



Cyanobacteria Monitoring Bi-Weekly Report of Orleans Ponds.

Sample Dates: Wednesday, September 1st and Friday, September 3rd, 2021

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

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

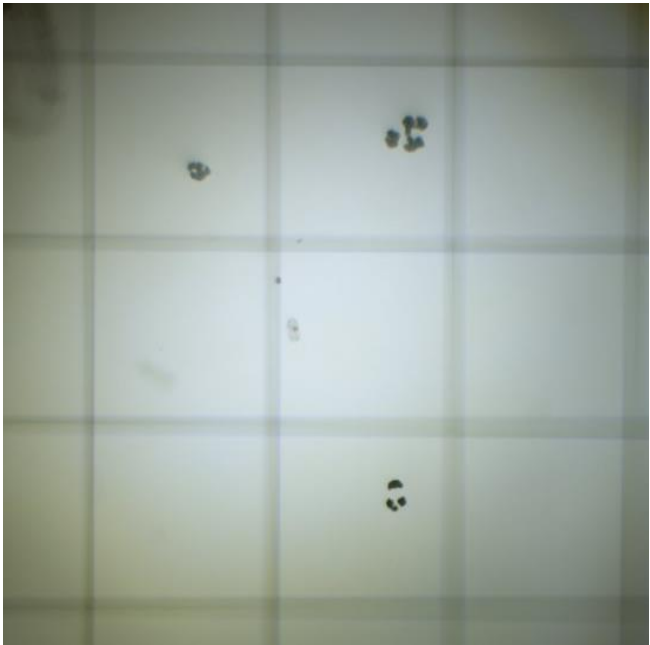
Data collected by: Rebecca Miller, Beth Larson, and Silas Watkins. Reviewed by: Kevin Johnson, Ecologist, APCC Cyanobacteria Monitoring Program.

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 | 9/1/21 | Low | Mixed | 80 | On Shore | 7/21/21: Low 8/4/21: Low 8/18/21: Low | Cyanobacteria concentrations and estimated Microcystin concentrations remain low. |
| Crystal Lake | 9/3/21 | Low | Mixed | 72.7 | NW | 7/23/21: Low 8/6/21: Low 8/20/21: Low | Cyanobacteria concentrations and estimated Microcystin concentrations remain low. |
| Ice House Pond | 9/3/21 | Low | MC | 71.6 | SW | 7/23/21: Low 8/6/21: Low 8/20/21: Low | Cyanobacteria concentrations and estimated Microcystin concentrations remain low. |
| Pilgrim Lake | 9/3/21 | Low | WO | 72.3 | - | 7/23/21: Low 8/6/21: Low 8/20/21: Low | Cyanobacteria concentrations and estimated Microcystin concentrations remain low. |
| Uncle Harvey Pond | 9/3/21 | Low | MC | 74.6 | W | 7/23/21: Low 8/6/21: Low 8/20/21: Low | The Microcystin concentrations were slightly elevated in this week's sample, recorded as 3.64ppb. Although they are lower than the threshold for our moderate tier (4ppb) or high tier (8ppb) for estimated Microcystin concentrations in our Bloom Forming Colonies sample, we recommend sampling again next week to check if an exceedance has occurred. However, |

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|--|--|--|--|--|--|--|--|
| | | | | | | | Uncle Harvey is currently in our Low tier. |
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Above: Left – a lone *Woronochinia* colony from Crystal Lake sampled on September 3, 2021. Right – *Microcystis* colonies from Uncle Harvey's Pond on September 3, 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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