

# LCRA Water Use Summary 2009



Many factors affect water use in the lower Colorado River basin, but no factor has as profound an effect as the weather. The basin experienced extreme drought in 2009 - increasing evaporation from the lakes and driving up the demand for water to grow crops, cool power plants and sustain residential landscapes. This report gives a snapshot of 2009 water use.

**Evaporation** - Hot temperatures and windy days can significantly increase evaporation of water. In 2009 an estimated 154,044 acre-feet evaporated from LCRA's five Highland Lakes (Buchanan, Inks, LBJ, Marble Falls, and Travis).

## 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 2009 less water was available in the river because of drought conditions while higher demands were placed on water stored in the Highland Lakes to meet customers' needs. This report includes all sources of water managed by LCRA—both the Highland Lakes and rights to river water.

## 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 2009, a total of 551,714 acre-feet of water was supplied from the Highland Lakes.

Water rights	2009 use
LCRA Garwood	85,744
LCRA / South Texas Project	72,646
LCRA Lakeside	8,252
LCRA Gulf Coast	43,830
LCRA Pierce Ranch	4,094
LCRA Lakes Buchanan and Travis	551,714
<b>LCRA total</b>	<b>766,280</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 2009 — 367,920 acre-feet or 67 percent of all water used from the Highland Lakes.

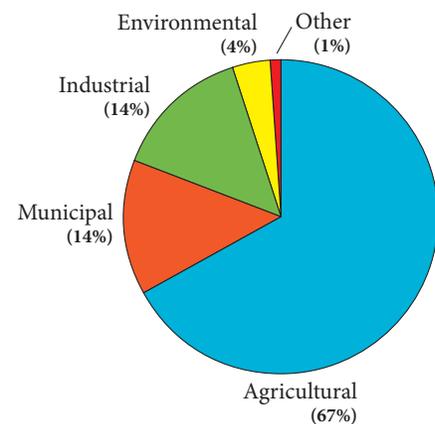
**Firm contracts** are requested by cities, businesses and industries that must rely on a long-term water supply. LCRA charges a higher rate for firm supply, which is expected to be available through a repeat of the worst drought our region has experienced, the 1947-1957 Drought of Record. Combined water use of firm customers was 149,137 acre-feet, but this use is growing as population and business increases in the region.

**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 2009 — 32,573 acre-feet was released for those environments, and 2,084 acre-feet was released to meet emergency needs for electricity.

## Colorado River Water Use

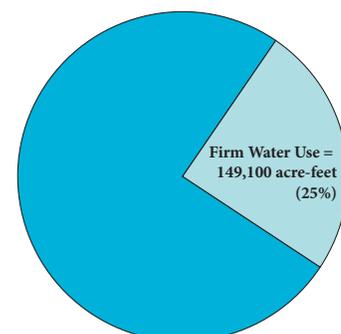
LCRA owns and manages additional supplies of water in the Colorado River. In 2009, a total of 214,566 acre-feet of water was supplied from the Colorado River for agricultural and industrial uses.

**2009 Water Use**  
(Percentage of all water use)



**2009 Firm Water Use**  
as part of Total Firm Supply

Total Firm Supply = 600,000 acre-feet



## Total Water Use by LCRA's Firm Water Customers

Water Supplied from the Highland Lakes	2009 Use**
Kingsland Water Supply Corporation	671
City of Horseshoe Bay	1,854
City of Marble Falls	1,734
Travis County MUD #04	1,804
GenTex Power Corporation	1,270
Lakeway MUD #1	1,844
Bastrop Energy Partners, LP	1,666
OXEA Corporation	2,955
Austin Energy	5,035
City of Burnet	1,146
City of Lago Vista	1,489
Travis County WCID #17	6,387
LCRA Sim Gideon Power Plant	3,265
LCRA Water and Wastewater Utilities	5,742
City of Pflugerville	6,033
Underground Services Markham, LLC	1,546
LCRA Ferguson Power Plant	670
City of Cedar Park	12,910
City of Leander	3,784
LCRA Fayette Power Project (FPP)	12,938
City of Austin	48,527
All other firm customers	19,396
<b>Subtotal firm customers</b>	<b>142,666</b>

Water Supplied from Run of River	2009 Use**
South Texas Project	72,646
City of Austin	107,733
Austin Energy	6,836
<b>Subtotal</b>	<b>187,215</b>

**Total, Both Sources 329,881**

\*\*acre-feet

LCRA estimates that 6,471 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 conditions changed 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 149,137 acre-feet in 2009.

### Legend

 Colorado River

#### Firm Water Use:

 2009 Water from Highland Lakes (AF)

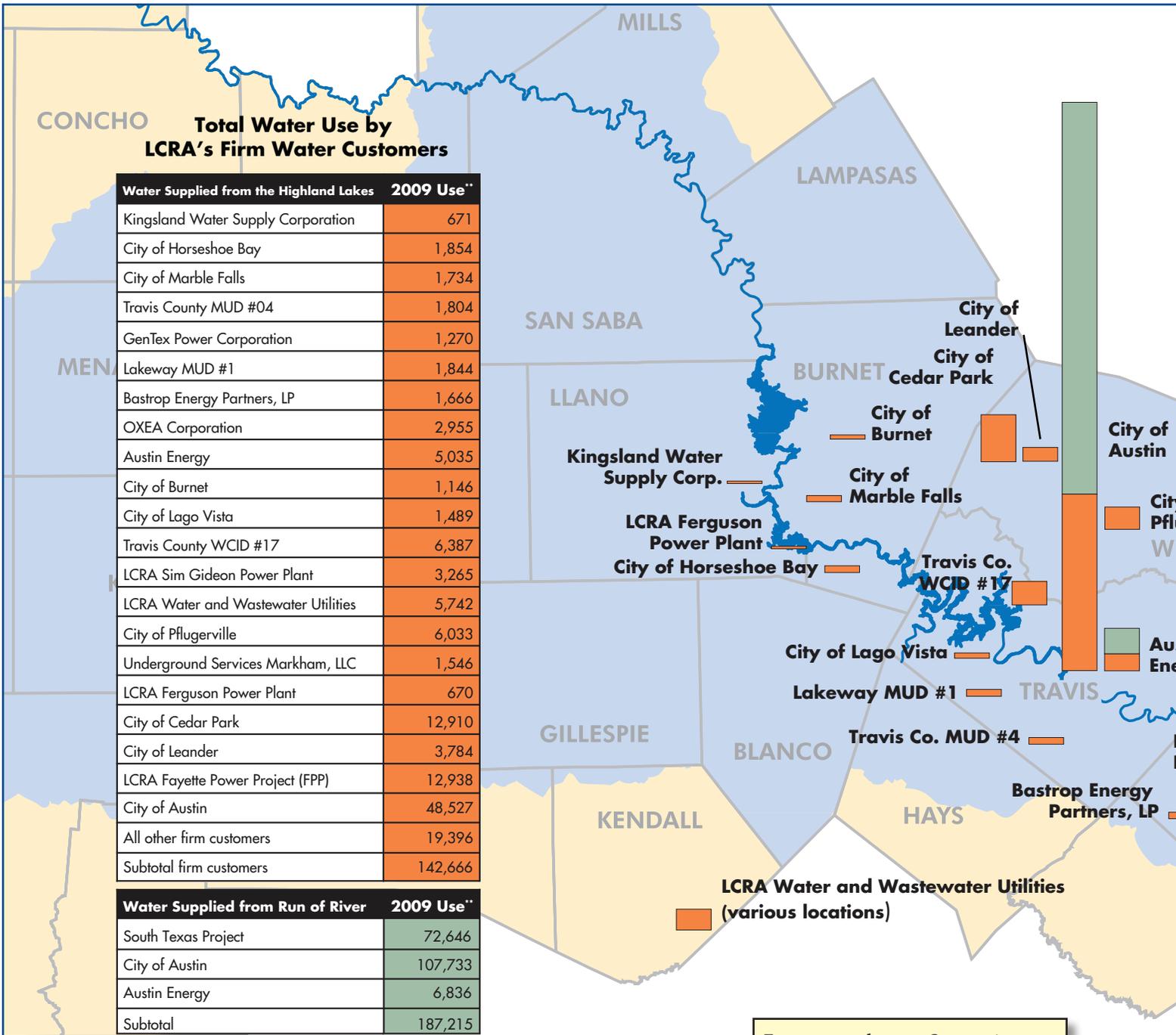
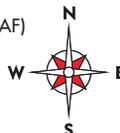
 2009 Water from Run of River (AF)

#### 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



**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 2009 LCRA released 2,100 acre-feet of water from Lake Travis to meet emergency needs during electrical power shortages.

# Customer Water Use in 2009

City of Austin owns a water right that allows it to pump water from the Colorado River. The City also relies on water from the Highland Lakes under a contract with LCRA. In 2009 the City's municipal use was 107,733 acre-feet from the Colorado River and 48,527 acre-feet from the LCRA's Highland Lakes.

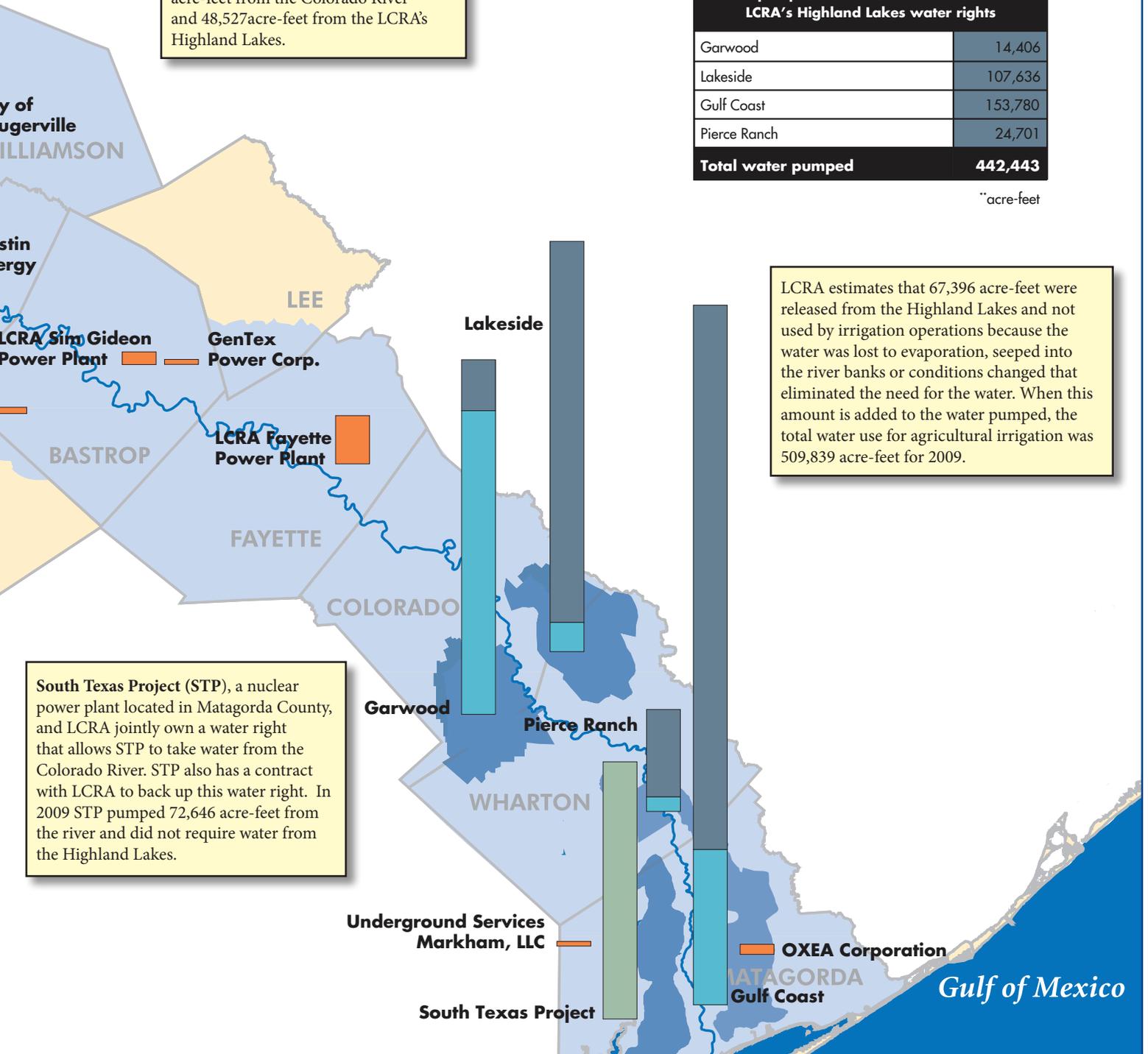
## Agricultural Irrigation

Water pumped under downstream water rights	
Garwood	85,744
Lakeside	8,252
Gulf Coast	43,830
Pierce Ranch	4,094
Water pumped from releases made under the LCRA's Highland Lakes water rights	
Garwood	14,406
Lakeside	107,636
Gulf Coast	153,780
Pierce Ranch	24,701
<b>Total water pumped</b>	<b>442,443</b>

\*\*acre-feet

LCRA estimates that 67,396 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 509,839 acre-feet for 2009.

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 2009 STP pumped 72,646 acre-feet from the river and did not require water from the Highland Lakes.



# How does 2009 compare to 2008?

Water use type	2008	2009
<b>Municipal water use</b>	<b>232,800</b>	<b>217,800</b>
Water from the Highland Lakes	107,100	110,100
Water from the river (City of Austin)	125,700	107,700
<b>Industrial water use</b>	<b>58,000</b>	<b>105,800</b>
Water from the Highland Lakes	47,700	33,200
Water from the river (LCRA/STP)	10,300	72,600
<b>Agricultural water use</b>	<b>571,800</b>	<b>509,800</b>
Water from the Highland Lakes	363,000	367,900
Water from the river	208,800	141,900
<b>Recreational &amp; Firm Irrigation</b>	<b>3,600</b>	<b>5,800</b>
Water from the Highland Lakes	3,600	5,800
<b>Environment*</b>	<b>71,200</b>	<b>32,600</b>
<b>Emergency Releases</b>	<b>5,600</b>	<b>2,100</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 amount 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 [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.
- For a complete list of LCRA's firm water customers visit [www.lcra.org/water/supply/contracts/index.html](http://www.lcra.org/water/supply/contracts/index.html).