Sediment Outflow at Taughannock by Bill Hecht

HABS WEEKLY NEWSLETTER

2022 CAYUGA LAKE HABS MONITORING PROGRAM

JULY 14, 2022

by CLWN Staff Intern Maria Lee

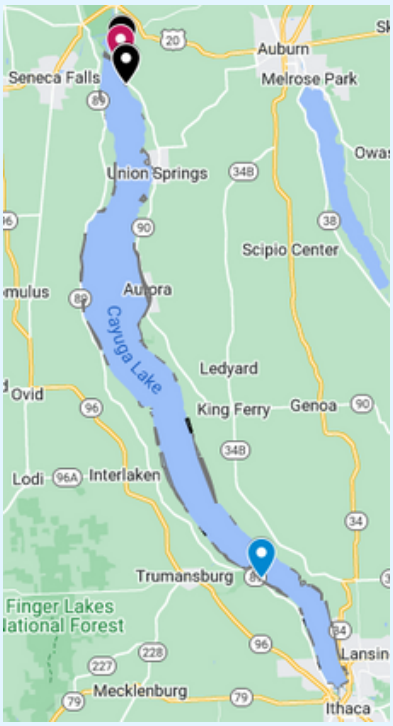
THIS WEEK'S CONTENTS:

HABs Update

This week, HABs season has begun to pick up the pace. From 7/8 to 7/14, there were a total of **four confirmed HABs,** all located within the Northeast quadrant of Cayuga Lake, followed by a **suspicious bloom** in the Southwest quadrant.

To view the most recent HAB reports, visit the Community Science Institute's HABs Reporting Page!

If you missed the past few newsletters, you can view them at our website's 2022 HABs Update Page, where all weekly HABs newsletters will be posted.
Continue reading for an information chart on the following page, to learn about HABs and climate change, and a special Creatures of Cayuga Lake highlight!



Map of Cayuga Lake indicating the location of HABs.
Black pins: Cyanobacteria are present in bloom (HAB) sample
Red pins: Cyanobacteria bloom with a microcystin toxin concentration that exceeds the limit for contact recreation (4.0 ug/ L).
Blue pins: Suspicious HAB

HABs Information Chart: 7/8 to 7/14

Bloom Code	Date Sample Received at CSI Lab	Location Description	Bloom extent	Microscopy	Total Chlorophyll (ug/L)	Microcystin Toxin (ug/L)	Bloom Status
22-3458-B1	Sample not collected	Minor bloom localized along the shoreline of Water St. in the village of Cayuga	Small localized	Sample not collected	Sample not collected	Sample not collected	**Cyanobacteria bloom (HAB).** Photos indicate that this is a cyanobacteria bloom
22-3475-B1	7/8/2022	Kayak launch area near Harris Parkin Village of Cayuga	Small localized	dense Microcystis, sparse Dolichospermum	790	253.00	**Cyanobacteria bloom (HAB).** Photos indicate that this is a cyanobacteria bloom
22-3402-B1	7/10/2022	Shoreline near dock close to Ide Machine	Small localized	dense Microcystis, sparse/moderate Dolichospermum	6842	1333.00	**Cyanobacteria bloom (HAB).** Photos and microscopy confirm that this is a cyanobacteria bloom
22-3402-B2	7/13/2022	Small bay along private shoreline south of the Village of Cayuga	Small localized	dense Microcystis, sparse Dolichospermum	Results pending	Results pending	**Confirmed cyanobacteria bloom (HAB),** confirmed by photos and microscopy
22-3470-B1	7/13/2022	Bloom observed near Taughannock Blvd., Trumansburg	Small localized	sparse Dolichospermum	Results pending	Results pending	**Suspicious bloom.** Photos and microscopy suggest that there may be cyanobacteria present

HABs and Climate Change

The past several decades have expressed some clear changes in the local climate. In Cayuga Lake, seasonal weather transitions have become more uncertain, and overall, extreme events have become more frequent and intense. Climate change contributes to:

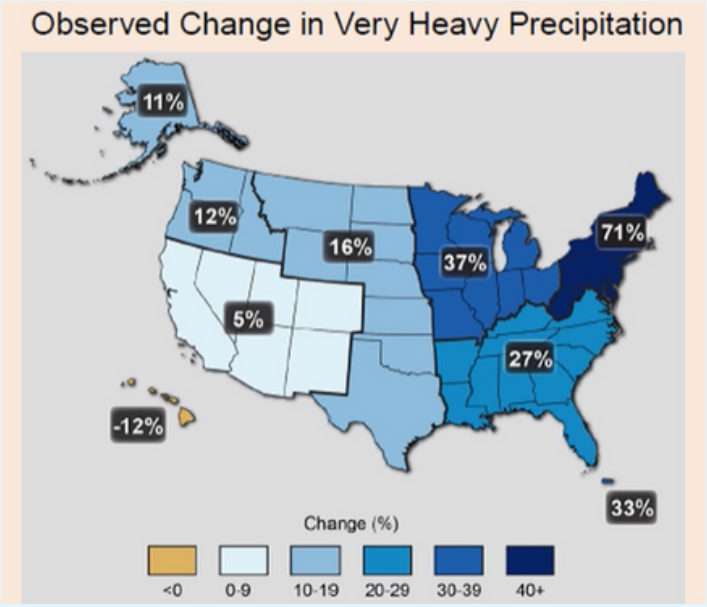
- **Increased frequency of heat stress days**
- **Increased frequency of high rainfall events leading to flooding**
- **Increased frequency of short-term summer water deficits**

Photo from CSI website

The cyanobacteria that form HABs thrive in warm water. With an increase of extreme heat stress days, this could cause HABs to develop faster and be more intense, leading to more negative consequences for people and organisms around the lake.

LEARN MORE AT OUR WEBSITE'S SIGNS OF CLIMATE CHANGE PAGE!

Intense rainfall events can lead to an increase of nutrient runoff into lakes. HABs grow best under nutrient-rich conditions, especially with increases of phosphorous and nitrogen. With more nutrient runoff entering the water this could lead to more HABs. The Northeast (including Cayuga Lake) is experiencing the highest observed changes in very heavy precipitation compared to the rest of the U.S! To learn more about climate impacts in our watershed and what you can do, check out our publication Watershed Living in a Changing Climate handbook.



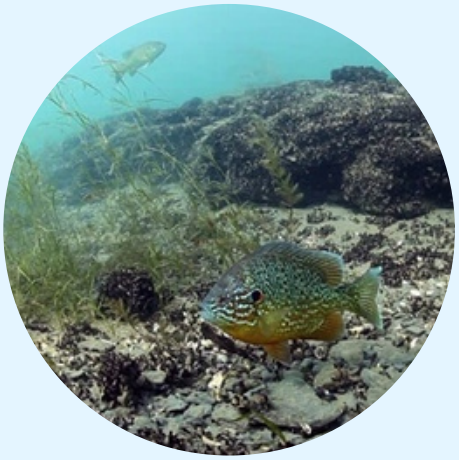
US National Climate Assessment 2014,

Creatures of Cayuga Lake

This week's creature highlight is a special edition -- we will be taking a look at two species of fish in Cayuga Lake!

Lake Sturgeon
by Duane Raver

The Lake Sturgeon, also called the Rock Sturgeon, is the largest freshwater fish in New York State. On average, they live 50-80 years, but female sturgeons can live to be 150 years long! Although they are classified as bony fishes, sturgeons have a cartilaginous skeleton (like sharks) and bony plates along their side and back. These ancient creatures are one of the oldest species on earth, belonging to a family that coexisted with the dinosaurs! Lake sturgeon are stocked in Cayuga Lake as part of their ongoing population restoration.



A Pumpkinseed Sunfish swimming in the lake
Photo credit: CLWN photo gallery

Meet the **Pumpkinseed Sunfish**, a tropical-looking fish native to North America. These fish thrive in warm, calm bodies of freshwater and can usually be found near shore hiding amongst the vegetation. The Pumpkinseed Sunfish is fairly small averaging 5-6 inches long. This little fish has a dark, olive-colored back with mottled sides and a distinct, bright yellow-orange ventral side (belly). A unique characteristic of the Pumpkinseed is its red crescent spot on the back of the ear-flap.

HABs are a real danger to fish and other aquatic life. HABs can block out sunlight and clog fish gills in addition to producing harmful toxins.
For more great information about Biodiversity in Cayuga Lake, visit
https://www.cayuganaturecenter.org/cayuga-lake/biodiversity

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

KNOW IT, AVOID IT, REPORT IT!

Questions? Contact:

Cayuga Lake Watershed Network (CLWN)
Liz Kreitinger, Steward/Executive Director: steward@cayugalake.org

Community Science Institute (CSI)
Grace Haynes, HABs Monitoring Program Coordinator
aghaynes@communityscience.org
607-257-6606

Discover Cayuga Lake
607-327-LAKE/5253

Photo by Bill Hecht