

Annual Report
2017 Aquatic Management Program
Spy Pond
Arlington, MA

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Introduction

In accordance with the existing aquatic plant management contract between the Town of Arlington and SÖLitude Lake Management for Spy Pond, the following document serves to provide a summary of the survey results and management recommendations for the 2018 season.

All work performed at Spy Pond this season was conducted in accordance with the current Order of Conditions (OOC) issued by the Conservation Commission (DEP #091-258) and the MA DEP – Office of Watershed Management issued License to Apply Chemicals (#17221).

Pre-Management Inspection

On June 13, a SÖLitude biologist conducted a pre-management inspection of Spy Pond to assess the relative abundance and distribution of non-native aquatic vegetation, specifically Eurasian watermilfoil (*Myriophyllum spicatum*). During the survey, the entire waterbody was systematically toured and a GPS was utilized to record any locations of milfoil encountered. As a result of the 2016 Sonar treatment program, no Eurasian milfoil was observed. Shoreline areas of varying density curlyleaf pondweed (*Potamogeton crispus*) were observed, as well as one individual water chestnut (*Trapa natans*) plant, which was immediately removed by the SÖLitude biologist. Based on the results of the survey, no treatment was scheduled to be conducted at this time.

Interim Survey

At the request of a resident of Spy Pond, an interim survey of the pond was conducted on August 4 to assess the nuisance aquatic plant growth of concern. Upon inspection, the growth was found to be spiny naiad (*Najas minor*), which is an invasive species capable of creating dense, nuisance mats of vegetation. One individual Eurasian milfoil plant was observed near the Kelwyn Manor Park boat launch at this time as well. As a result, treatment was scheduled shortly thereafter.

Herbicide Treatment

On August 28, an herbicide treatment to control the nuisance spiny naiad growth was scheduled and performed. Treatment of 30 acres of growth was completed using an airboat



equipped with an on-board low-pressure pump system, in which the liquid diquat herbicide was diluted with pond water and applied subsurface via trailing hoses. Although the treatment was targeting the spiny naiad growth, Eurasian milfoil is also impacted by diquat herbicide and any viable plants would have been impacted by the treatment. At no time during or following the treatment were non-target or aquatic organisms adversely impacted.

Late Season Survey

A late season survey was conducted by a SŌlitude biologist to reassess aquatic vegetation composition within Spy Pond and assess the treatment's impacts. Conditions at this time were dominated by healthy densities of snailseed and thin-leaf pondweed (*Potamogeton bicupulatus* and *pusillus*, respectively). Trace amounts of spiny naiad were observed within areas where growth had originally been extremely dense prior to treatment. No Eurasian milfoil plants were observed at this time. Some filamentous algae was present along the bottom of the pond.

Ongoing Management Recommendations

Based on the success of this and last year's management programs at Spy Pond, we recommend continuing with a similar management approach in 2018. As milfoil regrowth remained minimal again this season, spot-treatment with diquat herbicide is recommended for any areas of regrowth in 2018, as it is the most cost-effective option for limited growth. If substantial milfoil regrowth begins to reestablish within the pond, the use of systemic Sonar (fluridone) herbicide should be considered again based on their prior success in Spy Pond. As nuisance spiny naiad conditions were experienced this year, we recommend conducting an interim survey in mid-late July in 2018 to assess for its growth as it is a later germinating plant that would not be observed during a normal early season survey. Additionally, we recommend continuing with a spot-treatment approach to manage spiny naiad growth again in 2018.

As algae blooms have occasionally been problematic over the years at Spy Pond, and an alum nutrient inactivation treatment has previously been performed there, it may be worthwhile to consider an algae and water quality monitoring program. By monitoring algae counts and water quality conditions, a better understanding of the water quality conditions within the pond can assist with potential future management tasks. In the event that a copper algaecide or alum treatment needs to be conducted, we can more appropriately time and target the applications with conditions in mind.

FIGURE 1: June 2017 Distribution of Invasive Aquatic Vegetation



Legend



Individual water chestnut plant
(removed by biologist)

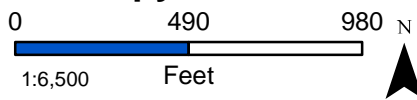


Curlyleaf pondweed

Spy Pond
Arlington, MA



Spy Pond





Map Date: 06/14/2017
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FIGURE 2: August 2017 Distribution of Invasive Aquatic Vegetation



Legend

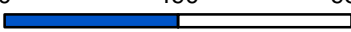
-  Individual Eurasian watermilfoil plant
-  Dense spiny naiad

Spy Pond
Arlington, MA




Spy Pond

0 490 980 N



1:6,500 Feet



Map Date: 08/07/2017
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