



BIOLOGIST:
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 CALL/TEXT WITH ANY QUESTIONS!



FIELD NOTES SUMMARY

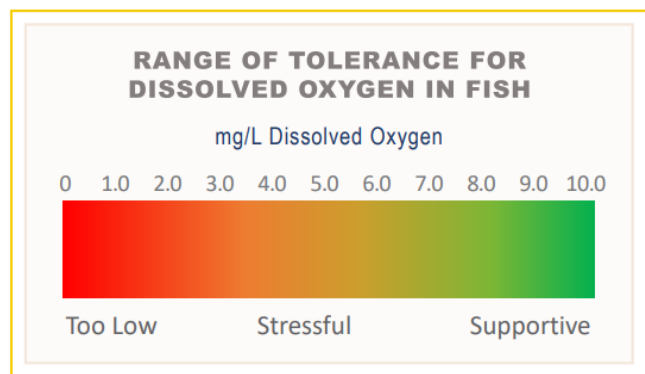
Customer: Hop Brook Protection Association
Pond Name: Grist Millpond
Site Location: Sudbury, MA
Date: 6/30/23

On 6/30/23, Co-Owner/Senior Aquatic Biologist, Colin Gosselin, made a visit to Grist Millpond. 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
Water Chestnut*	<i>Trapa natans</i>
Duckweed	<i>Lemna</i>
Watermeal	<i>Wolffia</i>
Waterweed	<i>Elodea</i>
Ribbon Leaf Pondweed	<i>Potamogeton epihydrus</i>
Curly-Leaf Pondweed*	<i>Potamogeton crispus</i>
Filamentous Algae	

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



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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:

Depth	Temperature (°C)	Dissolved Oxygen (mg/L)
Surface	25.3	9.24
1 Foot	25.2	8.27
2 Feet	24.1	7.17
3 Feet	23.7	7.08
Bottom	23.7	6.43

A treatment was conducted for the control of water chestnut. The liquid herbicide, Clearcast (imazamox), was applied using the most appropriate boat, equipped with a calibrated pump, which is used to target the water chestnut plants via foliar application methodology. This method allows for even and precise coverage. Weather was also closely monitored prior to treatment to ensure a treatment date without rain or high winds. The treatment was rescheduled from 6/30/2023 due to the previous forecast.

Prior to the treatment(s), the shoreline was posted with neon pink signs noting the treatment, affiliated water use restrictions, and Water & Wetland contact information. The signs fulfill permit obligations for shoreline posting. All required pre-treatment information and documents were also sent to Sudbury Conservation Commission.

Additional Notes from the Biologist
A large reduction in water chestnut regrowth was documented as a result of the previous management, specifically 2022. Algae, duckweed and watermeal on the surface were dominant where chestnut was not present. Elodea and curly-leaf pondweed were the dominant submerged species. The new boat ramp was a huge help. The boat was washed prior to leaving our shop/office this morning.

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



Photo 6

