



2016 Update

# The AIS Challenge at Lake Tahoe

The Latest on the Fight to Control Aquatic Invasive Species

August 2016

Photos: League to Save Lake Tahoe (left), peterspain.com

## Tahoe Taking Action

In 2015, a comprehensive plan to control aquatic invasive species (AIS) already established in the waters of Lake Tahoe was completed. This ecologically-based approach to prioritizing species and infestation sites identified two aquatic plants, Eurasian watermilfoil and curlyleaf pondweed, as well as warm water fish, as the primary targets for control work in the immediate future. Coupled with other factors such as feasibility, permitting and project cost, a five-year action list was developed to aid in the search for funding needed to complete the job.

Work taking place in 2016 is fueled by public/private partnerships, including sources such as California Tahoe Conservancy, Nevada Division of State Lands (NDSL), U.S. Fish and Wildlife Service and numerous private contributions, but more will be needed to reach the finish line. Currently, \$1 million has been secured, leaving another \$11 million unfunded to accomplish all of the work identified in the five-year action list.

Control of AIS is a multi-year endeavor that seeks to reduce the impacts from these aquatic invaders to a point of insignificance. An integrated approach using numerous techniques is essential to success and the work highlighted here is a continuation of previous control projects that will be followed up by effectiveness monitoring and further research into improved techniques for control moving forward.

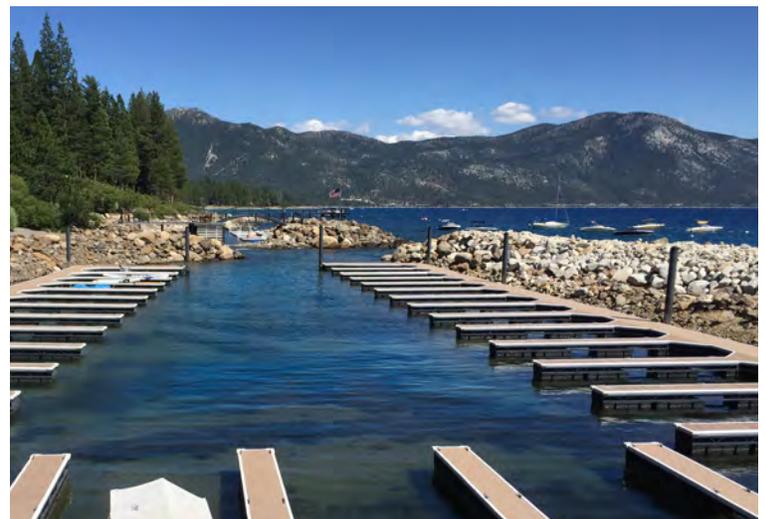
Sites slated for control work in 2016 include:

- Lakeside Marina and beach
- Tahoe City Dam
- Truckee River
- Crystal Shores Marina
- Tahoe Keys

Three marinas located in Crystal Bay were identified in the AIS Implementation Plan as high priorities for control work due to the presence of both Eurasian watermilfoil and warm water fish. Since 2014, Tahoe Resource Conservation District has partnered with NDSL and the three homeowners' associations of Crystal Shores to tackle aquatic invasive plant infestations. Financial support from NDSL and the homeowners of Crystal Shores East have provided the critical multi-year funding to effectively apply integrated treatment methods for long-term control. To date, two acres have been surveyed and treated with bottom barriers and SCUBA diver-assisted suction and hand removal. Further monitoring and control actions will continue in 2016.

Additionally, the threat from Asian clams looms. 2016 will see continued research into innovative techniques to control infestations and prevent further spread by focusing on small satellite populations like those in Emerald Bay and Sand Harbor.

A Eurasian watermilfoil infestation in one of three Crystal Shores marinas. Photo taken July 2015 prior to the placement of bottom barriers. Photo: Tahoe Resource Conservation District



# Seeking Solutions in the Tahoe Keys

The 172 acres of lagoons and channels within the Tahoe Keys are nearly 100 percent choked by aquatic plants, serving as a “nursery” for AIS to the rest of Lake Tahoe. The Tahoe Keys Property Owners Association (TKPOA) is taking a lead role among public, commercial and other private owners in spearheading approaches to address the problem. The complexity of the Tahoe Keys’ built environment, its extensive recreational use and the presence of native species requires more intricate and sustained efforts to make progress and protect Lake Tahoe.

The TKPOA recently completed two plans to address the AIS challenge. The Integrated Management Plan focuses on in-water activities while the Non-point Source Water Quality Plan tackles land-based issues, such as nutrient loading from landscape practices that are feeding the weed problem. These plans are adaptive and will be updated annually through review by a multi-stakeholder working group. Control actions are predominantly funded by TKPOA members, who have already committed over \$500,000 for work in 2016.

## 2016 Control Actions

### 1. Bottom Barrier Trials

Many individual property owners are stepping up to the challenge by agreeing to place individual barriers under their private docks and boat slips to address areas of the infestation otherwise not easily accessible by traditional methods. About 20 owners have installed over 50 barriers that will be monitored throughout and after the 2016 growing season to determine effectiveness and the potential to expand the trials in future years.

### 2. Managing the spread of fragments

The current practice of “harvesting” aquatic plants to allow recreational access in the lagoons produces thousands of viable plant fragments that can spread and establish elsewhere in Lake Tahoe. Skimmer boats are used to collect

Aquatic invasive plants pulled from Tahoe Keys.  
Photo: Tahoe Keys Property Owners Association



Tahoe Keys Property Owners Association staff skim aquatic invasive plant fragments left behind from AIS “harvesting” operations. Photo: TKPOA

fragments before they leave the Tahoe Keys. In 2016, the TKPOA will pilot the use of three new skimmer boats and will modify current practices to reduce the amount of fragments entering the Lake.

To prevent fragments from hitchhiking on boats leaving the Keys, a boat back-up station was installed near the channel. Prior to leaving the Tahoe Keys Lagoons, informational signs direct Keys boaters to reverse their propeller and back up to dislodge fragments.

### 3. Learning more about the unique environment in the Keys

Extensive monitoring has been undertaken to learn more about water movement within and out of the Keys lagoons as well as the availability of nutrients in the water and sediments feeding aquatic plants. Additional sampling of both native and invasive aquatic species will help inform which control methods will best achieve management goals.

## Looking Ahead

Methods of AIS control used successfully elsewhere in the nation will continue to be researched and considered for pilot tests during future years. Currently a proposal for a one-time application of approved herbicides used effectively in other water bodies is being developed and reviewed by stakeholders and agency staff. Details of the trial are still being determined and work would not commence until 2017 or 2018 at the earliest. Other innovative methods, such as ultraviolet light, are also being investigated for future trials.

## We Must Continue the Fight

The collaboration among public agencies, nonprofit organizations and private entities has Lake Tahoe on the road to success, but more must be done. An unrelenting and determined effort to address priority sites identified in recently completed management plans is already underway, as is an examination of new and innovative tools. Additional funding for research, monitoring and continued control efforts is needed to stay ahead of one of the largest threats to Lake Tahoe’s famed water quality. The AIS Challenge continues. Join the fight.

*\*References and contact information to get involved can be found at [keptahoebblue.org/ais-challenge-2016](http://keptahoebblue.org/ais-challenge-2016)*

# References and contact information

This document is a update to the 2015 AIS Challenge,  
available online at [keptahoebblue.org/AIS-challenge-2015](http://keptahoebblue.org/AIS-challenge-2015)

## References:

1. TRPA (Tahoe Regional Planning Agency). 2014. Lake Tahoe Region Aquatic Invasive Species Management Plan, California - Nevada. 35 pp. + Appendices.
2. Wittmann, M.E. and Chandra, S. 2015. Implementation Plan for the Control of Aquatic Invasive Species within Lake Tahoe. Lake Tahoe AIS Coordination Committee, July 31, 2015. Reno, NV. 52 pp.
3. August 2015. Draft Integrated Weed Management Plan for the Tahoe Keys Lagoons. Prepared by Sierra Ecosystem Associates for the Tahoe Keys Property Owners Association.
4. May 2016. Integrated Management Plan for Aquatic Weeds for the Tahoe Keys Lagoons. Prepared by Sierra Ecosystem Associates in Association with Dr. Lars Anderson for the Tahoe Keys Property Owners Association.

## Contact information for key organizations and agencies:

**League to Save Lake Tahoe**  
530.541.5388 | [keptahoebblue.org](http://keptahoebblue.org)

**Tahoe Regional Planning Agency**  
775.588.4547 | [www.trpa.org](http://www.trpa.org)

**Tahoe Fund**  
775.298.0035 | [tahoefund.org](http://tahoefund.org)

**Tahoe Lakefront Owners' Association**  
530.583.5253 | [tloa.net](http://tloa.net)