

Blue-Green Algae

Blue-Green Algae (BGA), or cyanobacteria, are an ancient group of free-floating, microscopic organisms naturally present in reservoirs, lakes and streams. BGA are usually found in low numbers but can become abundant in very warm, shallow and undisturbed waters receiving a great deal of sunlight and nutrients. Within a span of just days, a clear lake or pond can become cloudy or deep green with algae growth. This is called a bloom. While most BGA blooms are not toxic, some will produce and release toxins into the water that can affect the skin, liver, and nervous system. These toxins can be harmful to the health of humans and animals. Unfortunately, you cannot tell by appearance alone whether or not a bloom is toxic.

Q: What are DEQ's Responsibilities?

DEQ's primary role with respect to BGA blooms is to monitor and assist public water supplies so that algal toxins are not present in drinking water.

Q: How can I tell if BGA are present in a bloom?

- BGA may look like:
 - thick pea soup;
 - green paint;
 - bluish, brownish or reddish-green paint.
- When BGA washes up on shore, it may form a thick mat or scum on the beach.
- BGA are made up of extremely small organisms that are difficult to pick up and hold. Green algae are stringy and made up of grass-green strands. Green algae are harmless.

Q: Why be concerned about BGA?

- The toxins produced by BGA may cause a variety of reactions, most commonly, upper respiratory problems, eye irritation, skin rashes, vomiting, and diarrhea.
- The consumption or inhalation of BGA can be unsafe.
- Children are more vulnerable than adults because children tend to play in the water and are not as cautious as adults. Children are more likely to drink or accidentally swallow the water in which they are swimming.

Q: How can I find out if a BGA bloom is affecting any Oklahoma lakes?

Check <https://www.travelok.com/state-parks/lake-conditions>, a website of current lake conditions maintained by the Oklahoma Tourism and Recreation Department. This will also identify any BGA blooms present. Alternatively, you may contact the lake's manager.



Above: Smaller pieces of blue-green algae floating in a pond.

Below: A close-up photo of blue-green algae.



Q: What should I do if I become ill after being exposed to BGA?

If you become ill after coming in contact with BGA, visit your physician immediately and contact the Oklahoma State Department of Health at (800) 234-5963.

Q: Can livestock and pets be harmed by BGA?

- Pets and livestock are particularly susceptible to the harmful effects of BGA.
- Do not allow pets or livestock to swim in or drink water that appears to have BGA.
- Livestock that use ponds as a water source can inhale and consume large quantities of BGA. If toxins are present, this can lead to severe illness and even death.

For information about pets and livestock, contact the Oklahoma Department of Agriculture, Food and Forestry at (405) 521-3864 or visit <https://ag.ok.gov/>. If an animal has become ill after coming in contact with BGA, contact your veterinarian immediately.

Q: How can BGA be prevented?

- Avoid using more lawn fertilizer than is recommended.
- Use phosphorous-free fertilizer where possible.
- Avoid applying fertilizer where runoff can flow into storm drains.
- Maintain native vegetation along shorelines and streams. Native plants do not require additional fertilizer and the growth along the banks helps to filter water.
- Minimize activities that result in soil erosion.

Q: What should be done if there appears to be a BGA bloom?

- Avoid contact with the water.
- Keep children, pets and livestock away from the affected body of water.
- To report a bloom, contact DEQ at (800) 522-0206.

For more information, contact the DEQ State Environmental Laboratory at (405) 702-1000 or (866) 412-3057, or by email at selsd@deq.ok.gov.



Close-up of blue-green algae.



Above: Image of non-harmful algae.

Below: Close-up of non-harmful algae.

