

Twin Lakes, Salisbury, Connecticut 2017 Year-End Report

Report Prepared for:
Town of Salisbury
& Twin Lakes Association
Salisbury, CT 06068

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In accordance with the existing aquatic plant management contract between SOLitude Lake Management, the Town of Salisbury, and the Twin Lakes Association for Twin Lakes in Salisbury, CT, the following document provides this year's survey and treatment results, and management recommendations for the 2018 season.

All management activities were consistent with the permits issued by the CT DEEP (AQUA-2017-292, AQUA-2017-293, AQUA-2017-296).

2017 Management Program Summary:

Submitted Permit Application to CT DEEP	01/20/2017
Received approved CT DEEP Permits.....	05/11/2017
Early Season Survey.....	06/05/2017
Herbicide Treatment(s)	06/14 & 09/27/2017
Late-Season Survey.....	09/27/17 & 10/04/2017

MANAGEMENT HISTORY

From 2003-2017, area selective treatments with Reward (diquat) herbicide have been used to control the growth of Eurasian watermilfoil and curly-leaf pondweed in the Twin Lakes system. Areas of focus are the developed shoreline areas and other high-use areas of the three lakes. During the first five years of the program, 60-85 acres were treated annually in East Twin. Due to significant areal reduction, 20- to 40-acre treatments have been conducted through to the current program in East Twin Lake. Treatments later shifted to include Second and Third Lakes for both Eurasian watermilfoil and curly-leaf pondweed. A diverse native aquatic plant community has been documented throughout the course of active management.

Data collection on water chemistry and plankton community has been continued throughout the program by various entities involved in the restoration of the Twin Lakes system.

PRE-MANAGEMENT SURVEY

On June 5th, a SOLitude Lake Management (SOLitude) Biologist conducted a pre-management survey at Twin Lakes. The purpose of this survey was to document and

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analyze the distribution of target macrophyte species within the respective waterbodies, and provide treatment recommendations for the upcoming season (Figure 1).

- Eurasian watermilfoil and curly-leaf pondweed were found at Trace to Dense densities throughout the three basins.
- Most curly-leaf pondweed was noted in Second Lake while most Eurasian watermilfoil was noted in Third Lake. East Twin supported single-stem or low growth at the time of the survey.
- During the survey, flowering white water-crowfoot (*Ranunculus aquatilis*) was documented near the Second Lake boat landing and beach.
- Curly-leaf pondweed was found out to depths of ~18 feet, especially within Second Lake.

HERBICIDE APPLICATION SUMMARY

Treatment for Eurasian watermilfoil and curly-leaf pondweed was conducted on June 14th. As in previous years, treatment utilized the CT DEEP and US-EPA registered herbicide Diquat (Figure 1). A total of 63 acres were treated: 25 acres in East Twin, 13 acres in Second Lake, and 25 acres in Third Lake.

On September 27th, a late-season treatment for high-use areas containing waterlilies was performed in Second and Third Lakes. Treatment utilized the CT DEEP and US-EPA registered herbicide Glyphosate. Prior to all treatments, SŌLitude provided notifications to the Twin Lakes Association. Notifications were provided at least 48 hours prior to the herbicide application. A legal ad was also placed in the Republican American.

POST-MANAGEMENT SURVEY

The Twin Lakes system was surveyed on two separate days: Second and Third Lakes were surveyed on September 27th, and East Twin was surveyed on October 4th. Particular attention was given to the management areas, to assess the efficacy of management on the targeted aquatic vegetation.

- Results of this survey revealed an overall reduction of both target species (Figure 2). Curly-leaf Pondweed was not observed during this inspection. However, the nature of the survey combined with curly-leaf pondweed's life cycle make it unlikely that plant would be observed at this point in the season.
- Large patches of Eurasian watermilfoil were documented on the southern shoreline of East Twin Lake. Growth was consistently confined in patches, approximately 15ft long by 15ft wide. Much of this growth likely emerged after the pre-treatment survey and some was present outside of the treatment areas. The treatment likely reduced the patches to the low-biovolume present at the time of the survey.
- Areas of Eurasian watermilfoil outside of the treatment zones were persistent throughout the season, especially along the eastern side of the peninsula in East Twin and along the northern shoreline of Second lake.
- The private launch in Third Lake was noted as particularly dense with Eurasian watermilfoil, however good control was observed in other areas.



MANAGEMENT RECOMMENDATIONS

Due to restrictions on treatment areas and size, no significant changes to the management program are recommended for the 2018 season. Treatment regime and products appear to be working well to control the targeted non-native aquatic plants. Given the continued success of the current management approach and documented reductions in Eurasian watermilfoil and curly-leaf pondweed, we recommend maintaining a similar management program for the 2018 season.

If area restrictions are lessened or altered for the 2018 season, we suggest management of the eastern shoreline of the peninsula in East Twin and of the northern shoreline of Second Lake in addition to the current treatment areas.

We understand that the Town and Lake Association are currently working with another lake management professional to handle other aspects of the program including more detailed vegetation surveys, water quality monitoring and other assessment/planning tasks. We are happy to be involved as needed on management discussions and planning.

We hope you find this helpful in making your lake management decisions. If you have any questions or need anything further, please contact our office.