TAHOE KEYS CONTROL METHODS TEST

YEAR 2 ANNUAL REPORT

MAIN TAKEAWAYS

What's Happening in the Tahoe Keys?

Following a thorough analysis and significant public input, in 2022 the Tahoe Keys Property Owners Association (TKPOA) began a project to test innovative methods to control the largest infestation of aquatic invasive weeds in the Lake Tahoe Basin. Aquatic invasive species pose a serious risk to Tahoe's water quality and clarity, native species, and the public's enjoyment of the lake.

In 2023, TKPOA completed the second year of the three-year Tahoe Keys Control Methods Test. In the first year, they significantly reduced plant biomass using an array of methods, including the one-time, targeted use of herbicides sequestered behind protective curtains. **The goal of year two tests was to maintain the year one weed "knock-back" using entirely non-chemical Group B methods, such as UV light treatment, bottom barriers, and diver-assisted suction harvesting.** **No herbicides were applied in 2023.**

Did it Work?

Scientists analyzed tens of thousands of data points and so far they've seen **the initial knock-back in invasive plant density was largely sustained in herbicide-treated sites and some non-chemical sites.** Extremely different water levels* provided valuable insight into how deeper water affects treatment areas. Main takeaways include:

1. Successful knock-back of targeted invasive plants in 2022 was largely sustained in 2023 where herbicide was applied.

2. UV treatments were the most effective midchannel. Shoreline areas are difficult to navigate for the large array of lights.

*The water level was about four feet deeper in 2023 compared to 2022 and twice the volume. This resulted in submerged shoreline areas, which increased habitat for aquatic plants to grow in areas that had not received any treatments in 2022. At the same time, plant growth decreased in deep areas in both control and treated areas because light was unable to penetrate.

3 Bottom barriers were successful; however, instances of regrowth were found after removal in late fall. The bottom barriers likely need to be implemented for longer, and/or multiple years to be fully effective.

- *Bottom barriers don't kill curlyleaf pondweed turions (seeds), which can remain viable in the soil for years. Removing this invasive species will likely include the use of bottom barriers with other non-chemical treatments.*

4 The successful removal of targeted invasive species possibly gave native species such as *Elodea canadensis* an opportunity to grow more due to less competition. Unfortunately, more Coontail was observed, which is a native plant that was targeted for control through the CMT due to its nuisance characteristics.

5 Group B treatments, such as UV light treatment, bottom barriers, and diver-assisted suction harvesting, should be focused during spring and fall when curlyleaf pondweed growth is at its peak to remove new turions produced by plants and defend against old turions sprouting.

What's Ahead in 2024?

This summer is the final year of the Control Methods Test. TKPOA will expand the use and duration of non-chemical methods, weather-permitting, such as UV light treatment, bottom barriers, and diver-assisted suction harvesting. No herbicides will be applied in 2024.

The results of the Control Methods Test **will inform long-term management plans** for addressing aquatic invasive weeds in the Tahoe Keys.

LAKE TAHOE
INVASIVE SPECIES PROGRAM

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