

## **What is a Harmful Algal Bloom (HAB)?**

In Cherokee County we are lucky to have an abundance of rivers, streams, and creeks to kayak, fish, and swim in as well as the beautiful Lake Allatoona. It is no surprise we spend a good amount of time outdoors with all these choices. However, we rarely think about how our actions may impact the safety of our water resources and our own health. Algae is a simple plant that lives in fresh water. It is a common sight to see around any lake and is a good source of food for the fish and other organisms. Algae is a natural and useful part of many water bodies. Algae species flourish when wind and water currents are favorable and nutrients are at optimal conditions. We have had previous articles that talked about bacterial and nutrient loading from non-point sources through storm drainage systems. We have discussed that bacteria and other nutrients can harm bodies of water where we live. The over application or misapplication of fertilizers on driveways, sidewalks, and roads can lead to these phosphorus and nitrogen containing chemicals to make it into our water bodies, such as Lake Allatoona. When this happens you can get an overabundance of nutrients (phosphorus and nitrogen) that promote the overfeeding of algae.

When algae are present and summer temperatures keep the water warm the influx of nutrients can lead to overgrowth of algae and HAB's. NOAA states that "some HAB's appear in the aftermath of natural phenomena like sluggish water circulation, unusually high water temperatures, and extreme weather events like hurricanes, floods, and drought".

For freshwater the most common type of HAB comes from Cyanobacteria, a phytoplankton known as blue-green algae. These blooms can look like foam, scum, mats, or paint on the surface of the water and can smell bad. The blooms can change the color of the water to green, red, brown, or blue. Only some of the algae overgrowths are harmful and produce toxins that make people and animals sick and harm the environment. You cannot tell harmful blooms from non-harmful blooms just by looking at them, and it may not always be easy to see how large a bloom is.

If you have come into contact with harmful algae blooms the symptoms typically seen include: skin, eye, and throat irritation, stomach pain, headache, muscle twitches, vomiting, and diarrhea. Pets are particularly susceptible to HAB's and any indication that your pet has been exposed should prompt a trip to the vet. For safety it is a good idea to keep pets away from suspicious water during warmer months.

If you think you may have been in contact with water that contains HAB's it is important to contact your local health department or personal physician immediately.

For those interested in tracking and reporting possible HAB's there are 2 commonly used free apps you can download to your phone the first is CyAN and the other is Bloomin' Algae.

CyAN is a multi-agency project among EPA, the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), and the United States

Geological Survey (USGS) to develop an early warning indicator system to detect algal blooms in U.S. freshwater systems. This research supports federal, state, tribal, and local partners in their monitoring efforts to assess water quality to protect aquatic and human health.

Bloomin' Algae is a Citizen Science app for reporting the presence of harmful algal blooms of blue-green algae. The app helps speed up public health warnings and can help teach you how to recognize the risks to you, children, and animals.