

A harmful algal bloom (HAB) occurs when certain kinds of microscopic organisms multiply and produce toxins in a waterbody or waterway. The microscopic organisms that most commonly cause HABs in Pennsylvania's fresh and brackish waters are cyanobacteria, or blue-green algae. While cyanobacteria are a natural part of many aquatic ecosystems, under certain conditions, like high nutrients and warm temperatures, some kinds of cyanobacteria can produce cyanotoxins. HABs can form at any time but most often in late summer or early fall.

### HOW ARE HABs HARMFUL?

In high enough concentrations, cyanotoxins from HABs can be harmful to people, pets, livestock, and wildlife that come in contact with or ingest them. Those who encounter these toxins can experience severe illness including vomiting; diarrhea; neurological symptoms; skin, eye, nose, or throat irritation; or even death.

### HOW WILL I KNOW IF THERE IS A HAB?

Some HABs can look like foam, scum, or mats, particularly when the wind blows them toward a shoreline. Though typically blue-green in color, HABs can also be blue, green, brown, or red, resembling paint floating on the water. As the microorganisms in HABs die, the water may smell like rotting plants or have an earthy scent. HABs sometimes stay below the water's surface or float on it. Even if there are not any noticeable signs of HABs, cyanobacteria and other microorganisms may still be present in the water.



### HOW DO PEOPLE AND ANIMALS COME IN CONTACT WITH HABs?

People and animals can encounter HABs that are in the environment by physically touching, ingesting, and inhaling cyanobacteria and/or cyanobacteria toxins while swimming and boating; eating fish caught in contaminated water; using contaminated water to prepare food; or drinking contaminated water. For dogs and livestock, eating scum or algae and licking fur after swimming in contaminated water could be HABs exposures.

### HOW DO I PROTECT MYSELF, MY FAMILY, AND MY PETS FROM HABs?

- Avoid drinking, playing, swimming, water skiing, boating, or other activities in areas where the water has a bad odor or any visible indications of HABs. If you or your pet swim in water that might contain a HAB, rinse off with fresh water as soon as possible. Do not let pets lick off their fur.
- Follow any waterbody closures and advisories announced by local public health and other authorities.
- Seek professional assistance to determine causes and prevention measures for HABs most relevant to a specific waterbody. Poor water quality from excessive nutrients promotes the development and persistence of HABs. Using only the recommended amounts of fertilizers on lawns and plants, properly maintaining household septic systems, and keeping a buffer of natural vegetation around ponds and lakes to filter incoming water may prevent excess nutrients from forming in a waterbody.
- You can use Penn State's water testing services to test for excess nutrients (such as phosphorus or nitrate-nitrogen) that can make it easier for HABs to grow in any residential waterbody, including those used as a water source for livestock and fruit and vegetable gardens. However, a positive test for these nutrients does not necessarily mean HABs are present. More information on Penn State's water testing services is available at <https://agsci.psu.edu/aasl/water-testing/pond-and-lake-water>.
- If you swallow water from where there is a known HAB, call your doctor or a Poison Control Center at 800-222-1222. For your pet, contact a veterinarian or an Animal Poison Control Center at 888-426-4435.

**If you have any health-related questions about HABs, contact us at [env.health.concern@pa.gov](mailto:env.health.concern@pa.gov).**

**For other inquiries about HABs or to report a HAB, contact [HABs@pa.gov](mailto:HABs@pa.gov).**