LCRA Water Use Summary 2017

Hurricane Harvey seriously impacted many communities in the lower Colorado River basin in late August and early September 2017, with some areas receiving up to 30 inches of rain and experiencing widespread flooding. Little rain from the storm fell over the Highland Lakes watershed upstream of Austin in the Texas Hill Country. Lakes Travis and Buchanan – the region’s water supply reservoirs – began the year essentially full, at the top of their water supply pools. By fall, lake levels dropped slightly because of drier conditions and increased water use, but still remained above their average monthly elevations.

Municipal water use from the Highland Lakes and lower Colorado River by LCRA and its customers increased by 5 percent from 2016 to 2017. LCRA also released water from the Highland Lakes for downstream agriculture in the Gulf Coast, Lakeside and Pierce Ranch irrigation operations in 2017.

### 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 lakes Buchanan and Travis. When the flows into the Highland Lakes are greater than the downstream needs for water – for example, during floods – LCRA captures as much of the flows as can be safely stored in lakes Buchanan and Travis.

### 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 2017, the Highland Lakes supplied 272,669 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 145,560 acre-feet, or about 53 percent of all water used from the Highland Lakes, in 2017.

### Interruptible water contracts — These contracts primarily supply agricultural customers. Interruptible water is subject to cutbacks during drought conditions. Interruptible agricultural customers used 59,266 acre-feet, or about 22 percent of all water used from the Highland Lakes, in 2017.

### Environmental and emergency hydroelectric releases — 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 2017, LCRA released 67,762 acre-feet, or about 25 percent of water released from the Highland Lakes, for environmental flows and about 82 acre-feet solely to meet emergency needs for electricity.

### 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 2017, a total of 239,871 acre-feet of water was supplied from the Colorado River for agricultural, municipal and industrial uses under these water rights.

### Expanding the Region’s Water Supply

In 2017, LCRA continued work to increase water supplies for the lower Colorado River basin. LCRA continued construction on the Arbuckle Reservoir in Wharton County (formerly known as the Lane City Reservoir), the first significant new water supply reservoir in the region in decades. The Arbuckle Reservoir could add up to 90,000 acre-feet per year to the region’s water supply. It is expected to begin operating in late 2018. LCRA also continued to explore additional strategies to add to the water supply, including using surface water, treated effluent and groundwater.

Learn more about the lower Colorado River at lcrate.org.

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### Table: LCRA Water Use Summary 2017

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<tbody>
<tr>
<td>Municipal Water Use</td>
<td>246,601</td>
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<td>Industrial Water Use</td>
<td>60,272</td>
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<td>Agricultural Water Use</td>
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<td>Recreational and Firm Irrigation</td>
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<td>Environment</td>
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<td>TOTAL WATER USE</td>
<td>879,330</td>
<td>487,046</td>
<td>457,385</td>
<td>375,321</td>
<td>371,704</td>
<td>563,243</td>
<td>622,604</td>
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</table>

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*Water use is in acre-feet.

†Releases from the Highland Lakes for downstream agriculture in the Gulf Coast, Lakeside and Pierce Ranch irrigation operations were suspended from 2012 through 2015 because of the severe drought.

‡Dedicated environmental releases are the water released solely for the purpose of satisfying environmental needs. In addition, releases for downstream customers and runoff flowing into the river and bay help satisfy environmental needs.

§2016 water use was adjusted regarding water use by the City of Corpus Christi. The 3,416 acre-feet of water used by Corpus Christi in 2016 is not included in this table.

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Evaporation — In 2017, an estimated 182,315 acre-feet of water evaporated from the six Highland Lakes – Buchanan, Inks, LBJ, Marble Falls, Travis and Austin. This is roughly the amount that evaporated in 2016.

Emergency releases — On occasion, LCRA releases water through its hydroelectric generators to meet short-term, urgent power needs in the state. LCRA released about 82 acre-feet of water from the Highland Lakes due to emergency electrical power needs in 2017.

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 2017, the city’s municipal and park irrigation use was 150,542 acre-feet, including 105,758 acre-feet diverted under Austin’s water right from the Colorado River at Lake Austin and 44,784 acre-feet obtained under contract with LCRA from the Highland Lakes.

Interruptible water released but not pumped by agricultural customers — LCRA estimates that 24,720 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 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 2017 was 59,266 acre-feet.

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 2017, STPNOC pumped 55,908 acre-feet from the river below Bay City and did not use any water from the Highland Lakes.

**Firm water released but not pumped by firm customers** — LCRA estimates that 12,892 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 or was not needed because of changed conditions. When this amount is added to the water pumped, the total water supplied to LCRA’s firm customers in 2017 was 145,560 acre-feet.

The City of Corpus Christi holds a senior water right in the lower Colorado River basin. Corpus Christi began using water from the river in 2016. In 2017, the city used 1,528 acre-feet.