



“Currents” August 2019

Water Quality Concerns for Summer

UGRA has recently received a number of inquiries about the potential for blue-green algae in Kerr County streams. The concern is raised due to recent reports that dogs have died after coming in contact with blue-green algae in Texas waterways. Blue-green algae is a general term that refers to a wide variety of cyanobacteria which are naturally found in freshwater systems. Cyanobacteria are not true algae, but since they are photosynthetic, they are considered part of the same group of organisms that include algae. Some types of cyanobacteria release harmful compounds called cyanotoxins into the water.

Algae are naturally occurring plants that grow in water and are an important part of the aquatic food chain. A bloom occurs when algae grow very rapidly in a confined area or grow to the point where a microscope isn't needed to see it. Most algae blooms are harmless and do not indicate pollution or other water quality concerns, but under certain conditions may pose a risk to humans and animals. Algae blooms are considered harmful if they can produce toxins; especially, if people or animals come in direct contact with the toxins.

Certain environmental factors influence the growth of blue-green algae and subsequent algae blooms. In general, a harmful algae bloom needs ample sunlight, slow-moving water, and abundant nutrients (nitrogen and phosphorus). Stormwater runoff transporting pollution from human activities to the river can increase nutrient levels and cause algae blooms.

The Guadalupe River in Kerr County generally does not exhibit the conditions that could lead to a blue-green algae bloom since we do not have large lakes, are close to the headwaters springs that help keep water temperatures cool and maintain flows, and have naturally low nutrient levels. However, areas along the river or creeks where water becomes slow moving, stagnant, has surface scum, looks like pea soup, smells bad, or is very warm are never healthy swimming options for people or pets. Not only does swimming in these areas have an increased risk of contracting a waterborne illness due to elevated *E. coli* bacteria levels, but these areas also exhibit the conditions where blue-green algae could be present.

UGRA does conduct routine water quality monitoring throughout the year and more frequent testing for *E. coli* bacteria during the summer. There isn't currently an effective testing protocol for blue-green algae, but our field staff are trained to make observations of the occurrence of algae during routine water quality monitoring visits.

UGRA continues to recommend a commonsense approach to recreational waters: If you have concerns or are suspicious about the water quality, stay out. We have updated our list of tips for healthy summer swimming to also include concerns for blue-green algae:

- Don't swim in water that is stagnant, looks discolored, murky, or smells unpleasant.
- Avoid digging in or stirring up sediment.
- Avoid getting water up your nose - wear nose plugs or hold your nose.
- Avoid swimming if you have an open wound or infection.

- Use appropriate toilet facilities. Do not put yourself or others health at risk by using waterways as a toilet.
- Don't leave litter behind – take all your trash with you when you leave. Especially dirty diapers.
- Don't swim in areas with flocks of ducks and geese.
- Whenever you go swimming, always rise yourself off afterwards.
- Rinse off dogs that have been swimming and do not let them lick their fur.
- If anyone becomes ill after swimming, contact your health provider. Contact your vet if your dog appears ill.
 - o Signs of illness from blue-green algae in humans include numbness of lips, tingling in fingers and toes, dizziness, headache, rash or skin irritation, respiratory irritation, abdominal pain, diarrhea, or vomiting.
 - o Signs of illness from blue-green algae in dogs include weakness, staggering, convulsions, difficulty breathing, or vomiting.

Please contact UGRA to report any concerns for surface water quality or if you would like more information. To view recent *E. coli* bacteria testing results visit: www.ugra.org/public-information/swimability

Let's Keep Our River Clean

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