In 2016, the Highland Lakes completely recovered from the severe drought that gripped the lower Colorado River basin from 2008-2015. By mid-year, lakes Travis and Buchanan — the region’s water supply reservoirs — had risen to the top of their water supply levels, where they remained for the rest of 2016. Heavy rainfall in May and June prompted flood operations at all of the Highland Lakes dams. It was the first time in about a decade LCRA conducted flood operations simultaneously at Buchanan and Mansfield dams. In 2016, LCRA continued to manage and increase water supplies for the lower Colorado River basin. LCRA continued construction on the Lake City Reservoir in Wharton County, the first significant new water supply reservoir in the region in decades. The Lake City Reservoir could add up to 90,000 acre-feet per year to the region’s water supply when it goes online in 2018. LCRA also continues to explore additional water strategies for Central Texas, including using surface water, treated effluent and groundwater.

As the drought ended and many cities eased their watering restrictions, municipal water use from the Highland Lakes and lower Colorado River increased by 7.5 percent in 2016. LCRA also resumed releases from the Highland Lakes for downstream agriculture in the Gulf Coast, Lakeside and Pierce Ranch irrigation operations in 2016. The releases were suspended from 2012 through 2015 because of the severe drought.

**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 excess water 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 2016, the Highland Lakes supplied 177,705 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 115,339 acre-feet, or about 65 percent of all water used from the Highland Lakes in 2016.

**Interruptible water contracts** — These contracts primarily supply agricultural customers. Interruptible water is subject to cutbacks during drought conditions. Interruptible agricultural customers used 7,656 acre-feet, or about 4 percent of all water used from the Highland Lakes in 2016.

**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. In 2016, LCRA released 54,710 acre-feet, or about 31 percent of water released from the Highland Lakes, for environmental flows and emergency hydroelectric generation. Only 69 acre-feet of that total was used 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 2016, a total of 268,992 acre-feet of water was supplied from the Colorado River for agricultural, municipal and industrial uses under these water rights.
In 2016, an estimated 181,248 acre-feet of water was pumped from the Highland Lakes due to emergency electrical power needs 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 69 acre-feet of water from the Highland Lakes due to emergency electrical power needs in 2016.

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 2016, the city’s municipal and park irrigation use was 143,557 acre-feet, including 113,495 acre-feet diverted under Austin’s water right from the Colorado River at Lake Austin and 30,063 acre-feet obtained under contract with LCRA from the Highland Lakes.

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Flow to bay — About 3,929,188 acre-feet of fresh water flowed in the Colorado River past Bay City toward Matagorda Bay in 2016. This water came from pass-through releases of excess inflows to the Highland Lakes and rainfall and runoff occurring below the Highland Lakes. This natural flow of the river also is a source of water for customers such as STPNOC and downstream interruptible customers. In 2016, no water was released from the Highland Lakes to help meet freshwater inflow needs.

Evaporation — In 2016, an estimated 181,248 acre-feet of water evaporated from the six Highland Lakes – Buchanan, Inks, LBJ, Marble Falls, Travis and Austin. This is more than in the previous few years because levels in lakes Buchanan and Travis rose in 2016. As the combined average surface area increased, so did the amount of evaporation.

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 2016, STPNOC pumped 15,421 acre-feet from the river below Bay City. STPNOC did not require water from the Highland Lakes in 2016.