



**ENVIRONMENTAL SCIENTIST:**  
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 CALL/TEXT WITH ANY QUESTIONS!



## FIELD NOTES SUMMARY

**Customer:** Glen Echo Lake Improvement Association, Inc.

**Pond Name:** Glen Echo Lake

**Site Location:** Charlton, MA

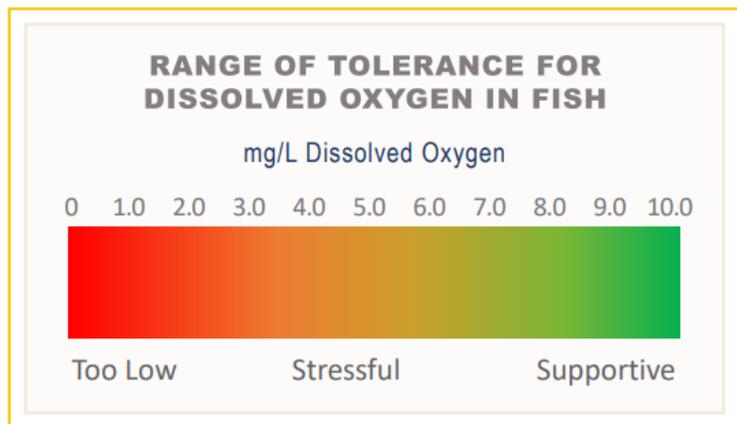
**Date:** 7/25/23

On 7/25/23, Senior Environmental Scientist, James Lacasse, and Aquatic Field Assistant, Brian Sweeney, made a visit to Glen Echo 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
Low-water milfoil	<i>Myriophyllum humile</i>
Variable Milfoil*	<i>Myriophyllum heterophyllum</i>
Waterlilies	<i>Nymphaeaceae</i>
Fanwort*	<i>Cabomba caroliniana</i>
Snailseed Pondweed	<i>Potamogeton bicupulatus</i>
Thinleaf Pondweed	<i>Potamogeton pusillus</i>

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).



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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. pH measurements were also collected at the requested locations/depths. pH is the measure of how acidic or basic the water is. <6 notably acidic; 6-9 standard for freshwater (7 is neutral); >9 notably basic.

Results from the visit are included in the table below:

Temperature & Dissolved Oxygen			
Location/Depth	Surface Temp (°C)	Surface DO (mg/L)	pH (S.U.)
North End Inlet	27.8	8.14	7.5
The Narrows	28.1	7.61	7.5
83 Sunset	27.8	7.33	7.3
Route 31 Cove	28.6	7.41	7.3
Dam - .5m	27.1	7.44	7.3
Dam - 1.5m	27.0	7.46	7.3
Dam - 2.5m	26.5	7.53	7.3
Dam - 3.5m	26.4	7.48	7.3
Dam - 4m	26.3	7.27	7.3
Near Boat Ramp	27.9	8.25	7.5

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.

Secchi Disk Clarity		
North End Inlet	Secchi Disk Depth (Feet)	2 ft 7 inches (to the bottom)
The Narrows	Secchi Disk Depth (Feet)	4 ft 0 inches
83 Sunset	Secchi Disk Depth (Feet)	5 ft 1 inch
Route 31 Cove	Secchi Disk Depth (Feet)	2 ft 7 inches (to the bottom)
Dam	Secchi Disk Depth (Feet)	4 ft 10 inches
Near Boat Ramp	Secchi Disk Depth (Feet)	3 ft 3 inches

This depth of disappearance, called the Secchi depth, is a measure of the transparency of the water.

Water Quality Parameters
Conductivity, Turbidity

Additional samples were collected from the contracted locations. The samples were properly preserved, and shipped on-ice via FedEx Overnight,

or transported directly to the most appropriate lab. The lab will analyze the samples for the contracted/required parameters which are listed in the table above. Results will be provided upon receipt

from the lab or in the year end-summary report, as applicable. Any concerning results will immediately be brought to the attention of the Client.

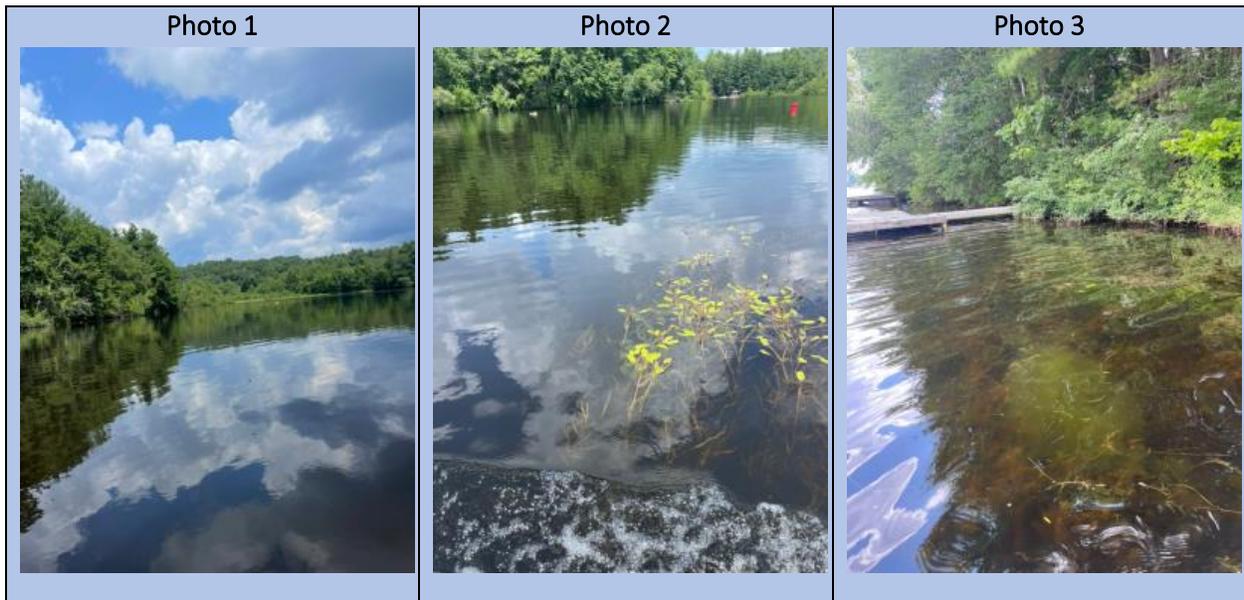
A treatment was conducted for the control of target nuisance/invasive plant growth. The liquid contact herbicides were applied using a treatment boat equipped with a calibrated sub-surface injection system. This application methodology allows for even coverage within the treatment areas. The treatment was completed without issue. We anticipate plant die-off within just a few days to a few weeks.

Prior to the treatment(s), the shoreline was posted by the Association with neon pink signs noting the treatment, affiliated water use restrictions, and Water & Wetland contact information. The signs fulfill permit obligations for shoreline posting.

**\*Additional Notes from the Biologist\***

The treatment was successfully completed, without issue. We treated all previously mapped areas of invasive species (fanwort/variable milfoil) in addition to 10-acres of nuisance native species (snailseed pondweed/low-water milfoil/thin-leaf pondweed). Samples were collected using calibrated meters in addition to samples preserved and sent to the lab for analysis. The treatment was briefly paused on a few occasions due to thunderstorms.

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.



<p data-bbox="349 359 446 386">Photo 4</p> 	<p data-bbox="764 359 859 386">Photo 5</p> 	<p data-bbox="1175 359 1269 386">Photo 6</p> 