

# How does 2014 compare?

TYPE OF WATER USE	2009	2010	2011	2012	2013	2014
<b>Municipal Water Use</b>	<b>218,202</b>	<b>209,265</b>	<b>246,601</b>	<b>228,570</b>	<b>213,691</b>	<b>203,668</b>
Water from the Highland Lakes	110,150	78,091	184,889	122,360	133,317	107,996
Water from the Colorado River	108,052	131,174	61,712	106,210	80,374	95,672
<b>Industrial Water Use</b>	<b>112,716</b>	<b>86,258</b>	<b>60,272</b>	<b>117,977</b>	<b>96,253</b>	<b>72,327</b>
Water from the Highland Lakes	33,234	35,572	53,757	19,133	34,296	14,482
Water from the Colorado River	79,482	50,686	6,515	98,844	61,957	57,845
<b>Agricultural Water Use</b>	<b>509,839</b>	<b>430,622</b>	<b>529,580</b>	<b>102,668</b>	<b>108,296</b>	<b>88,401</b>
Water from the Highland Lakes	367,920	182,152	433,251	8,896	22,346	15,952
Water from the Colorado River	141,919	248,470	96,329	93,772	85,950	72,449
<b>Recreational and Firm Irrigation</b>	<b>5,945</b>	<b>5,784</b>	<b>9,099</b>	<b>6,546</b>	<b>5,680</b>	<b>5,853</b>
Water from the Highland Lakes	5,753	5,550	8,759	6,338	5,535	5,599
Water from the Colorado River	192	234	340	208	145	254
<b>Environment*</b>	<b>32,573</b>	<b>19,279</b>	<b>33,433</b>	<b>31,285</b>	<b>33,465</b>	<b>4,582</b>
(from the Highland Lakes)						
<b>Emergency Hydroelectric Releases</b>	<b>2,084</b>	<b>352</b>	<b>345</b>	<b>0</b>	<b>0</b>	<b>490</b>
(from the Highland Lakes)						
<b>TOTAL WATER USE</b>	<b>881,359</b>	<b>751,560</b>	<b>879,330</b>	<b>487,046</b>	<b>457,385</b>	<b>375,321</b>

## Why does LCRA release water from the Highland Lakes?

Releases are made for several reasons:

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.

LCRA releases water to meet the needs of customers such as cities, power plants and farmers.

LCRA releases water for environmental flow needs for the river and Matagorda Bay as required by the state-approved 2010 Water Management Plan.

In general, LCRA releases water through hydroelectric generating units in order to produce electrical energy while supplying water for other demands. In the event of an emergency shortage of electricity, water may be released for hydrogeneration absent a downstream demand.

LCRA releases water through Mansfield Dam for flood control purposes in accordance with U.S. Army Corps of Engineers' regulations and protocols. LCRA made no flood releases from Mansfield Dam during 2014.

\*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).
- Visit [www.lcra.org/watersupply](http://www.lcra.org/watersupply) to learn about long-term water planning.
- Visit [www.lcra.org/water/supply/contracts](http://www.lcra.org/water/supply/contracts) for a complete list of LCRA's firm water contracts.



# LCRA Water Use Summary 2014



The severe drought affecting the lower Colorado River basin continued in 2014 for the seventh straight year, surpassing the severity of the historic drought from 1947 to 1957. In 2014, total inflows into the Highland Lakes were the second lowest since the completion of Mansfield Dam in 1942. Inflows are the estimated amount of water flowing into the Highland Lakes from rivers and tributaries based on four streamflow gauges. Six of the 10 lowest annual inflows have occurred during this drought.

In 2014, LCRA continued to take significant steps to preserve and increase water supplies for the lower Colorado River basin. With permission from the Texas Commission on Environmental Quality, LCRA cut off Highland Lakes water for most downstream agricultural irrigation for the third year in a row, and for the first time, limited the amount of dedicated releases from the Highland Lakes for environmental flows for the blue sucker fish, which is listed as a state-threatened species. LCRA also required its firm water customers to continue limiting their customers' outdoor watering to once a week.

LCRA completed four groundwater wells on the Lost Pines Power Park property it owns in Bastrop County to reduce the need for the power plants there to use water from the Highland Lakes. LCRA also broke ground on the Lane City Reservoir in Wharton County, the first significant new water supply reservoir in the region in decades. The reservoir could add up to 90,000 acre-feet per year to the region's water supply.

**Water use by source** — LCRA uses two basic sources of water to meet customers' needs: water naturally flowing in the Colorado River, and water stored in the Highland Lakes. When the flow of the Colorado River is greater than the needs for water — for example, during floods upstream of Austin — LCRA stores the excess water in lakes Buchanan and Travis, the water supply reservoirs in the Highland Lakes chain. In 2014, the Colorado River's flow was well below normal, and the gauged inflows into the Highland Lakes were the second lowest since 1942. Water stored in the Highland Lakes helped meet about 40 percent of the total needs for water in the lower Colorado River basin in 2014.

**Highland Lakes water use** — Contracts for water stored in the Highland Lakes can be for firm or interruptible supply. LCRA also uses water from the Highland Lakes to help maintain environmental flows and to produce hydroelectric energy. In 2014, the Highland Lakes supplied 149,101 acre-feet of water for all uses.

**Firm water contracts** — These contracts supply cities, businesses and industries that need a reliable long-term water supply. Firm supply is expected to be available through a repeat of the driest conditions the region has experienced. Firm customers accounted for 128,077 acre-feet, or about 85.9 percent of all water used from the Highland Lakes, in 2014.

**Interruptible water contracts** — These contracts primarily supply agricultural customers. Interruptible water is subject to cutbacks during drought conditions. Interruptible agricultural customers used 15,952 acre-feet of water, or about 10.7 percent of all water used from the Highland Lakes, in 2014.

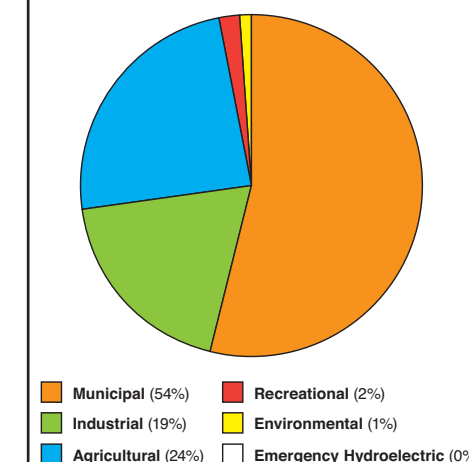
**Environmental and emergency hydroelectric releases** — LCRA releases water from the Highland Lakes to meet environmental flow requirements for the Colorado River downstream of Austin and for Matagorda Bay. Environmental flow releases accounted for 4,582 acre-feet, or about 3.1 percent of all water used from the Highland Lakes, in 2014. About 490 acre-feet, or 0.3 percent of water released from the Highland Lakes, was used solely to meet emergency needs for electricity in 2014.

**Colorado River water use** — In addition to the rights to water from the Highland Lakes, LCRA owns and manages other rights to water from the Colorado River. In 2014, a total of 130,144 acre-feet of water was supplied from the Colorado River for agricultural, municipal and industrial uses under these water rights.

**Evaporation** — In 2014, an estimated 114,294 acre-feet of water evaporated from the six Highland Lakes — Buchanan, Inks, LBJ, Marble Falls, Travis and Austin. This is less than in previous years because as the drought has continued, the combined average surface area of the Highland Lakes has decreased, which has, in turn, decreased the amount of evaporation.

Water Rights	2014 Use (in acre-feet)
LCRA Garwood	67,836
LCRA South Texas Project	35,994
LCRA Lakeside	0
LCRA Gulf Coast	21,701
LCRA Pierce Ranch	4,613
LCRA Lakes Buchanan and Travis	149,101
<b>SUBTOTAL — LCRA</b>	<b>279,245</b>
City of Austin Water Rights	95,896
Bastrop Energy Partners, LP	180
<b>TOTAL</b>	<b>375,321</b>

**2014 Water Use LCRA and Other Water Rights**  
(Percentage of total use)



# Customer Water Use in 2014

## 2014 Total Water Pumped by LCRA's Firm Water Customers

Water supplied from the Highland Lakes	Volume (acre-feet)
City of Austin, Municipal & Parks	47,584
City of Cedar Park	12,600
LCRA Power Plants, includes:	7,585
• Fayette Power Project (LCRA share)	6,469
• Sim Gideon Power Plant	151
• Lost Pines 1 Power Project	59
• Thomas C. Ferguson Power Plant	906
Travis County WCID No. 17	6,125
West Travis County Public Utility Agency	4,885
City of Leander	4,652
Domestic Water Users on Highland Lakes	4,582
Austin Energy (AE) Power Plants, includes:	3,049
• Fayette Power Project (AE share)	2,149
• Decker Power Plant	900
City of Pflugerville	2,710
Lakeway MUD	2,033
City of Horseshoe Bay	1,722
City of Lago Vista	1,647
Travis County MUD No. 4	1,612
City of Marble Falls	1,595
Bastrop Energy Partners, LP	1,261
Horseshoe Bay Resort, LTD	1,105
Loop 360 WSC	997
Hurst Creek MUD (The Hills)	897
Other Firm Customers	12,509
• Diverted from Lake Buchanan	1,104
• Diverted from Inks Lake	458
• Diverted from Lake LBJ	1,809
• Diverted from Lake Marble Falls	0
• Diverted from Lake Travis	3,055
• Diverted from Lake Austin	5,189
• Diverted Downstream of Lake Austin	894
<b>Subtotal from Highland Lakes</b>	<b>**119,150</b>
Water supplied from other water rights	Volume (acre-feet)
City of Austin / Austin Energy:	95,896
• Municipal & Parks	89,860
• Fayette Power Project (AE share)	3,618
• Decker Power Plant	2,418
South Texas Project Nuclear Operating Co.	35,994
Gulf Coast Municipal & Industrial Use, includes:	21,701
• Underground Services Markham, LP	7,915
• Oxea Corporation	2,547
• City of Pflugerville*	6,066
• Bastrop Energy Partners, LP*	884
• Fayette Power Project (LCRA share)*	3,522
• Sim Gideon Power Plant*	552
• Lost Pines 1 Power Project*	215
Bastrop Energy Partners, LP	180
<b>Subtotal from other water rights</b>	<b>153,771</b>
<b>Total from both sources</b>	<b>272,921</b>

**Emergency releases** — On occasion, LCRA releases water through its hydroelectric generators to meet short-term, urgent power needs in the state. LCRA released about 490 acre-feet of water from the Highland Lakes due to emergency electrical power needs in 2014.

**The City of Austin** owns several water rights that allow it to pump water from the Colorado River. The city also relies on water from the Highland Lakes under a contract with LCRA. In 2014, the city's municipal and park irrigation use was 137,444 acre-feet, including 89,860 acre-feet diverted under Austin's water right from the Colorado River at Lake Austin and 47,584 acre-feet obtained under contract with LCRA from the Highland Lakes.

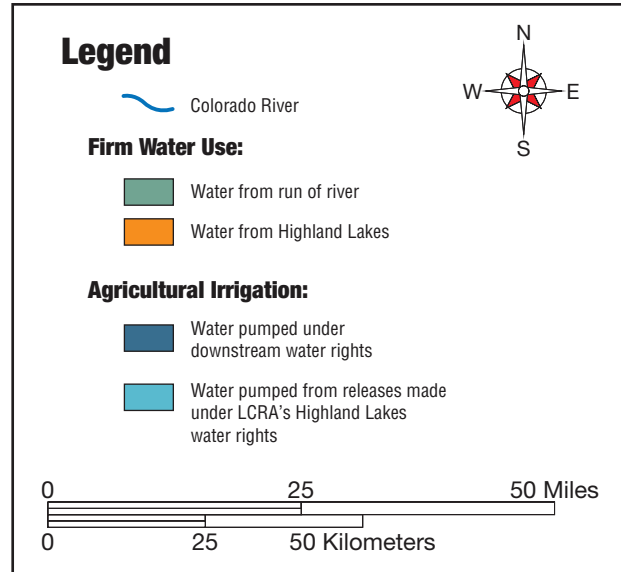
**\*\*Firm water released but not used** — LCRA estimates that 8,927 acre-feet were released from the Highland Lakes and not pumped by firm customers because the water was lost to evaporation, seeped into the banks or was not needed because of changing conditions. When this amount is added to the water pumped, the total water supplied to LCRA's firm water customers in 2014 was 128,077 acre-feet.

## 2014 Total Water Pumped for LCRA's Interruptible Water Customers (Agriculture)

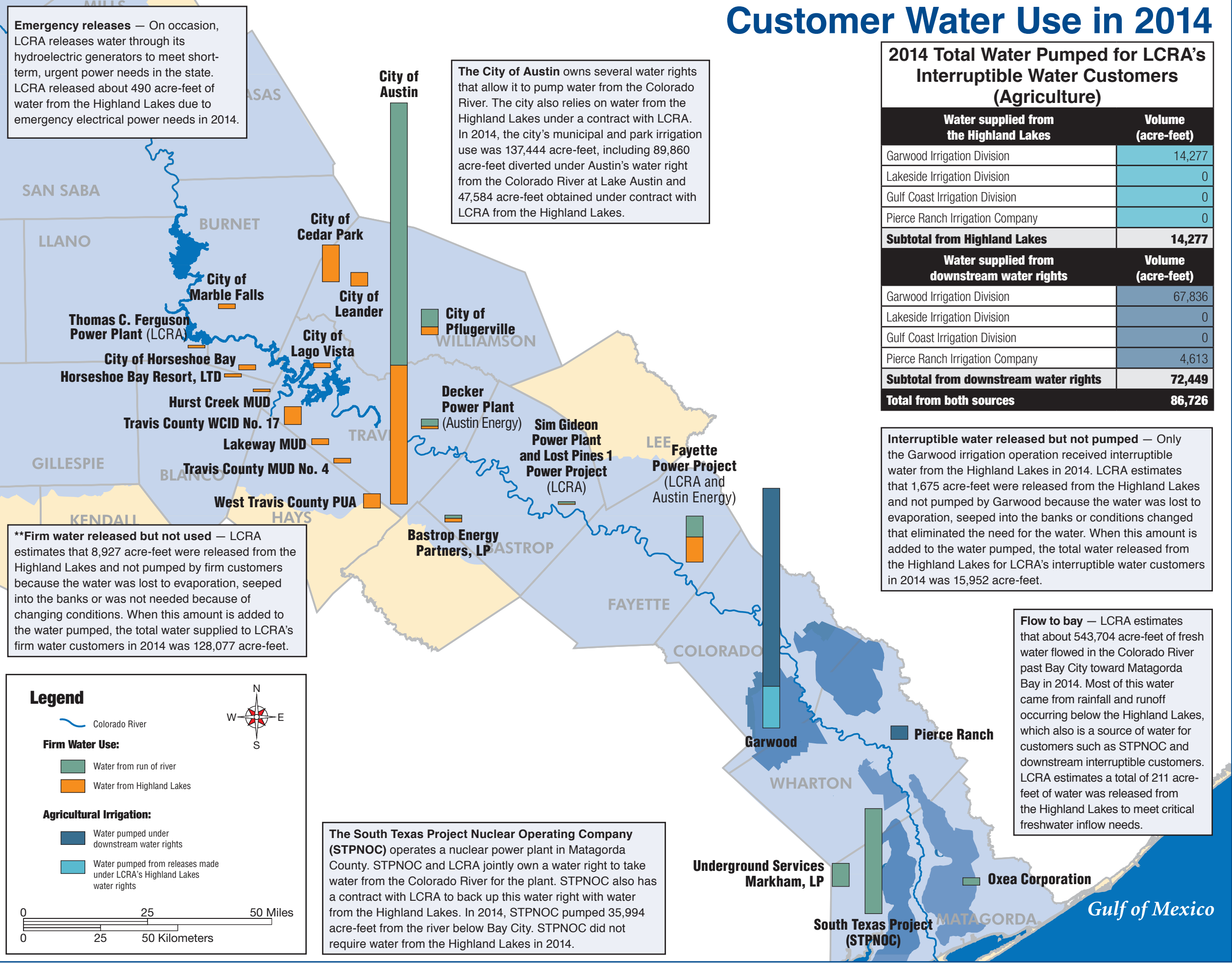
Water supplied from the Highland Lakes	Volume (acre-feet)
Garwood Irrigation Division	14,277
Lakeside Irrigation Division	0
Gulf Coast Irrigation Division	0
Pierce Ranch Irrigation Company	0
<b>Subtotal from Highland Lakes</b>	<b>14,277</b>
Water supplied from downstream water rights	Volume (acre-feet)
Garwood Irrigation Division	67,836
Lakeside Irrigation Division	0
Gulf Coast Irrigation Division	0
Pierce Ranch Irrigation Company	4,613
<b>Subtotal from downstream water rights</b>	<b>72,449</b>
<b>Total from both sources</b>	<b>86,726</b>

**Interruptible water released but not pumped** — Only the Garwood irrigation operation received interruptible water from the Highland Lakes in 2014. LCRA estimates that 1,675 acre-feet were released from the Highland Lakes and not pumped by Garwood 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 released from the Highland Lakes for LCRA's interruptible water customers in 2014 was 15,952 acre-feet.

**Flow to bay** — LCRA estimates that about 543,704 acre-feet of fresh water flowed in the Colorado River past Bay City toward Matagorda Bay in 2014. Most of this water came from rainfall and runoff occurring below the Highland Lakes, which also is a source of water for customers such as STPNOC and downstream interruptible customers. LCRA estimates a total of 211 acre-feet of water was released from the Highland Lakes to meet critical freshwater inflow needs.



**The South Texas Project Nuclear Operating Company (STPNOC)** operates a nuclear power plant in Matagorda County. STPNOC and LCRA jointly own a water right to take water from the Colorado River for the plant. STPNOC also has a contract with LCRA to back up this water right with water from the Highland Lakes. In 2014, STPNOC pumped 35,994 acre-feet from the river below Bay City. STPNOC did not require water from the Highland Lakes in 2014.



\* Temporary water use permit allowed 11,239 acre-feet of water authorized by the Gulf Coast water right to be diverted for municipal and industrial purposes at other locations in 2014.