



Left: Aerial view of Anderson Reservoir following a large storm event. Inset: A drill rig mounted on a barge obtains soil samples at Anderson Reservoir for analysis.

Anderson Dam Seismic Stability Study

A seismic study of Anderson Dam focusing on its stability during a large earthquake shows the material at its base and its foundation is weak. The dam would liquefy in a 7.25 magnitude earthquake on the Calaveras Fault about two kilometers from the dam which could deform significantly, risking an uncontrolled release of the reservoir water.

Based on preliminary findings, the water district had been operating Anderson Reservoir with a water level restriction of 37.5-feet below the spillway (57-feet below the crest) until completing more detailed analyses.

The seismic stability analyses are complete and the study has refined the expected damage from the 7.25 magnitude earthquake on the Calaveras Fault. Vertical deformation estimates range from 15 to 25 feet, with an additional 15 feet of potential cracking in the dam. With this new information, the study recommended a water level restriction of 40- to 45-feet below the dam crest (or 20.5- to 25.5-feet below the spillway) to provide an adequate level of safety to the public downstream and prevent the uncontrolled release of water.

Based upon this recommendation, and as confirmed by our independent Technical Review Board, the water district modified the operating restriction to 25.5-feet below the spillway (45-feet below the dam crest). Our dam safety regulators have approved this restriction.

The water district is also studying fault traces under the dam to determine if they are active and if the fault offset is large enough to damage the dam's outlet pipe. If so, the water district would need to reinforce its current outlet or construct a new outlet through a tunnel around the dam.

The water district is evaluating corrective measures to ensure public safety and continue dam operations. As a long term solution, the water district will modify the dam so it can withstand large earthquakes. The capital improvement project will require extensive planning and design efforts. **See the back page for more information about these efforts.** The water level restriction will remain in place until the capital project corrects those problems.

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Anderson Dam Seismic Study and Retrofit Project

Anderson Dam Seismic Retrofit Project

The water district has begun the Anderson Dam Seismic Retrofit Project to improve and stabilize the dam for the maximum credible earthquake and possible modifications to the outlet facilities.

As part of the project's planning phase, water district engineers will identify, review and evaluate retrofit and outlet alternatives on the dam to determine if they should be replaced or upgraded and develop a recommended project.

Neighbors of Anderson Reservoir and other interested stakeholders will be asked to provide input to the alternatives during the community engagement process. Following, a planning study report will go to the water district's board of directors for direction on the recommended project.

Contact us

For more information, contact **Frank Maitski** at **(408) 265-2607, ext. 2284**, or fmaitski@valleywater.org.

CLOSER LOOK AT ANDERSON RESERVOIR



SPILLWAY

OUTLET PIPE

DAM EMBANKMENT

CREST OF DAM