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

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.

Managing Lake Buchanan

- Under an agreement with the Federal Emergency Management Agency (FEMA), Lake Buchanan is considered full for flood control purposes at 1,018 feet msl during the flood-prone 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.
    - Keeping the lake at or below a maximum level of 1,018 feet msl during the flood-prone months offered better flood protection to the area around Lake Buchanan.
- 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. The proposed change would allow the lake to rise to a maximum of 1,020 feet msl level year-round after the dam upgrade is complete. 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 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.

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:

Buchanan Dam

- Refurbishing and adding remote operating capability to six existing hoists and adding 26 new automated 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.
- Adding remote control capabilities on all hoists at the dam.
- 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.

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

The project is scheduled to be completed in 2020.