



Biologist:
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Call/Text With Any Questions!



FIELD NOTES SUMMARY

Customer: Town of Arlington
Pond Name: Hill's Pond
Site Location: Arlington, MA
Date: 9/18/24

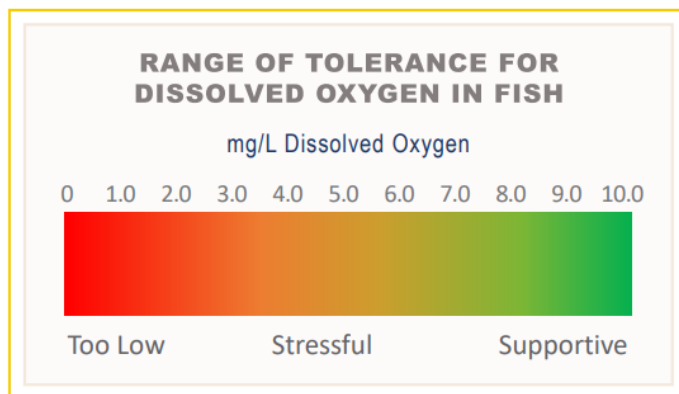
On 9/18/24, Aquatic Biologist, Grace Adams, made a visit to Hill's Pond. The following services were completed during the visit:

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
Microscopic Algae	
Cattails	<i>Typha</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:

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Upton, MA
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Temperature & Dissolved Oxygen	
Surface Temp (°C)	Surface DO (mg/L)
24.5	8.88

Water Quality Parameters
Algae ID, Classification, Biomass
Phosphorus, Total & Free Reactive (Water)

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 algae. The liquid contact algaecide was 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.

A treatment was conducted using polyaluminum chloride (PAC). The liquid PAC was applied using a backpack sprayer. This application methodology allows for even coverage within the treatment areas. PAC is not an algaecide, but binds with phosphorus in the water column, with phosphorus being the limiting nutrient fueling algae blooms. PAC also binds suspended solids which typically leads to clearer water.

Prior to the treatment(s), the shoreline was posted with neon signage 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
<p>Today's site visit at Hills Pond included a survey, collection of basic water quality data, sampling, and a treatment application. Given the significant decrease in water levels, the ongoing dry spell, and warm days, an increase in algal blooms was expected, and was observed during this visit. Fortunately, with the arrival of colder nights and anticipated rainfall in the forecast, the bloom is expected to subside.</p> <p>Based on the survey, algaecide was applied to the pond. Additionally, we had planned a PAC treatment to bind phosphorus, now that the water temperatures are lower. The PAC binds to phosphorus in the water column (the limiting nutrient for algal growth), and traps it in the sediment.</p> <p>Water samples were collected from the shoreline and were shipped overnight to SePro Laboratories for</p>

analysis. We will send the results as soon as we receive them back from the lab. The aeration system was functioning well.

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

