

White Pond Water Quality Monitoring Update, June 2, 2022

Water sampling for cyanobacteria and coliform bacteria

Please note that it is pollen season and residents and visitors may observe yellow pollen scums along the shoreline. These are not cyanobacterial scums, and should disappear within a few weeks.

In summary: There are cyanobacteria species appearing in samplings at the beach sites that are showing us early colony formation. There are no Harmful Algal Blooms Present (HAB). Water is safe for recreational use.

Water samples taken May 31 show the cyanobacteria *Dolichospermum* has appeared in samples at both Deep Sites and Thoreau Cove. *Dolichospermum* has been found as a component of previous year's blooms. While *Dolichospermum* were not plentiful in the May 31 sample, this signals the beginning of the early season recruitment/emergence of cyanobacteria, with large intact colonies. This recruitment process can culminate in visible surface accumulations.

Bi-weekly sampling will continue until June 15th, but will likely switch to weekly sampling after that, depending on emerging numbers of cyanobacteria. Zooplankton, including *Daphnia* species, were abundant in the May 31 sample, which is a positive indicator. The next set of water samples will be taken June 14.

A-Pod HAB Trap update

The primary A-Pod position is in position in the Thoreau Cove area below Seymour St, which is shown in solid yellow in the figure below. The primary A-Pod will contain two, 200-foot long collection members which float in the water column. The primary A-Pod is situated to maximize recovery of the deeper and larger cyanobacteria biomass source but it will also remove shallow scums.

As of May 25, there was a fairly concentrated scum at the entrance to the A-Pod and somewhat within the A-Pod trap, as shown in the photo below. Importantly, the scum did not test positive for cyanobacteria. Higgins Environmental is taking multiparameter pond measurements using a test probe that measures phycocyanin (PC) pigment. Phycocyanin pigment is unique to freshwater cyanobacteria, so it is a reliable indicator of the presence of cyanobacteria. PC was not positive just under the yellow scum, confirming that this is most likely pollen and not cyanobacteria. A very slight increase in PC was seen towards the center of the pond. This was correlated with an increase in dissolved oxygen in the water because as algae and cyanobacteria photosynthesize they give off oxygen

Two smaller A-Pod units may be installed in the pond this week, closer to the town beach area. Visitors and residents are asked to not disturb the A-Pods if you observe them.

