

GREENWIRE LAKE TAHOE:

Neighborhood plots chemical assault as invasive weed spreads

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Published: Wednesday, July 29, 2015

SOUTH LAKE TAHOE, Calif. -- A weed invasion has sparked debate over the future of an iconic lake.

At issue: Is Lake Tahoe's biggest threat invasive species or chemicals that would kill them?

Straddling the California-Nevada line, Lake Tahoe has some of the nation's most restrictive regulations aimed at protecting its famed clarity and cobalt-hued waters. But the regulations have failed to halt the march of invasive species. So lakeside property owners are proposing to poison the invading weed, Eurasian watermilfoil (*Myriophyllum spicatum*), which is infamous for clogging harbors and snaring boat propellers.

The weed has spread in the Tahoe Keys, a 1960s-vintage neighborhood in the southern lake with a maze of docks, canals and lagoons for 1,500 people and their boats.

Milfoil took root in the Tahoe Keys in the 1980s and has gone from 100 cubic yards in 1984 to 18,600 cubic yards in 2014.

Keys homeowners have been spending about \$400,000 per year to mechanically cut and remove weeds, an operation that generates debris that grows into larger plants. The weeds then drift out through boating channels or hitch rides on boats into Lake Tahoe.

The Tahoe Keys Property Owners Association argues that herbicides are among several weapons for controlling weeds. With four "harvester" machines running daily for four months a year, milfoil is still blanketing the water and choking the boat slips.

If the assault stops, "the whole area would be covered with weeds," said Lars Anderson, a former Department of Agriculture aquatic biologist now working as a consultant for the homeowners' association. "You couldn't get a boat out."

The group has produced a [website](#) that promises a draft version of the herbicide plan by Friday, followed by a public meeting Aug. 11 and an official submission of the "aquatic integrated weeds management plan" to local regulators by October. The website doesn't specify which chemical they plan to use, but Anderson said they could use chemicals that either target only the milfoil, or happen to be lethal to that weed in a specific dosage. Other aspects of the plan include improving

boat maintenance to reduce the likelihood of introducing invasives, improving stormwater drainage into the Tahoe Keys, collecting plant fragments and using scuba divers to remove particularly troublesome plants.

Water-supply agencies say the plan could hurt water quality and taint Tahoe's pristine image. The 1960 Winter Olympics in adjacent Squaw Valley prompted a growth spurt that boosted tourism but also fouled the lake with urban stormwater. Since 1997, when President Clinton signed an executive order coordinating federal work in the region, the lake has received more than \$450 million in federal funding for wildfire suppression, invasive species management and other programs. A bill introduced this session and in past years by California and Nevada's Senate delegation would authorize another \$415 million over the next 10 years ([*E&E Daily*](#), July 15).

"We've got some of the best water in the world," said Madonna Dunbar, executive director of the Tahoe Water Suppliers Association, which includes nine public utility districts, water agencies and water companies. "This is a total shift in philosophy."

Alternatives

Dunbar also works for the Incline Village General Improvement District, which supplies water and trash services to two communities in Washoe County, on the north end of the lake in Nevada. Incline Village -- along with five other Tahoe Water Suppliers Association members -- is among a few public water systems that U.S. EPA doesn't require to filter their drinking water.

Dunbar thinks chemicals could make their way to water-intake pipes. The Incline Village district sponsored a [paper](#) last year from the University of California, Davis' Tahoe Environmental Research Center that found wind and water patterns could bring chemicals through the lake fairly quickly at shallow depths.

"The release of a surrogate for herbicide transport from the vicinity of Tahoe Keys was simulated, and showed that herbicide could be transported to the vicinity of the nearshore regions of south-east Lake Tahoe within a 24 hour period," the paper said. "Within that period, material did not actually arrive at any of the water intakes, but based on other results in this report, that would occur within less than 48 hours."

The paper also predicted that the increased risk of drought associated with climate change projections would likely make substances move faster through the lake.

Dunbar cited successful eradication of milfoil in other areas of the lake using less controversial techniques. UC Davis researchers and state parks officials have removed milfoil from Emerald Bay, 10 miles west of the Tahoe Keys, using underwater mats that choke the plant's oxygen supply, as well as scuba divers

wielding vacuums.

Anderson pointed out the UC Davis study only studied the movement of particles, not chemicals with active ingredients that break down in the environment. He also said other methods could be much more expensive or more harmful than pesticides, which he estimated could cost between \$1,200 and \$1,500 per acre initially and get less expensive over time.

Any sanctioned introduction of herbicide in Tahoe is still more than a year away. The Tahoe Keys property owners envision an 18-month permitting process once they submit their proposal to the regional agency in charge of water quality, the Lahontan Regional Water Quality Control Board.

On top of that, the water control board still needs EPA approval for its 2011 document that set the stage for pesticides in the lake. The **plan** overturned a 1975 policy against pesticides, instead setting out the conditions needed for an exemption. EPA still has not finished reviewing the plan under Section 303 of the Clean Water Act, which regulates water quality.

A spokeswoman for EPA's Region 9 office in San Francisco said that the agency hopes to finish the review by the end of September but that it is also working with the Fish and Wildlife Service to evaluate the plan's effects on endangered species.

"The timeline is dependent in part on a few external actions, such as ESA consultation with the U.S. Fish and Wildlife Service," said spokeswoman Soledad Calvino. "We hope to have all the information needed to conclude review by the end of the fiscal year."

An FWS official said pesticide use might actually benefit one of the species under evaluation: the Lahontan cutthroat trout, which died out in the lake in the early 1900s due to overfishing and soil erosion from clear-cutting timber. "Frankly, some of the activity would be beneficial for potentially preparing an area for reintroduction," said Lee Ann Carranza, assistant field supervisor for FWS's office in Reno, Nev. "We're kind of looking at it from all aspects."

Lines being drawn

Environmental groups are still forming opinions on the plan. Some are open to the idea of pesticides as presented, while others are warier.

"We think it's a tool that should be considered if you're going to seriously talk about how to control aquatic invasives in the Tahoe Keys," said Jesse Patterson, deputy director of the League to Save Lake Tahoe, who has been reviewing the plans for the last several months as part of a technical advisory committee.

"We're not entirely comfortable with the use of herbicides in Tahoe, for obvious

reasons, but we know that's probably the only way to manage invasive species in the Tahoe Keys," he said. "If you want to ever have any chance of controlling them into the lake, you have to control them in the Tahoe Keys."

A local Sierra Club official said pesticides should be at the bottom of the list of options to combat invasives.

"I thought it should be an option of last resort," said Harold Singer, a former executive director of the regional water board who now serves on the executive committee of the Sierra Club's Tahoe Area chapter. "I don't think it's the kind of situation that was described when the basin plan was adopted."

As the plan takes shape, public opinion will evolve as well, Dunbar said.

"It's going to all become much more apparent over the next six months who's on which side of the aisle," she said.

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