

**Annual Report**  
2018 Aquatic Management Program  
Spy Pond  
Arlington, MA

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*Submitted on:* November 30, 2018

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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, treatment event, and management recommendations for the 2019 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 (#18196).

### **Pre-Management Inspection**

On May 16, 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*) and curlyleaf pondweed (*Potamogeton crispus*). 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. Based on the results of the survey, no treatment was scheduled to be conducted at this time.

### **Interim Survey**

In anticipation of later season spiny naiad (*Najas minor*) growth, a survey was conducted on July 19 to assess it's growth and determine a management approach. Spiny naiad growth at this time was moderate and low-growing still along the western shoreline. Some individual Eurasian milfoil plants were observed along the shoreline opposite Kelwyn Manor Park boat launch at this time as well. Dense snailseed ponweed (*Potamogeton bicupulatus*) was observed in all shallower water depths south of Elizabeth Island and in the eastern most cove. As a result, treatment was scheduled shortly thereafter.

### **Herbicide Treatment**

On August 13, an herbicide treatment to control the nuisance spiny naiad growth was scheduled and performed. Treatment of 40 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 within the treatment areas 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 pusillus*). Trace amounts of spiny naiad were observed within areas where growth had originally been extremely dense on the day of treatment. A few Eurasian milfoil plants were observed at this time along the southeastern shoreline by Rt 2. Some filamentous algae was present along the bottom of the pond and a moderate microscopic algae bloom was present throughout the waterbody.

### **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 2019. As milfoil regrowth remained minimal again this season, spot-treatment with diquat herbicide is recommended for any areas of regrowth in 2019, 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 its prior success in Spy Pond. As nuisance spiny naiad conditions were experienced this year, we recommend conducting an interim survey again in mid-late July in 2019 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 2019.

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 algacide or alum treatment needs to be conducted, we can more appropriately time and target the applications with conditions in mind.



**FIGURE 1: May 2018 Distribution of Invasive Aquatic Vegetation**



**Spy Pond**  
Arlington, MA

**Spy Pond**

0 500 1,000  
1:6,500 Feet




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**FIGURE 2: July 2018 Distribution of Invasive Aquatic Vegetation**



**Legend**


-  Eurasian watermilfoil
-  Spiny naiad, snailseed pondweed
-  Snailseed pondweed

**Spy Pond**  
Arlington, MA



**Spy Pond**

0 500 1,000  
1:6,500 Feet



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**FIGURE 3: August 2018 Herbicide Treatment Areas**



**Legend**


 Treatment area

**Spy Pond**  
Arlington, MA



**Spy Pond**

0 500 1,000  
1:6,500 Feet



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