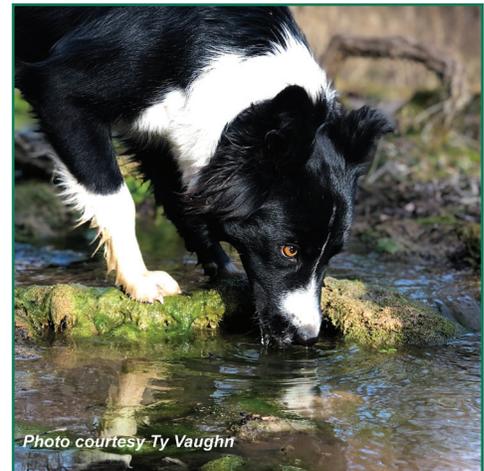


## IMPACT OF HARMFUL ALGAL BLOOMS ON ANIMAL HEALTH

Harmful algal blooms (HABs) in freshwater lakes and rivers are normally composed of cyanobacteria, or blue-green algae. These blooms can produce toxins harmful to human and animal health. Cyanobacteria typically thrive in warm and nutrient-rich waters, often making private ponds near fertilized farmland or turf grass susceptible. Blooms can be difficult to eliminate once they start to grow rapidly so proactive prevention of HABs is the best protection a manager/owner of a waterbody can provide.

### EXPOSURE

Toxins produced from HABs can damage an animal's liver, kidneys, or brain and nervous system.<sup>1</sup> They can also irritate the skin, and respiratory and mucous membranes. Animals can be easily exposed to these toxins because of their inclination to swim in or drink from a waterbody. Dogs may not be deterred by algal scums and may even be attracted to odors from the algae. Ingesting only a small amount of contaminated water can cause harm to animals. Cyanotoxin poisoning can also affect livestock, fish and wildlife, and other animals that consume contaminated water.



### CLINICAL SIGNS

When an animal is exposed to the cyanotoxins — through drinking, licking algae from its fur or consuming dried algae along the shore — symptoms can begin rather quickly with severity dependent on the type of blue green algae ingested.<sup>2</sup> Symptoms can begin within minutes to hours and potentially death can occur within minutes to days, depending on the type of toxin. No antidote or specific treatment exists for cyanotoxin poisoning, but cyanotoxin exposure can be treated if the animal is given care quickly. Preventing an exposure is always the best option for protecting your animal's health.

Common symptoms seen in animals include the following:<sup>2,3</sup>

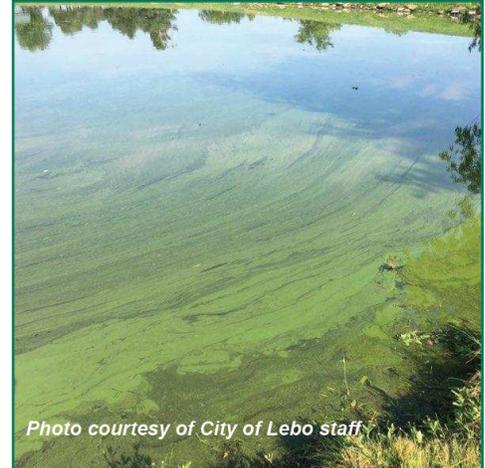
- Vomiting
- Diarrhea
- Difficulty breathing
- General weakness
- Seizures
- Staggered walking
- Excessive salivation
- Death

### 24-HOUR PET POISON HOTLINES

- [Kansas State University Veterinary Health Center](https://www.ksvhc.org/services/emergency/)  
785-532-5690 (dial 0), <https://www.ksvhc.org/services/emergency/>
- [Animal Poison Control Center](https://www.petpoisonhelpline.com/)  
855-764-7661, <https://www.petpoisonhelpline.com/>
- [ASPCA Animal Poison Control Center](https://www.asPCA.org/pet-care/animal-poison-control)  
(888) 426-4435, <https://www.asPCA.org/pet-care/animal-poison-control>

## STEPS TO TAKE IF AN ANIMAL HAS BEEN EXPOSED

- Contact your veterinarian immediately, even if no clinical signs exist as they may develop rapidly
- Keep animals from grazing near, drinking from, or wading or swimming in contaminated water
- Offer animals an alternative source of water
- Do not let pets lick the algae off their fur
- Wash pets with fresh water and soap after contact with contaminated water
- Report any suspected HAB-related illness to the Kansas Department of Health and Environment (KDHE) Epidemiology Hotline at [KDHE.EpiHotline@ks.gov](mailto:KDHE.EpiHotline@ks.gov), 877-427-7317; or online at [https://kdheks.col.qualtrics.com/jfe/form/SV\\_3m9Zfcls27nckMB](https://kdheks.col.qualtrics.com/jfe/form/SV_3m9Zfcls27nckMB)



## HOW TO RECOGNIZE HABS

Generally HABs occur during the summer and fall, although a bloom can happen during any time of the year. During a bloom, scum may be visible on the water's surface. Blooms can appear in a variety of colors from green or blue, to red or brown.<sup>1</sup> When blooms die off, usually a very distinctive odor can be detected. No visual indicators show whether a bloom is toxic — this can only be determined through testing.

If you suspect a bloom in a public-use lake, report it immediately to the KDHE through the Algae Bloom Reporting Form available at <https://survey123.arcgis.com/share/5b5aeea4205c411d97cbeb173a5d6d96>. Due to limited resources, KDHE does not sample or provide analysis for privately owned ponds or lakes. Owners of these waterbodies should contact SBEAP at 800-578-8898 or [sbeap@ksu.edu](mailto:sbeap@ksu.edu) for technical assistance. SBEAP's HAB toolkit at <https://www.sbeap.org/water-quality/harmful-algal-blooms> provides information on HABs and a list of laboratories that accept water samples for testing and analysis. Instructions are also included for conducting an at-home “jar test” as well as best management practices to mitigate HABs.

## PREVENTION

Since no antidote or treatment exists for cyanotoxin poisoning, the best protection for animals is to prevent algal blooms from developing. In working to prevent the occurrence of HABs, it is important to understand excess nutrients are the main cause of algae blooms.<sup>1</sup> Nutrient pollution of a waterbody typically occurs when runoff from nearby land includes fertilizers from lawns or crop fields, or animal waste; or when the waterbody is influenced by improperly functioning septic systems. These can all be major sources of excess nitrogen and phosphorous.<sup>4</sup>

In-lake treatments or mitigation options are short-term solutions at best at this time. A highly effective measure for preventing a HAB is to increase the aquatic plant diversity to help absorb nutrients in the water. Additionally, shoreline and buffer-strip plantings will provide a buffer to reduce runoff from entering the waterbody after heavy rains. When introducing new plant species, take care to avoid invasive types, choosing instead species native to the area. Utilizing plants in this way is a long-term solution to preventing algal blooms and protecting animal health. Learn to recognize cyanobacterial blooms and do your part to prevent them. **Remember... when in doubt, STAY OUT!**

<sup>1</sup> <https://www.ksvhc.org/services/emergency/>

<sup>2</sup> <https://www.health.state.mn.us/diseases/hab/animal.html>

<sup>3</sup> <https://www.cdc.gov/habs/illness-symptoms-freshwater.html>

<sup>4</sup> [https://www.kdheks.gov/algae-illness/hab\\_prevention.htm](https://www.kdheks.gov/algae-illness/hab_prevention.htm)