



Toxic Algae *(Harmful algae blooms)*

Frequently Asked Questions

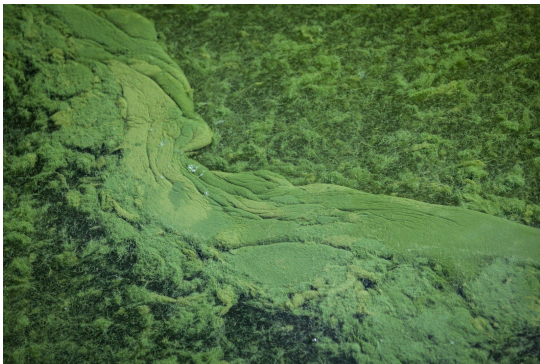
1. What is toxic algae?

Toxic algae or harmful algae blooms are made up of what many people call blue-green algae. Technically, these organisms are a special type of bacteria called cyanobacteria or cyanoHABs. Although these organisms naturally occur in Colorado waters, they become a problem when they multiply rapidly, resulting in a dense cyanobacteria concentration or “bloom”. The blooms become harmful when the cyanobacteria produce toxins.



2. What causes toxic algae?

Blooms tend to occur when the ecosystem gets out of balance and the cyanobacteria are able to outcompete other phytoplankton. Excess nutrients, high temperatures, and standing or slow-moving water provide an optimal environment for cyanobacteria to reproduce. The peak season for toxic algae is during the hot summer months of June to September.



3. What should I look for?

Toxic algae may resemble thick pea soup, spilled paint on the water’s surface, and/or create a thick mat of foam along the shoreline. Toxic algae is generally green, red, gold, or turquoise. You may also see small specks or blobs floating at or just below the water surface. Toxic algae is typically not stringy or mustard yellow in color (the latter is probably pollen).

4. Can I tell if a bloom is toxic by looking at it?

No. Laboratory testing or test strips are necessary to confirm the toxin levels. If you suspect toxic algae, the best advice is to avoid contact with the water until laboratory testing or test strips confirm the absence of or a safe level of toxins. See question number 5 below for more information about testing for algae.

5. How do I test for algae in water on my own property?

There are tests that are either no-cost or you can pay to take tests. Keep in mind the no-cost tests do NOT tell you if toxins are present. Tests that you pay for will tell you if toxins are present.

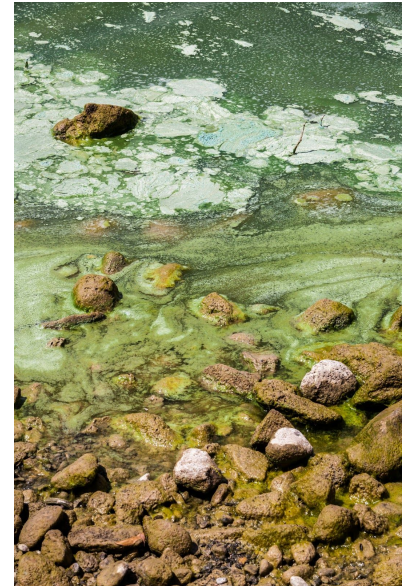
Simple, no-cost tests called field tests include the “jar” test or “stick” test. These two tests can be used to help screen for toxic algae, but keep in mind that these tests are not 100% perfect. These tests may tell you if blue-green algae is present but they do not determine if toxins are present. *Remember, for each test, protect yourself and wear gloves. Wash your hands and any exposed skin immediately with potable water after handling water samples.*

For the jar test, fill a glass jar $\frac{3}{4}$ full with lake water (collected just under the surface of the algae layer). Place it in the refrigerator without being disturbed overnight. Carefully remove the jar the next day and observe where the algae settled. If the algae collected at the top of the water, this indicates that blue-green algae (and thus, possibly toxic algae) are present.

The stick test involves dipping a sturdy stick into the algae scum layer. If the stick pulls out algae that looks stringy or hair-like, the algae is likely harmless filamentous green algae. If the stick comes out looking coated in paint, it may be blue-green algae which can produce toxins.

There are also two different types of tests which you can pay for that will tell you if and how much of the toxins are present.

- 1) The state lab offers two types of laboratory tests to determine algal toxin levels. The tests currently range in price from \$80-\$275. Sampling and shipping instructions are available here: <https://bit.ly/CDPHELabHAB>.
- 2) Test strips are also another method to test for the presence of toxic algae, and range in price from \$25 to \$35. Depending on the manufacturer, test strips may vary on the type and level of toxins it can test for. The test strips have a shelf-life of about 6 months.



6. Can I swim or play in water with toxic algae?

Since the only way to tell if water has toxic algae is to test for it, we recommend avoiding contact with the water until laboratory testing or test strips confirm the absence of or a safe level of toxins. This includes:

- Keep pets out of the water
- Keep kids out
- Do not drink the water

If you are exposed to algae, then we recommend you shower immediately.

7. What are the potential health impacts?

Toxic algae can affect the liver, skin, or neurological systems. The health impacts vary depending on the type of toxin and exposure. Symptoms of exposure may include skin irritation, gastrointestinal upset, fever, headache, sore throat, muscle and joint pain, and liver damage. Ingestion and direct skin contact are the typical means of exposure. If you suspect toxic algae has made you sick, contact your healthcare provider or Poison Control (1-800-222-2222).

8. Are they harmful to pets?

Yes, especially because pets are more likely to ingest the water. If you suspect toxic algae is present, do not let your pets or livestock contact the water. Keep your dog leashed around the water. Do not let them lick/ingest dried scum along the shoreline. In case of accidental exposure, do not let your pet lick their fur or paws. Rinse them thoroughly with potable water and wear gloves for your own protection if possible. Symptoms of algae toxin poisoning include vomiting, diarrhea, loss of appetite, abdominal swelling, stumbling, seizures, disorientation, or difficulty breathing (for a full list of symptoms, see <https://bit.ly/HABsPets>). Contact your vet immediately if you observe these symptoms after a suspected toxic algae exposure and then also contact CDPHE at 303-692-2606 or cdphe_toxcall@state.co.us.

As of 2019, no confirmed dog deaths related to toxic algae have been recorded in Colorado, but it is important for pet owners to remain vigilant, especially during the hot summer months.



9. Can I still fish or boat?

Yes, as long as the water body management permits these activities. Avoid boating through visible algae scum on the surface to avoid making the water splash. Fish may be consumed as long as they are cleaned thoroughly with potable water and guts are discarded appropriately. Wash any skin that has come into contact with the toxic algae with drinking water.

10. What should I do if I see a suspected bloom?

Contact the managing agency or owner of the waterbody. Counties, municipalities, and private entities conduct their own monitoring of waterways. Colorado Parks and Wildlife monitors waters in state parks and some state wildlife areas, and the Colorado Department of Public Health and Environment offers support for testing and guidance. At this time, testing and reporting for algal toxins is not required, so do not assume that a waterbody has been tested. For more information about toxic algae blooms, visit the state website at <https://cdphe.colorado.gov/toxic-algae>.

11. How do I find out who manages or owns the body of water?

There is no comprehensive list of waterbodies and their managing agencies in Colorado. Look for signs around park entrances or rest areas that indicate who owns or maintains the area. An online search or phone call to a local resource line may help to identify the managing agency or owner.

For water bodies managed by Colorado Parks and Wildlife, contact the park directly or visit the nearest area office for state wildlife areas. [Here is a list of current contact information.](#)

12. Is there anything that can be done to get rid of toxic algae?

Toxic algae will naturally dissipate with cooler temperatures, after wind events or storms that mix the water, cloudy days, and other natural factors. Even if you don't live near a water body, everyone can play a role in reducing the risk of toxic algae and improving Colorado water quality. When you don't control some of these pollutants, then they can run off during a precipitation event, go into a storm sewer system and eventually into a water body. Some of these pollutants that have impact on algae growth include:

- Fertilizer- follow the instructions on the package and don't use more than what the instructions say. The plants or grass won't absorb excess nutrients and so it can run off your yard during a precipitation event.
- De-icers- avoid using de-icers, especially ones containing nitrogen or urea. Reducing the need for de-icing by shoveling as soon as it snows can help.
- Animal waste- always pick up pet waste because it contains nutrients that promote algal growth. It may seem like a small effort but every little bit helps.

For managers who oversee lakes, ponds and other surface water, avoid using algaecides. Algaecides can result in more toxins in the short-term because the toxin is released from the dying algae cells into the surrounding water. For drinking water treatment facilities, using algaecides can lead to an increase in the amount of toxins in finished drinking water. Algae that contains these toxins can be removed through filtration but if the cells die from algaecides, and there are toxins in the surrounding water, the toxins are too small to filter out.

There are some physical and chemical controls that can be used for the management of blooms, but each measure is usually very expensive and has limitations. The EPA website below summarizes other ideas along with their effectiveness and limitations. It's important to note that these measures don't guarantee the removal of the toxic algae once it is present nor does the state have the resources to try these measures.

www.epa.gov/cyanohabs/control-measures-cyanobacterial-habs-surface-water