

How does 2013 compare?

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

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 the 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.
- Visit www.lcra.org/watersupply to learn about long-term planning.
- Visit www.lcra.org/water/supply/contracts for a complete list of LCRA’s firm water contracts.



LCRA Water Use Summary 2013



The severe drought affecting the lower Colorado River basin continued in 2013 for the sixth year. Because of the drought, in 2013 the amount of water flowing into the Highland Lakes from the river and tributaries, called inflows, was the second lowest on record.

In order for water to fill the lakes, it must fall in or above the lakes in their watershed, an area upstream of Austin stretching north past San Saba and west past Fredericksburg and Junction. There was significant rain in the lower Colorado River basin in 2013, including storms powerful enough to cause damaging floods in Austin and other communities late in the year. However, much of the heavy rain in 2013 fell in Austin or downstream of Austin, where it flowed into Lake Austin, Lady Bird Lake or the Colorado River downstream of the Highland Lakes. That water cannot be captured upstream in lakes Travis and Buchanan, the Highland Lakes reservoirs, and flows down the Colorado River toward Matagorda Bay.

From 2008 to 2013, total inflows into the Highland Lakes were only 33 percent of the historical average. This is the lowest total inflows for any six-year period since the completion of Mansfield Dam, forming Lake Travis, in 1942.

In response to the ongoing drought, the Lower Colorado River Authority (LCRA) instituted temporary drought measures for the second consecutive year. These measures, approved by the Texas Commission on Environmental Quality, cut off Highland Lakes water to most interruptible customers in 2013.

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 – LCRA stores the excess water in lakes Buchanan and Travis, the water supply reservoirs in the Highland Lakes chain. In 2013, the flow of the Colorado River was well below average. Water stored in the Highland Lakes helped meet about 50 percent of the total needs for water in the lower Colorado River basin.

Highland Lakes water use — LCRA contracts with customers to provide water stored in the Highland Lakes. Contracts for stored water can be for either firm or interruptible supply. LCRA also uses water from the Highland Lakes to help maintain environmental flows and for hydroelectricity to meet emergency needs for power, when ordered to do so by the Electric Reliability Council of Texas. In 2013, the Highland Lakes supplied 228,959 acre-feet of water.

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 worst drought our region has experienced, the 1947-1957 Drought of Record. Firm customers accounted for 173,148 acre-feet, or about 75.6 percent of all water used from the Highland Lakes in 2013.

Interruptible water contracts — These contracts primarily supply agricultural customers. Interruptible water is subject to cutbacks during drought conditions. Interruptible agricultural customers used 22,346 acre-feet of water, or about 9.8 percent of all water used from the Highland Lakes in 2013.

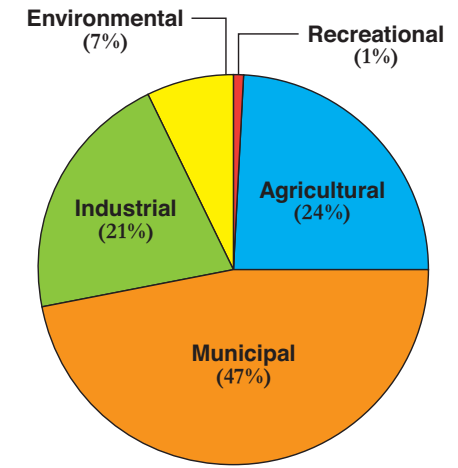
Environmental and emergency hydroelectric releases — LCRA releases water from the Highland Lakes to meet environmental flow requirements for the Colorado River downstream of Austin and for Matagorda Bay. Environmental flow releases accounted for 33,465 acre-feet, or about 14.6 percent of all water used from the Highland Lakes. No water was released from the Highland Lakes to meet emergency needs for electricity in 2013.

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 2013, a total of 141,217 acre-feet of water was supplied from the Colorado River for agricultural, municipal and industrial uses under these water rights.

Evaporation — In 2013, an estimated 120,899 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 evaporation.

Water Rights	2013 Use (in acre-feet)
LCRA Garwood	71,153
LCRA South Texas Project	44,019
LCRA Lakeside	0
LCRA Gulf Coast	21,944
LCRA Pierce Ranch	4,101
LCRA Lakes Buchanan and Travis	228,959
SUBTOTAL — LCRA	370,176
City of Austin Water Rights	87,029
Bastrop Energy Partners, LP	180
TOTAL	457,385

2013 Water Use
LCRA and Other Water Rights
(Percentage of total use)



Customer Water Use in 2013

2013 Total Water Pumped by LCRA's Firm Water Customers	
Water supplied from the Highland Lakes	Volume (acre-feet)
City of Austin, Municipal & Parks	61,629
LCRA Power Plants:	16,658
• Fayette Power Project (LCRA share)	12,732
• Sim Gideon Power Plant	2,904
• Lost Pines 1 Power Project	897
• Thomas C. Ferguson Power Plant	125
City of Cedar Park	12,738
Travis County WCID No. 17	6,476
Austin Energy (AE) Power Plants:	5,850
• Fayette Power Project (AE share)	4,069
• Decker Power Plant	1,781
City of Pflugerville	5,243
West Travis County Public Utility Agency	4,953
Domestic Water Users on Highland Lakes	4,582
City of Leander	4,525
Lakeway MUD	2,062
City of Horseshoe Bay	1,986
Travis County MUD No. 4	1,819
City of Marble Falls	1,673
City of Lago Vista	1,635
Bastrop Energy Partners, LP	1,422
Hurst Creek MUD (The Hills)	1,043
Loop 360 WSC	944
Horseshoe Bay Resort, LTD	926
Other Firm Customers	13,464
• Diverted from Lake Buchanan	959
• Diverted from Inks Lake	746
• Diverted from Lake LBJ	1,791
• Diverted from Lake Marble Falls	0
• Diverted from Lake Travis	2,996
• Diverted from Lake Austin	5,774
• Diverted Downstream of Lake Austin	1,198
Subtotal from Highland Lakes	**149,628
Water supplied from other water rights	Volume (acre-feet)
City of Austin / Austin Energy:	87,029
• Municipal & Parks	80,398
• Fayette Power Project (AE share)	3,728
• Decker Power Plant	2,903
South Texas Project Nuclear Operating Co.	44,019
Gulf Coast Municipal & Industrial Use:	11,248
• Underground Services Markham, LP	7,457
• Oxea Corporation	2,711
• City of Pflugerville*	121
• Bastrop Energy Partners, LP*	118
• Fayette Power Project (LCRA share)*	776
• Sim Gideon Power Plant*	50
• Lost Pines 1 Power Project*	15
Bastrop Energy Partners, LP	180
Subtotal from other water rights	142,476
Total from both sources (acre-feet)	292,104

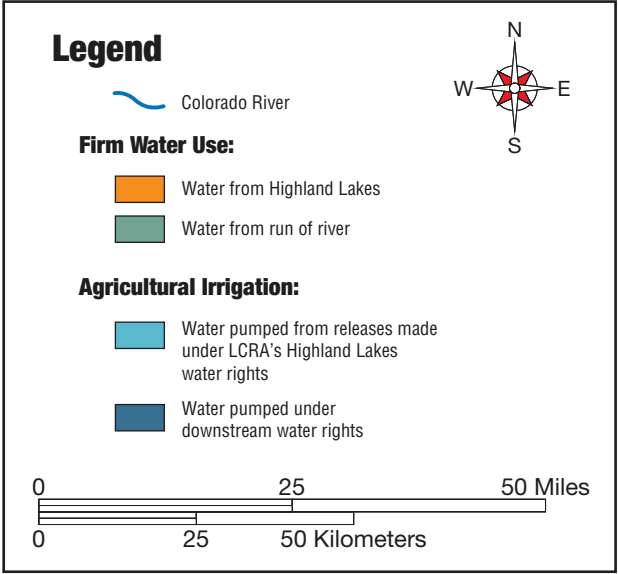
Emergency releases — On occasion, the Electric Reliability Council of Texas directs LCRA to release water through its hydroelectric generators to meet short-term, urgent power needs in the state. LCRA released no water from the Highland Lakes system due to emergency electrical power needs in 2013.

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 2013, the city's municipal and park irrigation use was 142,027 acre-feet, including 80,398 acre-feet diverted under Austin's water right from the Colorado River at Lake Austin and 61,629 acre-feet obtained under contract with LCRA from the Highland Lakes.

2013 Total Water Pumped for LCRA's Interruptible Water Customers (Agriculture)	
Water supplied from the Highland Lakes	Volume (acre-feet)
Garwood Irrigation Division	19,321
Lakeside Irrigation Division	0.0
Gulf Coast Irrigation Division	0.0
Pierce Ranch Irrigation Company	0.0
Subtotal from Highland Lakes	19,321
Water supplied from downstream water rights	Volume (acre-feet)
Garwood Irrigation Division	71,153
Lakeside Irrigation Division	0.0
Gulf Coast Irrigation Division	10,696
Pierce Ranch Irrigation Company	4,101
Subtotal from downstream water rights	85,950
Total from both sources (acre-feet)	105,271

Interruptible water released but not pumped — Only the Garwood irrigation system received interruptible water from the Highland Lakes in 2013. LCRA estimates that 3,025 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 2013 was 22,346 acre-feet.

Flow to bay — LCRA estimates that about 569,266 acre-feet of fresh water flowed in the Colorado River past Bay City toward Matagorda Bay in 2013. 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 14,686 acre-feet of water was released from the Highland Lakes in April, July and September 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 2013, STPNOC pumped 44,019 acre-feet from the river below Bay City in January, April, May, June, October, November and December. In 2013, STPNOC did not require water from the Highland Lakes.

* Temporary water use permit allowed 1,080 acre-feet of water authorized by the Gulf Coast water right to be diverted for municipal and industrial purposes at other locations in 2013.