

## Buchanan Dam

- In Burnet and Llano counties.
- Completed in 1938.
- 145.5 feet high.
- 2 miles long.
- Primary purpose: water supply and hydroelectric power.
- 37 floodgates.
- Discharge capacity: 348,000 cubic feet per second.
- Original name: Hamilton Dam.

## Lake Buchanan

- 22,017 acres.
- Historic high: 1,021.4 feet msl on Dec. 20, 1991.
- Historic low: 983.7 feet msl on Sept. 9, 1952.
- 30.65 miles long.
- 4.92 miles at widest point.

# Management of Lake Buchanan

Lake Buchanan is the uppermost lake of the Highland Lakes chain in the Texas Hill Country. Lake Buchanan and Lake Travis, the two water supply reservoirs in the Highland Lakes, supply water for more than 1 million people, businesses and industries, the environment and agriculture.

Lake Buchanan is not designed to store floodwaters. When Lake Buchanan is full at 1,020 feet above mean sea level (feet msl), there are only a few inches of room until water flows over the spillway in an uncontrolled fashion. LCRA aims to pass floodwaters as safely as possible down the Highland Lakes chain to Lake Travis – which has substantial room for floodwater in its flood pool.



Lake Buchanan

## Managing Lake Buchanan

- Under an agreement with the Federal Emergency Management Agency (FEMA), Lake Buchanan is maintained at or below 1,018 feet msl during the months of May through October every year, and at 1,020 feet msl the rest of the year.
  - The FEMA agreement came about in 1990 because of FEMA's concerns that LCRA might not be able to open floodgates fast enough if flash flooding were to occur when the lake was at 1,020 feet msl.
- In 2009, LCRA began a multiyear, multimillion-dollar project to upgrade and strengthen the floodgates, hoists and other facilities at Buchanan Dam.
  - LCRA is maintaining Lake Buchanan at or below 1,018 feet msl year-round during the construction project.
- Both the FEMA agreement and the current operational constraints are reflected in LCRA's state-approved Water Management Plan.
- LCRA is working toward changing the current agreement with FEMA, but this is a process that will take some time after the dam renovations are complete. The proposed change would allow the lake to rise to a maximum of 1,020 feet msl level year-round. NOTE: The pending change would not mean the lake would be kept at a constant level of 1,020 feet msl; the lake would continue to rise during rainy times and fall because of water supply use and evaporation during drier times.
- Historically, Lake Buchanan has rarely been at 1,020 feet msl – only 2 to 3 percent of the time – even before the FEMA agreement that keeps the lake at or below 1,018 feet msl for part of every year.

May 2020

# Management of Lake Buchanan

## Buchanan Dam upgrade project

The \$50 million project to upgrade Buchanan Dam is designed to bring the dam to current design standards and provide safe and efficient operation of the dam and its 37 floodgates.

The project includes:

- Adding 30 new stationary remote-operated and two new traveling remote-operated hoists to provide for quicker response during flood operations.
- Strengthening all 37 floodgates and providing a 1-foot vertical extension on all gates to reduce the potential for overtopping and allow more reaction time in the event of a flood.
- Removing and inspecting all gate trunnions (hinges) and replacing them, if needed.
- Upgrading the electrical system.
- Providing stop log systems at all three gated sections of the dam. The stop logs can be placed in front of floodgates to hold back lake water and allow work on the floodgates to continue in a dry work environment.
- Upgrading security and safety features throughout the dam.



**Buchanan Dam**

During the project, construction is underway on only a few gates at a time to ensure the dam remains capable of responding to flooding at all times.

The project is scheduled to be completed in fall 2020.