

Opinion: Imperative to fight AIS at Tahoe

By Casey Beyer

A newly released scientific study highlights the importance of collaborative work to prevent the introduction of aquatic invasive species at Lake Tahoe, and confirms what many public and private stakeholders have feared: That the invasive quagga mussel, if introduced, could establish in our mountain lake's clear, iconic waters.

The study by UNR and Desert Research Institute found quagga mussels could survive in Lake Tahoe, particularly in areas with elevated calcium levels from already-established Asian clam populations and in areas of higher algae growth, as found in some near shore parts of the lake.



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There was hope that quagga mussels, which are native to Ukraine, would struggle to survive in Lake Tahoe's low-calcium waters. However, given the importance of Lake Tahoe's natural environment and recreational opportunities, the Tahoe Regional Planning Agency and its many partners decided early on to take a conservative approach and proactive steps to keep them and many other aquatic invaders out of the lake's waters.

The study found that about 80 percent or more of adult quaggas could survive over a 90-day period in Lake Tahoe's low-calcium

waters. Survival increased to more than 90 percent for adult quaggas and 60 percent for juvenile quaggas in water with the increased calcium concentrations found near Asian clam beds in Lake Tahoe's nearshore – long enough for adults to start reproductive cycles and for juveniles to grow into reproducing adults.

Why are quagga mussels a concern? They are known as prolific breeders and can form sprawling colonies that carpet rocks, lake bottoms, boats, and other structures, littering beaches with shells and causing major environmental, economic, scenic, and recreation impacts.

In 2009, TRPA and 40 public and private stakeholders launched the Lake Tahoe Aquatic Invasive Species Program and mandatory boat inspections to help prevent the introduction of quagga and other aquatic invasive species at Lake Tahoe. Now recognized as a model for the country, the inspection program has overseen the certification and safe launch of nearly 200,000 boats at Lake Tahoe.

Federal funding that has paid for about half of the boat inspection program's \$1.5 million annual cost is running out. TRPA is working to secure state funding from California and Nevada to ensure that this vital program continues, and that inspection fees remain affordable for the thousands of recreational boaters who visit Lake Tahoe each year.

Boat inspections have successfully kept quagga mussels out of Lake Tahoe and remain a top priority for TRPA and its many partners. This new study reemphasizes their value in protecting our lake from aquatic invaders that, if introduced, could potentially spread out of control and forever alter the Jewel of the Sierra.

This study also emphasizes the importance of continued control projects to manage harmful aquatic invasive species in Lake Tahoe, including aquatic weeds such as curlyleaf pondweed and

Eurasian watermilfoil, invertebrates such as Asian clams, and warm water game fishes.

The Lake Tahoe Aquatic Invasive Species Program recently completed a pilot research project that used rubber mats to treat five acres of an Asian clam infestation at Emerald Bay. The goal of the project was two-fold: To evaluate the rubber mats' effectiveness as a way to reduce populations of Asian clams and other aquatic invasive species on a large scale at Lake Tahoe, and to reduce an Asian clam infestation at an iconic and heavily-visited recreation site.

A major priority for TRPA this year is completing a comprehensive control strategy for aquatic invasive species at Lake Tahoe. The goal is to prioritize control projects and guide our future efforts to best use limited funding for maximum possible effect. The strategy will look at what invasive species are the most harmful at Lake Tahoe and where, when, and how they should be treated.

Combatting aquatic invasive species at Lake Tahoe is one of the top priorities for TRPA. The fight will be long and difficult, requiring constant reevaluation to ensure that projects are as effective as possible. Fortunately, many public and private partners are engaged in this fight, and there are many ways people can help.

Boaters can show up to Lake Tahoe with their watercraft "Cleaned, Drained, and Dry," to expedite the mandatory boat inspection process and help stop the spread of aquatic invaders. People with non-motorized watercraft can become Tahoe Keepers and complete that self-inspection training program to help ensure they are not spreading invasive species. People can also become part of Eyes on the Lake, a volunteer program the League to Save Lake Tahoe launched last year to train people to identify and report any aquatic invasive species they see while they are out recreating to help improve monitoring and control efforts.

Please join us in the fight against aquatic invasive species. Working together we can protect our beloved Lake Tahoe, a national treasure, from the introduction and spread of non-native species that could have devastating impacts.

Casey Beyer is chair of the Tahoe Regional Planning Agency Governing Board.