

WHEN THE LEVEE BREAKS: FLOODING & DAMS

Over one million California properties are in flood risk areas. Levees and dams can help mitigate the danger, but what happens when they break?

In December 1955, heavy rains pelted Northern California. Seemingly unending precipitation washed away railroads, highways, and orchards between Oregon and Santa Cruz. By December 22, the Feather and Yuba Rivers were rising at a rate of 2 feet/hour.

On Christmas Eve, the Feather River’s Gum Tree levee collapsed, releasing a 21-foot wall of water and submerging 90% of Yuba City. Thirty-eight people drowned in the deluge.



View of Plumas Street in Yuba City, looking north from the intersection of Bridge & Plumas Street in the downtown area, on Dec. 24, 1955. Photograph by Floyd Winters. Courtesy Sutter County Library.

Still, the rains continued. Hundreds of people were rescued by boat and helicopter. The military and community members worked to stabilize the levees, repairing damage and sealing gaps with canvas, sand bags, and walls of mud. In mid-January, more rain brought water within 12 inches of the top of the improved 70-foot-tall barrier. This time, it held.

In 1951, the California State Engineer had proposed a major dam on the Feather River, east of the town of Oroville. State officials found the plan appealing for both flood prevention and water supply, but many Californians initially opposed the project.

After the flood, however, the state narrowly secured the public’s support to move forward with the massive \$400 million Oroville Dam project. Though some environmental concerns were addressed during the planning, concerns of the Konkow Maidu community were not; their ancestral lands were flooded to create the Oroville Reservoir.

“WE WANTED [THE DAM] COMPLETED AS RAPIDLY AS POSSIBLE. I REMEMBER WRITING A LETTER TO THE SACRAMENTO BEE, PROTESTING STATE INVESTMENT IN THE 1960 WINTER OLYMPICS AT SQUAW VALLEY. I FELT THAT MONEY WOULD HAVE BEEN BETTER SPENT ON FLOOD CONTROL PROJECTS.”

– **Tom Britzman**, former Yuba City Resident

The Oroville Dam became a key part of the California State Water Project, and today provides water to 25 million Californians and 750,000 acres of farmland. At 770 feet high, it is the tallest dam in the U.S.

When Environmental Policy is Ignored. In 2017, heavy rainfall eroded the soil below the Oroville Dam’s *spillways*, structures used to release extra water from a reservoir in a safe and controlled manner, and threatened to collapse the dam’s concrete *weir*, or barrier. Over 180,000 people evacuated, faced with the threat of a 30-foot wall of water. Luckily, the weir held.

The Oroville Dam’s spillway crisis could have been avoided if agencies had addressed the concerns raised through the National Environmental Policy Act (NEPA) process. Enacted in 1970, NEPA requires federal agencies to solicit public feedback. During the dam’s relicensing process, local groups called for the spillways’ reinforcement. The Yuba County Water Agency also noted serious issues. However, state and federal authorities dismissed concerns because of the high cost of improvements. 2017’s event eventually led to the needed repairs.

Since 2014, Congress has introduced over 150 pieces of legislation to weaken NEPA. But strengthening our environmental policies, rather than dismantling them, can help protect Californians’ future safety.