STATE OF CALIFORNIA DEPARTMENT OF
WATER RESOURCES
EXECUTIVE DIVSION - STATE WATER PROJECT

Oroville Dam Facts and Figures

At 770 feet high, the Oroville Dam is the tallest dam in the United States, 43.6 feet higher than Hoover Dam. The dam impounds Lake Oroville, the largest reservoir in the California State Water Project and second largest in California, with a storage capacity of 3.54 million acre-feet and, when full, a surface area of 15,810 acres of water and 167 miles of shoreline. The reservoir reaches "full pool" at 900 feet elevation – the level of the tree line on the shore. The lake reached full pool this year in June 2023. Lake Oroville reached a historic low elevation of 628.63 feet, only 22 percent of capacity, on Sept. 30, 2021 due to drought conditions. This historic low water level impacted the intakes at the powerplant at Oroville Dam, the Edward Hyatt Powerplant, causing the hydropower plant to go offline due to low lake levels for the first time since operations began in 1967.

The elevation of Oroville Dam's crest is 922 feet high and is 6,920 feet, or 1.3 miles, long from the restrooms on the south end to the north end of the emergency spillway. Area residents find the 1-mile length along the top of the dam offers exercise with a wonderful view. Over 80 million cubic yards of material were needed to build Oroville Dam, which was completed in 1967 and filled in 1968. This is enough material to build a two-lane highway around the earth.

The reconstructed Flood Control Outlet (FCO) or main spillway, damaged in 2017, is 3,055 feet long and 178.8 feet wide (wider than a 12-lane freeway with a median). Over 13 million pounds of reinforcing steel and 509,600 cubic yards of concrete was used in its construction. The eight FCO gates at the head of the spillway are each 33 feet high and 17.5 feet wide and open when water releases are needed to create more flood storage space in the reservoir (last 'spill' was September 2023).

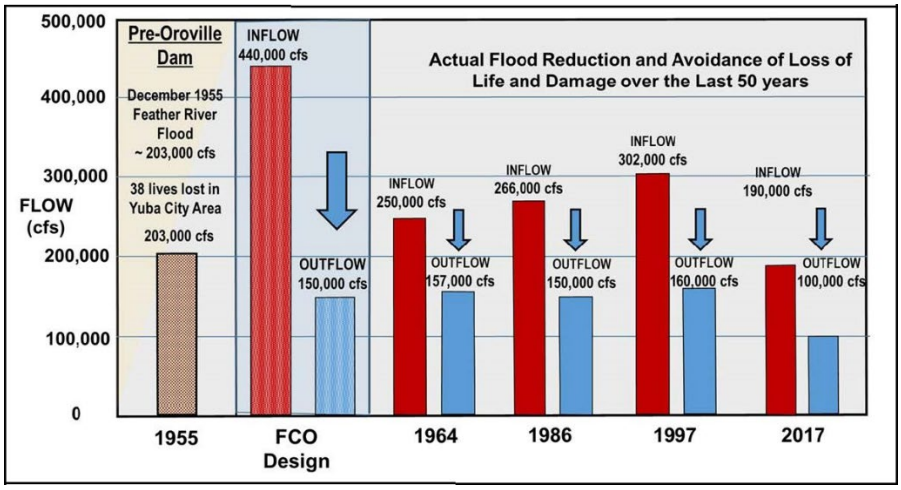
The Emergency (or Auxiliary) Spillway's crest is at elevation 901 feet and located above a concrete splashpad or apron that could fit 25 football fields on its surface. The 'stair-step' construction helps to reduce the energy and impact of a water release. At the bottom of the apron, a 1,450-foot-long secant-pile wall is built of concrete piles buried 35 to 65 feet deep into bedrock. The underground wall prevents uphill erosion during a release over the emergency spillway.

History

While the idea of a dam at the confluence of the three forks of the Feather River above Oroville had been discussed for years, the floods of 1955 resulted in state actions to move forward with the 'Feather River Project' and work on the dam site began in 1961. The dam was topped out in 1967 and in1968 took less than a year to fill.

Flood Control

The Upper Feather River watershed above Oroville Dam encompasses 3,607 square miles. During severe atmospheric river storms, inflows into Lake Oroville can exceed 250,000 cubic feet per second (cfs) and during the 1997 flood event, inflows exceeded 300,000 cfs. DWR is required by the U.S. Army Corps of Engineers to provide flood storage space in the reservoir during the winter months to absorb increased inflows.

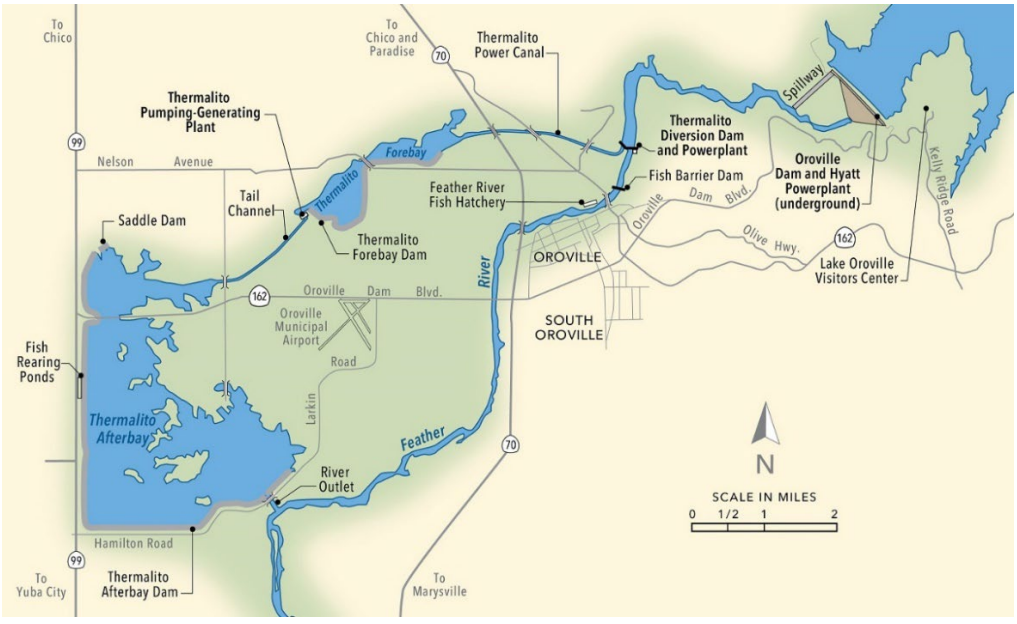


The graph demonstrates the value of Oroville Dam as a flood control facility, significantly reducing downstream water flows to the Feather River during flood events, avoiding extensive property destruction and preventing loss of countless lives.

Oroville Facilities

The Oroville Facilities are a key water storage and electrical generation complex for California's State Water Project (SWP). The SWP delivers water to 27 million Californians and 750,000 acres of farmland and provides flood control, recreation, water quality improvement, fish and wildlife protection and enhancement, and hydroelectric power.

The Oroville Facilities include Lake Oroville and Oroville Dam, Edward Hyatt Powerplant (three of six generating units have pump-back capabilities) (714 MW capacity), Thermalito Diversion Dam and Powerplant (3.3 MW capacity), Ronald B. Robie Thermalito Pumping-Generating Powerplant (118 MW capacity), and the Thermalito Forebay and Afterbay. The Feather River Fish Hatchery, which includes a fish barrier dam, as well as the 11,000-acre Oroville Wildlife Area where much of the material for the building of Oroville Dam was mined, are also part of the Oroville Facilities. Both are administered for DWR by the California Department of Fish and Wildlife.



Recreation

The California Department of Parks and Recreation (State Parks) administers the Lake Oroville State Recreation Area (LOSRA), providing tent/RV, boat-in, floating, and equestrian campgrounds, five main paved boat ramps and several car-top boat ramps, two marinas, numerous day use areas, and area trails for hikers, bicyclists, and equestrians. The Thermalito Forebay and Afterbay also have paved and car-top boat ramps, swim beaches, day use areas, and limited RV overnight and primitive camping sites.