WATER & WETLAND
LAKE POND & WETLAND MANAGEMENT

BIOLOGIST:
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Call/Email with any questions!

FIELD NOTES SUMMARY

Customer: Methuen Conservation Commission
Pond Name: Forest Lake
Site Location: Methuen, MA
Date: 6/5/25

On 6/5/25, Aquatic Field Biologist, Brian Sweeney, and Aquatic Field Biologist, Brian O'Leary, made a visit to Forest Lake. The following services were completed during the visit:

Upon arrival to the site, a survey was conducted using visual observation paired with a standard throw-rake and handheld GPS/ArcGIS Field Maps, as applicable. Plants documented during the survey are documented in the table below. (*) denotes an invasive species. Invasive species are non-native to the ecosystem and are likely to cause economic harm, environmental harm, or harm to human health.

Species Identified	
Common Name	**Latin Name**
Waterlilies	*Nymphaeaceae*
Clasping-leaf Pondweed	*Potamogeton perfoliatis*
Cattails	*Typha sp.*
Thin-leaf Pondweed	*Potamogeton pusillus*
Snailseed Pondweed	*Potamogeton bicupulatus*
Benthic Algae	
Brittle Naiad	*Najas Minor*

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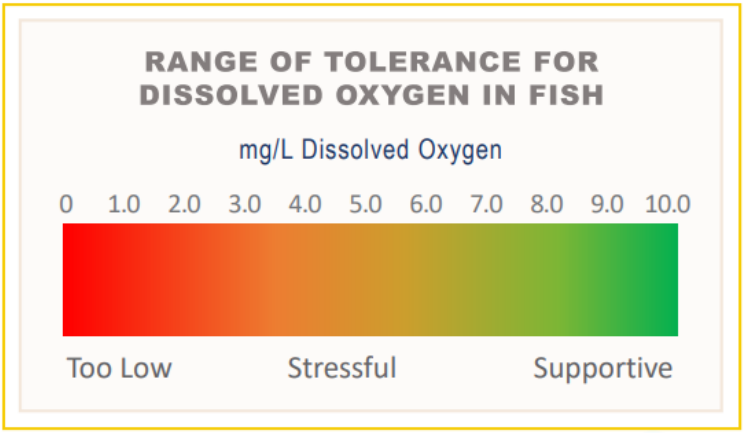

While on-site, dissolved oxygen (DO) and temperature readings were collected using a calibrated YSI meter with optical sensor. Dissolved oxygen is the amount of oxygen in water that is available to aquatic organisms. DO is necessary to support fish spawning, growth, and activity. Tolerance varies by species, but the figure below provides a general range of fish tolerance (Source: epa.gov). Dissolved oxygen can be affected by many outside factors, such as: temperature, time of day, and pollution. Dissolved oxygen levels are typically lowest early in the morning. Healthy water should generally have concentrations of about 6.5-8+ mg/L.

Results from the visit are included in the table below:

Temperature & Dissolved Oxygen	
Surface Temp (°C)	Surface DO (mg/L)
22.2	6.22

A Secchi disk is a disk with alternating black and white quadrants. It is lowered into the water of a lake until it can no longer be seen by the observer. This depth of disappearance, called the Secchi depth, is a measure of the transparency of the water.

Secchi Disk Clarity	
Secchi Disk Depth (Feet)	12 feet 4 inches

Additional Notes from the Biologist
The site visit consisted of collecting basic water quality data in addition to completing a survey. A large, highly dense patch of brittle naiad was observed adjacent to the boat launch. Small, sparse patches of waterlilies were scattered throughout the lake's perimeter. A few stands of cattails were noted as well. The northern edge of the pond contained stands of clasping-leaf at scarce to moderate densities. Small, scattered patches of benthic algae were also noted in the same area. Small, moderately dense patches of thin-leaf pondweed were observed along the eastern perimeter. The southwestern midsection of the lake boasted large, moderate to highly dense stands of clasping-leaf pondweed, as well as small, sparsely dense patches of snailseed pondweed. The southern island was accompanied by small, scattered patches of low density clasping-leaf pondweed. Additionally, a few individual clasping-leaf plants dotted the pond in various locations. Other than the locations listed above, the lake's overall

condition was excellent condition. Dead fragments of curly-leaf were collected via throw-rake, but no actively growing stands were observed.

Water clarity was excellent at the time of visit. Pollen was documented along the windblown shorelines, which should not be confused with a buildup of micro-algae. No surface algal blooms were observed. Weather conditions were ideal for surveying at the time of visit. Based on survey data, we recommend continuing to monitor growth as treatment would be necessary if vegetation began to reach "nuisance" densities, as it historically has at Forest Lake in previous years. If treatment is necessary, the treatment would target the invasive growth, in addition to the nuisance densities of natives. At this current time, densities are at beneficial levels.

As always, we will notify you prior to any upcoming visits, as applicable. Please feel free to reach out to us directly with any questions.

Photo 1	Photo 2	Photo 3
		

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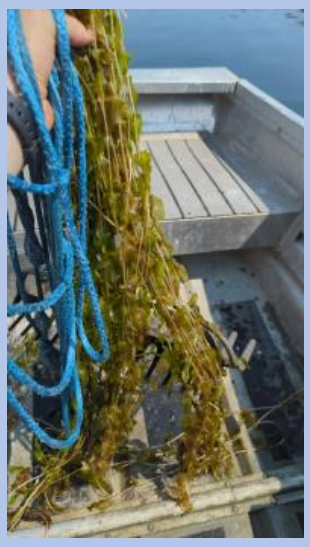
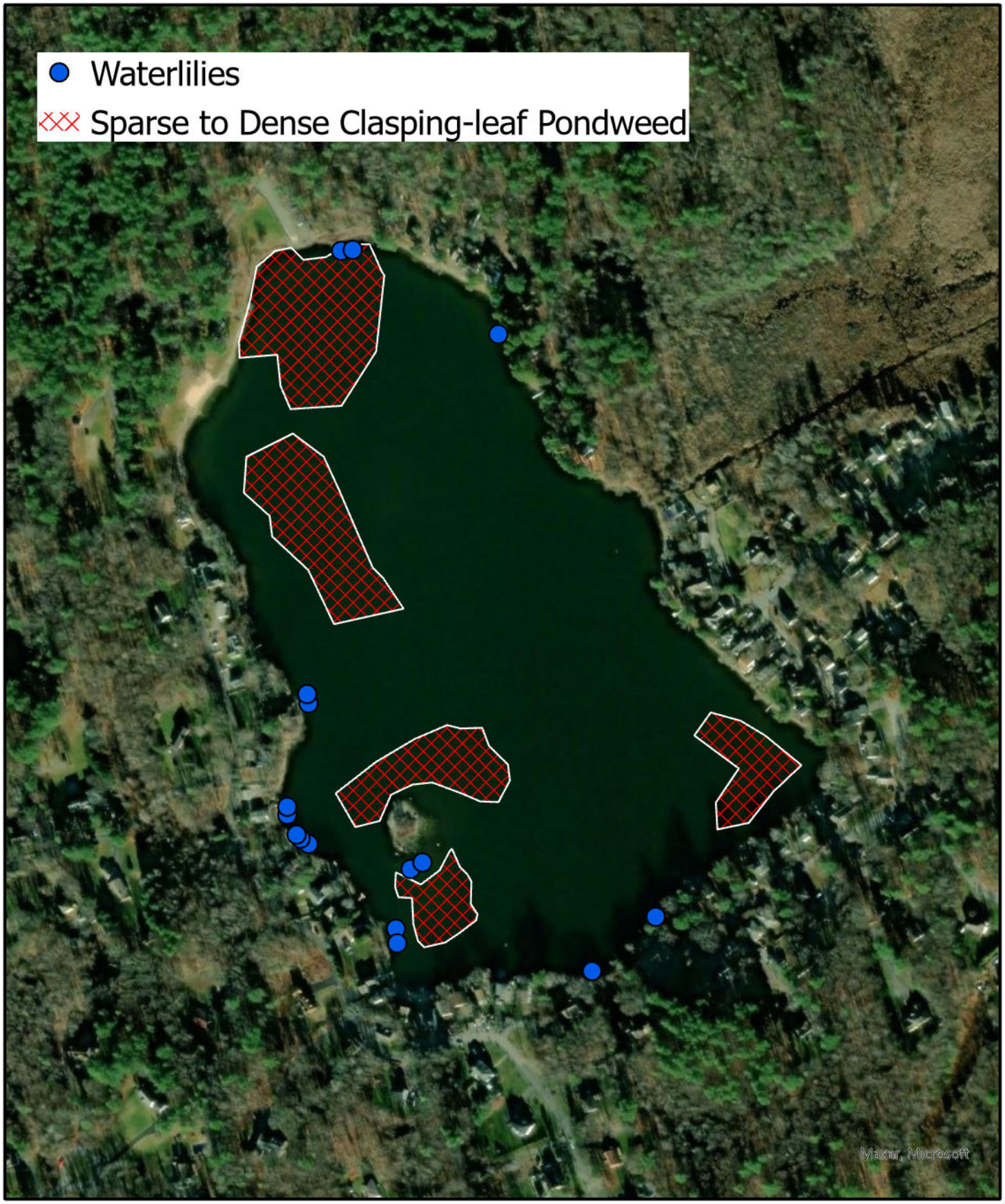
Photo 4	Photo 5	Photo 6
		



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Forest Lake
Dominant Vegetation Assemblage
Methuen, MA

Survey Date
6/3/2025

Map Date
6/9/2025

N