

White Pond Water Quality Monitoring Program Update September 29, 2022

CURRENT WATER USE STATUS: SWIM AT YOUR OWN RISK/PET ADVISORY

SUMMARY:

Water sampling conducted September 20 showed a significant decrease in bloom forming cyanobacteria (BFC) compared to samples taken a week ago on September 13. High numbers of BFCs seen in the September 13 sample were attributed to a late season maxima (mini-bloom) of cyanobacteria, which is a common late summer/early fall phenomenon. Based on the September 13 sample results, there was a concern that cyanobacteria biomass might continue to increase rapidly over the next week or two. The September 20 sample data indicates that this did not occur; cyanobacteria biomass (measured as phycocyanin) decreased almost 50% compared to the September 13 samples.

Dolichospermum was the dominant species (99%) seen in the September 20 samples. Water was tested for anatoxin-A, which was below the detection limit. Based on the September 20 data, it appeared the cyanobacteria populations were diminishing.

However, on September 27, a significant accumulation of cyanobacteria was observed in the primary A-Pod trap (see pictures below). It is likely that this accumulation was wind-blown or accumulated due to water currents in the pond.

Pond users should be aware that there is still a small possibility that wind-blown visible blooms and scums may accumulate temporarily at areas along the shoreline. These areas of concentrated cyanobacteria may contain toxins. Out of an abundance of caution, water use status remains at Swim at Your Own Risk and a Pet Advisory remains in effect. Pond users are reminded to avoid swimming or wading in areas of visible bloom or scums and to keep pets away from these areas.

As we move into October, day length is diminishing rapidly, and water temperatures are cooling. Both of these factors should result in decreased cyanobacterial growth.

The final round of water sampling will occur on October 4.

A-Pod HAB Trap update

No HAB accumulations or scums were observed recently, until September 27th (see photos below). There appears to be a suspended HAB concentration event entering the A-Pods, although this appears to be a smaller amount than seen last year at around this time. It is not known how long this accumulation will persist.

Sonde snapshots around and in "A" and "B" A-Pods had phycocyanin (PC) values up to about 27 RFUs indicating HAB biomass concentration buildup inside and outside the Traps. The shallow A-Pods "C" and "D" had low PC values and no visible HABs. PC values in traps decreased after our removal actions.

About 3 wet pounds of HABs were removed from the traps; which is about equivalent to 1 pound when dried.

Water currents were measured on September 21st (with little to no wind) at range between 6 to 7.5 feet per minute (4-foot deep drogues) to 8 feet per minute (1-foot deep shallow drogues). Shallow drag or eddie currents were identified near some shoreline structures. Flow on either side of the pond (north and south sides) was clockwise as previously recorded.

Water clarity was measured at each of the three deep holes from east to west: 22.3 feet; 21.3 feet and 21 feet. Readings were taken between 12:14 and 12:45PM, full sun, a little bit of water turbulence from wind. These readings are similar to September 10th measurements (21.4 to 22.5 feet) especially when taking into account more water turbulence on September 27th than on September 10th (almost flat calm).

PC vertical sonde results were similar to September 8th results at the same locations, though it seems that HAB biomass (PC values) have decreased more with depth since September 8th. PC results are "low" other than areas where HABs are visibly apparent.

September 27, 2022 White Pond A-Pod Trap Photos



Looking West at main A-Pod "A".



Looking South and down at
A-Pod "A"

Trap entrance, taken only
minutes after above photo
looking west



Looking down at A-Pod "A" with
HABs visible as green "cloud-
like" suspension.