

# LCRA Water Use Summary 2020

In 2020, the Highland Lakes watershed saw near- to above-average rainfall through September, before a drier fall and winter. Much of the rain in the early part of the year was sporadic and soaked into parched soil, resulting in little runoff to the Highland Lakes. The lower-than-average amount of water flowing into the Highland Lakes continued a pattern that began in the summer of 2019.

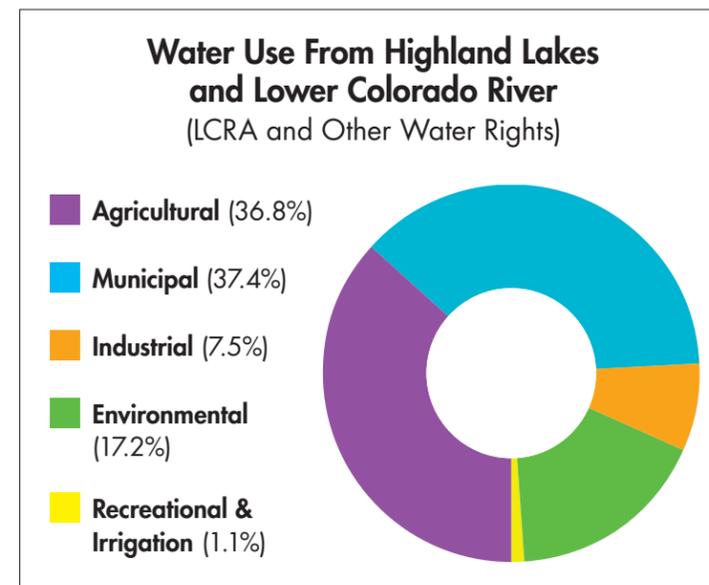
Inflows were below the historical monthly averages every month but March, and 2020 inflows to the Highland Lakes ranked as the sixth lowest on record since 1942.

In 2020, reduced river flows contributed to decreases in water use from the Colorado River and increases in water use from the Highland Lakes across all water use types.

**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 2020, the Highland Lakes supplied 370,595 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 170,537 acre-feet, including 175 acre-feet to meet emergency needs for electricity, or about 46% of all water used from the Highland Lakes, in 2020.
  - Interruptible water contracts** – These contracts supply agricultural customers. Interruptible water is subject to cutbacks during drought conditions. Interruptible customers used 84,472 acre-feet, or about 23% of all water used from the Highland Lakes, in 2020.
  - 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 2020, LCRA released 115,586 acre-feet, or about 31% of water released 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 2020, a total of 189,396 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	2020 Use (in acre-feet)
LCRA Garwood	78,819
LCRA South Texas Project	12,795
LCRA Lakeside	36,016
LCRA Gulf Coast	53,378
LCRA Pierce Ranch	8,388
LCRA Lakes Buchanan and Travis	370,595
<b>SUBTOTAL – LCRA</b>	<b>559,991</b>
City of Austin Water Rights	112,869
Bastrop Energy Partners, LP	180
<b>TOTAL</b>	<b>673,040</b>



## HOW DOES 2020 COMPARE?

TYPE OF WATER USE*	2016	2017	2018	2019	2020
<b>Municipal (firm)</b>	<b>210,376</b>	<b>221,037</b>	<b>225,861</b>	<b>234,648</b>	<b>251,970</b>
Water from the Highland Lakes	97,134	115,416	133,517	112,701	144,531
Water from the Colorado River†	113,242	105,621	92,344	121,947	107,439
<b>Industrial (firm)</b>	<b>39,018</b>	<b>91,188</b>	<b>80,580</b>	<b>57,030</b>	<b>50,343</b>
Water from the Highland Lakes	13,404	23,000	24,433	9,157	18,593
Water from the Colorado River†	25,614	68,188	56,147	47,873	31,750
<b>Recreational and Irrigation (firm)</b>	<b>5,123</b>	<b>7,362</b>	<b>6,760</b>	<b>7,013</b>	<b>7,568</b>
Water from the Highland Lakes	4,870	7,225	6,667	6,766	7,413
Water from the Colorado River	253	137	93	247	155
<b>Agricultural (interruptible)</b>	<b>254,085</b>	<b>235,255</b>	<b>289,665</b>	<b>219,467</b>	<b>247,573</b>
Water from the Highland Lakes	7,656	59,266	136,490	27,319	84,472
Water from the Colorado River	246,429	175,989	153,175	192,148	163,101
<b>Environmental‡</b>	<b>54,641</b>	<b>67,762</b>	<b>55,923</b>	<b>61,954</b>	<b>115,586</b>
(from the Highland Lakes)					
<b>TOTAL WATER USE</b>	<b>563,243</b>	<b>622,604</b>	<b>658,789</b>	<b>580,112</b>	<b>673,040</b>

\* Water use is in acre-feet.

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

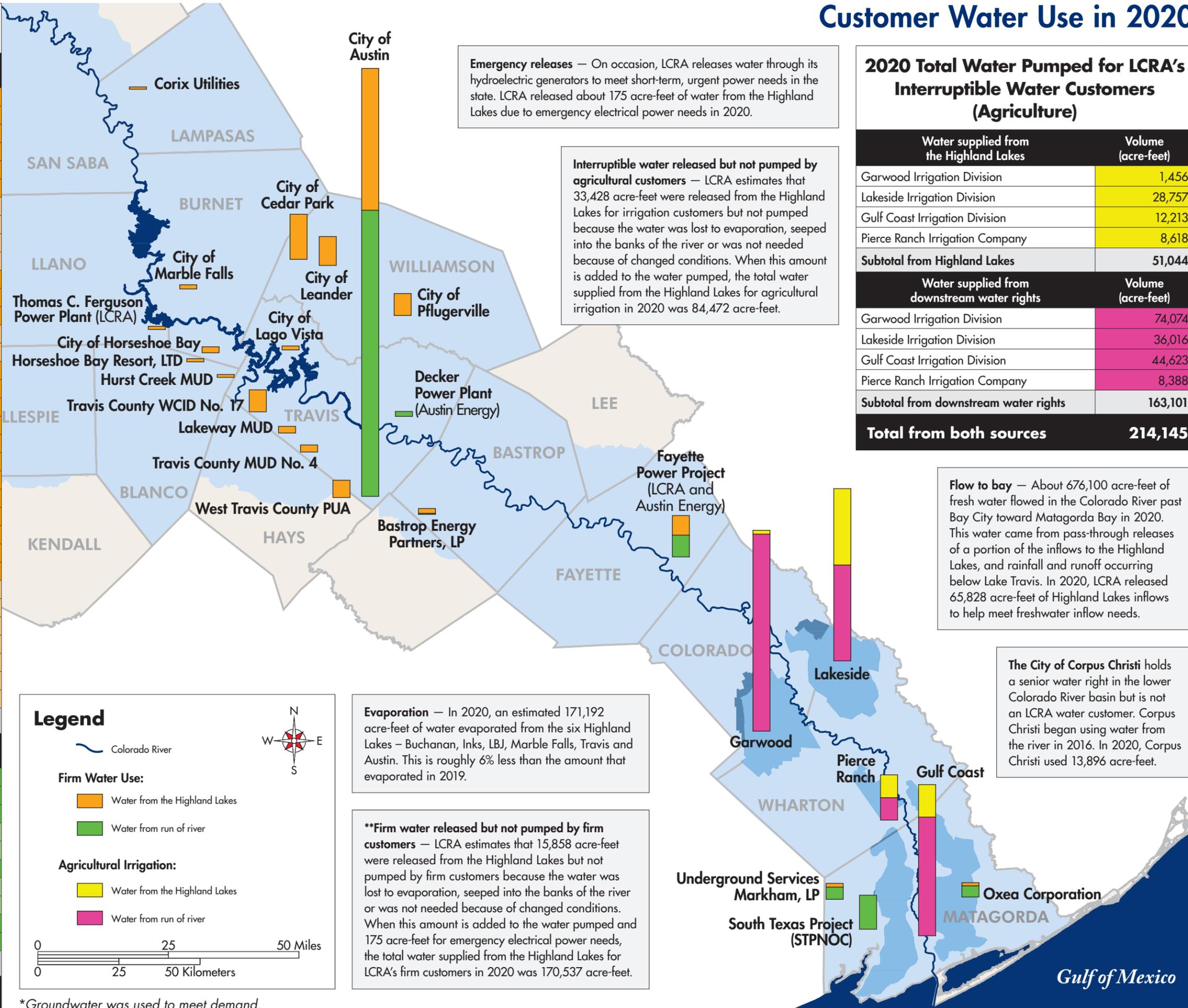
‡ Environmental releases are made to meet environmental requirements set out in the LCRA Water Management Plan. Releases for downstream customers and runoff flowing into the river and bay also help satisfy environmental needs.

Learn more about the lower Colorado River at [www.lcra.org](http://www.lcra.org).



# Customer Water Use in 2020

2020 Total Water Pumped by LCRA's Firm Water Customers	
Water supplied from the Highland Lakes	Volume (acre-feet)
City of Austin, municipal and parks	53,346
City of Cedar Park	16,957
City of Leander	10,861
Travis County WCID No. 17	8,256
City of Pflugerville	8,245
LCRA power plants	8,211
• Fayette Power Project (LCRA share)	7,010
• Sim Gideon Power Plant*	0
• Lost Pines 1 Power Project*	0
• Thomas C. Ferguson Power Plant	1,201
West Travis County Public Utility Agency	6,517
Domestic water users on Highland Lakes	4,406
Austin Energy (AE) power plants	3,360
• Fayette Power Project (AE share)	3,360
• Decker Power Plant	0
Travis County MUD No. 4	2,663
Lakeway MUD	2,501
City of Horseshoe Bay	2,235
Bastrop Energy Partners, LP	1,864
City of Marble Falls	1,575
City of Lago Vista	1,478
Underground Services Markham, LP	1,395
Oxea Corporation	1,215
Horseshoe Bay Resort, LTD	1,186
Hurst Creek MUD (The Hills)	1,077
Corix Utilities (Lometa)	871
Other firm customers	16,285
• Diverted from Lake Buchanan	27
• Diverted from Inks Lake	566
• Diverted from Lake LBJ	2,063
• Diverted from Lake Marble Falls	0
• Diverted from Lake Travis	5,317
• Diverted from Lake Austin	6,876
• Diverted downstream of Lake Austin	1,436
<b>Subtotal from Highland Lakes**</b>	<b>154,504</b>
Water supplied from other water rights	Volume (acre-feet)
City of Austin, municipal and parks	107,593
South Texas Project Nuclear Operating Co.	12,795
Gulf Coast municipal and industrial use	8,755
• Underground Services Markham, LP	4,592
• Oxea Corporation	4,163
Austin Energy (AE) power plants	5,276
• Fayette Power Project (AE share)	3,426
• Decker Power Plant	1,850
LCRA Fayette Power Project - Garwood amendment	4,745
Bastrop Energy Partners, LP	180
<b>Subtotal from other water rights</b>	<b>139,344</b>
<b>Total from both sources</b>	<b>293,848</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 175 acre-feet of water from the Highland Lakes due to emergency electrical power needs in 2020.

**Interruptible water released but not pumped by agricultural customers** — LCRA estimates that 33,428 acre-feet were released from the Highland Lakes for irrigation customers but not pumped 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, the total water supplied from the Highland Lakes for agricultural irrigation in 2020 was 84,472 acre-feet.

**Evaporation** — In 2020, an estimated 171,192 acre-feet of water evaporated from the six Highland Lakes – Buchanan, Inks, LBJ, Marble Falls, Travis and Austin. This is roughly 6% less than the amount that evaporated in 2019.

**\*\*Firm water released but not pumped by firm customers** — LCRA estimates that 15,858 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 175 acre-feet for emergency electrical power needs, the total water supplied from the Highland Lakes for LCRA's firm customers in 2020 was 170,537 acre-feet.

2020 Total Water Pumped for LCRA's Interruptible Water Customers (Agriculture)	
Water supplied from the Highland Lakes	Volume (acre-feet)
Garwood Irrigation Division	1,456
Lakeside Irrigation Division	28,757
Gulf Coast Irrigation Division	12,213
Pierce Ranch Irrigation Company	8,618
<b>Subtotal from Highland Lakes</b>	<b>51,044</b>
Water supplied from downstream water rights	Volume (acre-feet)
Garwood Irrigation Division	74,074
Lakeside Irrigation Division	36,016
Gulf Coast Irrigation Division	44,623
Pierce Ranch Irrigation Company	8,388
<b>Subtotal from downstream water rights</b>	<b>163,101</b>
<b>Total from both sources</b>	<b>214,145</b>

**Flow to bay** — About 676,100 acre-feet of fresh water flowed in the Colorado River past Bay City toward Matagorda Bay in 2020. This water came from pass-through releases of a portion of the inflows to the Highland Lakes, and rainfall and runoff occurring below Lake Travis. In 2020, LCRA released 65,828 acre-feet of Highland Lakes inflows to help meet freshwater inflow needs.

**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 using water from the river in 2016. In 2020, Corpus Christi used 13,896 acre-feet.

\*Groundwater was used to meet demand.