



Cyanobacteria Monitoring Bi-Weekly Report of Orleans Ponds.

Sample Dates: October 29th and November 1st, 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.

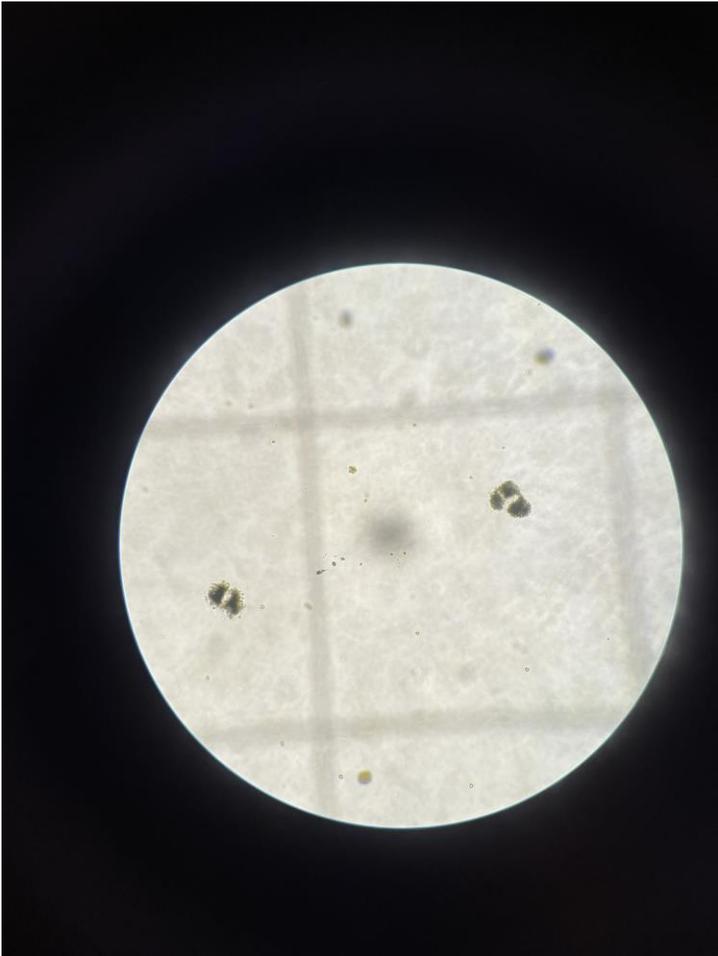
Sample collection by: Members of the Orleans Pond Coalition and Rebecca Miller

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	10/29/21	High	Mixed	60	NE	9/27/21: Low 10/13/21: High 10/19/21: High	A visible Cyanobacteria scum was sampled and confirmed near shore. Repeat sampling will occur on 11/2/21. Based on the visible cyanobacteria scum recorded here following a few weeks of concerns about scum accumulation, we are maintaining the advisory recommendation on Bakers Pond.
Crystal Lake	11/1/21	Low	WO	56.5	W	9/16/21: Low 9/30/21: Low 10/14/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.
Ice House Pond	11/1/21	Low	WO	56.4	W	9/16/21: Low 9/30/21: Low 10/14/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.
Pilgrim Lake	11/1/21	Low	MC	55.76	W	9/16/21: Low 9/30/21: Low 10/14/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.
Uncle Harvey Pond	11/1/21	Low	Mixed	57.02	W	9/16/21: Low 9/30/21: Low 10/14/21: Low	Cyanobacteria concentrations and estimated Microcystin concentrations remain low.



Above: Cyanobacteria scum at shore in Bakers Pond on October 29, 2021.



Above: *Microcystis* and *Woronichinia* from a sample from Uncle Harvey's Pond, November 1, 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: Monitoring results indicate no or low concentrations of cyanobacteria detected. To the best of our knowledge at the time and location of sample collection, regular recreational usage of the pond is safe with respect to cyanobacteria and toxins. Map color is blue.

Moderate: Monitoring results indicate moderately high levels of cyanobacteria concentrations detected. While these conditions pose low to minimal health risks to adults, they can be dangerous for children or pets if water is ingested accidentally or incidentally during recreational activities. Pet exposure can be from drinking pond water or grooming after swimming. Due to lower body masses, children and pets are more susceptible to impacts at lower concentrations than adults. This tier is consistent with the town of Barnstable's "Pet Advisory." Map color is yellow.

High: Monitoring results indicate high levels of cyanobacteria concentrations detected. Health risk to adults is high and is especially dangerous for children and pets when ingested. APCC found cyanobacteria concentrations near or exceeding state recreational standards with potential for exponential growth rates of cyanobacteria. Any accidental consumption of pond water is considered dangerous and interacting with the pond in general carries risk for adverse health effects.

Use restriction pending (map color is light red) – based on APCC's findings we have recommended a restriction and the decision to issue a restriction is pending with the town/DCR. Further information should be sought from the relevant town.

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