



Cayuga Lake HABs Update, Week of July 15, 2019

Update The past few weeks of beautiful, hot, wet, calm weather have resulted in the appearance of many potential Harmful Algal Blooms around Cayuga Lake. The good news is that our HABs Harriers team and members of the general public have been diligent about reporting the locations for testing. You can view the latest results at the 2019 HABs Reporting Page, with map: <http://www.communityscience.org/volunteer/harmful-algal-bloom-monitoring/cayuga-lake-habs-reporting-page/>. Following is a brief report from Nate Launer, HABs Team Leader at the Community Science Institute:

What a fast start to the bloom season it has been! As many of you know, the southwestern shore of Cayuga Lake was hit particularly hard with an extensive HAB last Saturday (July 13). Conditions seem to be just right for these cyanobacteria blooms as the temperatures continue to rise. During the week of July 15 we are continuing to receive bloom reports from around the lake, especially in the southern half. It can be hard to determine when or where one bloom ends and the other begins. Many of the blooms reported this weekend seemed to be extensive and cover the shoreline of many properties. Thanks to tremendous sampling work by HABs Harriers, we received samples from over 25 locations since Friday, July 12.

To summarize lab results to date, nearly all of the blooms this year have been composed almost entirely of the cyanobacteria taxa *Dolichospermum*. This is the same type of cyanobacteria that the blooms were composed of at the same time last year. Also similarly to 2018, the blooms so far this summer have all had very low microcystin toxin concentrations. We will see what the rest of the season brings.

As always, if a suspicious HAB does occur or continue to persist, avoid any contact with the bloom and keep kids and pets away. Make sure to notify the county health department with any health or exposure concerns. And advise others to do the same! (See links to more information below). Please let me know if you have any questions or concerns. Let's keep it up! — Nate Launer

Cayuga Lake is Not Alone - Harmful Algal Blooms are Disruptive Elsewhere. Following are news and research reports from several locations, with links to in-depth reading.

Perspectives on Harmful Algal Blooms (HABs) and the Cyberbiosecurity of Freshwater Systems.

David G. Schmale III et al. A Perspective Article in *Front. Bioeng. Biotechnol.*, 04 June 2019: "Harmful Algal Blooms (HABs) have been observed in all 50 states in the U.S., ranging from large freshwater lakes, such as the Great Lakes, to smaller inland lakes, rivers, and reservoirs, as well as marine coastal areas and estuaries. In 2014, a HAB on Lake Erie containing microcystin (a liver toxin) contaminated the municipal water supply in Toledo, Ohio, providing non-potable water to 400,000 people. Studying HABs is complicated as different cyanobacteria produce a range of toxins that impact human health, such as

microcystins, saxitoxin, anatoxin-a, and cylindrospermopsin. HABs may be increasing in prevalence with rising temperatures and higher nutrient runoff. Consequently, new tools and technology are needed to rapidly detect, characterize, and respond to HABs that threaten our water security. A framework is needed to understand cyber threats to new and existing technologies that monitor and forecast our water quality." Read more: <https://www.frontiersin.org/articles/10.3389/fbioe.2019.00128/full>

Alliance for the Great Lakes 2019 HABs Forecast, July 11: "Earlier today, NOAA and its partners [released the 2019 Seasonal Forecast of Harmful Algal Blooms \(HAB\) for Lake Erie](#). Researchers forecast a severe algal bloom event in the lake, with a severity forecast of 7.5 on a scale of 1-10. The size of the bloom does not necessarily indicate the toxicity of the bloom." Read more:

<https://greatlakes.org/2019/07/statement-on-2019-harmful-algal-bloom-forecast/>

Finger Lakes – Heat, early rain contributing to ripe conditions for harmful algal blooms, July 15: "Several bodies of water in central New York have reported harmful algal blooms in recent weeks. With temperatures heating up after a wet spring, conditions are ripe for the blooms. Harmful algal blooms have been widely reported on Cayuga Lake. They have also appeared on Lake Neatahwanta in Oswego County. The Cazenovia and Jamesville beaches closed last week due to the blooms." Read more from the WRVO news report:

<https://www.wrvo.org/post/heat-early-rain-contributing-ripe-conditions-harmful-algal-blooms>

Upcoming: 6th Annual Finger Lakes Harmful Algal Blooms Symposium July 31, 2019 - 10:00 a.m. – 5:00 p.m. At the Scandling Center-Vandervort Multipurpose Room 2nd floor, Hobart and William Smith Colleges 300 Pultney Street Geneva NY 14456. Co-sponsored by the Finger Lakes Institute and others. List of speakers, registration form (a small fee is required; lunch is included):

<https://www.usgbc.org/event/2019-finger-lakes-harmful-algal-blooms-habs-symposium>

Potable Water & Harmful Algal Blooms: Are you concerned that the water you drink may be affected by Harmful Algal Blooms? Information and advice from the NYS Department of Health is available in the brochure "Harmful Blue-green Algae Blooms: Understanding the Risks of Piping Surface Water into Your Home": <https://www.health.ny.gov/publications/6629.pdf>

Check the beach for HABs before you go! You can find the most up to date information on water quality by calling the park office ahead of your trip.

[Taughannock Falls State Park](#) (607) 387-6739

[Cayuga Lake State Park](#) (315) 568-5163

[Long Point State Park](#) (315) 364- 5637 or (315) 497-0130

[Lansing Myers Park](#) (607) 533-7388 ext. 17

Village of Cayuga: Harris Park <http://www.villagecayugany.com/>

Wells College Dock and swimming area, Village of Aurora: <http://auroranewyork.us/>

For more information about HABs and what to do if you believe you have had contact with one, check out the DEC's HABs page here: <https://www.dec.ny.gov/chemical/77118.html>

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The Cayuga Lake HABs Monitoring Program is a collaborative effort led by a local consortium of three nonprofits: The Community Science Institute (CSI), the Cayuga Lake Watershed Network (CLWN), and Discover Cayuga Lake (DCL), working in collaboration with the New York State Department of Environmental Conservation (NYSDEC) and the State University of New York Environmental School of Forestry (SUNY-ESF).

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