Shoreline Monitoring Program

Identifying and Reporting Harmful Algal Blooms (HABs)

Seneca Lake Pure Waters Association is diligently working to develop and implement a Harmful Algal Bloom (HABs) identification and notification process for Seneca Lake. Our Shoreline Monitoring program began in 2014 with a simple phone number, the HABs Hotline. In just four short years, the program has evolved into a successful collaboration with the New York State Department of Environmental Conservation (NYS DEC) and Finger Lakes Institute (FLI) at Hobart and William Smith Colleges.

Last year, 80 volunteers from the Seneca Lake community submitted weekly reports of shoreline observations to the NYS DEC for the months of August and September. August was uneventful, however, the last two weeks of September, the conditions were ideal for algal blooms. Pure Waters received reports of suspicious algal blooms from around the entire lake with volunteers collecting over 60 suspicious bloom samples for analysis at Finger Lakes Institute.

The laboratory tests confirmed that 50 of the 60 samples were in fact Harmful Algal Blooms and that 22 out of the 50 HAB samples produced high levels of toxins. The HABs activity on Seneca Lake in 2017 was a dramatic increase from prior years, as you can see in the summary below.

Year	# of Samples Analyzed	# of Samples with Confirmed HABs	# of Samples with High Toxins
2014	9	0	0
2015	9	5	1
2016	12	5	2
2017	60	50	22

In 2018, Seneca Lake Pure Waters Association continues to focus on the water quality by expanding the depth and breadth of the Shoreline Monitoring program by:

- Increasing the number of Shoreline Survey Volunteers from 80 to 100.
- Adding more monitoring zones to the shoreline to ensure maximum survey coverage.
- Establishing HABs regional coordinators to assist Shoreline Survey Volunteers.
- Raising awareness about HABs by incorporating HABs education in publications and forums.

HAB FACTS: What you should know!

What are algal blooms?
In general, most algae are harmless and are an important part of the food web. Certain types of algae can grow quickly and form blooms, which can occur in isolated locations or can cover an entire lake. Our monitoring program has shown that in 2015 and 2016 there were only a few isolated occurrences of HABs on Seneca Lake. Unfortunately, in 2017 HABs were wide spread, covering most of the lake during the last two weeks of September.

What are blue-green algae?
Blue-green algae are not algae at all, but rather a type of bacteria called cyanobacteria. It is normal for cyanobacteria to be present in lakes. However, this type of bacteria thrives in warm, nutrient-rich water and when conditions are right, the bacteria can grow quickly forming "blooms."

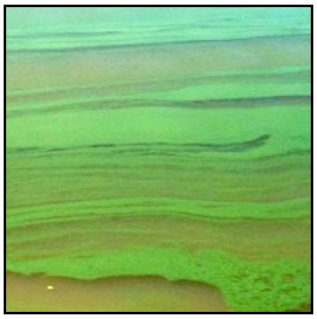
What are HARMFUL ALGAL BLOOMS (HABs)?
When blue-green algal blooms produce cyanotoxins, they are harmful. Last year, some of the HABs in Seneca Lake produced microcystin and anatoxin, which can cause health issues in humans and animals. If individuals or animals are exposed to HABs and are experiencing adverse health effects, they should seek immediate medical attention.

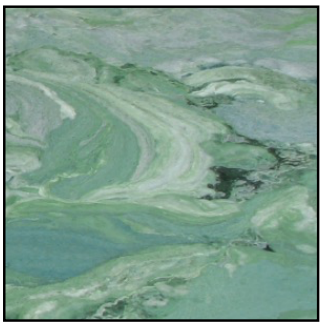
How do I know if a bloom is toxic?
Laboratory testing is the only reliable method for determining if a bloom contains toxins. If you see a suspicious bloom, report it, so a sample can be obtained and tested for toxins.

When do harmful algal blooms occur?
Blooms typically form in warm, calm waters during summer and early fall, but can occur other times of the year, if conditions are right.

What do HABs Look Like?
HABs have different colors and looks. Some colors are green, blue-green, brown, black, white, purple, red and black. They can look like film, crust or puffballs at the surface. They also may look like grass clippings or dots in the water. Some HABs look like spilled paint, pea soup, foam, wool, streaks or green cottage cheese curd.


green dots or globs


parallel green streaks


spilled paint


pea soup

Report Suspicious Blooms to the Seneca Lake HABs Hotline at 1-800-220-1609
or email us at: senecahabs@senecalake.org