

Key Terms

Acre-foot – the amount of water required to cover 1 acre 1 foot deep. One acre-foot of water is equal to 325,851 gallons.

Combined storage – the total volume of water stored in lakes Buchanan and Travis at a given point in time.

Firm water – water that can be supplied on a consistent basis through a repeat of the worst drought in recorded history for the lower Colorado River basin. “Firm” customers are typically cities and municipalities.

Interruptible stored water – water that can be cut back or cut off during drought or times of shortage to ensure that LCRA can meet firm water customer demands. Agricultural customers in Colorado, Wharton and Matagorda counties buy interruptible water.

Instream flows – the amount of water flowing in a stream or channel, in this case, in the Colorado River downstream of the Highland Lakes.

March 2020

2020 Water Management Plan

LCRA manages the water in lakes Travis and Buchanan, the region’s primary water supply, under a state-approved Water Management Plan. During a drought, the plan requires that LCRA curtail or cut off interruptible stored water from the Highland Lakes so firm water supplies will continue to be available to meet the basic needs of cities, businesses and industries.

The Texas Commission on Environmental Quality approved the current Water Management Plan in February 2020.

The Water Management Plan enables LCRA to adapt its operations as drought conditions change. The plan establishes three sets of operating conditions to determine the availability of interruptible stored water for agricultural customers in Colorado, Wharton and Matagorda counties. It also sets two evaluation dates – March 1 and July 1 – for determining the amount of interruptible stored water available for the first and second agricultural seasons.

The WMP also establishes environmental flow criteria to help protect the health of the Colorado River and Matagorda Bay. The WMP uses three dates – March 1, July 1, and Nov. 1 – for determining the applicable environmental flow criteria.

The 2020 Water Management Plan:

- Incorporates the most recent hydrology available for the region. This includes data from the 1940s, when the lakes were created, through 2016. This includes most recent severe drought.
- Sets out three conditions that determine how much interruptible stored water is available for a given season: Normal, Less Severe Drought and Extraordinary Drought.
- Determines the amount of interruptible stored water available for diversion at the agricultural operations based on the curtailment condition. The amount of available interruptible stored water in each condition is based on current storage in the Highland Lakes, inflows to the lakes and a look-ahead test to determine whether storage could fall below specified levels.
- Includes limits on releases of interruptible stored water from Mansfield Dam (Lake Travis) for the first and second agricultural seasons.
- Maintains combined storage in lakes Buchanan and Travis above 600,000 acre-feet through a repeat of the worst drought conditions this region has even seen.
- Provides dedicated releases of water for the health of the Colorado River by using three levels of instream flow criteria that decrease incrementally as combined storage levels drop.
- Provides dedicated releases of water for the health of Matagorda Bay by using five levels of criteria that decrease incrementally as combined storage levels drop, and in conjunction with curtailment of interruptible stored water for agriculture.

2020 Water Management Plan

Water Supply Conditions

The plan establishes three water supply conditions: Normal, Less Severe Drought, and Severe Drought. Normal conditions are in effect unless the criteria for Less Severe Drought or Extraordinary Drought conditions are met. LCRA makes interruptible stored water available to the Gulf Coast, Lakeside and Pierce Ranch irrigation operations under Normal or Less Severe Drought conditions. When the criteria for Extraordinary Drought conditions are met, the interruptible stored water supply to those three divisions is cut off.

Less Severe Drought conditions occur when the combined storage of lakes Travis and Buchanan is below 1.5 million acre-feet on March 1 or July 1 and the cumulative prior three months of inflows total less than 50,000 acre-feet, or the combined storage is below 1.4 million acre-feet on March 1 or July 1 and the cumulative prior three months of inflows total less than the 33rd percentile for the three-month period.

Conditions move from Less Severe Drought to Normal conditions on a subsequent evaluation date if the combined storage has been above 1.5 million acre-feet any time since the prior evaluation date. Conditions also move to Normal conditions if the combined storage has been above 1.4 million acre-feet any time since the prior evaluation date and the cumulative three-month inflows on March 1 or July 1 equal or exceed the median for the three-month period.

Conditions move from Less Severe Drought to Extraordinary Drought conditions when combined storage is below 1.3 million acre-feet on March 1 or July 1, the drought has lasted at least 18 months, *and* inflows to lakes Buchanan and Travis since the start of the drought are worse than inflows in the 1950s drought. Extraordinary Drought conditions also occur when the combined storage is below 1.4 million acre-feet on July 1 and combined storage has decreased by more than 300,000 acre-feet between March 1 and July 1.

Conditions move from Extraordinary Drought to Less Severe Drought on a subsequent evaluation date if the combined storage has been above 1.3 million acre-feet any time since the prior evaluation date. If the criteria for exiting Less Severe Drought also are met, conditions return to Normal.

Look-Ahead Test

If the LCRA Board of Directors determines that combined storage would drop below 600,000 acre-feet in the next 12 months or below 900,000 acre-feet in the upcoming agricultural season, LCRA will not supply interruptible stored water in the upcoming agricultural season, except to the Garwood Irrigation Division, based on provisions of the 1988 purchase agreement with the Garwood Irrigation Company.

Complete Plan Available

The complete 2020 Water Management Plan is available at lcra.org/watermanagementplan.

2020 Water Management Plan

Availability of Interruptible Stored Water for Diversion at the Gulf Coast, Lakeside and Pierce Ranch Operations

First Agricultural Season

Normal Conditions		Less Severe Drought Conditions	
Combined Storage on March 1 (acre-feet)	Interruptible Stored Water (acre-feet)*	Combined Storage on March 1 (acre-feet)	Interruptible Stored Water (acre-feet)*
Below 1,100,000	0	Below 1,100,000	0
1,100,000 to 1,300,000	107,100 to 178,000**	1,100,000 to 1,499,999	88,200 to 155,000**
Above 1,300,000	178,000	1,500,000 or above	Normal conditions apply
Anytime cutoff* if storage drops to or below 1 million acre-feet		Anytime cutoff* if storage drops to or below 1 million acre-feet	

* Non-Garwood operations.

** For combined storage within the specified ranges, the amount of available interruptible stored water follows a linear scale between the values shown.

Second Agricultural Season

Normal Condition		Less Severe Drought Condition	
Combined Storage on July 1 (acre-feet)	Interruptible Stored Water (acre-feet)*	Combined Storage on July 1 (acre-feet)	Interruptible Stored Water (acre-feet)*
Below 1,100,000	0	Below 1,100,000	0
1,100,000 to 1,400,000	39,700 to 66,000**	1,100,000 to 1,499,999	39,700 to 55,000**
Above 1,400,000	66,000	1,500,000 or above	Normal conditions apply
Anytime cutoff* if storage drops to or below 1 million acre-feet		Anytime cutoff* if storage drops to or below 1 million acre-feet	

* Non-Garwood operations.

** For combined storage within the specified ranges, the amount of available interruptible stored water follows a linear scale between the values shown.

Maximum Release from Lakes Buchanan and Travis for Interruptible Customers

The maximum release of interruptible stored water from lakes Buchanan and Travis for orders in the Gulf Coast, Lakeside and Pierce Ranch operations is 210,000 acre-feet in first season and 82,000 acre-feet in second season.

Rules for Supplying Water for First and Second Agricultural Seasons

- If interruptible stored water is not supplied for the first agricultural season, it also is not available for the second season.
- If interruptible stored water is cut off and combined storage in lakes Travis and Buchanan is less than 1.3 million acre-feet, all run-of-river water that originates above Mansfield Dam also is cut off for agricultural use. If combined storage is 1.3 million

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acre-feet or higher, any run-of-river water that originates upstream and is passed through is limited to the amount needed to finish the current season.

- If the limit on interruptible stored water supply available for diversion for the first agricultural season is reached or if the limit on interruptible stored water available for release from Mansfield Dam for the first agricultural season is reached:
 - In a year in which interruptible stored water is available for second season, all or a portion of the second season allocation can be used to finish first season.
 - In a year in which there is no interruptible stored water available for second season, the supply will be cut off in the middle of the season.

Environmental Flows

Under the WMP, LCRA provides water from lakes Buchanan and Travis to help meet three levels of instream flows based on the combined storage in lakes Buchanan and Travis on the most recent evaluation date for environmental flows - March 1, July 1 or Nov. 1. LCRA will supply previously stored water to meet these requirements when flows are in the levels defined as subsistence flows in the WMP.

LCRA also provides “storable inflows” – water that could be stored in lakes Buchanan and Travis based on the seniority of those water rights – to help meet higher flow levels. When combined storage is above 1.8 million acre-feet on the evaluation date, LCRA will provide storable inflows to help meet base-dry flow criteria, and when combined storage is above 1.96 million acre-feet on the evaluation date, LCRA will provide storable inflows to help meet base-average flow criteria.

LCRA also provides water to help meet five levels of inflows to Matagorda Bay, based on the combined storage in lakes Buchanan and Travis. LCRA’s obligation to release water to meet the criteria set out in the WMP is limited to storable inflows to lakes Buchanan and Travis. When making releases to support bay inflows, there are maximum monthly release values and a provision whereby a percentage of storable inflows is maintained in the lakes, rather than releasing all storable inflows for a bay criteria. The WMP also includes a provision allowing a required release for the bay to be deferred or waived if there has been a significant rain event on the bay or significant inflows into the bay just after the period for evaluating bay inflows.