

# Scientists roll out 'not-welcome' mats to kill Tahoe clams

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(PhysOrg.com) -- Lake Tahoe scientists at the University of California, Davis, and the University of Nevada, working with government and conservation organizations, this week began a novel attempt to control a dime-sized clam that threatens the spectacular lake's ecological balance -- including its trademark clarity.

The problem is the non-native Asian clam, *Corbicula fluminea*. First observed in the [lake](#) in 2002, the Asian clam population in some places now has reached thousands per square yard, mainly along the California-Nevada state line in the southeast corner of the lake.

The Asian clam is undesirable because it:

- Displaces native clams, snails and other organisms living on the lake bottom, which are important members of the lake's native food web;
- Fosters the growth of bright green algae, which change the look of the water, and smell when they decompose; and
- Could help foster an invasion of quagga mussels, another aggressive non-native species, by creating desirable habitat for them.

The novel control effort involves installing an acre of rubber sheeting on the lake bottom to kill the clams by depriving them of oxygen. The sheeting will remain in place all summer.

“The goal of this experiment is to determine whether it is feasible to control clams using impermeable bottom barriers,” said Geoffrey Schladow, director of the UC Davis Tahoe Environmental Research Center. “We need to know how to efficiently deploy and remove large areas of rubber sheeting, and when it is all done, we must know whether the clams recolonize the treated areas.”

The "dissolved oxygen deprivation" strategy was devised and tested on small patches of lake bottom last summer by Lake Tahoe experts at UC Davis and the University of Nevada, Reno.

That study and the results of this year's acre-scale experiment will be used to help Tahoe Basin agencies develop a clam-management strategy.

The scientists leading the experiment are UC Davis Tahoe Environmental Research Center postdoctoral researcher Marion Wittmann, director Schladow and associate director John Reuter, and University of Nevada, Reno, associate professor Sudeep Chandra.

The Asian clam experimental control effort is coordinated by the Lake Tahoe Asian Clam Working Group, a collaboration of scientists, environmental agencies and water suppliers.

Members include the UC Davis Tahoe Environmental Research Center; University of Nevada, Reno; Tahoe Resource [Conservation](#) District; Tahoe Regional Planning Agency; U.S. Fish and Wildlife Service; Lahontan Regional Water Quality Control Board; California Department of Parks and Recreation; Nevada Division of State Lands; Nevada Division of Environmental Protection; Round Hill General Improvement District; and Incline Village General Improvement District.

The estimated \$648,000 cost of the experimental treatment will be funded by the U.S. Fish and Wildlife Service, the Nevada Division of

State Lands and the Southern Nevada Public Land Management Act.

In total, \$1.4 million has been allocated by working group agencies for Asian clam control work around Lake Tahoe.

The Lahontan Regional Water Quality Control Board has dedicated \$700,000 to controlling Asian clams in [Lake Tahoe](#), some of which will be used to expand work into Emerald Bay in 2011.

Provided by UC Davis

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