

District to launch study on Calero Dam's foundation

The Santa Clara Valley Water District is conducting a geotechnical study of the Calero Dam in south San Jose in preparation for a seismic stability project that will better prepare it to withstand a large earthquake. The field investigation began in August around the dam, while work on the surface of the reservoir is slated for Nov. 21. The entire scope of the geotechnical work will take about six months. *

Importance of the study

Evaluation of the safety of the Calero Dam requires a comprehensive examination of its foundation, making geotechnical investigations an important component of many such construction projects. These below ground studies test the soil for compressibility, strength and other factors likely to influence the final direction of projects.

When the work begins, at least a two-person crew will be on site, along with a drill rig to complete the borings or an excavator to complete the test pits. Multiple rigs may work simultaneously during some periods.

A licensed well driller will install the borings and the district will use a specialized hydraulic driver for other tests and have support vehicles at the site. The drill rig and crew will access the locations through existing maintenance roads. The district expects no closures, but may use traffic control and flaggers to ensure safety during the field work. Underground utility locators will ensure the drilling locations are safe.

* Project start dates and duration may vary due to site conditions and equipment availability.



Calero Reservoir in March.

Results from the study, available about six months after completion of the geotechnical work, will help verify embankment and foundation conditions, allowing the engineer to develop final designs for the dam's seismic retrofit.

The reservoir will remain open for recreational use during the work, but the project area will be inaccessible to the public as contractors work from sunrise to sunset during weekdays and possibly Saturdays.

Project background

An independent engineering study in 2012 called Calero Dam a seismic risk due to the presence of alluvium—gravel and sand from the underlying creek bed—under the downstream dam embankment. That material could liquefy during an earthquake on a nearby fault and cause the dam to deform significantly, risking an uncontrolled release of reservoir water.

In response to the study, the state Division of Safety of Dams imposed storage restrictions for Calero Reservoir of about 20-feet below the dam crest, keeping water levels lower than normal to reduce seismic risk.

The water district initiated the retrofit project at Calero mainly to stabilize the dam's embankment and to modify or replace the outlet works - a device used to release and regulate water flow from a dam - and modify the spillway to allow for safe passage of a major flood.

This project will also improve the Fellows Dike, an older and smaller earthen levee on the southern most section of Calero Reservoir.

About the dam and reservoir

The water district built Calero Dam during the Great Depression, completing it in 1935 after acquiring land as the Santa Clara Valley Water Conservation District. The dam and reservoir is one of the six original reservoirs approved for construction by voters in May 1934.

Both dam and reservoir are located on Calero Creek. The 2.2-miles-long reservoir can store 9,934 acre-feet of water. Its surface area is 349 acres.

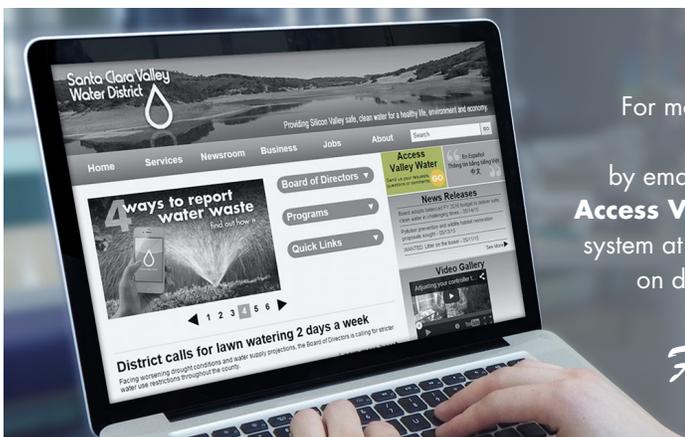
The reservoir provides water directly to drinking water treatment plants, which treat and test it for safety. The district then distributes the water to water retailers to sell to the county's 1.8 million residents.

Calero also captures and stores winter runoff to recharge groundwater basins, helps store water from the nearby Almaden Reservoir watershed and accepts imported water. Calero allows several recreational opportunities, such as boating, fishing and skiing, but also potentially supply water to all three of the district's treatment plants.

More about us

As the county's primary drinking water provider, the Santa Clara Valley Water District ensures the safety and abundance of drinking water. We operate 10 reservoirs which catch local rainfall and we import water from the Sierra Nevada snowmelt through the Delta. Some of that water replenishes the underground aquifer for later pumping from wells and some goes to one of our three drinking water treatment plants. Once we treat and test the water to meet all state and federal drinking water standards, we sell it to local water providers like the San Jose Water Company that resell it to individual homes and businesses. The water supply in some areas in northern Santa Clara County includes Sierra Nevada water imported through San Francisco's Hetch Hetch system.

The water district also has a major role in the stewardship of local water resources. We care for hundreds of miles of streams by removing invasive vegetation, repairing creek bank erosion, planting native vegetation and removing sediment that can impact the creek's ability to carry floodwaters during rainy months. We also have many programs to reduce pollution and contamination in these waterways. Where the flood threat is significant, we undertake large construction projects such as building levees or replacing undersized bridges. Often, the water district can partner with a city or the county to open a trail or park alongside the creek, providing a recreational amenity for all to enjoy.



CONTACT US

For more information, contact Senior Project Manager **Bal Ganjoo** at **(408) 630-3117** or by email at **bganjoo@valleywater.org**. Or use our **Access Valley Water** customer request and information system at **valleywater.org** to find out the latest information on district projects or to submit questions, complaints or compliments directly to a district staff person.



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