

LCRA Water Use Summary 2023

The lower Colorado River basin experienced prolonged dry conditions and record-setting heat in 2023. While there were brief periods of above-average rainfall in late spring and late fall, for most of the year the basin received below-normal rainfall, with annual rainfall totals for portions of the eastern Hill Country, I-35 corridor and Coastal Plains 8 to 16 inches below average.

The drier-than-normal conditions meant there was little rain to run off and flow into lakes Buchanan and Travis. Total inflows in 2023 were the fourth lowest on record and only 18% of the annual average. Inflows for August 2023 were the lowest monthly inflows on record since the lakes were created.

Because of the drought, no water from the Highland Lakes was available to most interruptible agricultural customers in Colorado, Matagorda and Wharton counties in 2023.

Total water use from the Highland Lakes and lower Colorado River decreased from 2022 to 2023. Water use from the Highland Lakes decreased by 41%, with declines for most types of use. Diversions of water from the lower Colorado River increased by 17% from 2022 to 2023.

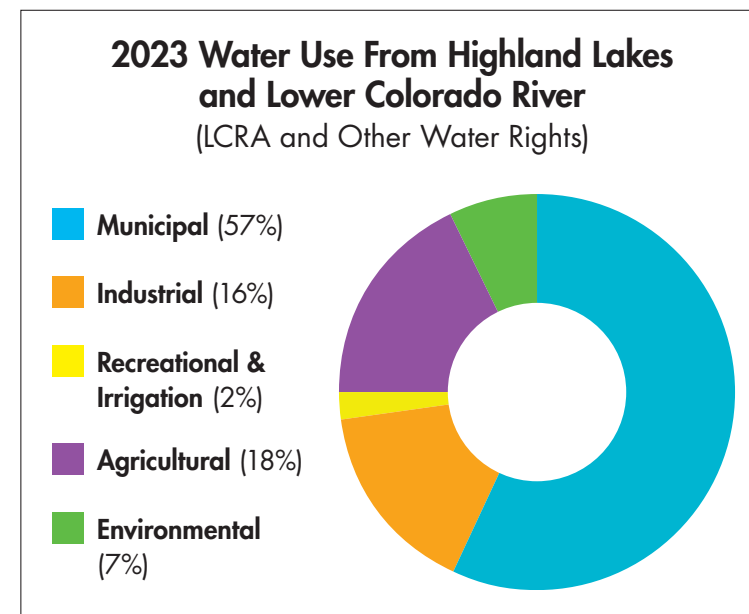


WATER USE BY SOURCE – LCRA uses two basic sources of water to meet customer and environmental needs: water stored in lakes Buchanan and Travis and water naturally flowing in the Colorado River. When the natural flow into the Highland Lakes is greater than customer needs and environmental obligations, LCRA stores the excess in lakes Buchanan and Travis for later use.

- Highland Lakes water use** – Contracts for water stored in lakes Buchanan and Travis can be for firm or interruptible supply. LCRA also supplies water from the Highland Lakes to help maintain environmental flows, as required by the state-approved Water Management Plan. In 2023, the Highland Lakes supplied 255,249 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 available through a repeat of the driest conditions the region has experienced. Firm customers used 210,883 acre-feet, or about 82% of all water used from the Highland Lakes, in 2023. This includes 296 acre-feet used in hydroelectric generation to meet emergency needs for electricity.
 - Interruptible water contracts** – These contracts supply agricultural customers. Interruptible water is subject to cutbacks during drought conditions, and its availability was curtailed in 2023 because of the drought. Interruptible customers used 9,079 acre-feet, or about 4% of all water used from the Highland Lakes, in 2023.
 - Environmental** – From time to time, LCRA releases water from the Highland Lakes to meet environmental flow requirements for the Colorado River downstream of Austin and for Matagorda Bay. In 2023, LCRA released 35,287 acre-feet, or about 14% of all water used from the Highland Lakes, for environmental flows.
- Colorado River water use** – In addition to the rights to water from the Highland Lakes, LCRA owns and manages other rights to the natural flow of the Colorado River. In 2023, a total of 147,517 acre-feet of water was supplied from the Colorado River for agricultural, municipal, industrial, recreation and firm irrigation uses under these water rights.

Water Rights	2023 Use (in acre-feet)
LCRA Garwood*	93,943
LCRA and South Texas Project*	42,138
LCRA Lakeside*	0
LCRA Gulf Coast*	9,560
LCRA Pierce Ranch*	1,876
LCRA Lakes Buchanan and Travis	255,249
SUBTOTAL – LCRA	402,766
City of Austin Water Rights*	80,360
Bastrop Energy Partners, LP*	180
SUBTOTAL – Other	80,540
TOTAL	483,306

*Water use from the Colorado River was 228,057 acre-feet.



HOW DOES 2023 COMPARE?

TYPE OF WATER USE*	2019	2020	2021	2022	2023
Municipal (firm customers)	234,648	251,970	249,011	266,848	274,946
Water from the Highland Lakes	112,701	144,531	118,821	198,971	187,868
Water from the Colorado River†	121,947	107,439	130,190	67,877	87,078
Industrial (firm customers)	57,030	50,343	113,594	51,790	77,141
Water from the Highland Lakes	9,157	18,593	12,390	22,722	15,974
Water from the Colorado River†	47,873	31,750	101,204	29,068	61,167
Recreational & Irrigation (firm customers)	7,013	7,568	4,204	6,898	7,041
Water from the Highland Lakes	6,766	7,413	4,204	6,898	7,041
Water from the Colorado River	247	155	0	0	0
Agricultural (interruptible customers)	219,467	247,573	171,900	258,704	88,891
Water from the Highland Lakes	27,319	84,472	45,109	160,213	9,079
Water from the Colorado River	192,148	163,101	126,791	98,491	79,812
Environmental‡	61,954	115,586	31,317	40,510	35,287
(from the Highland Lakes)					
TOTAL WATER USE	580,112	673,040	570,026	624,750	483,306

* Water use is in acre-feet.

† Reported use includes water under water rights held by the City of Austin and Bastrop Energy Partners, LP and jointly by South Texas Project and LCRA.

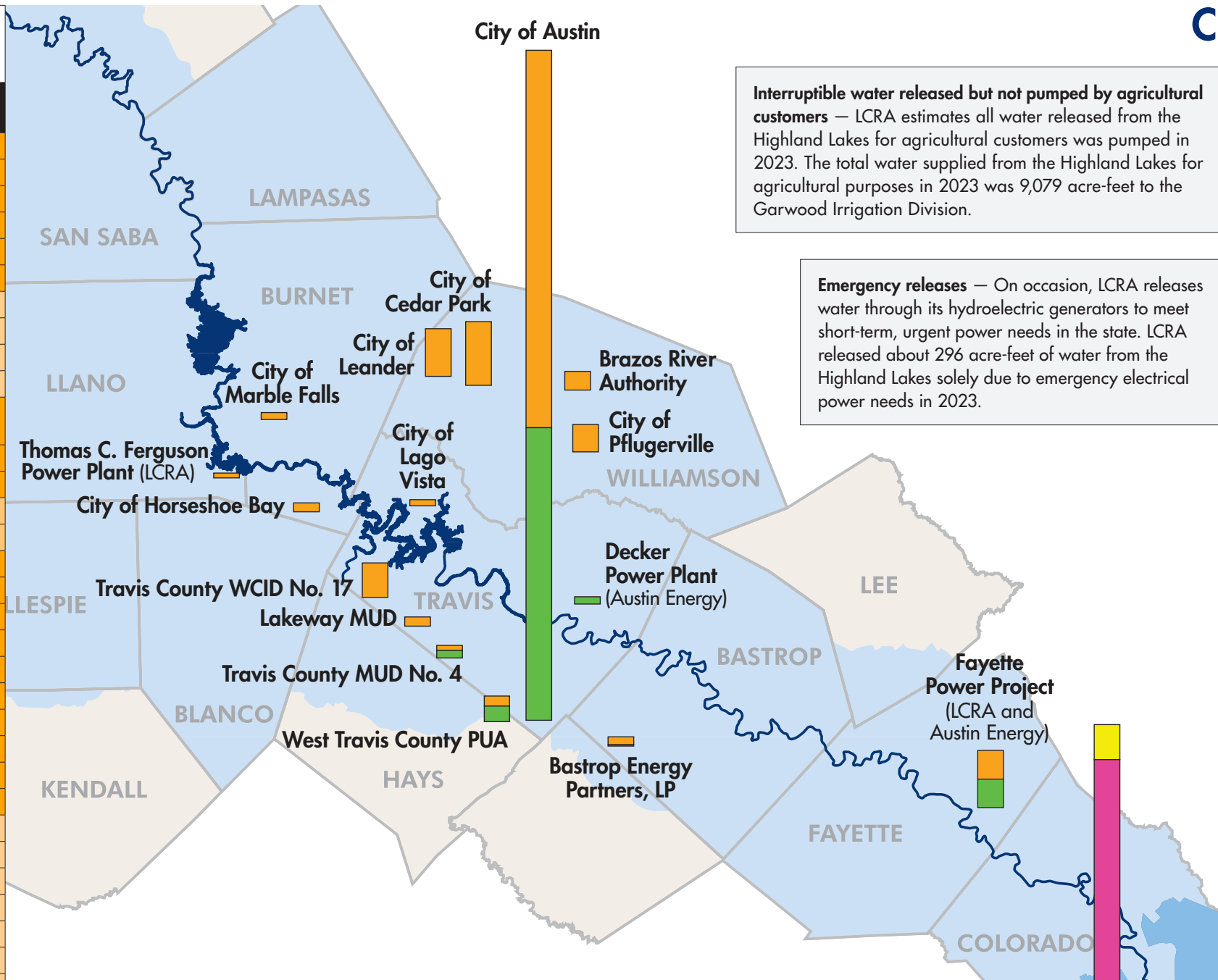
‡ Environmental releases are made to meet environmental requirements set out in the LCRA Water Management Plan. Releases for downstream customers and runoff flowing into the river and bay also help satisfy environmental needs.

Learn more about the lower Colorado River at www.lcra.org.

Customer Water Use in 2023

2023 Total Water Pumped by LCRA's Firm Water Customers

Water supplied from the Highland Lakes	Volume (acre-feet)
City of Austin, municipal and parks	97,903
City of Cedar Park	16,517
City of Leander	12,349
Travis County WCID No.17	8,945
City of Pflugerville	7,110
LCRA power plants	5,581
• Fayette Power Project (LCRA Share)	4,326
• Sim Gideon Power Plant*	0
• Lost Pines 1 Power Project*	0
• Thomas C. Ferguson Power Plant	1,255
Brazos River Authority	4,844
(Georgetown, Liberty Hill and Round Rock)	
Domestic water users on the Highland Lakes	4,791
Austin Energy (AE) Power Plants	3,122
• Fayette Power Project (AE share)	3,122
• Decker Power Plant	0
West Travis County PUA**	2,604
Lakeway MUD	2,389
City of Horseshoe Bay	2,315
Bastrop Energy Partners, LP	2,066
City of Marble Falls	1,799
City of Lago Vista	1,600
Travis County MUD No. 4**	1,276
Underground Services Markham, LP	587
OQ Chemicals Corp.	132
Other firm customers	15,106
• Diverted from Lake Buchanan	407
• Diverted from Inks Lake	747
• Diverted from Lake LBJ	3,460
• Diverted from Lake Marble Falls	0
• Diverted from Lake Travis	6,366
• Diverted from Lake Austin**	3,158
• Diverted downstream of Lake Austin	968
Subtotal from Highland Lakes**	191,036
Water supplied from other water rights	Volume (acre-feet)
City of Austin, municipal and parks	76,157
LCRA/STP Nuclear Operating Company	42,138
LCRA municipal use – Garwood amendment	10,921
LCRA Gulf Coast municipal and industrial use	9,560
• Underground Services Markham, LP	4,775
• OQ Chemicals Corp.	4,785
LCRA Fayette Power Project – Garwood amendment	5,086
Austin Energy (AE) power plants	4,203
• Fayette Power Project (AE share)	2,312
• Decker Power Plant	1,891
Bastrop Energy Partners, LP	180
Subtotal from other water rights	148,245
Total from both sources	339,281



Interruptible water released but not pumped by agricultural customers — LCRA estimates all water released from the Highland Lakes for agricultural customers was pumped in 2023. The total water supplied from the Highland Lakes for agricultural purposes in 2023 was 9,079 acre-feet to the Garwood Irrigation Division.

Emergency releases — On occasion, LCRA releases water through its hydroelectric generators to meet short-term, urgent power needs in the state. LCRA released about 296 acre-feet of water from the Highland Lakes solely due to emergency electrical power needs in 2023.

2023 Total Water Pumped for LCRA's Interruptible Water Customers (Agriculture)

Water supplied from the Highland Lakes	Volume (acre-feet)
Garwood Irrigation Division	9,079
Lakeside Irrigation Division	0
Gulf Coast Irrigation Division	0
Pierce Ranch Irrigation Company	0
Subtotal from Highland Lakes	9,079
Water supplied from downstream water rights	Volume (acre-feet)
Garwood Irrigation Division	77,936
Lakeside Irrigation Division	0
Gulf Coast Irrigation Division	0
Pierce Ranch Irrigation Company	1,876
Subtotal from downstream water rights	79,812
Total from both sources	88,891

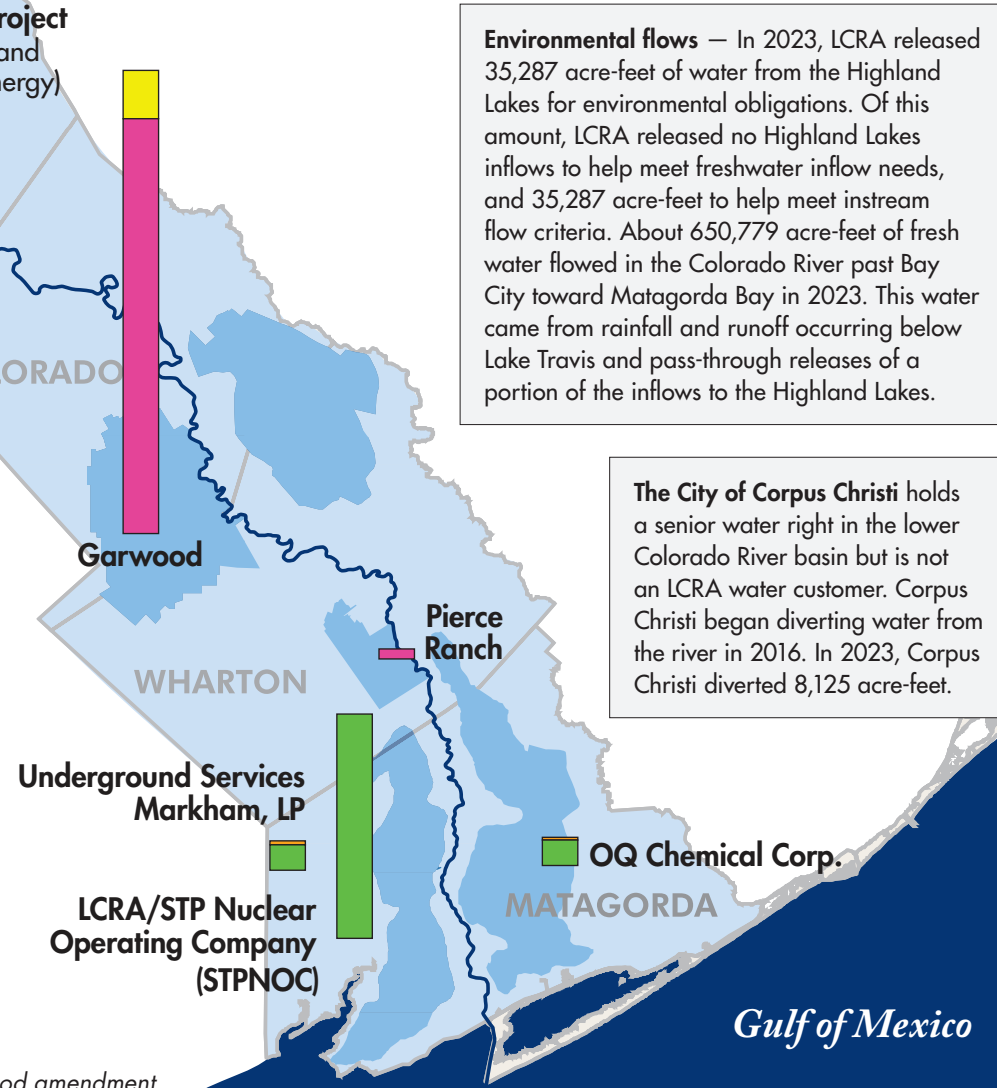
Environmental flows — In 2023, LCRA released 35,287 acre-feet of water from the Highland Lakes for environmental obligations. Of this amount, LCRA released no Highland Lakes inflows to help meet freshwater inflow needs, and 35,287 acre-feet to help meet instream flow criteria. About 650,779 acre-feet of fresh water flowed in the Colorado River past Bay City toward Matagorda Bay in 2023. This water came from rainfall and runoff occurring below Lake Travis and pass-through releases of a portion of the inflows to the Highland Lakes.

Legend

- Colorado River
- Use by Firm Water Customers:**
 - Water from the Highland Lakes
 - Water from run of river
- Agricultural Irrigation:**
 - Water from the Highland Lakes
 - Water from run of river

Evaporation — In 2023, an estimated 142,899 acre-feet of water evaporated from the six Highland Lakes – Buchanan, Inks, LBJ, Marble Falls, Travis and Austin. This is roughly 17% less than the amount that evaporated in 2022, and below the record 192,470 acre-feet that evaporated in 2011.

****Firm water released but not pumped by firm customers** — LCRA estimates that 19,551 acre-feet were released from the Highland Lakes but not pumped by firm customers because the water was lost to evaporation, seeped into the banks of the river, or was not needed because of changed conditions. When this amount is added to the water pumped and the 296 acre-feet used in hydroelectric generation to meet emergency electrical power needs, the total water supplied from the Highland Lakes for LCRA's firm customers in 2023 was 210,883 acre-feet.



The City of Corpus Christi holds a senior water right in the lower Colorado River basin but is not an LCRA water customer. Corpus Christi began diverting water from the river in 2016. In 2023, Corpus Christi diverted 8,125 acre-feet.

*Groundwater was used to meet demand.

**Customers, other than City of Austin, diverting from Lake Austin were partially (about 61% in 2023) met with water from Garwood amendment.