Cyanobacteria Bloom FAQ

# **What are cyanobacteria?**

Cyanobacteria, also called blue-green algae, are microscopic organisms found naturally in all types of water. These single-celled organisms live in fresh, brackish (combined salt and fresh water) and marine water. Similar to most plants, cyanobacteria use sunlight to make their own food. In warm, nutrient-rich (high in phosphorus and nitrogen) environments, cyanobacteria can multiply quickly, creating blooms. Cyanobacterial blooms suspended in the water column may not be visible to the casual recreator. Cyanobacteria that produce toxins are called cyanobacterial Harmful Algal Blooms, or cyanoHABs for short.

# **Why are some cyanoHABs harmful?**

CyanoHABs produce toxins called cyanotoxins. Drinking water that contains cyanotoxins can cause serious illness in humans and pets. Additionally, contact with water containing cyanotoxins can result in skin irritation. You cannot tell if a bloom contains toxins just by looking at it. CyanoHABs are most actively blooming and a greater risk during months of high-water temperatures.

# **How can people and animals come in contact with cyanoHABs and cyanotoxins in the environment?**

At Lake Mattamuskeet*,* through direct contact with the water during fishing, boating, waterfowl hunting or other recreational activities in or on waters that have cyanoHABs.

# **What should I do if I come into direct contact with lake water?**

Swimming is not allowed in the lake. Anyone who comes into contact with the lake water should rinse off with fresh water as soon as possible. Contact your doctor if you or a family member experience sudden or unexplained illness after coming into contact with water in Lake Mattamuskeet.

Follow any waterbody closures announced by the Refuge (call 252-926-4021) or local public health authorities (<https://epi.publichealth.nc.gov/oee/algae/protect.html>).

# **What should I do if my pet comes into direct contact with lake water?**

Don’t let pets swim in or drink from lake water. However, if pets do swim in the lake (for example, dogs during the waterfowl hunting season), rinse them off immediately. Do not let them lick the water off their fur. Contact your veterinarian if your animal experiences sudden or unexplained illness.

Follow any waterbody closures announced by the Refuge (call 252-926-4021) or local public health authorities (<https://epi.publichealth.nc.gov/oee/algae/protect.html>).

# **How can I help reduce cyanoHABs?**

Use only the recommended amounts of fertilizers on your yard and gardens to reduce the amount that runs off into the environment.

Properly maintain your household septic system.

Maintain a buffer of natural vegetation around ponds and lakes to filter incoming water.

# **Is it safe to eat fish caught from waters affected by cyanoHABs?**

Eating fish caught from affected waters is an unknown health risk.

There have been no reports of people becoming sick from eating fish or crabs caught from Lake Mattamuskeet. However, there has been no specific research on lake water regarding the risk to human health.

It is known that some cyanotoxins have been found to accumulate in fish tissues, and particularly in the internal organs such as the liver and kidneys. Toxin accumulation studies suggest that the muscle (fillet) tissue is less affected by cyanotoxins.

# **Are there fish consumption advisories for fish in Lake Mattamuskeet?**

The N.C. Dept. of Health and Human Services provides advisories for fish consumption. For additional information, contact the NC Department of Health and Human Services. <https://chhe.research.ncsu.edu/coec/projects/fish-consumption-advisories/>

# **What precautions can I take when consuming what I caught in the lake?**

If you decide to eat fish caught from Lake Mattamuskeet, remove the fat, skin and organs before cooking. Be careful not to cut into the organs. Before cooking or freezing the fish, rinse the fillets with clean water to remove any contaminants from the cleaning process.

For crabs, only eat the meat. Remove all organs and the “mustard” found in cooked crabs. Rinse the crabmeat before cooking.

# **What is the Refuge doing about the cyanoHABs in the lake?**

The Refuge will continue to monitor the water quality in the lake and coordinate with the local/state health authorities to provide updates about the cyanoHABs. The Refuge has posted public health advisories signs around the lake.

Mattamuskeet NWR is collaborating with the N.C. Wildlife Resources Commission, Hyde County, N.C. Coastal Federation and other stakeholders in the county to complete a Lake Mattamuskeet Watershed Restoration Plan. Several strategies proposed in the plan are aimed at reducing nutrient loading in the lake that should decrease the frequency and magnitude of cyanobacteria harmful algae blooms.

# **Sources:**

Center of Disease Control: <https://www.cdc.gov/features/harmful-algal-blooms/index.html>

NC Department of Health and Human Services: <https://epi.publichealth.nc.gov/oee/algae/protect.html>

EPA: <https://www.epa.gov/nutrient-policy-data/cyanobacterial-harmful-algal-blooms-water>

USFWS Wildlife Health Lab