Issue 26: Fall 2022

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COOSA RIVERKEEPER

- How We're Addressing Nutrients on the Coosa
- Swim Guide: By the Numbers
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History of Nutrients on the Coosa

Historically, the Coosa has been affected by nutrient pollution, whether it's from wastewater discharges, concentrated animal feeding operations, or agricultural runoff. This along with the fact that Alabama's state agencies are not required to test its water for nutrients, specifically phosphorus and nitrogen. This has led our organization to a new avenue of study of the Coosa. Out of necessity, we began expanding our nutrient and algae monitoring program in late 2021 and have only expanded it further in 2022 with the Coosa River named the Fifth Most Endangered River in the US by American Rivers.

Too many nutrients within a body of water can lead to an excess of growth of aquatic weeds, and especially algae. When excess growth occurs, this can be a big problem for the aquatic environment as the natural equilibrium within can shift. This shift can cause some species of plant to die off or get taken over by what is growing excessively. Algae can also grow excessively when conditions are just right which can lead to an arguably bigger problem: A harmful Algae Bloom or 'HAB'' for short. HAB's typically occur in shallow, slow moving, and warm water especially when an excess of nutrients is present. What makes HAB's especially dangerous is the potential for them to fill the water column with algae specific toxins. These toxins are in fact dangerous and can negatively impact the health of plants, fish, animals, and even humans.

How Nutrient Pollution Works



Read more about Nutrients at CoosaRiver.org/Nutrients

Our Algae Monitoring Plan

Our team conducted algae sampling intensives on each reservoir on the Coosa. Beginning with Lake Mitchell, the team hopped on The Olive II, and began taking algae samples from dam to dam, stopping at locations that were predetermined using topographical data. Over the summer, we conducted the same type of intensives, dam to dam, on Neely Henry, Logan Martin, Jordan, and Lay Lake.

To analyze algae, we create a microscope slide using a sample of water. We then look at it under a microscope to visually try to identify live species of algae. If we did have a positive indication of harmful algae being present, we would then contact the NOAA with pictures of what we found. They would then provide further confirmation and instructions on how to handle the bloom if one were to occur. Finding positive confirmation of a species in our sample does not mean that a bloom is going to happen, but it does mean that the potential for a bloom to occur is greater in the area that we gathered the sample.

120 # of Algae Sites Monitored

150

of Algae Samples Collected



It is important to understand that not all algae is bad, and nearly every species plays a critical role in their environment. The true problem occurs when very specific species of algae begin to grow excessively.

Currently, there are only two species of algae that we have identified as having the potential to create harmful algae blooms and they are known as "Cyanobacteria" and "Euglena Sanguinea". The term "Cyanobacteria" encompasses five different species that we try to identify, however all of which create toxins. Out of our 150 samples, only one came back with positive confirmation, however it was not a bloom. Euglena Sanguinea is an outlier, but we quickly learned that it also has the potential to bloom and create toxins, as we had to handle a bloom of Euglena in our watershed in early August. Fortunately, most toxic algae blooms typically dissipate in a few weeks, depending on conditions, but they should nonetheless be treated with caution. Despite how long they last, they still have a high potential to harm animal and human life.

Read the full blog post at CoosaRiver.org/AlgaeMonitoring

By the Numbers:

2022 COOSA RIVER SWIM GUIDE

















This year in honor of the 50th Anniversary of the Clean Water Act, Coosa Riverkeeper expanded its free water quality monitoring program to 50 sites in 12 counties! We couldn't have done this without the generosity of these businesses, people, and grantors.



Clean Water Act 101

Before the Clean Water Act was passed in 1972, waterways in the United States were severely contaminated by sewage, trash, oil, and industrial pollution.

Since then, the Clean Water Act has dramatically reduced pollution and improved water quality across the country, but progress is threatened by lack of enforcement, deregulation, and other major issues. But, that's why Waterkeepers are vital. Despite failures to implement and enforce the Clean Water Act, Waterkeepers take the citizen suit provision and public comment processes of the Clean Water Act to hold polluters (and our government) accountable to protect our waterways, aquatic life, and the public.

What does the Clean Water Act Do?

The Clean Water Act does two things: regulates the discharges of pollutants into waters of the United States from point sources like pipes, ditches, and similar conveyances and regulates water quality standards for surface waters.

What are the Objectives?

There are two objectives of the Clean Water Act:

- I.To eliminate the discharge of pollutants into the nations water.
- 2. To achieve water quality levels that are fishable and swimmable.

Who can sue under the Clean Water Act?

Any citizen with "standing" may sue under the Clean Water Act. To have standing you must be able to prove that you have been someone with an interest which is or may be adversely affected.

Why does the Clean Water Act Matter?

Prior to the Clean Water Act, water quality regulations were weak or nonexistent, and point source discharge was largely unregulated leaving our waters unprotected and contaminated from the dumping of dangerous and toxic pollutants. Today, although still facing issues, our waters are in much better shape than they were 50 years ago! The Coosa is still dealing with illegal discharges and have a lot of work to do... so join us by becoming a member today!

Fall Events

GET MORE INFO AT COOSARIVER.ORG/EVENTS







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