

FRESHWATER ALGAL BLOOMS FREQUENTLY ASKED QUESTIONS



What is blue-green algae?

Blue-green algae, or cyanobacteria, is a type of bacteria found naturally in freshwater environments. This bacteria is a microorganism that functions like algae or a plant in that it feeds through photosynthesis and derives its energy from the sun. Blue-green algae can be found all over the world, and occur in Florida's freshwater and brackish habitats, such as lakes, rivers and estuaries.

What causes an algal bloom?

Although blue-green algae are found naturally, increases in nutrients can exacerbate the extent, duration and intensity of blooms. Other factors that contribute to blooms include warm temperatures, reduced water flow and lack of animals that eat algae. Although they can occur at any time, blue-green algae are most common in Florida during the summer and early fall, with high temperatures and abundant sunlight. The summer also brings storms that have the potential to deliver nutrients into waterways through stormwater runoff.

Are all types of blue-green algae harmful?

Some – not all – blue-green algae can produce toxins that can contribute to environmental problems and affect public health. Little is known about the exact environmental conditions that trigger toxin production. Over time, these toxins are diluted and eventually break down and disappear. Non-toxic blooms can also harm the environment by depleting oxygen levels in the water column and reducing the amount of light that reaches submerged plants.

Are algal blooms predictable?

The nature of most freshwater algal bloom events makes it difficult to predict where and when a bloom will occur or how long it will last. However, lessening the negative effects of algal blooms is possible through restoration work to improve water quality by reducing nutrients. The department sets appropriate nutrient limits to restore waters by setting [Total Maximum Daily Loads](#) to guide restoration activities to return these water bodies to water-quality standards that protect human health and aquatic life.

Can you tell what type algae is or if it is producing toxins by looking at it?

No, this is why the Florida Department of Environmental Protection (DEP) coordinates with the water management districts and the Florida Fish and Wildlife Conservation Commission (FWC) to routinely sample observed and reported algal blooms. If potential toxin-producing species of cyanobacteria are one of the dominant species present, toxin analyses are also performed.

What are the health risks associated with algal blooms?

The Florida Department of Health (DOH) takes the lead in determining if a harmful algal bloom presents a risk to human health. DOH issues health advisories as it determines to be appropriate and may also post warning signs when blooms affect public beaches or other areas where there is the risk of human exposure. DOH advises that people and their pets avoid contact with water when a visible bloom is present, and that bloom affected water should not be used for recreation, irrigation or to water livestock.

What happens when an algal bloom is reported?

The department collects detailed information such as location, description and size of the bloom. The reports are then evaluated and prioritized for inclusion in near-term sampling plans based on severity of the bloom and potential for human exposure.

continued

How can I stay updated on algal blooms in my area?

To ensure the health and safety of our state's residents and visitors, DEP is committed to keeping Floridians updated on current algal blooms and how the state is responding to protect human health, water quality and the environment. DEP places sampling results, monitoring locations and latest actions by DEP, the water management districts and other local, state and federal response team partners at www.algalbloomupdate.com. Residents can also subscribe to receive automatic email Algal Bloom Monitoring and Response updates.

Who collects samples?

DEP and Florida's water management districts collect samples when algal blooms are observed during their routine water-quality monitoring as well as when blooms are reported. FWC samples nearshore marine waters.

How often are samples collected?

DEP and Florida's water management districts frequently monitor Florida's water quality and routinely collect algal bloom samples as soon as they are observed as part of this effort. In addition, staff can be deployed to take additional samples in response to reported blooms – whether from a citizen, other response team agencies or other sources.

Where are algal bloom samples tested?

Most algal bloom samples are processed in DEP's nationally-recognized lab in Tallahassee.

What does DEP's lab test for?

Bloom samples are examined using a microscope to determine whether a potential toxin-producing species of blue-green algae is predominant in the sample. If they are, the bloom sample is then tested to determine if it is producing toxin and if so, at what level. The toxins that could be tested for include microcystin, clindrospermospin, or anatoxin-a, as appropriate to the species present.

Why do reported toxin values differ between different sampling agencies or groups?

All agencies and groups do not sample or analyze their samples using the same methods. Differences in collection method, sample preparation and analysis can result in significant differences in reported values.

DEP collects bloom samples at locations that best represent the overall condition and water quality of the bloom-affected water. Additionally, algal bloom characteristics can change rapidly (within hours) due to prevailing wind, current, weather and other conditions. This can also contribute to different values being reported for the same bloom event. Persistent blooms are routinely monitored and retested.

Who should I contact about beach closures?

For the most up-to-date information regarding public beach closures, residents and visitors are encouraged to contact the counties directly as they have information on the latest actions.

- » Martin County: 772-320-3112
- » St. Lucie County: 772-229-2850
- » Palm Beach County
 - Juno Beach and north: 561-624-0065
 - Riviera Beach and south: 561-629-8775

Visit www.floridastateparks.org for state park beach closure alerts