

Oroville Dam: Background and Update



About 30 percent of Southern California's water comes from Northern California and the State Water Project, which is owned and operated by the California Department of Water Resources. Oroville Dam on the Feather River is part of the State Water Project and captures the supply that is then diverted downstream in the Sacramento-San Joaquin Delta. Oroville's main spillway suffered severe damage during the record wet start to the 2017 rain season. The subsequent use of an emergency spillway created erosion concerns that prompted an evacuation of communities downstream. The Metropolitan Water District of Southern California is one of the state water contractors that participates in and receives water supplies from the State Water Project, and has contributed funding of more than \$11 billion in today's dollars to the state's construction of this vital water delivery system. The state's proper maintenance of Oroville and the entire State Water Project is essential to water reliability for Metropolitan and two-thirds of California residents and businesses.



Emergency Spillway



Main Spillway

COURTESY OF CA DEPARTMENT OF WATER RESOURCES

Oroville's Design

Water is impounded and released at Oroville by four separate facilities. The tallest earthen dam in the nation is designed to hold back supplies and withstand flood and seismic events. Below the dam are power generating facilities that release water downstream. North of the dam is the main concrete spillway to release larger, controlled flows. And north of the main spillway is an emergency spillway that would release water uncontrolled in the rare event that main spillway releases are not sufficient.

What Happened

In February 2017, in the days preceding a large, warm storm event, Oroville's main spillway experienced significant concrete damage. Releases were decreased in order to protect the spillway and the Hyatt power generating facilities. High flows into Oroville on Feb. 11 began to flow over the emergency spillway. Concerns about emergency spillway erosion prompted the Butte County Sheriff to evacuate downstream communities and for the state Department of Water Resources to increase releases from the damaged main spillway to lower lake levels so that the emergency spillway was not overtopping by the next day.

Dam Safety and Hydro Relicensing Years of Metropolitan Support

State and federal agencies have an extensive process of inspecting dams in California and throughout the nation and periodically reviewing any necessary upgrades. This process did not identify structural weaknesses that would materialize at the Oroville main and emergency spillways. Metropolitan supports the extensive independent analysis that will lead to future repairs and improvements. In a separate process to renew the federal license to operate Oroville and establish appropriate flows and other public benefits, unrelated flood control concerns in 2005 were raised by nongovernmental organizations seeking to intervene in this process. Recent reports in the media have stated that Metropolitan and other state water contractors objected due to the potential costs. These reports are erroneous. MWD raised no issues regarding the costs of armoring the emergency spillway.

DAM SAFETY PROCESS

ARMY CORPS OF ENGINEERS

Responsible for dam/spillway upgrades

FEDERAL ENERGY REGULATORY COMMISSION

Conducts annual hydro dam inspections

STATE OFFICE OF DAM SAFETY

Conducts bi-annual dam safety inspections



HYDROELECTRIC DAM RELICENSING SEQUENCE

FEDERAL ENERGY REGULATORY COMMISSION

Establishes flow releases and other facility public benefits

FEATHER RIVER NGOs

Intervened in 2005 in relicensing process based on flood protection concerns

STATE WATER CONTRACTORS METROPOLITAN WATER DISTRICT

Suggested review of flood protection concerns with appropriate dam processes

FEDERAL ENERGY REGULATORY COMMISSION

Re-evaluated and concluded that emergency spillway "would perform as designed"

WHO IS METROPOLITAN

The Metropolitan Water District of Southern California is a state-established cooperative of 26 member agencies – cities and public water agencies – that serve nearly 19 million people in six counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies and helps its members develop increased water conservation, recycling, storage and other resource management programs.

OUR MISSION

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

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Next Steps: Upgrading the State Water Project

The full evaluation by an independent review team as well as the appropriate state and federal agencies will identify the necessary repairs and upgrades to the Oroville flood control facilities. Oroville must perform its flood control mission first and foremost so that it can provide public water supplies for California. Metropolitan through the State Water Contractors will work in partnership so that California has a viable State Water Project for decades to come.

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