



FIELD NOTES SUMMARY

Customer: Town of Arlington / Friends of Menotomy Rocks Park (Hills Pond)

Site Location: Arlington, MA

Date: 5/20/22, 8:45 AM

Observations / Notes: On May 20th, Senior Environmental Scientist, James Lacasse, and Field Assistant, Grace Adams, completed a site visit to Hills Pond in Menotomy Rocks Park. The visit consisted of performing a survey, collecting basic water quality data, installing a diffuser, and conducting a treatment. Conditions during the visit were sunny and partly cloudy.

Upon arrival, a survey was conducted using visual observation. The entire shoreline had dense densities of filamentous algae (Photos 2 & 4). In addition to the algae, there was moderate densities of curly leaf pondweed (invasive).

While on-site, basic water quality was collected using calibrated meters. The pH was 7.3, which is within a standard range for freshwaters and is considered neutral. The water temperature was consistent with other similar waterbodies we manage in the area. The dissolved oxygen was sufficient to support fish and wildlife and is aided by the submersed aeration system. Water clarity was also assessed using a Secchi disk. 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. The Secchi reading was 5'2", which is average.

As planned, and based on the survey, a treatment was conducted for the control of filamentous algae. Given the condition of the pond during this initial visit, we proceeded with an abundance of caution. To limit the chances of oxygen depletion, from too much biomass die-off at one time, only the algae was targeted during this treatment. The perimeter of the pond was treated, and the middle was left untreated. The liquid algaecide (Captain XTR), which is copper based, was applied using a treatment boat equipped with a calibrated subsurface injection system, in addition, foliar methodology was used to target areas of floating filamentous algae mats. This application methodology allows for even coverage within the treatment areas. Neon signs noting treatment and no restrictions were posted around the pond. Arlington Conservation Commission, as well as the Friends of Menotomy Rocks Park were notified of this visit. Given that the curly-leaf pondweed was not at a problematic density, and to

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limit biomass die-off (as described above), we are planning an early June visit specifically to target the invasive curly-leaf pondweed. This window is still within the prime curly leaf treatment window. We have scheduled this for Wednesday, June 1st. While we understand that the residents must want instant health of the pond, certain precautions must be taken, and this may take this visit, as well as the next.

Also while on-site, a fourth diffuser was added to the existing three diffuser aeration system (Photos 1 & 3). This was completed without issue, and proper placement was insured. In an effort to distribute the air from the aeration system equally, the third diffuser, closest to the new fourth diffuser, was relocated. The system was also calibrated to insure even airflow to each diffuser. Photo 5 shows the final conditions after all diffuser lines had been re-buried.

Lastly, while on-site, at the request of Friends of Menotomy Rocks Park, an E. Coli sample was collected (Photo 6), properly preserved, and dropped off at the State Certified Laboratory. As soon as results are received, we will be sure to send them over with a brief analysis. If the E. Coli colonies count comes back at a concerning threshold, this will also be brought to your attention immediately. Unfortunately the labs have been slower than usual and results have been taking 10-14 days.

As described above, we have scheduled a curly leaf pondweed treatment for June 1st, but will provide a more formal notification approximately one week prior. Please let us know if you have any questions at all. We are truly looking forward to impressing the Town of Arlington and Friends of Menotomy Rocks Park this year.

Pond	Surface Temp (°C)	Surface DO (mg/L)
Hills Pond	20	8.4

Photos



