BLUE PAPER

Blue-Green Algae

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What is blue-green algae?

Blue-green algae, also known as cyanobacteria, is often seen in lakes and other bodies of stagnant water during the month of August and into the fall. Blue-green algae is actually a microscopic bacteria living in the water. A blue-green algae bloom is a quick multiplication of the microscopic organisms that becomes visible to the human eye. Blooms typically occur when water is warm, stagnant and nutrient rich as in late summer/fall but can happen year-round.

Blue-green algae bloom

Photo credit: https://www.dec.ny.gov/chemical/81962.html

Why do they bloom?

Blue-green algae blooms when nutrients, especially nitrogen and phosphorous, are available in the water and water temperatures are consistently warm, at least 82° Fahrenheit. Nutrients in the water can come from a variety of sources including stormwater runoff, decaying plant material in the water, wastewater and animal waste. In the summer and early fall are often when the right amount of nutrients in the lake water combines with warm water temperatures making lakes like Clear Lake, susceptible to blue-green algae.

How to identify it?

Blue-green algae may or may not be visible to the human eye. It can stay at the surface of the water or below the water looking like scum or foam. Although named blue-green algae, blooms can also be red and brown. Often, blue-green algae blooms are described as looking like paint floating on the surface of the water or pea soup.

A blue-green algae bloom will continue to grow until all available nutrients are used. As the blue-green algae dies, it can create an odor in the water described as rotting plants. Dead blue-green algae in water can also make the water taste foul.

There are non-harmful lookalikes to blue-green algae that can also be found in stagnant, warm water. This includes duckweed and filamentous algae. For more information about these, please click here. (https://www.pca.state.mn.us/water/blue-green-algae-and-harmful-algal-blooms)

Why is it a problem?

Blue-green algae is a problem because some species can produce harmful toxins that can sicken or kill people, pets and wildlife if exposed. Most blooms are not harmful, but you cannot tell just by looking at it. A laboratory test must be done to determine if harmful toxins, called cyanotoxins, are being produced by the blue-green algae.

Blue-green algae bloom

Photo credit: https://www.cpr.org/2019/08/29/whats-up-with-the-algae-blooms-in-colorado-and-why-are-they-so-hard-to-track/

When in doubt, stay out!

Symptoms of exposure to blue-green algae include vomiting, diarrhea, rash, eye irritation, cough, sore throat, and headache. Symptoms appear from hours to days after exposure. If you think you see a blue-green algae bloom, play it safe and stay out of the water. For more information on health risks of blue-green algae, click here (https://www.cdc.gov/habs/materials/factsheet-cyanobacterial-habs.html).

How can we eliminate it?

Blue-green algae cannot be completely eliminated from the lake as it is a naturally occurring part of the lake ecosystem. However, the occurrence of large blooms can be reduced by removing nutrients from the lake. Use a lawn fertilizer without any phosphorus (that means a "0" as the middle number). Use garden fertilizer sparingly and always check nutrient levels in the soil prior to applying fertilizer. Never dispose of grass clippings or leaves in the lake.

SOURCES:

https://www.epa.gov/cyanohabs/learn-about-cyanobacteria-and-cyanotoxins

https://www.cdc.gov/habs/pdf/cyanobacteria_faq.pdf

https://lakes.grace.edu/identify-blue-green-algae/

https://www.nalms.org/getting-to-know-cyanobacteria-the-basics-blooms-toxins-and-taxa-text/

https://www.pca.state.mn.us/water/blue-green-algae-and-harmful-algal-blooms

FOR MORE INFO:

https://www.pca.state.mn.us/sites/default/files/wq-swm1-04.pdf

https://www.epa.state.oh.us/portals/28/Documents/HAB/BloomCharacterizationGuide-DRAFT.pdf

https://ksoutdoors.com/Outdoor-Activities/Outdoor-Health-and-Safety/Blue-Green-Algae-Information