

Algae FAQ for Georgia Power Lakes

What are Algae?

Algae are single and multicellular photosynthetic organisms found throughout the world in all types of freshwater and saltwater habitats.

Why are Algae important?

They are tremendously important to the health of our planet and serve as the base of the food chain in all aquatic ecosystems. In freshwater, they support the base of the food chain that ultimately leads to higher order aquatic organisms such as bass. Algae also produce about 40-50% of the oxygen we breathe.

Why do algae make the water look green?

All algae contain a green pigment in their cells called chlorophyll-a which enable them to perform photosynthesis. Algae that cause an obvious green color change to the water itself are called phytoplankton and are single celled organisms.

What are other types of algae?

Another taxonomic group of algae are known as Cyanobacteria or “blue-green” algae and are among the oldest lifeforms on earth. The photoplanktonic blue-green algae also contain green pigments in their cell walls for photosynthesis and help make lake water look green. Cyanobacteria are vital to the health of an aquatic ecosystem.

What is an algae bloom?

Under certain conditions, algae can grow so fast that they become noticeable and can make the water turn a rich pea-soup green or spilled green/blue paint color. This condition is known as a “bloom” and in some instances can form a thick surface or thick green mat. In addition to these visual observations, an algae bloom may sometimes have an unpleasant smell.

What cause an algae bloom?

The primary environmental trigger for an algae bloom is due to a process called Eutrophication. This is known as the sudden enrichment of natural waters with nutrients such as Phosphorus and Nitrogen. Certain species of blue-green algae can use these excess nutrients more efficiently which leads to excessive growth.

How does nutrient enrichment happen?

The primary mechanism of nutrient enrichment or Eutrophication is stormwater runoff within a lake's watershed. A watershed is a land area from which water drains and carries runoff to a nearby body of water (lake). Watershed runoff may include urban stormwater flow as well as rural agricultural areas. Land use patterns and increased development within a watershed including the use of fertilizers that enter stormwater runoff significantly increase the process of Eutrophication.

Does water temperature matter for an algae bloom to occur?

Typically, warmer water (late spring to early fall) combined with excessive nutrients can create conditions favorable for algae blooms. Many species of algae grow faster at higher temperatures; however, there are few species of algae that can tolerate colder temperatures.

Are algae blooms harmful?

Blue-green algae are not always harmful, but some can produce toxins. Not every algae bloom will produce toxins and it can be difficult to identify whether or not a bloom is toxic. Typically, a water sample will have to be collected where the bloom is occurring and sent to qualified water chemistry lab to test for blue-green algae toxins.

What are some harmful effects of blue-green algae toxins?

Typical side effects include skin rash, skin irritation, throat swelling, respiratory problems, headaches, or eye irritation.

How do I avoid contact with an algae bloom?

Avoid staying in the water if you see a thick green mat or layer on the water surface and avoid ingesting the water from incidental contact. Also keep your pets out of the water if you see this condition.

Who do I contact if I exhibit conditions from the effects of a blue-green algae bloom?

Contact your healthcare provider and indicate the possibility of exposure to algal toxins from swimming in the water.

What can I do to help prevent algae blooms?

Limit the amount of fertilizer you use on your lawn to prevent nutrients from entering the lake through stormwater runoff. Keep fertilizers off driveways and sidewalks as this is the quickest route for nutrients to enter a lake. Shoreline residents of a lake can maintain a buffer of native plants around their shorelines that intercept and absorb excess nutrients from fertilizers and prevents soil erosion. The proper maintenance and care of septic tank systems are an important step in preventing nutrient pollution.

Who do I contact if I see an algae bloom?

Contact your local Georgia Power shoreline manager and report your observations which are very important. This may aid in early detection of an algae bloom and allow shoreline manager to initiate important notification steps.