

2020 Annual Summary Report Vegetation Evaluation Massapoag Lake Sharon, MA 02067

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Introduction

SOLitude Lake Management was contracted by the Sharon Lake Management Committee in 2020 to conduct an aquatic vegetation management program at Massapoag Lake in Sharon, MA. The purpose of the program was to evaluate the existing aquatic plant growth throughout Lake Massapoag. The survey focused on Fanwort (*Cabomba caroliniana*) and Variable Milfoil (*Myriophyllum heterophyllum*) distribution and relative abundance in the waterbody and adjacent lagoon. An outline of the 2020 program, along with our recommendations for ongoing management follow. No treatments were conducted in 2020.

Site Description

Lake Massapoag is a 385-acre waterbody located in Sharon, MA with a maximum reported depth of 14 meters. The lake bottom is primarily rocky, with two underwater plateaus in the northern center of the lake. The lake is fed primarily through groundwater springs, and streams including periodic high flow from a lagoon adjacent to the southern cove of the waterbody.

Vegetation Survey

A vegetation survey was conducted by a SOLitude Aquatic Specialist at Lake Massapoag and the adjacent lagoon on August 10, 2020. The survey utilized a Jon boat from which visual inspection occurred as well as bottom sampling using a "throw-rake" where water depth or other factors impaired visual inspection. The survey focused on invasive vegetation, specifically fanwort and variable milfoil. Special attention was paid to areas noted to have these invasive species in surveys of previous years. Most of the lake bottom was limited in aquatic vegetation which can be attributed to the rocky substrate.

Patches of variable milfoil were observed in the western and southern cove in moderate densities. Fanwort was found intermixed with the milfoil in the western cove in moderate to dense density.

In the northeastern, southeastern, and western portions of the lake some native vegetation was observed such as Tapegrass (*Vallisneria americana*), waterweed (*Elodea canadensis*), Naiad (*Najas spp.*), Bladderwort (*Utricularia spp.*), and spike rush (*Eleocharis spp.*). A patch of Common Reed (*Phragmites australis*) was found along the eastern shoreline

which should be monitored closely as it is invasive and has strong potential to spread quickly. Various lily species including Watershield (*Brasenia schreberi*), Yellow Waterlily (*Nuphar variegata*) and White Waterlily (*Nymphaea odorata*), patches were found in the western and southern coves as well as within the lagoon. There was a dense abundance of lilies found, particularly within the lagoon. A description of the various classes of relative abundance is shown below.

Trace	Few plants on rake
Sparse	Finger full on rake
Moderate	Handful on rake
Dense	Difficult to bring rake onto boat

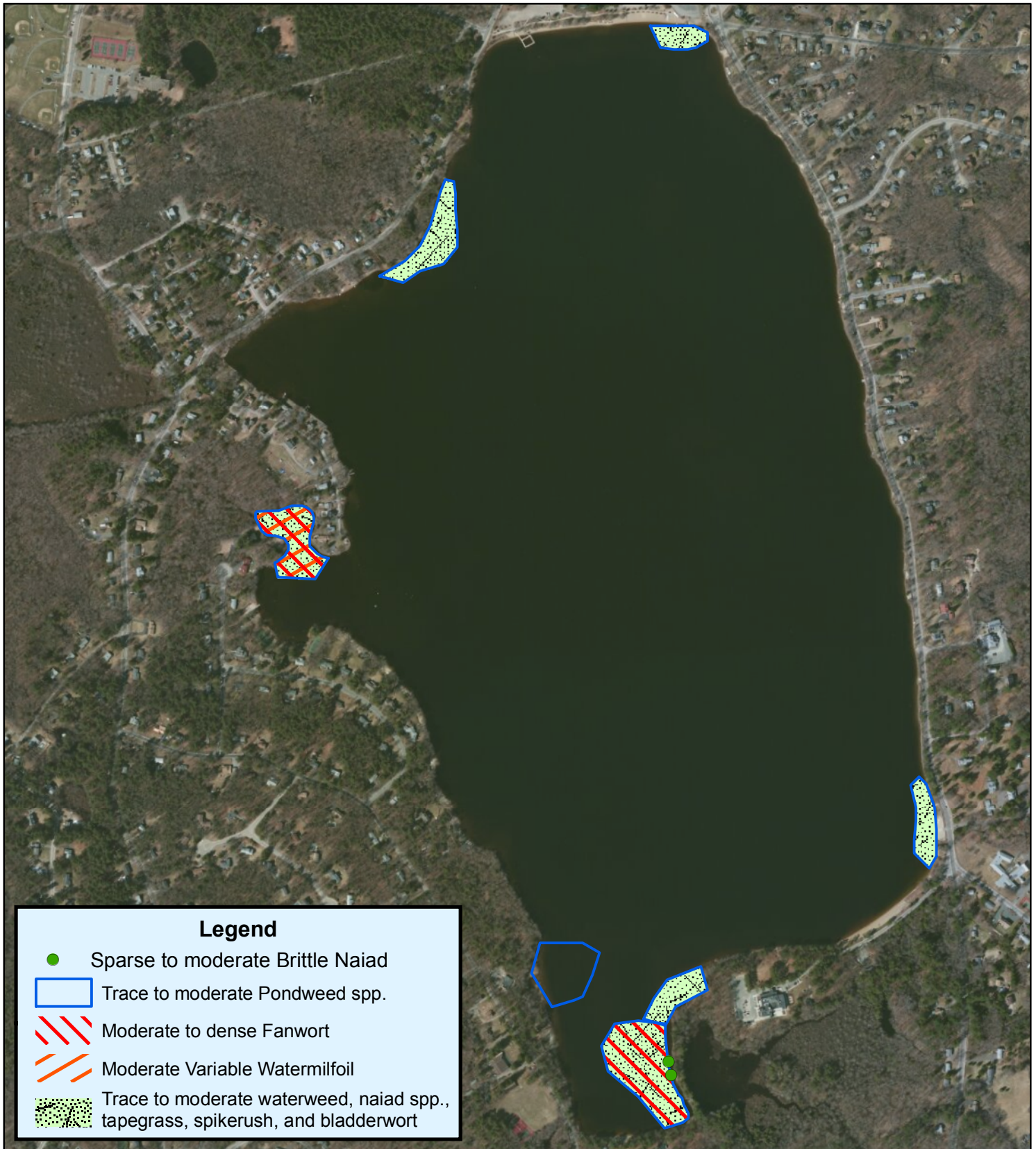
Recommendations for 2021

With milfoil and fanwort beginning to appear in the lake again, we recommend a small scale treatment, before they are found abundantly throughout the waterbody. We strongly recommend an annual survey in 2020 to determine changes in vegetation distribution and abundance with a focus on invasive species such as milfoil and fanwort, followed by a Sonar treatment, like the one done in 2018. The survey is essential in planning effective treatments, if requested, to maintain control of the target species. We also recommend the addition of the following programs for 2020.

- Monitor the phragmite population on the eastern shoreline and treat when necessary. Phragmites are a rhizomatous plant and can spread very fast.
- Maintain balanced waterlily growth through the selective application of AquaPro (glyphosate). By treating selected areas of waterlilies every other year, a healthy balance of plants can be achieved. If left unmanaged, waterlilies will encroach on open water habitat further degrading the lake. By treating every other year, we can allow for a healthy distribution of vegetation.

We feel that our recommendations will help continue to enhance the lake's aesthetic, ecological and recreational value. We truly appreciate your business and look forward to working with you again next season in 2021. If you have any questions regarding our 2020 program or our recommendations for 2021, please do not hesitate to contact our office.

FIGURE 1: 2020 Vegetation Assemblage



Lake Massapoag
Sharon, MA
Norfolk County
42.10334°, -71.17713°

Lake Massapoag

0 500 1,000 1,500 2,000 Feet

1:9,721

Map Date: 08/10/2020
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