

Making headway battling aquatic invasive plants

By Tahoe Resource Conservation District

After four years of treatment, Emerald Bay remains free of aquatic invasive plants.

In 2010, the Tahoe Resource Conservation District, in collaboration with California State Parks and the Lake Tahoe Aquatic Invasive Species Program, began treating 6 acres of Emerald Bay to remove Eurasian watermilfoil, an invasive plant that alters the aquatic ecosystem by raising the pH of the water, decreasing oxygen, and increasing water temperature. Dense mats of vegetation can also interfere with boat navigation and recreational activities such as paddling and swimming.

The Emerald Bay project was a model for success that is being replicated at other locations.

This year, Tahoe RCD realized a similar achievement at Crystal Shores East Marina in Incline Village. From 2014 to 2016, crews used diver-assisted suction removal and lake-bottom barriers to eliminate invasive plant growth. In 2017, no plants were detected in any of the three Crystal Shores marinas. Surveillance surveys will continue in 2018.

With support from public and private partners, teams are controlling invasive plants at other locations around the Lake Tahoe Basin. The University of Nevada, Reno's 2015 Implementation Plan for the Control of Aquatic Invasive Species within Lake Tahoe is guiding the way. The plan uses an ecological and science-based framework to prioritize locations for controlling satellite populations of invasive plants.

In 2017, Tahoe RCD surveyed over 9 acres of aquatic plant

habitat at Lakeside Beach and Marina, Fleur du Lac, Crystal Shores, Tahoe Vista Boat Launch, the Truckee River, and three miles along Nevada's shoreline. All Eurasian watermilfoil and curlyleaf pondweed plants were removed this season, and the sites will be monitored next year.

In a pilot project, Inventive Resources Inc. and Tahoe RCD used ultraviolet light to treat invasive plants at Lakeside Marina. Lab studies and small field tests have shown that ultraviolet light damages the DNA and cellular structure of aquatic plants, causing them to die back. Tahoe RCD will work with partners this winter to finalize initial results and schedule post-treatment monitoring for 2018.

"From our work in Emerald Bay and Crystal Shores, we know that invasive plant populations can be reduced, and with continued treatments, we will be able to better manage populations around the lake in the future," said Nicole Cartwright, executive director at Tahoe RCD. "While bottom barriers and diver-assisted suction removal have proven to be successful, we need to identify other techniques that could help us get ahead of the battle, particularly with persistent plant species such as curlyleaf pondweed, and much larger infestations that are looming."

Funding for these projects has been provided by California Tahoe Conservancy, Crystal Shores East Homeowners Association, California Department of Water Resources, Incline Village General Improvement District, Tahoe Water Suppliers Association, Nevada Division of State Lands, Tahoe Fund, Tahoe Regional Planning Agency, Truckee River Fund, and the U.S. Fish and Wildlife Service.

*This article is republished from the winter 2017 edition of **Tahoe In Depth**.*