



# Summary of Lavaca (P) Region

The Lavaca Regional Water Planning Area is composed of Jackson and Lavaca counties and Precinct 3 of Wharton County, including the entire City of El Campo (Figure P.1). Other cities in the region include Edna, Yoakum, Hallettsville, and Shiner. Most of the region lies in the Lavaca River Basin, with the Lavaca River being its primary source of surface water. Groundwater from the Gulf Coast Aquifer supplies most of the water for the planning area. The largest economic sector in the region is agribusiness, while manufacturing, oil and gas production, and mineral production also contribute to the region’s economy. The members of the Lavaca Planning Group are listed on the last page of this summary.

## Population and Water Demands

In 2010, less than 1 percent of the state’s total population will reside in the Lavaca Region, and between 2010 and 2060 its population is projected to increase less than 1 percent to 49,663 (Figure P.2). However, by 2060, the region’s total water demand is projected to decrease 8 percent from 225,561 acre-feet in 2010 to 206,908 acre-feet (Figure P.3), primarily because of an almost 9 percent reduction in agricultural irrigation demand, from 213,638 acre-feet in 2010 to 195,251 acre-feet in 2060 (Table P.1).

## Existing Water Supplies

The region relies on several surface water and groundwater sources. In 2010, surface water is projected to supply less than 1 percent of the total, while groundwater is anticipated to supply 99 percent. The principal surface water supply is Lake Texana, the only reservoir in the region. The Gulf Coast Aquifer is the only major aquifer supplying groundwater to users in the region. The total surface water and groundwater supply is estimated to remain constant from 2010 to 2060 at 209,431 acre-feet (Table P.2).

## Needs

Water user groups in the Lavaca Region are anticipated to need 50,655 acre-feet of additional water in 2010 under drought conditions and 31,979 acre-feet by 2060, all of which can be met by pumping additional groundwater during irrigation season and then letting water levels recover before the next planting season (Figure P.4, Table P.3). Irrigation is the only water use sector that has a need for additional water in 2010 through 2060, and these needs are declining due to a decrease in irrigated acreage in the region.

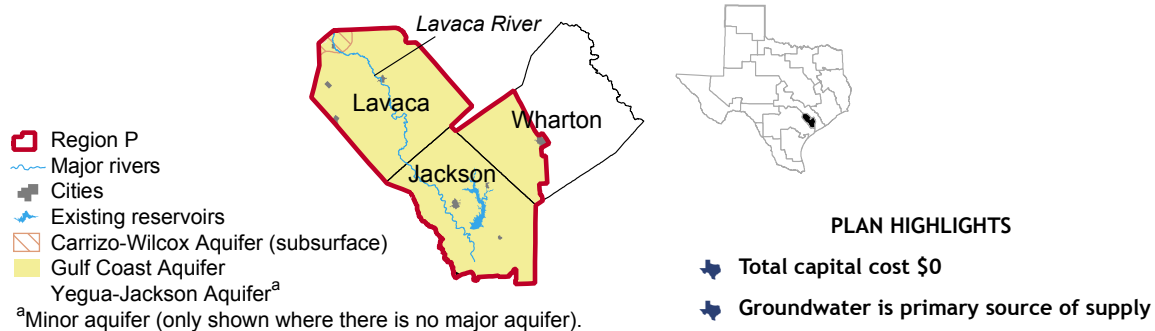


Figure P.1. Lavaca Region.

## Recommended Water Management Strategies and Cost

The Lavaca Planning Group analyzed various strategies to meet needs, but the only one determined to be economically feasible was temporarily overdrafting the Gulf Coast Aquifer to provide additional irrigation water during drought. This strategy produces 32,468 acre-feet of water which is sufficient to meet the region's needs (Figure P.5). **There is no capital cost associated with this strategy** because all necessary infrastructure is assumed to already be in place.

## Conservation Recommendations

Water conservation was not recommended as a strategy because it was not the most cost-effective method to meet irrigation needs, which are the only needs in the region. Since there were no municipal needs, no municipal conservation was recommended. However, the planning group did recommend that all municipal water user groups implement water conservation measures. The Lavaca Planning Group did recommend continued agricultural water conservation practices as one of its policy recommendations. The region also supports state and federal programs that provide financial and technical assistance to agri-

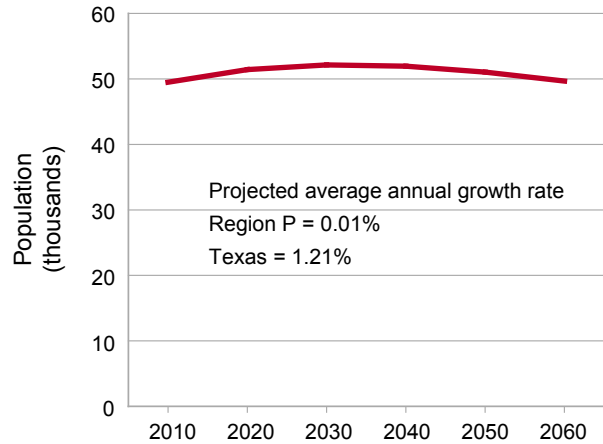


Figure P.2. Projected population for 2010-2060.

cultural producers and result in increased irrigation efficiency and overall water conservation.

## Ongoing Issues

The primary concern of the Lavaca Planning Group is protecting groundwater resources for use by agricultural producers in the region. Efforts to produce large amounts of groundwater in the region and market them for outside use are also an ongoing concern.

Table P.1. Projected water demands for 2010-2060

Category	2010 (acre-feet)	2060 (acre-feet)	Percent change in demand 2010-2060	Percent of overall demand in 2010	Percent change in relative share of overall demand, 2010-2060
Municipal	4,765	4,445	-7	+2	0
County-other	2,406	2,096	-13	+1	0
Manufacturing	1,089	1,425	+31	0	0
Mining	164	192	+17	0	0
Irrigation	213,638	195,251	-9	+95	0
Steam-electric	0	0	0	0	0
Livestock	3,499	3,499	0	2	0
Region	225,561	206,908	-8		

Figure P.3. Projected total water demand and existing water supplies for 2010-2060.

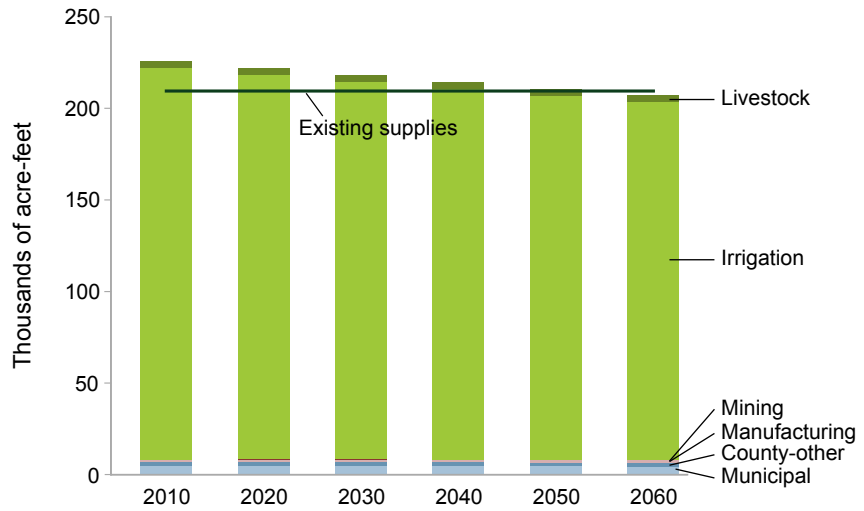


Figure P.4. Projected water needs for 2010-2060.

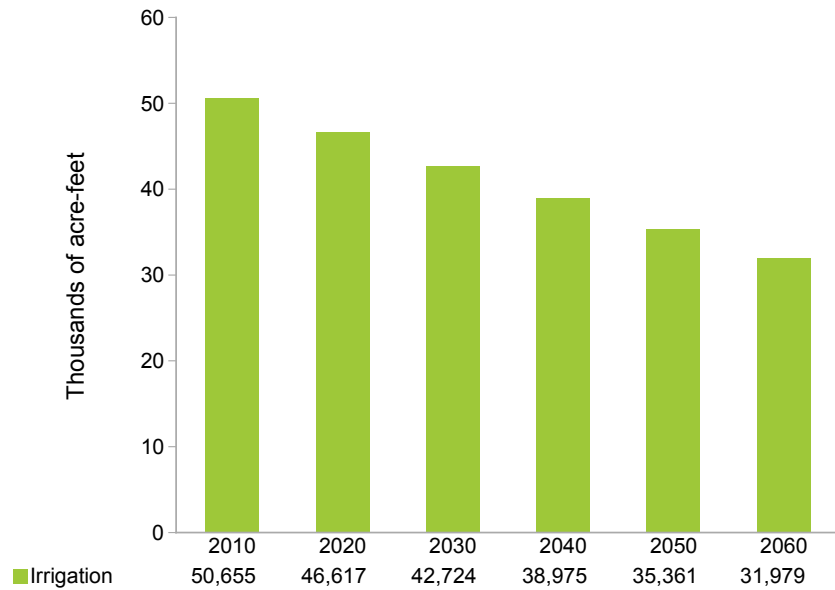


Figure P.5. Recommended water management strategy water supply volumes for 2010-2060.

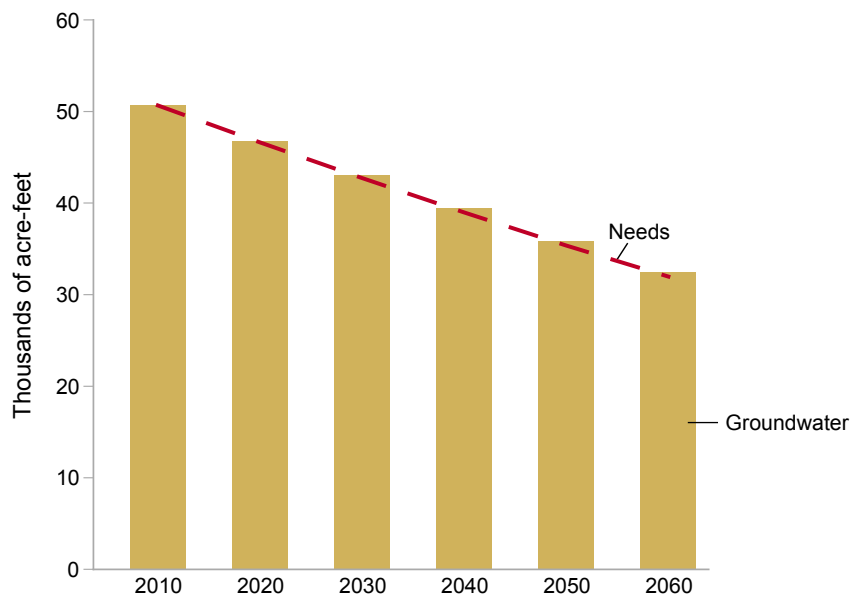


Table P.2. Existing water supplies for 2010 and 2060

Water supply source	2010 (acre-feet)	2060 (acre-feet)
<b>Surface water</b>		
Lake Texana	1,832	1,832
<b>Surface water subtotal</b>	<b>1,832</b>	<b>1,832</b>
<b>Groundwater</b>		
Gulf Coast Aquifer	207,599	207,599
<b>Groundwater subtotal</b>	<b>207,599</b>	<b>207,599</b>
<b>Region total</b>	<b>209,431</b>	<b>209,431</b>

*Note:* Water supply sources are listed individually if 10,000 acre-feet per year or greater in 2010. Only includes supplies that are physically and legally available to users during a drought of record.

### **Select Policy Recommendations**

- Establish fees for groundwater export from the region
- Base long-term groundwater availability on an aquifer's sustainable yield
- Subject any local groundwater used outside the region to the same protections as the basin of origin for surface water
- Recommend Lake Texana, Stage II, located on the Lavaca River, for designation as a unique reservoir site to meet needs in the Coastal Bend Region (but not in the Lavaca Region)

Table P.3. Water needs (acre-feet per year) by county and type of use in years 2010 and 2060

County	Total		Municipal		County-other		Manufacturing		Steam-electric		Mining		Irrigation		Livestock	
	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060	2010	2060
Jackson	15,735	15,834	-	-	-	-	-	-	-	-	-	-	15,735	15,834	-	-
Lavaca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wharton	34,920	16,145	-	-	-	-	-	-	-	-	-	-	34,920	16,145	-	-
Region	50,655	31,979	-	-	-	-	-	-	-	-	-	-	50,655	31,979	-	-

## **SELECT MAJOR WATER MANAGEMENT STRATEGIES**

*(See Appendix 2.1 for recommended strategy)*

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✪ **Temporary overdrafting the Gulf Coast Aquifer would provide 32,468 acre-feet in 2060 for agricultural needs—Implementation by: 2010; Capital Cost: \$0.**

### **Lavaca Planning Group Members and Interests Represented**

#### **Voting members during adoption of 2006 Regional Water Plan:**

Harrison Stafford, II (Chair), counties; Patrick Brzozowski, river authorities; John Butschek, municipalities; Gerald Clark, agriculture; Roy Griffin, electric generating utilities; Patrick Hertz, water utilities; Ronald Leck, counties; Jack Maloney, municipalities; Phillip Miller, counties; Paul Morkovsky, industries; Richard Ottis, industries; Wayne Popp, water districts; L.G. Raun, agriculture; Dean Schmidt, agriculture; Robert Shoemate, environmental; Larry Waits, agriculture; Ed Weinheimer, small business; Bob Weiss, public

#### **Former voting members during 2001-2006 planning cycle:**

Glen Blundell, counties; Kenneth Henneke, small business; Jack Nelson, river authorities; Terry Ramey, municipalities