

Cyanobacterial Harmful Algal Blooms

A Guide for Safe Fishing Practices and Fish Consumption in Wisconsin's Lakes and Rivers

What are cyanobacterial harmful algal blooms?

Cyanobacteria (blue-green algae) are natural organisms found in all lakes, rivers and ponds in Wisconsin. Factors like sunlight and plentiful nutrients, such as phosphorous and nitrogen, can help cyanobacteria grow to high numbers and form a cyanobacterial **bloom**. These blooms are also known as cyanobacterial harmful algal blooms, or **cyanoHABs** since they can make toxins called cyanotoxins, or have other harmful effects on humans, animals, and the environment.

How do cyanoHABs impact fish and other aquatic life?

CyanoHABs can threaten the life and health of aquatic animals. Large amounts of cyanobacteria in the water can impair habitats, clog fish gills and make it challenging for aquatic life to find food. When a cyanoHAB decomposes, it uses oxygen from the water. Fish that are left without enough oxygen to breathe may die or leave the area in order to survive. If fish are exposed to cyanotoxins, they may experience organ damage or death. Major fish die-offs throughout the world have been attributed to these blooms.

Is it safe to eat fish from a Wisconsin lake, river, or pond if the water has been affected by a cyanoHAB?

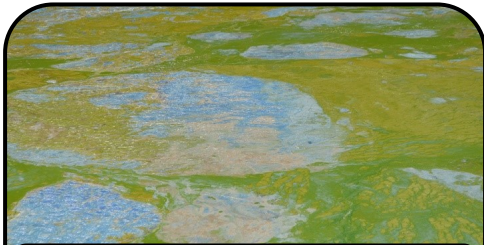
Evidence so far suggests that eating the muscle tissue, known as the **fillet**, of a fish caught before, during, or after a bloom poses low risk to human health. However, **consuming the fish whole, including it's organs, could be harmful to health**. This is because cyanotoxins are more likely to build up in internal organs such as the liver and kidneys, and not the fillet. To date, there have been no known reports of people getting sick from eating fish caught during a freshwater bloom, however, more research is needed to better understand the risk to human health, especially for long-term consumption of fish impacted by cyanoHABs. Currently, there are no state health-based guidelines for consuming fish from water affected by a cyanoHAB.



How can I stay safe during fishing season?

Recognize the signs of a bloom!

Discolored, scummy water are signs that the water may be unsafe. We recommend looking for a different fishing spot if the water:



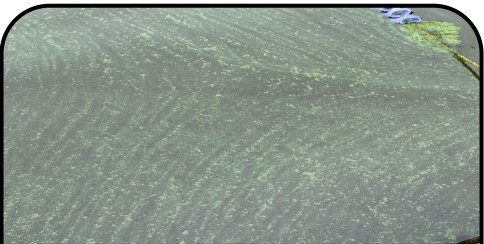
Looks like spilled paint



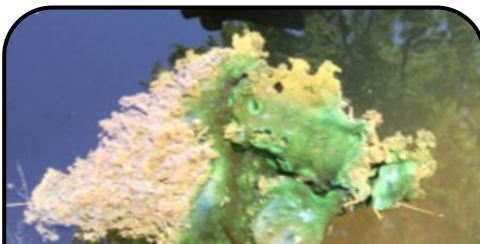
Is discolored or streaky



Looks like green pea soup



Has small, floating green dots






Has floating scum or mats



Has dead fish or other animals

Be cautious about your catch!

If you decide to catch and eat fish from bloom-affected water, follow these tips:

-  Avoid touching bloom-affected water. If your skin is exposed, wash it off with clean water.
-  Remove the internal organs and fat since these are the parts of the fish that are most likely to build up toxins. Be cautious not to cut into the organs.
-  Thoroughly rinse the fillet with clean water before cooking or freezing to remove any excess contaminants.

Be aware of other contaminants!

Mercury, polychlorinated biphenyls (PCBs), and per- and polyfluoroalkyl substances (PFAS) can also pollute water and build up in fish tissues. Unlike cyanobacteria (cyanobacteria), the health effects that people can experience from eating fish contaminated with these pollutants are well-studied, and state guidance is in place to help keep people safe from them. Everyone, but especially children, people who are pregnant or may become pregnant, and those who are nursing should avoid these contaminants in fish. Visit the Wisconsin Department of Natural Resources (WI DNR) at dnr.wi.gov/topic/Fishing/consumption to learn more.

Know before you go!

Before you head out to the water, be sure to visit the WI DNR's online query tool at apps.dnr.wi.gov/fishconsumptionadvisoryquery/ or scan the QR code on the right to find current fish advisories and health-based advice for your favorite fishing spot.

