



# Cyanobacterial Harmful Algal Blooms (HABs)

August 2015

## 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. HABs can occur under suitable environmental conditions of light, temperature, nutrients, and calm water. These “blooms” often 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 and, 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.

## Cyanobacterial Harmful Algal Bloom (HAB) photos

	
<p>HAB (August 2014)</p>	<p>sampling a bloom for analysis</p>

## Non-HAB (harmless look-alikes) photos

 <p>(2013)</p>		
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)

### Are Cyanobacterial Harmful Algal Blooms (HABs) harmful?

Avoid contact if you see what you think might be such a HAB, and report its location to one of the contacts listed below. Because animals can be harmed by drinking from waterbodies during a cyanobacterial HAB event, keep pets and domestic animals away from waters that you suspect may have a HAB. 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 experiencing a HAB.

### Should I drink the water?

Never consume untreated surface water (e.g., lakes, ponds, or streams), especially if a HAB is suspected.

### What is the NJ Department of Environmental Protection doing?

NJDEP's Ambient Lakes Monitoring Program routinely monitors a network of freshwater lakes in NJ for the presence of HABs, as well as the chemical and physical parameters that are conducive to HAB growth (<http://www.state.nj.us/dep/wms/bfbm/lakes.html>). Sampling and analyses for the presence of the most common cyanotoxins in these lakes was initiated in 2013, and a response plan is in place for reported blooms. NJDEP is also partnering with Rutgers University to do a pilot study investigating contributors to cyanotoxins in selected lakes.

If an algal bloom occurs in freshwater that is used for drinking water, the NJDEP partners with the drinking water supplier to test if cyanobacteria and cyanotoxins are present, so that 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, contact the NJDEP Monday – Friday, 8:30 am to 5:00 pm at 609-292-0427, or call the DEP Hotline anytime (1-877-WARNDEP) to report it. You can also contact your local or county Health Department (see website below). Please note the exact location of the suspected HAB along with any details (e.g., date/time, bloom appearance and color, whether a swimming beach is nearby).

### **Contacts**

NJDEP Hotline: 1-877-WARNDEP (1-877-927-6337)

<http://www.nj.gov/dep/warndep.htm>

NJDOH Public Health Sanitation and Safety Program (609-826-4941)

<http://nj.gov/health/phss>

Local and county Health Departments in New Jersey

<http://www.state.nj.us/health/lh/directory/lhdselectcounty.shtml>

NJDEP Bureau of Freshwater & Biological Monitoring (609-292-0427)

<http://www.state.nj.us/dep/wms/bfbm>

For questions regarding drinking water, please contact your local water supplier or NJDEP Division of Water Supply and Geoscience (609-292-7219)

<http://www.nj.gov/dep/watersupply>

### **Additional Information**

U.S. Environmental Protection Agency (EPA)

Cyanobacterial Harmful Algal Blooms:

(including links to other states' information)

<http://www2.epa.gov/nutrient-policy-data/cyanojobs>

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)

Harmful Algal Blooms in the Great Lakes:

<http://www.glerl.noaa.gov/res/waterQuality/>