

## **CALAVERAS DAM PROJECT REVISED, FUTURE OPERATIONS COULD HELP RESTORE ALAMEDA CREEK**

*Conservation Groups Win Flow Releases and Changes in Dam Operations That  
Will Improve Habitat for Steelhead Trout*



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**Sunol, CA** – The final Environmental Impact Report for the San Francisco Public Utilities Commission project to replace Calaveras Dam in the upper Alameda Creek watershed, which was released earlier this month, includes revisions to the project to benefit restoration of threatened steelhead trout such as changes to dam operations, constructing a fish ladder and fish screens on a diversion dam, initiating a habitat management plan and providing more water flow in Alameda Creek. The SFPUC and the S.F. Planning Department will vote on approval of the environmental report for the project this Thursday, January 27.

“The revised Calaveras Dam replacement project will significantly advance the restoration of steelhead trout to Alameda Creek through water releases, constraints on water diversions, fish passage projects and other habitat improvements,” said Jeff Miller, Director of the Alameda Creek Alliance. “San Francisco should be commended for moving toward more sustainable watershed management and we look forward to working with the SFPUC to restore habitat conditions in upper Alameda Creek.”

“However, the SFPUC continues to pursue a Sunol Valley water diversion project that would recapture an unspecified amount of stream flow releases from upstream dams and this could interfere with steelhead migration,” said Miller. “Why threaten the benefits of restored stream flows by taking the water back?”

The SFPUC has committed to providing year-round water releases into Alameda Creek from Calaveras Reservoir ranging from 5 to 12 cubic feet per second, depending on the time of year and water-year type (wet, normal or dry). Particularly important will be cold-water flow releases during summer months to improve water quality and rearing conditions for trout. The SFPUC will modify operation of a 32-foot diversion dam in upper Alameda Creek, reducing its water diversion capacity by more than 40 percent, closing the diversion gates for more of the year to allow unimpaired natural flow to continue downstream, and ensuring minimum flows of 30 cubic feet per second past the dam during winter and spring.

The SFPUC will also construct a fish ladder around the diversion dam and investigate fish passage improvements downstream to help adult steelhead migrate into the headwaters of Alameda Creek, the best trout habitat in the watershed below major dams. The SFPUC will install a fish screen on the diversion dam and improve screens in the reservoir to prevent small juvenile trout from being diverted or trapped during water operations. The SFPUC also announced a management plan to monitor stream flows and improve habitat conditions, with a stated goal of restoring a self-sustaining steelhead population in the watershed.

Alameda Creek is becoming an urban stream success story due to ongoing restoration efforts, but it took years of advocacy by conservation groups and tough permit requirements by state and federal regulatory

agencies to make the Calaveras Dam project beneficial to steelhead. Alameda Creek is an ‘anchor watershed’ considered regionally significant for restoration of steelhead to the entire Bay Area. Since central coast steelhead were listed as threatened under the Endangered Species Act in 1997, numerous agencies have pursued restoration projects to allow migratory fish from the Bay to reach spawning habitat in the upper creek. Downstream of San Francisco’s dams, 11 fish passage projects at smaller barriers in the creek have been completed since 2001. Several more major fish ladder and dam removal projects are scheduled for completion the next few years, including a fish ladder in Fremont past the “BART weir” and an Alameda County Water District rubber dam in the lower creek. These projects will allow steelhead to swim to about 20 miles of spawning and rearing habitat in the watershed for the first time in nearly half a century.

“All eyes are now on the progress of the planned fish ladder at the BART weir in the lower creek, which when completed will allow migratory fish to finally return to upper Alameda Creek,” said Miller.

### Background

The SFPUC manages 36,800 acres of public land and operates three dams in the upper Alameda Creek watershed. Calaveras Dam captures runoff from 100 square miles of the Calaveras Creek and Arroyo Hondo tributaries, and the Alameda Diversion Dam diverts flows from upper Alameda Creek into Calaveras Reservoir. The SFPUC captures the majority of the natural stream flows of the upper watershed. The completion of Calaveras Dam in 1925 trapped formerly ocean-run steelhead trout above the reservoir and blocked fish migration into the best trout spawning and rearing habitat in the watershed. Because the dam is near an active fault zone and was determined to be vulnerable in a strong earthquake, in 2001 the Division of Safety of Dams restricted the reservoir storage level to 40 percent of capacity until the dam is rebuilt.

Scoping comments on the dam replacement project began in 2005 and the project became controversial when the SFPUC originally refused to consider impacts of the dam operations on steelhead. The SFPUC adopted a Water Enterprise Environmental Stewardship Policy in 2006 committing the agency to operating its water system “in a manner that protects and restores native fish and wildlife downstream of SFPUC dams and water diversions, within SFPUC reservoirs, and on SFPUC watershed lands.” However, a 2008 Programmatic Environmental Impact Report for the SFPUC’s \$4 billion program of retrofits to San Francisco’s aging water system and the 2009 draft EIR for the Calaveras Dam Replacement Project did not include operations and flow releases consistent with restoring a sustainable run of steelhead below the dam.

Over 70 Bay Area conservation and fishing groups called on the SFPUC to improve conditions in Alameda Creek and restore stream flows for steelhead trout. The Alameda Creek Alliance and Center for Biological Diversity submitted extensive legal and biological comments on the environmental review. Ultimately, a federal permit was needed for the project and the National Marine Fisheries Service required increased stream flows and improved habitat conditions to comply with the Endangered Species Act. In 2009 the SFPUC changed course and proposed improved flow and operations requirements for the dam. Construction of the replacement dam is scheduled from 2011 to 2015 and changes to dam operations, new flow releases and restoration actions will begin after completion of construction. The SFPUC is also beginning an evaluation of restoring the Alameda Creek stream reach through the Sunol Valley, and a new gravel quarry operator on SFPUC land will help fund habitat improvements to the creek adjacent to the quarry.

Landlocked trout that live in and above the SFPUC’s Calaveras and San Antonio reservoirs are likely descendants of the original migratory steelhead run in Alameda Creek, genetically related to wild steelhead and an important native gene pool for restoring steelhead below the dams. Rainbow and steelhead trout are

different life forms of the same species, *Oncorhynchus mykiss*. Rainbows stay in the stream environment as resident fish whereas steelhead migrate to the ocean and return to the stream to spawn and rear.

The SFPUC examined possible fish passage projects at Calaveras Dam to allow interchange between trout populations above and below the dam, but concluded they would be technically infeasible, very expensive and have limited biological benefit. For example, a functional fish ladder at the dam would need to be more than 290 feet high - the tallest fish ladder in the country - and would cost an estimated \$40 million for construction plus \$7 million per year in water and operational costs. As a result the SFPUC does not propose moving fish upstream or downstream past the dam. The Alameda Creek Alliance advocates moving stranded fish from tributaries above the reservoir – trapped fish that would die in drying pools during the summer - below the reservoir as a simple and inexpensive way to enhance the gene pool of trout below the dam.

The SFPUC will mitigate for construction impacts to sensitive habitats during the dam rebuild through a Habitat Reserve Program involving restoration projects and habitat improvements on SFPUC lands for species such as the California red-legged frog, Alameda whipsnake and California tiger salamander. In the Alameda Creek watershed, these reserves include 641 acres south of Calaveras Reservoir, 254 acres north of San Antonio Reservoir, 584 acres in Sage Canyon north of the Arroyo Hondo tributary of Calaveras Reservoir, and 35 acres at Goat Rock near the Alameda Diversion Dam. The Alameda Creek Alliance had proposed that mitigations should be on private land in need of protection, but because of the diligence of the SFPUC in attempting to protect other private lands in the watershed through other programs, and the extensive habitat restoration efforts proposed for the reserves, is now supporting this mitigation approach.

*The Alameda Creek Alliance ([www.alamedacreek.org](http://www.alamedacreek.org)) is a community watershed group with over 1,800 members, dedicated to protecting and restoring the natural ecosystems of the Alameda Creek watershed. The Alliance has been working to restore steelhead trout and protect endangered species in the Alameda Creek watershed since 1997.*