HABs Update

Since our last newsletter on Aug 26, we have had only one bloom on Cayuga Lake. This bloom was in the Northeast quadrant, at Frontenac Park. The Community Science Institute has also posted lab results from last newsletter’s blooms, see the end of page 2 for those results.

As many of you know, this summer Grace Haynes has taken the position of the Community Science Institute’s new Director of Outreach and Cayuga Lake HABs Monitoring Program Coordinator! Check out our interview with Grace on page 3 to learn about her background, contributions to the program, and some of her future goals.

The latest incoming HABs reports can be viewed at the Community Science Institute’s HABs Reporting Page.

All of the previous HABs newsletters can be found at the 2022 HABs Update Page.
**HABs Update**

On the right side of the page is a Map of Cayuga Lake indicating the location of this week’s HAB reports.

**Index of pin color and meaning:**
- **Purple pins:** Unsafe bloom! Microcystin toxin concentration exceeds the limit for contact recreation (4.0 µg/L).
- **Black pins:** Cyanobacteria are present in bloom (HAB) sample. Potentially toxic/harmful bloom. No sample collected.
- **Blue pins:** Suspicious HAB
- **Green pins:** Cyanobacteria bloom with a microcystin toxin concentration less than the drinking water limit (0.3 µg/L).
- **Yellow pins:** Cyanobacteria bloom with a microcystin toxin concentration in between the drinking water limit (0.3 µg/L) and the limit for contact recreation (4.0 µg/L).
- **Small green circle:** Indicates that the bloom reported is an extension of a previously reported bloom.

To navigate the HABs map up close, visit CSI’s 2022 Cayuga Lake HABs Reporting Map.

**HABs Information Chart: 8/26 to 9/2**

Dates presented are the date the sample was received at the CSI lab.

**Total chlorophyll a** is used to estimate the biomass of the cyanobacteria bloom

**Microcystin** is the harmful toxin that cyanobacteria produce. Microcystin toxin levels are used to measure toxicity of a bloom.

<table>
<thead>
<tr>
<th>Bloom Code</th>
<th>Date</th>
<th>Location Description</th>
<th>Bloom extent</th>
<th>Microscopy</th>
<th>Total Chlorophyll (µg/L)</th>
<th>Microcystin Toxin (µg/L)</th>
<th>Bloom Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-3474-B1</td>
<td>8/25</td>
<td>Public boat launch at Frontenac Park, shore and stream</td>
<td>Large localized</td>
<td>Dense microcystis</td>
<td>5115 µg/L</td>
<td>1513 µg/L</td>
<td>Cyanobacteria Bloom (HAB), indicated by photos and field reports.</td>
</tr>
</tbody>
</table>

Our last HABs newsletter provided information from 11 blooms, none of which had lab results returned yet. Since publishing that newsletter, all the confirmed HABs came back as having Microcystin Toxin levels above the limit for contact recreation, except for bloom **22-3460-B2** on the shoreline at Don’s Marina, which was below the drinking water limit.
Meet Grace: CSI Director of Outreach and HABs Monitoring Program Coordinator

Thank you so much Grace Haynes for all of your hard work, we are so grateful for your contributions and dedication to our Cayuga Lake community!

Tell us about where you grew up, and a little about your previous work and education.

I just started at the Community Science Institute at the end of June after a background that spans both the sciences and the humanities. I grew up in northern California, where I loved to poke around in the woods. That interest only grew as I got older and spent increasingly more time camping and hiking. I have a BA in the humanities and a master’s in Natural Resources Science and Management; I feel most fulfilled professionally when I am able to engage with people and ecology at the same time. Building community around nature is something I have tried to do throughout my educational and professional background, and it is such a pleasure to have this intersection in my job description now!

Describe your role as the Outreach and Programs Coordinator. What are some aspects of your job that you find the most fulfilling or inspiring? What do you enjoy most about this role?

One of my favorite things about my job is the opportunity to share my love of nature and environmental stewardship with so many people. I draw a ton of inspiration from our volunteers, who often remind me that the fight for a world in which we prioritize ecologically sound practices and a balance with the natural world began long before I came along. I also love connecting with the community at outreach events. Figuring out what brings science to life for people—our volunteers, folks who come to us for water testing, or the kids at our 4-H2O events—is incredibly rewarding.
Meet Grace: Continued

What is something that you love about the Cayuga Lake area, nature, scenery?

I have been so struck by the amount of nature that is right at my fingertips here! It seems there is no end to the outdoor spaces that I have to add to my upstate New York bucket list. I hiked the Interloken Trail through the Finger Lakes National Forest last weekend and was struck by the challenging hikes, the beautiful views, and the friendly people I met.

Are there any issues facing the Cayuga Lake Watershed that have come to your attention since stepping into this role that you would like to learn more about?

My role at CSI focuses quite a bit on the HABs on Cayuga Lake. In learning more about this issue, I am improving my recognition of microorganisms and their interactions. Much of my previous work has focused on ecology, so I am reading as much as I can about the ecological interactions that may impact the formation of HABs.

What are some goals that you have looking forward?

My personal goal is to learn as much as I can about this beautiful community and watershed. Being new to the area, I am amazed and energized by the networks and collaboration around environmental issues. In the context of CSI, I am hoping to expand our reach within our community. We look for feedback from attendees of our events to ensure we are serving them in a way they value. It is my goal to apply this feedback to our programming so that we can continue to improve the way we communicate and engage around science!
**FAQs**

**Where can I look for HABs updates near me?**
To keep an eye out for HABs in your area or anywhere around Cayuga Lake, visit the CSI’s HAB’s Reporting Page. In addition, this newsletter will contain weekly updates about reported HABs.

**Where can I report a HAB or a suspicious HAB?**
Please fill out the HAB Report form with the required information or email us at habshotline@gmail.com. When you are sending in a report, please make sure to include your contact information and photos of the bloom (one close-up for detail and one further away to show the extent of the bloom), location, date, and time.

**Safety Tips:**
1. Stay away from any suspicious blooms
2. Never swallow untreated lake water.
3. Don’t swim in cloudy, discolored, or suspicious-looking water - it could contain microorganisms that are harmful to humans
4. Make sure to wash your hands after contact with water before you eat, or shower after swimming

**Questions? Contact:**

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**Discover Cayuga Lake**
607-327-LAKE/5253

Photo by Bill Hecht