July 2020

Cyanobacterial Harmful Algal Blooms (HABs)

What are Cyanobacteria?

Cyanobacteria are a type of bacteria capable of photosynthesis. Although they are not true algae, they are often referred to as "blue-green algae." Cyanobacteria frequently impart off-tastes and odors to the water in which they grow, and sometimes they produce toxins that can be harmful to the health of humans and other animals. Although problems related to cyanobacteria most often occur in freshwaters (lakes and streams), cyanobacteria can also be found in marine waters.

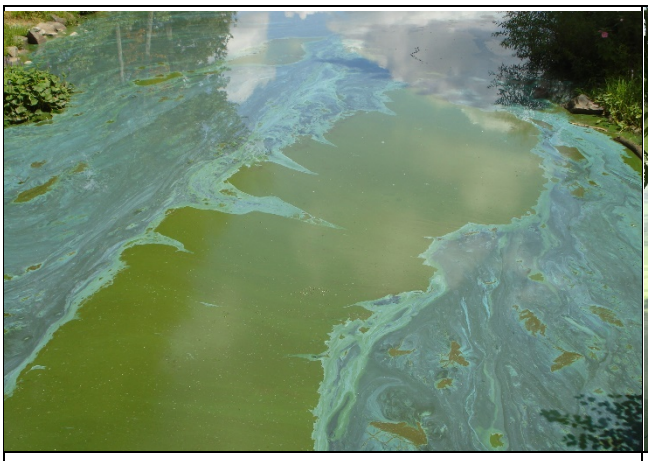
What are Cyanobacterial Harmful Algal Blooms (HABs)?

A cyanobacterial harmful algal bloom (HAB) is the name given to the excessive growth, or "bloom", of cyanobacteria, some of which can produce one or more types of potentially harmful toxins (cyanotoxins). HABs can occur under suitable environmental conditions of light, temperature, nutrients and calm water. These "blooms" can result in a thick coating or "mat" on the surface of a waterbody, often in late-summer or early fall.

How do I identify a Cyanobacterial Harmful Algal Bloom (HAB)?

A cyanobacterial HAB often looks like a layer of bright bluish-green or white paint on the water surface. Other evidence of a potential cyanobacterial HAB could be discolored or pea-green colored water, parallel streaks, or green dots/globs in the water. It is important to note that some blooms are due to common green algae and not cyanobacteria. Additionally, even when present, cyanobacteria do not always produce cyanotoxins. Below are some photographs of cyanobacterial HABs and also photographs of algal mats, surface films, plant pollen, or harmless plants that may resemble, but are not, cyanobacterial HABs.

Common Cyanobacterial Harmful Algal Bloom (HAB) appearance

	
Spilled Paint	Pea Soup

Common Cyanobacterial Harmful Algal Bloom (HAB) appearance

Green streaks parallel to shoreline	Large green dots

Non-HAB (harmless look-alikes) photos

Algal mat (algae or water plants that have collected on the surface)	Muck (a mixture of organic material on the surface or banks)	Duckweed (a tiny floating plant with true leaves)

Risk of Cyanobacterial Harmful Algal Blooms (HABs)

If you see what you think might be a HAB avoid contact and report its location to the DEP Hotline. Because animals can be harmed by drinking from waterbodies during a cyanobacterial HAB event, keep pets and domestic animals away from waters if a suspected HAB is present. If a HAB has been identified in a body of water used for drinking or recreation, signs may be posted by local or county authorities.

Should I swim?

You should not swim or conduct any activity which might result in direct contact with the water when a suspected HAB is present.

Should I eat the fish?

You should not eat fish or shellfish from a waterbody where a HAB is present.

Should I drink the water?

Never consume untreated surface water (e.g., lakes, ponds, or streams), especially if a HAB is suspected. You should never use untreated surface water as a substitute for potable water.

What is the New Jersey Department of Environmental Protection doing?

DEP has implemented a *New Jersey Cyanobacterial Harmful Algal Bloom (HAB) Response Strategy.* This Strategy provides a unified statewide approach for response to cyanobacterial HABs in freshwater recreational waters and sources of drinking water, and for protection of the public from risks associated with exposure to cyanobacteria and the toxins they can produce. Although the primary focus is on the protection of human health, this Strategy also provides some information and recommendations regarding prevention of exposure to domestic animals, wildlife, and livestock.

The Response Strategy specifically provides information on:

- Entities responsible for response and actions
- Recreational risk thresholds
- Acceptable parameters and methods for assessing risk
- Appropriate monitoring and analysis for toxins
- Recommended Advisories and other appropriate communication mechanisms

The Strategy is applicable to lakes, ponds, rivers, and streams with potential public access, recreational use, licensed bathing beaches, or serve as sources of drinking water. If an algal bloom occurs in freshwater that is used for drinking water, the DEP partners with the drinking water supplier to test for the presence of cyanobacteria and cyanotoxins, and appropriate adjustments to drinking water treatment are implemented if necessary.

You can help!

If you observe what you think might be a HAB in a pond, lake, or stream, a suspected Harmful Algal Bloom report can be submitted by smartphone or PC using the new interactive HAB Reporting and Communication System. This System will be used to gather initial information such as: location coordinates, photos, known activities, and extent over the waterbody. This information will be used to inform DEP to initiate appropriate response actions. Once the DEP completes the investigation of the suspected HAB, results and recommendations for public notices or advisories will be communicated through the HAB System. All information and data will be accessible to the public by clicking the location on the interactive map in the HAB System. If a smartphone or computer are not available, reports may also be submitted to the DEP Hotline at 1-877-WARNDEP (927-6337). You can also contact your local or county Health Department or county 24-hour hotlines (http://nj.gov/health/lh/directory/lhdselectcounty.shtml). If reporting by phone, please note the exact location of the suspected HAB along with any details (e.g., date/time, bloom appearance and color, and whether a swimming beach is nearby).

Contacts

DEP HAB Reporting and Communication System:
https://survey123.arcgis.com/share/993bfe45dc494666af762b5397c12b9c

To see the current status of NJ HABs:
https://njdep.maps.arcgis.com/apps/opsdashboard/index.html#/49190166531d4e5a811c9a91e4a41677

DEP Hotline: 1-877-WARNDEP (1-877-927-6337) http://www.nj.gov/dep/warndep.htm

DEP Bureau of Freshwater & Biological Monitoring (609-292-0427)
njcyanohabs@dep.nj.gov
http://www.state.nj.us/dep/wms/bfbm/CyanoHABHome.html
http://www.state.nj.us/dep/wms/bfbm

DOH Public Health and Food Protection Program (PHFPP) (609-826-4935)
https://nj.gov/health/ceohs/food-drug-safety/

Local and County Health Departments in New Jersey
https://www.nj.gov/health/lh/community/index.shtml

For questions regarding drinking water, please contact your local water supplier or DEP Division of Water Supply and Geoscience (609-292-7219)
http://www.nj.gov/dep/watersupply

Additional Information

DEP Harmful Algal Bloom Website: https://www.nj.gov/dep/hab/

U.S. Environmental Protection Agency (EPA) Cyanobacterial Harmful Algal Blooms: (including links to other states' information)
https://www.epa.gov/cyanohabs

Rutgers New Jersey Agricultural Experiment Station
Blue-green Algae in Waterways:
http://njaes.rutgers.edu/pubs/fs1216/

NY Department of Environmental Conservation
Blue-green Harmful Algal Blooms:
http://www.dec.ny.gov/chemical/77118.html

National Oceanographic and Atmospheric Administration (NOAA)
https://oceanservice.noaa.gov/hazards/hab/