

Review of the Tahoe Keys Control Methods Test Year 2 Implementation and Proposed Year 3 Actions

Background

The Tahoe Keys Property Owners Association (TKPOA) began implementing the Control Methods Test project (CMT project) in May 2022 to assess future options for large-scale invasive aquatic plant control in the Tahoe Keys. The key target species are invasive Eurasian watermilfoil, Curlyleaf pondweed and extensive growth of Coontail. The goal of the CMT project is to determine what technologies may achieve a 75% knockback of the current weed infestation and if this knockback can be maintained over a 3-year time frame using non-herbicide methods in years 2 and 3. The CMT project technologies being tested to achieve the large-scale knockback include two different aquatic herbicides, an aeration system, and ultraviolet light. Chemical treatments were tested in Year 1 independently and in combination with the methods listed previously. Follow-up non-herbicide method treatments began in Year 2 (2023) and will be continued with some modifications in Year 3 (2024), including UV light, aeration, diver assisted suction harvesting, and bottom barriers.

TKPOA and Lake Tahoe resource management agencies will use the “Year 1” (2022), and Year 2 collected data to determine (1) use, locations and frequency of follow up plant control treatment methods to be used for “Year 3” (2024); and (2) whether additional monitoring is needed to assess impacts and inform future treatment decisions for “Year 3”.

Review Need

TKPOA and resource management agencies would like to build on previous Science Council review of the environmental impact statement and CMT test results for Year 1 and Year 2 to obtain scientific input continuity into Year 3 of CMT implementation. This will consist of reviewing collected data from Year 2 in the context of proposed weed follow up treatments for Year 3. It will also provide the opportunity to inform future treatment decisions and monitoring activities.

TKPOA and management agencies also seek Council participation in stakeholder workshops to discuss project monitoring results and proposals for the coming year.

Documents for Review

1) Proposed CMT Year 3 Aquatic Weed Treatment Areas and Acreages – 2024

Two brief documents (a set of map slides and a table) outline preliminary weed treatment activities proposed for CMT Year 3 activities. The slides and table provide recommendations based on various assessments of the previous year’s work, collected data, and associated reports.

2) Tahoe Keys Lagoons Aquatic Weed Control Methods Test: Annual Report – Year 2

The annual report describes the monitoring, mitigations, and resource protection measures required by regulatory permits that allowed for the CMT treatments to occur.

The sections below focus on the in-water monitoring activities and treatment results in various areas.

- a) Section 3.0 Monitoring Context and Conditions
- b) Section 4.0 Control Site Monitoring Results
- c) Section 5.0 Year 2 Group B UV Treatments: Nutrient Summary
- d) Section 6.0 LFA Treatment Sites: Monitoring for Changes in “Muck” Sediments
- e) Section 7.0 Other Water Quality Monitoring During CMT Year 2
- f) Section 8.0 Light for Plant Growth: Photosynthetically Active Radiation (PAR) During CMT Year 2
- g) Section 9.0 HAB Monitoring and Results

3) Tahoe Keys Lagoons Macrophyte Control Efficacy Report (Annual Report – Year 2, Appendix E)

The referenced appendix describes the approach to assess the efficacy of treatments in the first and second years of the CMT. Various methodologies were used, including macrophyte rake pulls and hydroacoustic scans to assess macrophyte response(s) to treatments throughout the growing season. Treatment efficacy goals for Years 2 and 3 are to maintain 75% reduction in AIP biovolume and 3-foot vessel hull clearance in those areas where Year 1 Group A methods accomplished those goals compared to pre-CMT conditions.

Review Questions and Charge

- 1) Do previous treatment activities in Year 2, collected data, and submitted reports support the 2024 implementation plans outlined in the set of slides and table of proposed treatments for Year 3?
- 2) Do the water quality or other data reveal any trends or indicators that suggest:
 - a) Modifications to the monitoring program should be considered in Year 3;
 - b) Modifications to mitigation measures associated with treatment activities should be considered for Year 3; and/or,
 - c) There is a need for post-Year 3 monitoring to further evaluate or substantiate CMT treatments efficacy or monitoring results.

Product

The product of this work will be a brief memorandum compiling the reviewers' responses to the questions above in the context of the provided materials.

Personnel

Project TSAC lead: Michael Marchetti

Project agency lead: Dennis Zabaglo

Contributing scientists: David Caron

Background Documents

1. Proposed CMT Year 3 Aquatic Weed Treatment Areas and Acreages – 2024 (set of slides with maps showing proposed treatments and summary table of treatment types and acreages)
2. [Tahoe Keys Lagoons Aquatic Weed Control Methods Test: Annual Report – Year 2](#)
3. [Tahoe Keys Lagoons Macrophyte Control Efficacy Report \(Annual Report – Year 2, Appendix E\)](#)

Additional project information can be found at <https://tahoekeysweeds.org/>