



Cyanobacteria Monitoring Bi-Weekly Report of Orleans Ponds.

Sample Dates: October 14th, 2021

Report prepared by: The Association to Preserve Cape Cod (APCC)

Report prepared for: The Orleans Pond Coalition and The Town of Orleans

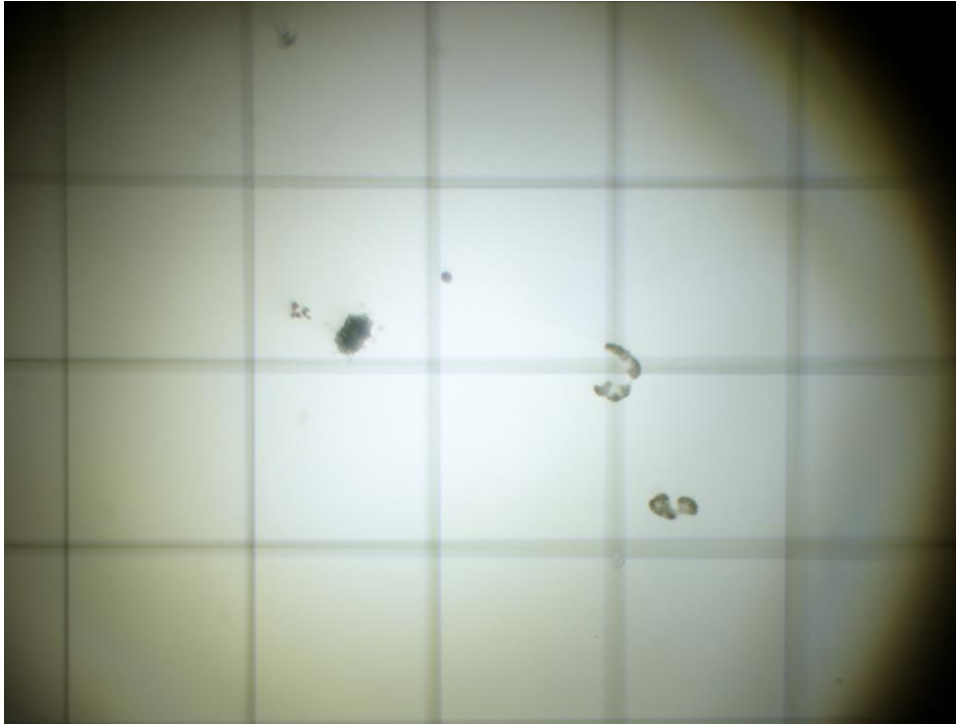
Data collected by: Rebecca Miller, Beth Larson, and Silas Watkins. Reviewed by: Kevin Johnson, Ecologist, APCC Cyanobacteria Monitoring Program.

Sample collection by: Members of the Orleans Pond Coalition

For more information: <https://apcc.org/our-work/science/community-science/cyanobacteria/>

Pond	Date of sample	Warning Tier	C&D	Temp (°F)	Wind Direction	Recent Activity	Notes
Bakers Pond	10/13/21	High	MC	68	-	8/30/21: Low 9/15/21: Low 9/27/21: Low	The estimated Microcystin concentrations in our bloom forming colonies sample are now above 8ppb, at 13.2ppb now, meeting the criteria for our high warning tier. As this data projects the Microcystin concentrations if this biomass accumulates at shore, we are concerned by these elevated concentrations. However, no cyanobacteria bloom material was reported at the time of sampling. We recommend an advisory for the site and to test again next week.
Crystal Lake	10/14/21	Low	WO	65.6	W	9/3/21: Low 9/16/21: Low 9/30/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.
Ice House Pond	10/14/21	Low	MC	64.9	WSW	9/3/21: Low 9/16/21: Low 9/30/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.
Pilgrim Lake	10/14/21	Low	Mixed	65	W	9/3/21: Low 9/16/21: Low 9/30/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.

Uncle Harvey's Pond	10/14/21	Low	MC	65.7	-	9/3/21: Low 9/16/21: Low 9/30/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.
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Above: Microscope photo showing one *Dolichospermum* colony and two *Microcystis* colonies from a sample taken from Baker's pond on October 13th, 2021.

Abbreviations:

C&D (Composition and Dominance) Identifies the dominant genus of cyanobacteria found in the sample.

DS (*Dolichospermum*) Common genus of cyanobacteria. Produces regulated toxins at low level.

MC (*Microcystis*) Common genus of cyanobacteria. Produces regulated toxins at relatively high levels.

Mixed Indicates that no single genus of cyanobacteria was found to be dominant.

WO, AZ (*Woronochinia* and *Aphanizomenon*) Additional genera of cyanobacteria that are believed to produce regulated toxins at a similar rate to *Dolichospermum*.

Warning Tier Descriptions

“Low” (**BLUE**) indicates general safety for recreational activities according to our data and it roughly equates to our blue and yellow tiers from last year.

“Moderate” (**YELLOW**) indicates the cyanobacteria concentrations in the pond are particularly dangerous to children or pets if ingested and it equates to last year’s orange tier and is very similar to the town of Barnstable’s “Pet Advisory” level.

“High” (**RED**) indicates APCC found either toxin levels approaching state standards for recreation or found a visible cyanobacteria scum; each poses a considerable risk for human and pet interactions with the pond. This tier is between the town of Barnstable’s “Warning” and “Closure” tiers and roughly equates to last year’s red tier.

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