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Liz Hafalia / The Chronicle
A scenic overlook sits above the reservoir created by Searsville Dam, which some environmentalists want removed.

Fight looms over removal of Searsville Dam

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Environmentalists, educators and conservationists are digging in for a fight over a proposal to remove Stanford University's Searsville Dam before a mountain of mud gathering behind the 118-year-old structure begins oozing over the top.

A group of environmentalists has embarked on an all-out campaign to tear down the 65-foot-tall hunk of concrete on San Francisquito Creek at the base of the Santa Cruz Mountains.

Proponents of dam removal say Searsville, which is part of the Jasper Ridge Biological Preserve, has blocked fish from spawning, flooded miles of creek and riparian habitat and - because it is next to the San Andreas fault - is a safety risk.

Matt Stoecker, a biologist who founded the anti-dam group, Beyond Searsville Dam, said the artificial lake supports numerous exotic and invasive species, including largemouth bass and bullfrogs that prey upon native species and sometimes spill over and wreak havoc downstream.

"The biological benefits of dam removal are clear, and because of that, dam-removal projects have taken off across the country," Stoecker said. "The absence of this artificial reservoir will lead to the restoration of all the amazing habitat that was lost."

Stanford officials aren't so sure about that. Instead of improving local streams, they said, dismantling the dam could endanger the complex ecosystem, including freshwater wetlands and extensive bird habitat, that have naturally developed around the reservoir over the past century.

"The risk of removing this dam far outweighs the benefits," said Phillippe Cohen, the director of the Jasper Ridge preserve.

Nesting waterfowl

Cohen led a tour of the dam site last week and pointed out an extensive system of forested wetlands on the edge of the lake that he said supports a huge population of nesting waterfowl. He said at least 10 different bat species use the area to feed and a permanent monitoring station has made more than 14 million recordings of bat calls for scientists to study.

"There is a whole list of factors with this dam that don't exist elsewhere," he said. "There is a high risk of loss of wetlands habitat, and the moment you remove the dam, you change the sediment content downstream."

Environmental groups have increasingly championed the removal of aging dams across the country, mostly for safety and liability concerns, but, in some cases, for environmental reasons. More than 500 obsolete dams have been removed throughout the nation.

In California, farmers, residents, energy companies and Indian tribes recently approved an ambitious plan to remove four dams on the Klamath River by 2020 and restore 300 miles of spawning habitat for salmon. A Monterey water company is working with the state and federal governments on a plan to reroute the Carmel River around the 106-foot-tall San Clemente Dam, which has been choked with silt and has been virtually useless for years.

Nobody disputes the fact that the Searsville reservoir is no longer a reliable source of water for Stanford University. In 1892, when it was completed, the dam had a capacity of 350 million gallons. It has since shrunk 90 percent, to about 15 million gallons. More than 50 feet of silt has built up behind the 275-foot-wide dam, a quagmire that could prove deadly for residents of downstream communities if there were a failure.

Sediment buildup

The crumbly mountains behind the dam are depositing sediment into Searsville Lake at a rate that experts say could potentially fill it in within a decade or two, depending on how much runoff is caused by earthquakes and storms.

The university and downstream agricultural operations still use some of the water, but even Cohen admits that the output is not enough on its own to justify the dam, which Stanford acquired in 1918.

"No matter what you decide to do, the status quo is not an option," said Cohen, acknowledging that the dam may have to be removed in the future. "But you can't start from the perspective that removal is the best alternative until you look at all the other options."

The wetland habitat, 90 percent of which has been destroyed on the Peninsula and around the state, is an important research tool for wildlife biologists, biochemists and hydrologists and is an educational opportunity for students, he said.

The Jasper Ridge Advisory Committee, made up of Stanford faculty, staff and graduate students, recommended dredging the lake three years ago over what it termed an expensive, risky dam removal project. Cohen said dam removal studies alone would cost upward of $5 million.

Habitat restoration

Representatives from 30 Bay Area environmental groups have nevertheless signed on to the effort to remove the dam, which fishery biologists say is smack-dab in the middle of the largest historic steelhead trout spawning tributary in the Portola Valley and Woodside areas.

"This is potentially the most significant steelhead restoration effort in the Bay Area in terms of the amount and quality of habitat that could be opened up to oceangoing fish," said Jeff Miller, a conservation advocate for the Center for Biological Diversity. He said the dam was built at the confluence of six streams and flooded riparian forest and natural wetland ponds used by migrating steelhead trout.

"You've got significant redwoods along the riparian area, good root systems and intact stream banks," he said. "Getting that dam out could be significant for reviving that run and adjacent runs as well."