

FIELD NOTES SUMMARY

Customer: Town of Mendon

Pond Name: Lake Nipmuc

Site Location: Mendon, MA

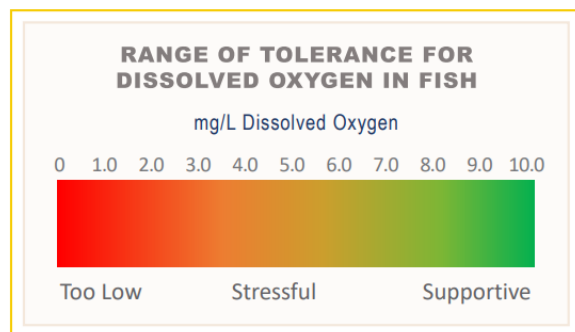
Date: 5/24/24

On 5/24/24, Senior Aquatic Biologist, Colin Gosselin, made a visit to Lake Nipmuc. 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
Variable Milfoil*	<i>Myriophyllum heterophyllum</i>
Ribbon Leaf Pondweed	<i>Potamogeton epihydrus</i>
Cattails	<i>Typha</i>
Tape Grass	<i>Vallisneria americana</i>
Benthic Algae	
Filamentous Algae	
Watershield	<i>Brasenia schreberi</i>
Bladderwort	<i>Utricularia</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). 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)
21.6	8.96

A Secchi disk is a disk with alternating black and white quadrants. It is lowered into the water of a lake until it

Secchi Disk Clarity	
Secchi Disk Depth (Feet)	13'4"

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.

Additional Notes from the Biologist
<p>This visit consisted of a survey of Lake Nipmuc. Invasive variable milfoil was found in the typical areas consisting of the old Nipmuc Marina, the shallow cove near Alicante Restaurant, and the southwestern cove near the outlet. The milfoil was dense (best seen in photo 5 below). Tapegrass, bladderwort, and waterlilies were found in sparse densities throughout the lake. The water clarity was excellent as demonstrated by the high Secchi depth (above). There were no signs of an algal bloom. A small film of pollen was documented across the surface near the shorelines. This is not to be confused with algae.</p> <p>Based on this survey, we will schedule the June treatment for the control of invasive variable milfoil.</p>

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



Photo 4



Photo 5

