

Blue Green Algae FAQ

What is a Harmful Algae Bloom (HAB)?

The HAB means that the level of toxins in the water make it potentially unsafe for full-body recreational activities, such as swimming, and for pets that may drink the water. The toxin being measured is microcystin, which is generated from certain strains of blue-green algae.

The level to trigger a HAB declaration is 20 parts per billion of the toxin Microcystin. Lakes with this designation will be sampled weekly, and the declaration will stay in effect until the level stays below 20 parts per billion for two consecutive weeks. This is a low level concentration. High lake concentrations have been known to exceed 8,000 parts per billion.

What is harmful blue-green algae?

Although it technically is not a true algae, what is commonly referred to as harmful blue-green algae refers to certain strains of cyanobacteria that produce toxins. These toxins were found in a number of Minnesota lakes in past years. The Minnesota Pollution Control Agency (MPCA) tracks and tests for HAB lakes. See the MPCA web site for more information.

Harmful blue-green algae can dominate the algal populations of a lake under the right combinations of water temperature, low water depths, and nutrients.

What causes blue-green algae?

Blue-green algae generally occurs after several years of below normal rainfall, or if large amounts of nitrogen, phosphorous or other nutrients wash into a lake from agricultural lands or construction sites. Since there have been no changes to the land that drains to Round Lake, and since stormwater is pretreated, the District is assuming that the higher algae levels are due to low precipitation. Blue-green algae prefers still or stagnant water. Because we have had less rainfall, Round Lake and several other local lakes and ponds have lower than normal water levels and are not being “flushed out” by large rainstorms. This leads to an accumulation of nutrients that are prime conditions for the growth of algae. Although unusual for this area, blue-green algae does occur in Minnesota. There is no effective treatment method for eliminating blue-green algae from a lake. The blue-green algae will die off similar to regular algae blooms, but can reoccur under the right conditions.

What should I look for to avoid blue-green algae?

The harmful strains of blue-green algae usually have heavy surface growths of pea-green colored clumps, scum or streaks, with a disagreeable odor and taste. It can have a thickness similar to motor oil and often looks like thick paint in the water. Algae blooms usually accumulate near the shoreline where pets and toddlers have easy access and the water is shallow and more stagnant. It is important to keep a watchful eye on children and pets so that they do not enter the water. Aspects to watch out for include:

- Water that has a neon green, pea green, blue-green or reddish-brown color.
- Water that has a bad odor.
- Foam, scum or a thick paint-like appearance on the water surface.
- Green or blue-green streaks on the surface, or accumulations in bays and along shorelines.

Algae tend to be pushed by the wind, and therefore can accumulate along a lake's windward shoreline. At lakes that have a HAB advisory, avoid recreating along the shoreline that the wind is blowing toward.

What are the risks and symptoms?

Pets and farm animals have died from drinking water containing HAB (or licking their wet hair/fur/paws after they have been in the water). Blue-green algae toxins have been known to persist in water for several weeks after the bloom has disappeared.

The risks to humans come from external exposure (prolonged contact with skin) and from swallowing the water. Symptoms from external exposure are skin rashes, lesions and blisters. More severe cases can include mouth ulcers, ulcers inside the nose, eye and/or ear irritation and blistering of the lips. Symptoms from ingestion can include headaches, nausea, muscular pains, central abdominal pain, diarrhea and vomiting. The severity of the illness is related to the amount of water ingested, and the concentrations of the toxins.

Are some people more at risk?

Yes. Some people will be at greater risk from HAB than the general population. Those at greater risk include:

- Children. Toddlers tend to explore the shoreline of a lake, causing greater opportunity for exposure. Based on body weight, children tend to swallow a higher volume of water than adults, and therefore could be at greater risk.
- People with liver disease or kidney damage and those with weakened immune systems.

Here are some tips on what you can do, and things to avoid:

- Be aware of areas with thick clumps of algae and keep animals and children away from the water.
- Don't wade or swim in water containing visible algae. Avoid direct contact with algae.
- Make sure children are supervised at all times when they are near water. Drowning, not exposure to algae, remains the greatest hazard of water recreation.
- If you do come in contact with the algae, rinse off with fresh water as soon as possible.
- Don't boat or water ski through algae blooms.
- Don't drink the water, and avoid any situation that could lead to swallowing the water.

Is it safe to eat fish from lakes that are under a Health Alert?

Although research is limited, most information to date indicates that toxins do not accumulate significantly in fish tissue, which is the meat that most people eat. At this time, fishing is permitted at lakes that are under a Health Alert. This issue is continuing to be studied, and this web site will be updated if more conclusive information becomes available.

Where can I find out more information about lake sampling for toxic algae?

For more information, go to:

[Minnesota Pollution Control Agency](http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/lakes/lake-water-quality/blue-green-algae-and-harmful-algal-blooms.html?menuid=&missing=0&redirect=1) (<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/lakes/lake-water-quality/blue-green-algae-and-harmful-algal-blooms.html?menuid=&missing=0&redirect=1>)

[Center for Disease Control \(CDC\)](http://www.cdc.gov/hab/cyanobacteria/) (<http://www.cdc.gov/hab/cyanobacteria/>)

[California Department of Health](http://www.cdph.ca.gov/healthinfo/environhealth/water/Pages/Bluegreenalgae.aspx)

(<http://www.cdph.ca.gov/healthinfo/environhealth/water/Pages/Bluegreenalgae.aspx>)

[Michigan Algae flyer](http://www.deq.state.mi.us/documents/deq-ead-tas-algae.pdf) (<http://www.deq.state.mi.us/documents/deq-ead-tas-algae.pdf>)

[New Hampshire Environmental Services](http://des.nh.gov/organization/divisions/water/wmb/beaches/cyano_bacteria.htm)

(http://des.nh.gov/organization/divisions/water/wmb/beaches/cyano_bacteria.htm)

[Florida Department of Public Health](http://www.myfloridaeh.com/medicine/aquatic/pdfs/BG_algae_FAQ.pdf)

(http://www.myfloridaeh.com/medicine/aquatic/pdfs/BG_algae_FAQ.pdf)

[World Health Organization](http://www.who.int/water_sanitation_health/bathing/srwe1execsum/en/index7.html)

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If I am experiencing health symptoms, who do I call?

If you experience health symptoms, notify your physician. You can also contact the Minnesota Regional Poison Center at (888) 779-7921 for more information.