

# LCRA Water Use Summary 2010



In 2010 the lower Colorado River basin saw a wet spring and tropical rains in the fall as well as months of very dry weather and below-average inflows to the Highland Lakes. The overall result was that LCRA customers used less stored water than in 2009. This resulted in higher lake levels in 2010 than in 2009 when the basin experienced extreme drought conditions most of the year. This report includes all sources of water managed by LCRA — both the Highland Lakes and rights to river water — as well as City of Austin water rights that are backed up by LCRA.

**Evaporation** - Hot temperatures and windy days can significantly increase evaporation of water. In 2010 an estimated 183,923 acre-feet evaporated from the six Highland Lakes (Buchanan, Inks, LBJ, Marble Falls, Travis, and Austin).

## Water use by source

LCRA uses water in the river and the Highland Lakes to meet customers' needs. Water supplied from the Highland Lakes comes from lakes Buchanan and Travis, the water supply reservoirs in the Highland Lakes chain. In 2010 more water was available in the river, compared to 2009, and less demands were placed on water stored in the Highland Lakes to meet customers' needs.

## Highland Lakes Water Use

LCRA provides water from the Highland Lakes to customers through contracts. There are two types of contracts — interruptible and firm water supply contracts. Water is also supplied from the Highland Lakes to help maintain environmental flows and to meet emergency needs for hydroelectric power. In 2010, a total of 320,996 acre-feet of water was supplied from the Highland Lakes.

Water rights	2010 Use
LCRA Garwood	88,895
LCRA South Texas Project	43,213
LCRA Lakeside	40,997
LCRA Gulf Coast	109,431
LCRA Pierce Ranch	9,147
LCRA Lakes Buchanan and Travis	320,996
<b>SUBTOTAL - LCRA</b>	<b>612,679</b>
City of Austin Water Rights	138,886
<b>TOTAL</b>	<b>751,565</b>

**Interruptible contracts** are primarily requested by agricultural customers. LCRA charges a lower rate for these customers, but they are subject to cutbacks during drought conditions. Interruptible agricultural customers in the lower basin used the most water of all customers in 2010 — 182,152 acre-feet or 57 percent of all water used from the Highland Lakes.

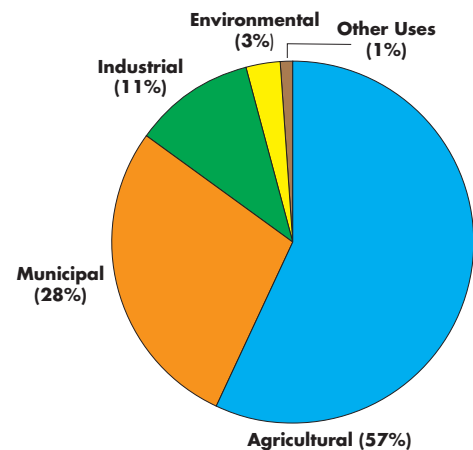
**Firm contracts** are requested by cities, businesses and industries that must rely on a long-term water supply. LCRA charges a higher rate for firm supply, which is expected to be available through a repeat of the worst drought our region has experienced, the 1947-1957 Drought of Record. In 2010, a total of 119,213 acre-feet of water was supplied from the Highland Lakes to firm customers.

**Environmental and emergency hydroelectric releases** — LCRA releases water from the Highland Lakes to meet minimum flow requirements for the Colorado River downstream of Austin and for Matagorda Bay. In 2010 — 19,279 acre-feet was released for those environments, and 352 acre-feet was released to meet emergency needs for electricity.

## Colorado River Water Use

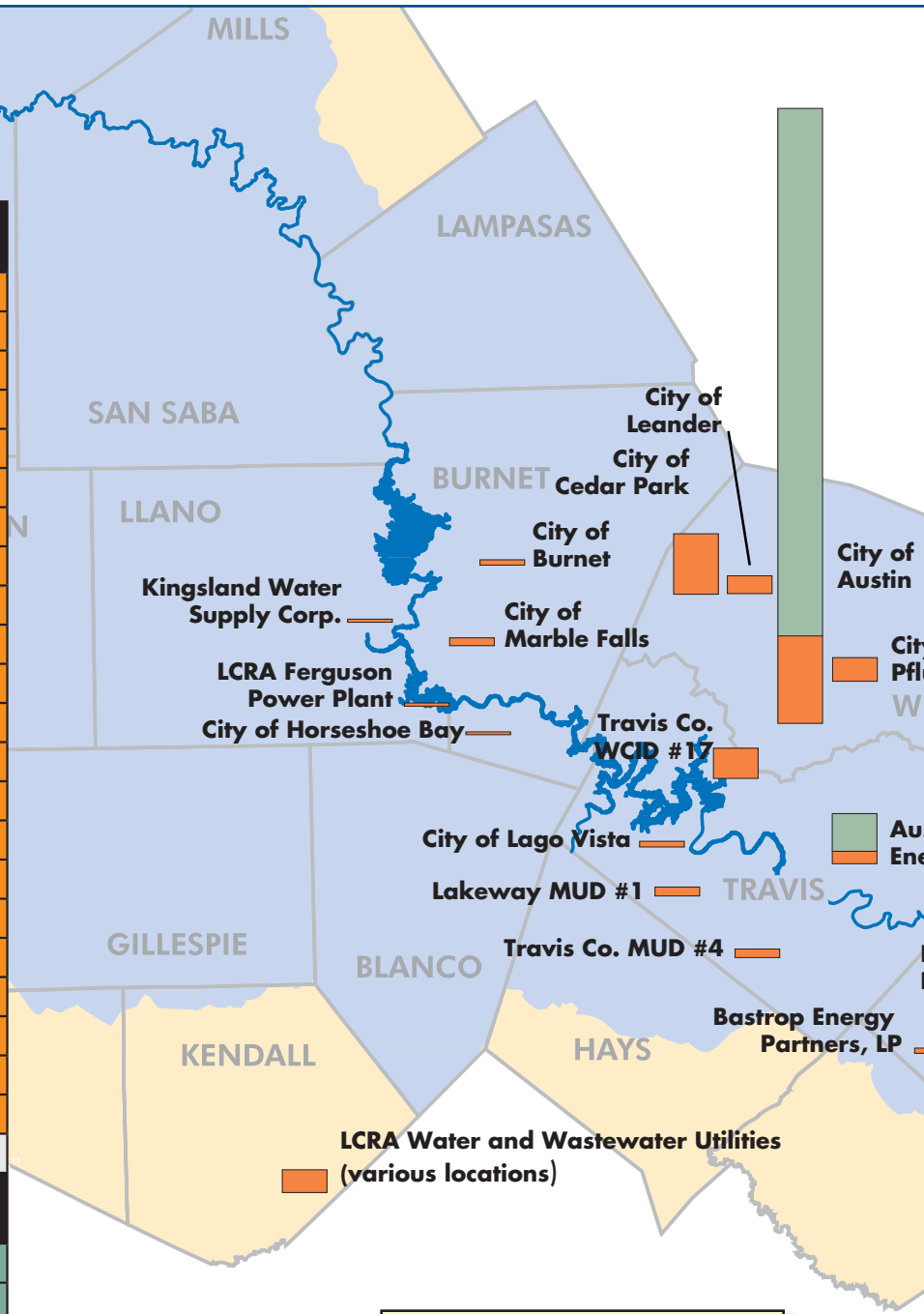
LCRA owns and manages additional supplies of water in the Colorado River. In 2010, a total of 291,683 acre-feet of water was supplied from the Colorado River for agricultural and industrial uses under these water rights.

**2010 Water Use  
LCRA and Austin Water Rights  
(Percentage of total use)**



## 2010 Total Water Pumped by LCRA's Firm Water Customers

Water Supplied from the Highland Lakes	Volume (acre-feet)
City of Austin	13,792
City of Cedar Park	12,360
LCRA Fayette Power Project (FPP)	12,184
Travis County WCID No. 17	5,957
Underground Services Markham, L.P.	5,660
City of Pflugerville	5,253
LCRA Water and Wastewater Utilities	5,105
City of Leander	3,763
LCRA Sim Gideon Power Plant	2,760
Austin Energy Fayette Power Project (FPP)	2,318
Oxea Corporation	2,263
Lakeway MUD No. 1	2,069
Travis County MUD No. 4	1,784
City of Marble Falls	1,659
City of Lago Vista	1,301
Bastrop Energy Partners	1,075
GenTex Power Corporation	1,073
City of Burnet	950
Kingsland Water Supply Corporation	647
LCRA Ferguson Power Plant	636
City of Horseshoe Bay	543
All Other Firm Customers	19,895
<b>Subtotal from Highland Lakes</b>	<b>103,047</b>
Water Supplied from Customer Water Rights	Volume (acre-feet)
City of Austin	131,179
South Texas Project	43,213
Austin Energy	7,473
<b>Subtotal from Customer Water Rights</b>	<b>181,865</b>
<b>Total, from Both Sources (acre-feet)</b>	<b>284,912</b>



**Emergency releases** – On occasion, the Electric Reliability Council of Texas requests LCRA to release water through its hydroelectric generators to meet short-term, urgent power needs in the state. In 2010 LCRA released 352 acre-feet of water from Lake Travis to meet emergency needs during electrical power shortages.

LCRA estimates that 16,166 acre-feet were released from the Highland Lakes and not used by firm customers because the water was lost to evaporation, seeped into the banks or changed conditions that eliminated the need for the water. When this amount is added to the water pumped, the total water supplied from the Highland Lakes to LCRA's firm water customers was 119,213 acre-feet in 2010.

### Legend

Colorado River

**Firm Water Use:**

- Water from Highland Lakes (AF)
- Water from Run of River (AF)

**Agricultural Irrigation:**

- Water pumped from releases made under the LCRA's Highland Lakes water rights (AF)
- Water pumped under the downstream water rights (AF)

0 25 50 Miles

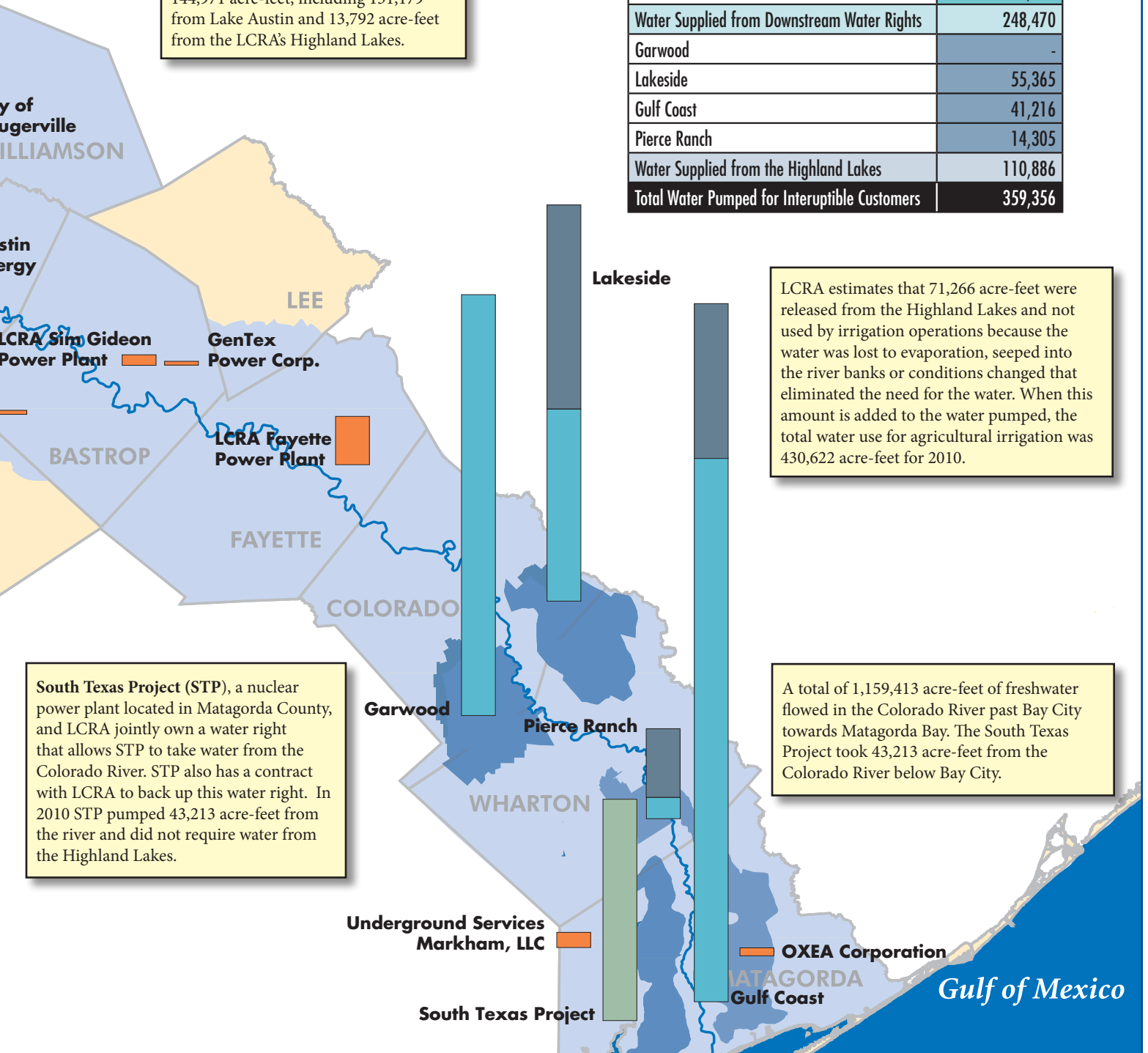
0 25 50 Kilometers

# Customer Water Use in 2010

City of Austin owns a water right that allows it to pump water from Lake Austin and the Colorado River. The City also relies on water from the Highland Lakes under a contract with LCRA. In 2010 the City's municipal use was 144,971 acre-feet, including 131,179 from Lake Austin and 13,792 acre-feet from the LCRA's Highland Lakes.

## Water Pumped for LCRA's Interruptible Customers (Agriculture)

Garwood	88,895
Lakeside	40,997
Gulf Coast	109,431
Pierce Ranch	9,147
Water Supplied from Downstream Water Rights	248,470
Garwood	-
Lakeside	55,365
Gulf Coast	41,216
Pierce Ranch	14,305
Water Supplied from the Highland Lakes	110,886
<b>Total Water Pumped for Interruptible Customers</b>	<b>359,356</b>



LCRA estimates that 71,266 acre-feet were released from the Highland Lakes and not used by irrigation operations because the water was lost to evaporation, seeped into the river banks or conditions changed that eliminated the need for the water. When this amount is added to the water pumped, the total water use for agricultural irrigation was 430,622 acre-feet for 2010.

South Texas Project (STP), a nuclear power plant located in Matagorda County, and LCRA jointly own a water right that allows STP to take water from the Colorado River. STP also has a contract with LCRA to back up this water right. In 2010 STP pumped 43,213 acre-feet from the river and did not require water from the Highland Lakes.

A total of 1,159,413 acre-feet of freshwater flowed in the Colorado River past Bay City towards Matagorda Bay. The South Texas Project took 43,213 acre-feet from the Colorado River below Bay City.

Underground Services Markham, LLC  
South Texas Project

OXEA Corporation  
Gulf Coast

Gulf of Mexico

# How does 2010 compare to 2009?

Water Use Type	<u>2009</u>	<u>2010</u>
<b>Municipal Water Use</b>	<b>218,200</b>	<b>209,300</b>
Water from the Highland Lakes ( <i>LCRA only</i> )	110,100	78,100
Water from the Colorado River ( <i>Austin only</i> )	108,100	131,200
<b>Industrial Water Use</b>	<b>112,700</b>	<b>86,300</b>
Water from the Highland Lakes ( <i>LCRA only</i> )	33,200	35,600
Water from the Colorado River ( <i>LCRA/STP and Austin</i> )	79,500	50,700
<b>Agricultural Water Use</b>	<b>509,800</b>	<b>430,600</b>
Water from the Highland Lakes ( <i>LCRA only</i> )	367,900	182,200
Water from the Colorado River ( <i>LCRA only</i> )	141,900	248,500
<b>Recreational &amp; Firm Irrigation</b> ( <i>LCRA and Austin</i> )	<b>5,900</b>	<b>5,800</b>
<b>Environment*</b> ( <i>LCRA only</i> )	<b>32,600</b>	<b>19,300</b>
<b>Emergency Hydroelectric Releases</b> ( <i>LCRA only</i> )	<b>2,100</b>	<b>400</b>

**Why does LCRA release water from the Highland Lakes?** Releases are made for several reasons:

1. First, LCRA is legally obligated to pass water through the dams if a downstream senior water right holder is entitled to the water. Downstream senior water rights include those owned by LCRA and by the cities of Austin and Corpus Christi.
2. LCRA releases water to meet needs of customers such as the City of Austin, power plants and farmers.
3. LCRA releases water for environmental flow needs for the river and Matagorda Bay.

\*Dedicated environmental releases are the amounts of water released solely for the purpose of satisfying environmental needs. In addition, releases for downstream customers and runoff flowing into the river and bays help satisfy environmental needs.

## Learn more about the lower Colorado River

- Visit the Daily River Report at [www.lcra.org](http://www.lcra.org). Click button on right column.
- Visit [www.lcra.org/watersupply](http://www.lcra.org/watersupply) to learn about long-term planning.
- Visit [www.lcra.org/water/supply/contracts/index.html](http://www.lcra.org/water/supply/contracts/index.html) for a complete list of LCRA's firm water customers.