

### 5B.38 Major Water Providers

Table 5B.38-1 lists each major water provider in the Brazos G Region and their corresponding surplus or shortage in years 2030 and 2050. For each major water provider with a projected shortage, a water supply plan has been developed and is presented in the following subsections, or has previously been presented in their respective county section.

**Table 5B.38-1.  
Major Water Provider Surplus/(Shortage)**

<i>Water User Group</i>	<i>Surplus/(Shortage)<sup>1</sup></i>		<i>Comment</i>
	<i>2030 (acft/yr)</i>	<i>2050 (acft/yr)</i>	
Brazos River Authority	(90,259)	(202,014)	Shortage includes requests to BRA for additional water purchases
West Central Texas MWD	31,577	29,557	Supply using firm yield estimates; District maintains that safe yield estimates are more appropriate; also includes 15,000 acft/yr from O.H.Ivie Reservoir
City of Abilene	10,812	2,331	Includes customer city projected demands; 15,000 acft/yr supply from O.H. Ivie Reservoir
City of Waco	46,679	40,700	Includes contractual water supply commitments only
City of Round Rock	(6,695)	(16,122)	Includes full contracted water supply; infrastructure constraints not considered
Central Texas WSC	5,845	5,845	Includes contractual water supply commitments only
Bell County WCID No. 1	0	0	Includes contractual water supply commitments only
Lower Colorado River Authority	0	0	Includes contractual water supply commitments only; includes 25,000 acft/yr to BRA/LCRA Alliance

<sup>1</sup> From Tables 4-51 and 4-52, Section 4 – Comparison of Water Demands with Water Supplies to Determine Needs.

#### 5B.38.1 Brazos River Authority

##### 5B.38.1.1 Description of Supply

The Brazos River Authority is the primary provider of water to the Brazos G region. The BRA provides water from three wholly owned and operated reservoirs in the region: Lake Granbury, Possum Kingdom Lake, and Lake Limestone. BRA also contracts for conservation storage space in nine U.S. Army Corps of Engineers reservoirs in the region. BRA holds water

rights in the region to divert 662,000 acft annually, and contracts to supply water to municipal, industrial, and agricultural water customers in the Brazos G region and other regions. Currently, BRA has a waiting list of requests from 35 entities wanting to purchase more than 235,000 acft/yr. Current supplies are almost fully committed and cannot meet the requested demands, resulting in a potential shortage of about 202,000 acft.

### 5B.38.1.2 Options Considered

Table 5B.38-2 lists the water management strategies, reports section references discussing the strategy, total project cost, and unit costs that were considered for meeting potential water needs of the Brazos River Authority.

**Table 5B.38-2.  
Water Management Strategies Considered for the Brazos River Authority**

Option	Yield (acft/yr)	Approximate Cost	
		Total	Unit (\$/acft)
System Operation	(1)	--	--
Development of Carrizo-Wilcox Groundwater Supplies (Section 5A.17)	65,000	\$380,000,000	\$699 <sup>2</sup>
Millican Reservoir – Panther Creek Site (Section 5A.14)	235,200	\$1,237,000,000	\$366 <sup>3</sup>
Millican Reservoir – Bundic Site (Section 5A.14)	73,800	\$552,000,000	\$541 <sup>3</sup>
Little River Reservoir (Section 5A.14)	129,000	\$361,000,000	\$197 <sup>3</sup>
Allens Creek Reservoir(4)	57,000 to 153,000	(5)	(5)
South Bend Reservoir (Section 5A.14)	106,700	\$205,000,000	\$141 <sup>3</sup>
Caldwell Lake <sup>6</sup>	(5)	(5)	(5)
Whitney Reallocation (Section 5B.5)	54,500	\$12,973,000	\$57
Voluntary Redistribution (Section 5B.6)	178,000	n/a	\$348 to \$1,205
Control of Naturally Occurring Chlorides (Section 5B.8)	--	up to \$304,000,000	n/a
Conjunctive Use of the Brazos River Alluvium (Section 5B.19)	3,220	\$9,843,000	\$305
Purchase water from LCRA for use by BRA/LCRA Alliance	25,000	\$86,614,000 <sup>7</sup>	\$597
<sup>1</sup> Currently being estimated by BRA. <sup>2</sup> Treated water cost. <sup>3</sup> Raw water cost. <sup>4</sup> Located in Region H. Included in BRA Long Range Water Resource Development Program, 1995. <sup>5</sup> Not available at time of printing. <sup>6</sup> Included in BRA Long Range Water Resource Development Program, 1995. Not studied for Brazos G RWPA. <sup>7</sup> Total cost pro-rated from Table 5.16-8 for 25,000 acft project.			

**5B.38.1.3 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 potential needs of the Brazos River Authority in the 2000 to 2030 time period:

- Development of Carrizo-Wilcox Groundwater Supplies
- Millican Reservoir – Bundic Site
- Little River Reservoir
- Voluntary Redistribution
- System Operation
- Purchase of Water from LCRA for BRA/LCRA Alliance Use
- Control of Naturally Occurring Chlorides (Shallow well brine recovery with environmentally sound disposal. Environmentally sound disposal includes deep well injection or other methods that prevent the naturally occurring chlorides from entering the Brazos River. One such method is the harvesting of salt in the proposed Stonewall County Brine Utilization Management Project as described in Section 5A.8.)

In the long-term (i.e., beyond 2030), the Brazos River Authority is recommended to also pursue these projects to meet needs of the basin:

- Conjunctive Use of the Brazos River Alluvium
- South Bend Reservoir (Coordination with West Central Texas Municipal Water District regarding the development of Breckenridge Reservoir is needed. Hydrologic conditions of the area may not support the full development of both South Bend Reservoir and Breckenridge Reservoir.)

The Allens Creek Reservoir project is located in Region H (Houston Region). The Brazos G RWPG has not considered the Allens Creek Reservoir project and makes no recommendations regarding its utilization for Region H.

**5B.38.1.4 Costs**

The Brazos River Authority sponsors development of projects in response to needs in the basin and at the request of those needing the water. The BRA would not be the end user of the water. Most of the projects in the recommended plan are also included in the plans for other water user groups. For the following reasons, project costs and time schedules of costs is not summarized in this part of the plan, but is presented in the plans of the other water user groups:

- The timing of the projects is subject to obtaining requests for project implementation from users;
- The overall project yield and configuration is subject to number, demand, and location of project participants; and,
- The project costs and timing are listed within each user entities' recommended plans.

#### **5B.38.2 West Central Texas Municipal Water District**

The West Central Texas MWD (WCTMWD) is the primary water supplier to Abilene, Albany, Breckenridge, and Anson. The WCTMWD actively monitors regional needs and is progressive their planning and drought preparedness. The West Central Texas MWD can only obligate itself to provide the water specified in its customers contracts and it has a sufficient supply to meet those obligations. However, based on possible future economic upturns, new technologies, and new industries, WCTMWD is identifying regional water supply projects to benefit their service area. Projects to be included in the water plan would be identified and available to meet potential needs. To that end, the following projects are recommended to be included in the water plan for West Central Texas MWD:

- a. Development of Seymour Aquifer groundwater supplies (this project is also in City of Abilene's recommended plan, but at a later implementation date):
  - Cost Source: Section 5A.12
  - Date to be Implemented: before 2010
  - Total Project Cost: \$31,895,000
  - Total Annual Cost: \$2,969,000
  - Project Yield: 11,100 acft/yr
- b. Breckenridge Reservoir:
  - Cost Source: Section 5A.14
  - Date to be Implemented: beyond 2030
  - Total Project Cost: \$171,000,000
  - Total Annual Cost: \$12,589,000
  - Project Yield: 20,000 acft/yr
  - Coordination with Brazos River Authority regarding the development of South Bend Reservoir is needed. Hydrologic conditions of the area may not support the full development of both Breckenridge Reservoir and South Bend Reservoir.

**Table 5B.38-3.  
Recommended Plan Costs by Decade for West Central Texas MWD**

<i>Plan Element</i>	<i>2000</i>	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>
<b>Groundwater Development</b>						
Supply from Plan Element (acft/yr)	--	11,100	11,100	11,100	11,100	11,100
Annual Costs (\$/acft)	--	\$2,969,000	\$2,969,000	\$2,969,000	\$652,000	\$652,000
Unit cost (\$/acft)	--	\$267	\$267	\$267	\$59	\$59
<b>Breckenridge Reservoir</b>	--					
Supply from Plan Element (acft/yr)	--	--	--	20,000	20,000	20,000
Annual Costs (\$/acft)	--	--	--	\$12,589,000	\$12,589,000	\$12,589,000
Unit cost (\$/acft)	--	--	--	\$629	\$629	\$629

### **5B.38.3 City of Abilene (Major Water Provider)**

The recommended water supply plan for the City of Abilene is included in Section 5B.33 with the Taylor County water user groups.

### **5B.38.4 City of Waco (Major Water Provider)**

The recommended water supply plan for the City of Waco is included in Section 5B.24 with the McLennan County water user groups.

### **5B.38.5 City of Round Rock (Major Water Provider)**

The recommended water supply plan for the City of Round Rock is included in Section 5B.36 with the Williamson County water user groups.

### **5B.38.6 Central Texas Water Supply Corporation**

Central Texas WSC (CTWSC) is the primary water supplier to about 16 entities in Bell, Williamson, and Lampasas Counties. CTWSC can only obligate itself to provide the water specified in its customer contracts and it has a sufficient supply meet those obligations withno projected shortages. CTWSC is currently planning the extension of waterlines to the Salado WSC area in order to provide treatment and delivery of water that Salado WSC has purchased in Lake Stillhouse Hollow from BRA. The Salado WSC regional project is included in the recommended plan for Salado WSC in Section 5B.1 with the Bell County entities.

**5B.38.7 Bell County WCID No. 1**

Bell County WCID No. 1 (District) is the major water provider to Belton, Copperas Cove, Harker Heights, Killeen, and other entities in Bell County. The District can only obligate itself to provide the water specified in its customer contracts and it has sufficient supply to meet those obligations with no projected shortages. The District is in the planning stage of water treatment plant improvements, but has not indicated that any raw water or conveyance improvements are planned. No supply plans are currently recommended for Bell County WCID No. 1.

**5B.38.8 Lower Colorado River Authority**

In the Brazos G region, the Lower Colorado River Authority (LCRA) sells water to the City of Cedar Park, the City of Leander, and the City of Lometa. LCRA is only obligated to provide the water specified in its contracts, therefore, no shortages are shown for the LCRA in the planning region. Under the terms of HB 1437, LCRA can sell an additional 25,000 acft/yr to entities in Williamson County. The Brazos River Authority is negotiating with LCRA to purchase the 25,000 acft and distribute it to Williamson County under the BRA/LCRA Alliance. This supply is in the recommended plans for the City of Round Rock and for County-Other in Williamson County.