on Edwards Aquifer groundwater for its water supply. The groundwater supply in Bell County is estimated to have a reliable supply of about 3,484 acft/yr (Table 3-14) based on pumpage and aquifer response in the drought of the 1950's. This groundwater supply was apportioned to all current users based on 1997 reported use and Salado WSC is estimated to have a reliable groundwater supply of about 992 acft/yr. Salado WSC also has a contract with the Brazos River Authority for 1,600 acft/yr from Lake Stillhouse Hollow.

There are no facilities in place to allow Salado WSC to use this supply, consequently this supply is not shown in the demand/supply tables (Table 4-2), in accordance with TWDB rules.

In order to get a clear understanding of Salado’s demand/supply situation, water demands for both the Salado CDP and County-Other category along with their water supply are reported in Table 5B.1-8. As shown in Table 5B.1-8, the shortage in 2030 for supplies with infrastructure in place is 1,404 acft/yr. With the Lake Stillhouse Hollow water, there is no shortage in 2030 and the shortage in 2050 is 429 acft/yr. TWDB rules require that plans be developed for year 2030 shortages; if infrastructure is needed to utilize contracted supplies, then include that infrastructure in the plan.

**Table 5B.1-8.
Water Demands and Supply for Salado WSC (CDP and County-Other)**

	2000	2010	2020	2030	2040	2050
Water Demand (acft/yr)						
Salado CDP (Table 2-3)	755	910	1,057	1,220	1,356	1,470
Salado from County-Other ¹	145	463	801	1,105	1,384	1,480
Total Demand	900	1,373	1,858	2,325	2,740	2,950
Water Supply (acft/yr)						
Groundwater	921	921	921	921	921	921
Surplus/(Shortage) with Groundwater Only	21	(452)	(937)	(1,404)	(1,819)	(2,029)
BRA Contract	1,600	1,600	1,600	1,600	1,600	1,600
Surplus/(Shortage) with BRA Contract	1,621	1,148	663	196	(219)	(429)

¹ See www.brazosgwwater.org web site for County-Other water demands by entity.

5B.1.10.2 Options Considered

Table 5B.1-9 lists the water management strategies, references to the report section discussing the strategy, total project cost, and unit costs that were considered for meeting the Salado WSC (CDP and County-Other) shortage.

5B.1.10.3 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 Salado (WSC and County-Other):

- Implement Regional Water System to Utilize BRA Contract

Table 5B.1-9.
Water Management Strategies Considered for Salado WSC (CDP and County-Other)

Option	Yield	Approximate Cost ¹	
		Total	Unit (\$/acft)
Additional Water Conservation (Section 5A.2)	61	\$35,014/year	574 ²
Little River Reservoir (Section 5A.14)	169,800	\$361,065,000	150 ³
Southwest Bell County Regional Water System	-	⁴	⁴
Transmission Pipeline from CTWSC to Salado WSC	1,600	\$8,296,000	\$687
No Action	-	\$9,677,000 ⁵	\$42,443 ⁵

¹ Unless otherwise noted, costs are Total Project Cost and Unit Cost (\$/acft per year) for treated water delivered to the water supply entity. Unit cost is for full utilization of project capacity.
² Source of Cost Estimate: Section 5A.2.
³ Source of Cost Estimate: Section 5A.14. Unit Cost for raw water. Treatment and transmission costs for individual users would be additional.
⁴ Cost estimate is pending input from consultants to CTWSC and BRA.
⁵ Economic impact of not meeting shortage (i.e., "no action" alternative) in 2030 as estimated by TWDB.

5B.1.10.4 Costs

Costs of the recommended plan for the Salado WSC (CDP and County-Other) to meet 2030 shortages are:

- a. Implement Regional Water System to Utilize BRA contract:
 - Cost Source: HDR Preliminary Cost Estimate for Planning Purposes. Costs based on a standalone system with raw water intake at Stillhouse Hollow Reservoir, a water treatment facility in the proximity of the Stillhouse Hollow Dam, and treated water transmission lines to connect to the Salado WSC system. Approximately 15,000 ft. of 14-in. diameter transmission pipeline and a 3 MGD capacity water treatment plant are the main capital cost components.
 - Date to be Implemented: by 2008
 - Total Project Cost: \$8,296,000
 - Total Annual Cost: \$1,100,000

A preliminary engineering study is currently being performed by consultants to BRA and CTWSC. The proposed regional system would have a raw water intake and water treatment plant at the Stillhouse Hollow Reservoir and treated water transmission lines delivering water to communities in southwestern Bell County and northern Williamson County.

Once this study is available, the costs for water service to Salado WSC can be amended and will probably be lower than shown in Table 5B.1-9.

5B.1.11 City of Temple

The City of Temple obtains raw water primarily from the Leon River, to which it holds a run-of-the-river permit. This permit from the TNRCC gives the City the right to divert water from the river but not to store it. The City also has contracted for stored water from BRA in Lake Belton. No shortages are projected for the City of Temple and no changes in water supply are recommended.

**Table 5B.1-10.
Recommended Plan Costs by Decade for Salado WSC (CDP and County-Other)**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Regional Water System						
Projected Surplus/(Shortage) (acft/yr)	21	(452)	(937)	(1,404)	(1,819)	(2,029)
Supply From Plan Element (acft/yr)	0	1,600	1,600	1,600	1,600	1,600
Annual Cost (\$/yr)	*	*	*	*	*	*
Unit Cost (\$/acft)	*	*	*	*	*	*
* Cost is pending outcome of preliminary engineering study being performed by others.						

5B.1.12 City of Troy

5B.1.12.1 Description of Supply

- Source: Surface Water from City of Temple from Leon River; Ground Water from Trinity Aquifer
- Estimated Reliable Supply: 194 acft/yr
- System Description: The City of Troy receives water from the City of Temple at two meter locations. Two ground water wells supplement the system.

5B.1.12.2 Options Considered

The City of Troy has a projected shortage of 255 acft per year in 2030, which is about 58 percent of demand. Table 5B.1-11 lists the water management strategies, references to the report section discussing the strategy, total project cost, and unit costs that were considered for meeting the City of Troy shortage.

5B.1.12.3 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 Troy:

- Voluntary Redistribution from Temple. The City of Troy would meet their shortage by buying an additional 300 acft per year from the City of Temple. The existing facilities have adequate capacity to deliver the additional water.

**Table 5B.1-11.
Water Management Strategies Considered for the City of Troy**

Option	Yield	Approximate Cost ¹	
		Total	Unit (\$/acft)
Additional Water Conservation (Section 5A.2)	22	\$12,886/year	\$574 ²
Little River Reservoir (Section 5A.14)	169,800	\$361,065,000	\$150 ³
Voluntary Redistribution from City of Temple (Treated Water Cost)	\$300	\$159,000/year ⁶	\$530 ⁶
No Action	-	\$10,823,011 ⁴	\$42,443 ⁴

¹ Unless otherwise noted, costs are Total Project Cost and Unit Cost (\$/acft per year) for treated water delivered to the water supply entity. Unit cost is for full utilization of project capacity.
² Source of Cost Estimate: Section 5A.2.
³ Source of Cost Estimate: Section 5A.14. Unit Cost for raw water. Treatment and transmission costs for individual users would be additional.
⁴ Economic Impact of not meeting shortage (i.e., "no action" alternative) in 2030 as estimated by TWDB.
⁵ Costs estimate is pending input from consultants to CTWSC and BRA.
⁶ Source of Cost Estimate: City of Temple's wholesale water rates.

5B.1.12.4 Costs

Costs of the recommended plan for the City of Troy to meet 2030 shortages are:

- Voluntary Redistribution from City of Temple.
 - Cost Source: The City of Temples water rates
 - Date to be Implemented: By Year 2005
 - Annual Cost: \$159,000 per year

The Annual Cost of \$159,000 per year is based upon the City of Temple's wholesale water rates of approximately \$1.75 per 1,000 gallons for the first 1 million gallons per month and \$1.65 per 1,000 gallons for any additional water in that month.

**Table 5B.1-12.
Recommended Plan Costs by Decade for the City of Troy**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Voluntary Redistribution						
Projected Shortage (acft/yr)	(41)	(117)	(199)	(255)	(272)	(274)
Supply From Plan Element (acft/yr)	-	300	300	300	300	300
Annual Cost (\$/yr)	-	\$159,000	\$159,000	\$159,000	\$159,000	\$159,000
Unit Cost (\$/acft)	-	\$530	\$530	\$530	\$530	\$530

5B.1.13 Fort Hood

The U.S. Department of the Army (Fort Hood) has a water right to store and divert 12,000 acft in Lake Belton. Technically, the Army could, in any single year, divert up to 12,000 acft, however, the yield available from their permitted storage volume is 3,336 acft/yr. This water supply has been divided evenly between Coryell County and Bell County and the Army contracts with the City of Gatesville (Coryell County) and Bell County WCID No. 1 to divert, treat, and deliver this water to Fort Hood. Based on their firm water supply, shortages are shown for Fort Hood in each county. The shortages are based on projected demands with full staffing level and reserve units called to active duty, which will probably be an infrequent event and of temporary duration. In which case, the Army should be able to arrange to purchase additional treated water through the City of Gatesville and Bell County WCID No. 1 using raw water supplies contracted to other entities. No change in Fort Hood's water supply situation is recommended.

5B.1.14 County-Other

No shortages are projected for County-Other entities and no changes in water supply are recommended.

5B.1.15 Manufacturing

5B.1.15.1 Options Considered

Manufacturing in Bell County has a projected shortage of 7,315 acft per year in 2030, which is about 96 percent of demand. Table 5B.1-13 lists the water management strategies, references to the report section discussing the strategy, total project cost, and unit costs that were considered for meeting the shortage for manufacturing in Bell County.

5B.1.15.2 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 2030 shortage for manufacturing in Bell County:

- Voluntary Redistribution from Municipal Use

**Table 5B.1-13.
Water Management Strategies Considered for Manufacturing in Bell County**

Option	Yield (acft)	Approximate Cost ¹	
		Total	Unit (\$/acft)
Additional Water Conservation	380	\$218,120	\$574
Wastewater Reuse	1,825	\$7,022,000	\$326
Voluntary Redistribution from Municipal Use	7,315	\$0	\$0
No Action	-	\$1,254,546,000 ¹	\$171,503 ¹

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

5B.1.15.3 Costs

Water supply for manufacturing in Bell County is obtained by purchase from a city or water supply corporation or from private wells operated by the manufacturing entity. Most of the cities and the rural area in Hill County have surplus supplies through the year 2050. New manufacturing facilities would be expected to locate where existing water supplies are available, such as near a city or within the service area of an existing water supply corporation. In which case, the cost of a water supply to a new facility would be as a retail customer to the City and as such, no cost is listed for meeting this demand.

5B.1.16 Steam-Electric

There is no water supply in Bell County dedicated to steam-electric use. Steam-Electric in Bell County has a projected demand of 11,200 acft/yr, consequently, the shortage is also 11,200 acft/yr.

5B.1.16.1 Options Considered

Table 5B.1-14 lists the water management strategies, references to the report section discussing the strategy, total project cost, and unit costs that were considered for meeting the shortage for Steam-Electric in Bell County.

**Table 5B.1-14.
Water Management Strategies Considered for Steam-Electric Use in Bell County**

Option	Yield	Approximate Cost	
		Total	Unit (\$/acft)
Additional Water Conservation	550	\$316,000	\$574
Wastewater Reuse	11,200	\$42,326,000	\$326
Voluntary Redistribution from Municipal Use	11,200	\$1,792,000 ¹	\$160 ¹
No Action	-	\$52,657,000 ²	\$4,701 ²
¹ Costs dependent on location and size of project. ² Economic impact of not meeting shortage (i.e., "no action" alternative) in 2030 as estimated by TWDB.			

5B.1.16.2 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 2030 shortage for Steam-Electric Use in Bell County:

- Voluntary Redistribution from Municipal Use

5B.1.16.3 Costs

Costs of the recommended plan for Steam-Electric Use in Bell County to meet 2030 shortages are:

- a. Voluntary Redistribution from Municipal Use:
 - Cost Source: Estimate of wholesale cost of water
 - Date to be Implemented: By Year 2010
 - Annual Cost: \$1,792,000 per year

The Annual Cost of \$1,792,000 is based upon multiplying the desired amount of water, 11,200 acft, by the estimated wholesale water rate of \$160 per acft for raw water delivered to a steam-electric plant.

**Table 5B.1-15.
Recommended Plan Costs by Decade for Steam-Electric Use in Bell County**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
Voluntary Redistribution From Municipal Use						
Projected Shortage (acft/yr)	(0)	(11,200)	(11,200)	(11,200)	(11,200)	(11,200)
Supply From Plan Element (acft/yr)	-	11,200	11,200	11,200	11,200	11,200
Annual Cost (\$/yr)	-	\$1,792,000	\$1,792,000	\$1,792,000	\$1,792,000	\$1,792,000
Unit Cost (\$/acft)	-	\$160	\$160	\$160	\$160	\$160

5B.1.17 Mining

No shortages are projected for Bell County Mining and no changes in water supply are recommended.

5B.1.18 Irrigation

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

5B.1.19 Livestock

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