

Harmful Algal Bloom Toolkit

A planning guide for public health and emergency response professionals



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Introduction

Purpose

The purpose of this toolkit is to provide information to local governments and health departments in Wisconsin about preparing for and responding to harmful algal blooms. The toolkit provides background information, practical guidance, strategies, media release templates, talking points, definitions, and useful reference materials on this topic. The guides in this toolkit may be copied onto local agency letterheads for distribution to residents affected by harmful algal blooms.

Background

More than 15,000 lakes and rivers in Wisconsin are home to a multitude of organisms, including cyanobacteria (also known as blue-green algae). Cyanobacteria are a type of photosynthetic bacteria meaning they get their energy from the sun. They are one of the first organisms that learned to produce oxygen and as such, they have played an important role in the creation of the earth's atmosphere and water bodies as we know them today. Factors such as **an excess of nutrients like nitrogen and phosphorus, warm temperatures, light availability, and calm wind and water conditions** can all contribute to the growth and reproduction of cyanobacteria, which can result in cyanobacteria blooms.

Nutrient overloading, warm temperatures, sunlight, and calm weather can impact bloom growth.



A common example of cyanobacterial scum at the surface of the water, and dried on the sand.

In Wisconsin, blooms typically occur during the warm weather months between mid-June and mid-September. Cyanobacteria will follow sunlight and nutrients by floating to the surface, where they can form thick scum layers or mats and may look bubbly or frothy. Cyanobacteria can be pushed to different locations by wind or wave action, building up along shorelines. Significant weather events like extreme heat or rainfall can also cause blooms to appear quickly, sometimes within hours.

Cyanobacterial blooms can take on different appearances. They can be a variety of colors including fluorescent green, blue, white, red, or brown. Blooms can have more than one color present and may look like spilled paint or pea soup. A foul sewage-like odor may also be noticeable.

Human Health Impacts

Cyanobacterial blooms can be a public health issue because they can affect the health of people who use the water for recreational or occupational purposes. Some species of cyanobacteria can produce toxins called **cyanotoxins**, that can make people and animals sick. A cyanobacterial bloom that produces toxins is known as a cyanobacterial harmful algal bloom or **cyanoHAB**. Not all cyanobacteria produce these toxins, and those that do, do not produce them at all times. Two common cyanotoxins found in Wisconsin waters are a liver toxin called microcystin and a neurotoxin called anatoxin. Cyanotoxins can affect most body systems and symptoms following exposure can include:

Respiratory

- Cough
- wheezing
- Eye, nose, throat irritation
- Trouble breathing

Gastrointestinal

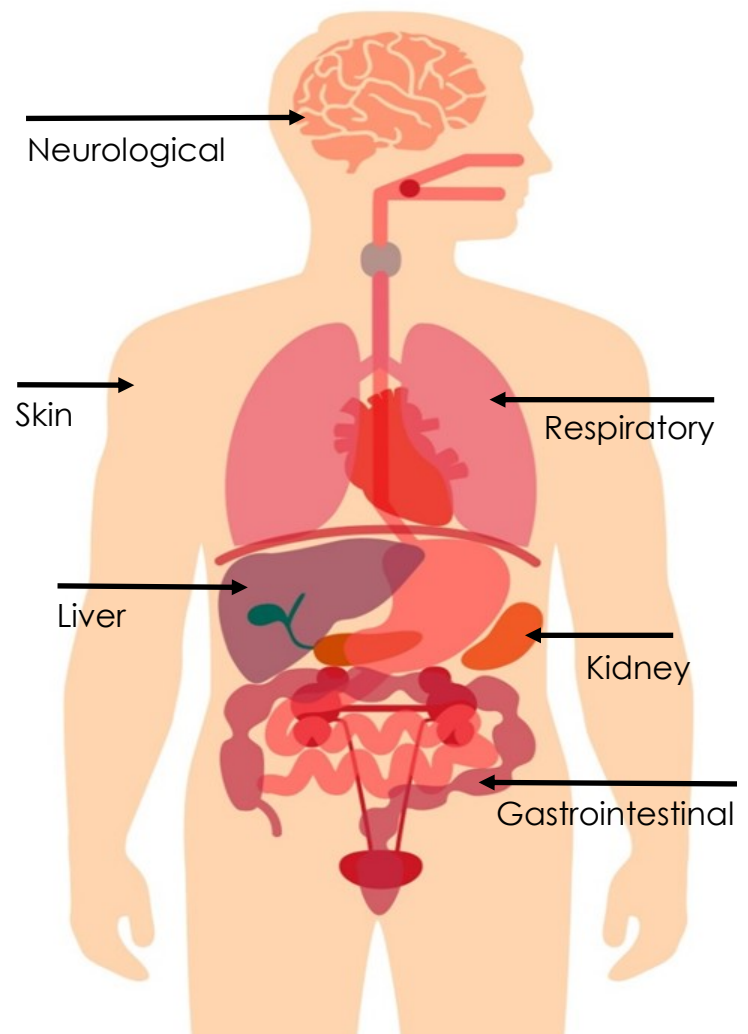
- Abdominal pain
- Diarrhea
- Nausea
- Vomiting

Dermal

- Blisters
- Hives
- Itchy skin
- Red skin

Symptoms of cyanoHAB exposure can depend on several factors:

1. **Route of exposure:** People and animals can be exposed to cyanotoxins by inhaling, swallowing, and coming into skin contact with contaminated water.
2. **Cyanobacterial species and toxin type:** Different species of cyanobacteria can produce different toxins that can target distinct organs and body systems (for example, gastrointestinal tract, nervous system).
3. **Cyanobacterial cell and toxin concentrations:** Exposure to higher concentrations could result in a more severe illness.
4. **Existing vulnerabilities:** Behavior, body size, and pre-existing conditions like allergies or liver disease can increase risk of exposure and illness.



CyanoHABs and Their Look-Alikes

Cyanobacterial blooms can be mistaken for pollen, duckweed, and filamentous green algae in waterways. Below are examples of harmful versus non-harmful water conditions.

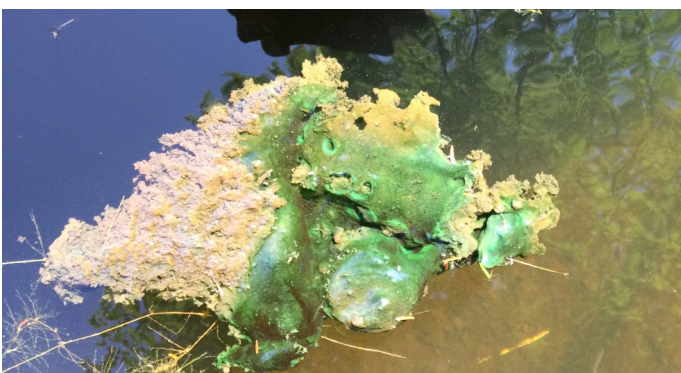
Harmful



Green water that looks like pea soup



Surface scum that looks like spilled paint

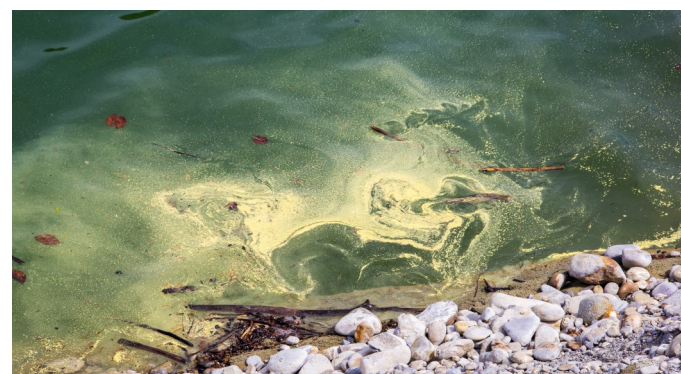


Floating globs or mats

Not Harmful



Long, hair-like filamentous green algae



Yellow plant pollen



Tiny, green floating plants (duckweed)

Visit the Interstate Technology Regulatory Council's (ITRC) [Visual Guide to Common Harmful Cyanobacteria](#) and their [Benthic CyanoHAB Webpage](#) for more photos and descriptions of cyanobacterial blooms.

CyanoHAB Recreational Guidance

Local health departments have the authority to close water bodies or restrict activities when blooms are present. **DHS recommends issuing a beach closure when testing of cyanotoxins or visual observation of a public swim area suggests a high probability of adverse human health effects.** There are currently no Wisconsin guidelines for cyanotoxin levels. In absence of state guidance, we use national and international guidelines, such as those from the [Environmental Protection Agency \(EPA\)](#) and the [World Health Organization \(WHO\)](#). These values are listed below.

	Microcystin-LR	Cylindrospermopsin	Anatoxin	Saxitoxin
EPA	8 µg/L	15 µg/L	N/A	N/A
WHO	24 µg/L	6 µg/L	60 µg/L	30 µg/L



Toxin testing is the best way to determine health risk. However, if testing is not feasible, visual assessment of water conditions is usually sufficient for determining the level of health risk present and informing appropriate public health action. The pictures on the left depict potentially hazardous conditions that would likely warrant health advisories or beach closures.



Under most circumstances, recreators should refrain from swimming, water skiing, paddle boarding, boating, and jet-skiing when cyanobacteria present a health hazard and a beach closure is issued. Since some of these activities (for example, kayaking and canoeing) have less direct potential contact with affected water compared to others, sometimes adjustments to which activities are prohibited during a water body closure can be considered.



Additional guidance for issuing advisories and beach closures can be found in Section IV of [DHS's cyanobacteria and cyanotoxin poisoning case reporting and investigation protocol](#). DHS has curated signage, social media posts, and press releases for local health departments (LHDs) to use in response to blooms. These resources can be found in Appendix A.

Examples of blooms that indicate health hazards and may warrant advisories.

Drinking Water and Fish Consumption Safety

Drinking water

Exposure to cyanobacteria and cyanotoxins from drinking water is unlikely. In Wisconsin, most drinking water comes from wells and is not at risk for cyanobacteria or cyanotoxins. Surface water is the drinking water source for about one-third of Wisconsinites. While cyanoHABs may occur on these lakes in summer, studies have shown that cyanotoxins are sufficiently removed by the public water system's routine treatment processes.

We advise recreators to refrain from swallowing surface water, no matter how clean it may appear. Some cyanotoxins, such as microcystin, are resistant to degradation by heat and they cannot be removed by boiling water. Because it is impossible to detect the presence of toxins in water by taste, odor, or appearance, it is safest to assume they are present. Additionally, surface water can contain microorganisms, such as parasites, viruses, and other bacteria that can make people sick if they swallow them.

Fish consumption

Some cyanotoxins can accumulate in fish tissues. Higher concentrations have been found in the internal organs like the liver and kidney and lower concentrations have been found in muscle tissue or the fillet. Scientific evidence so far suggests that while eating the fillet of a fish exposed to a bloom is a low health risk, consuming the whole fish, including its internal organs, could be harmful to health. To reduce risk of exposure to cyanobacteria and cyanotoxins, DHS recommends taking the following steps:

- Remove the internal organs and fat as these are the parts of the fish that are most likely to build up toxins.
- Be cautious not to cut into the internal organs.
- Thoroughly rinse the fillets with clean water before cooking or freezing to remove any excess contaminants.

A more comprehensive guide for safe fishing and fish consumption practices can be found in our HAB and fish fact sheet in [Appendix A](#).

Other than cyanobacteria and cyanotoxins, fish may accumulate other concerning contaminants such as [mercury, polychlorinated biphenyls \(PCBs\)](#), and [perfluoroalkyl and polyfluoroalkyl substances \(PFAS\)](#) from Wisconsin's waters. The Wisconsin DNR provides fishing and fish consumption recommendations in [Choose Wisely: A Health Guide for Eating Fish in Wisconsin](#).

Pet Safety Information

Livestock, wildlife, and dogs and cats can experience severe illness from exposure to cyanoHABs. Dogs in particular are especially susceptible to cyanoHABs because they are not easily deterred from water and continually groom by licking. Due to their body size, they can become sick from even low amounts of cyanotoxins.

Cyanotoxins are fast acting agents, so illness onset can occur within minutes to hours following exposure. Symptoms can include **neurotoxic effects** like lethargy, muscle weakness, paralysis and seizures, **gastrointestinal symptoms** like vomiting and diarrhea, or **respiratory distress** can occur and the animal might have difficulty breathing.



Health and safety tips for pets and livestock

- Rinse your animal off with clean water if your animal contacts water that is discolored or contains scum or globs.
- Offer fresh, clean water for pets to drink instead of lake water.
- Do not let the animal eat or play with globs of cyanobacteria or lick scum from their fur.
- Do not let pets swim in or drink from discolored water or where you see foam, scum, or floating globs of blue-green algae.
- If your pets eat grass, avoid using lake water for lawn irrigation if blooms are present.
- Call a veterinarian if your animal shows any of these symptoms of cyanoHAB poisoning: lethargy, vomiting, diarrhea, convulsions, difficulty breathing, or general weakness.

Did You Know?

Reported illnesses in dogs in Wisconsin are often ruled out because a cause of illness other than HAB toxicity is more likely or confirmed by a veterinarian. Other common causes of illness that present signs of illness similar to HAB toxicity are listed on the right.



Heat related stress



Water intoxication



Pesticide exposure



Ingestion of poisonous substances like mushrooms

Reporting Bloom Events and Illnesses

Report a bloom

The Wisconsin Department of Natural Resources (DNR) collects reports of cyanobacterial blooms. To report a bloom, fill out the DHS online reporting form: [Harmful Algae Bloom \(HAB\) Illness of Sighting Survey, F-02152](#) or send an email to DNRHABS@wisconsin.gov.

Include the following information in your report:

- A description of size of the bloom
- The duration of the bloom (How long did it last? Hours or days?)
- The location of the bloom with lake, town, and county name
- Any photos taken both close up and farther away

The DNR is unable to sample and test in response to each bloom report, but may be able to confirm, from submitted photos, whether cyanobacteria are present. Please note that this email address is monitored during normal business hours, so responses to reports received outside business hours may be delayed.

Report an illness

Cyanobacteria and cyanotoxin poisoning is a reportable disease in Wisconsin. According to the state statute, cases must be reported to the [local public health department or Tribal health center](#) of the jurisdiction where the ill person resides within 72 hours of case recognition. Local health departments should report the suspect case to WEDSS as soon as possible and reference the [Case Reporting and Investigation Protocol](#) for guidance. Due to the complexity of case investigation and risk assessment, the DHS HAB Program will work with local health and Tribal agencies on case investigations. The DHS HAB Program has been investigating suspect cases of cyanoHAB-related illnesses since 2008 and will continue to offer technical assistance to local health and Tribal agencies during case investigations.

In 2018, cyanobacteria and cyanotoxin poisoning became a Category II reportable disease.

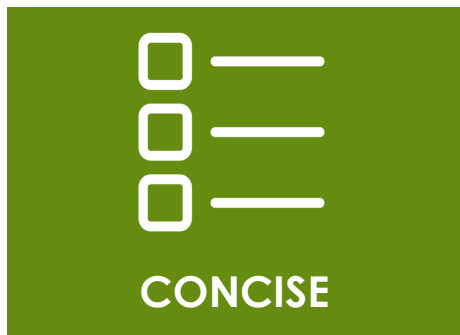
Human and animal illnesses should be reported to the Wisconsin HAB Surveillance Program by completing the [Harmful Algae Bloom \(HAB\) Illness of Sighting Survey, F-02152](#) or calling the Bureau of Environmental and Occupational Health at 608-266-1120.

Note: This program does not provide medical treatment. If you are experiencing symptoms such as stomach cramps, diarrhea, vomiting, headache, fever, muscle weakness, difficulty breathing, get medical help as soon as possible or call the Wisconsin Poison Center at 800-222-1222. If your pet is having symptoms such as seizures, vomiting or diarrhea after contact with surface water, seek veterinary care right away.

Questions? Email dhshabs@dhs.wisconsin.gov.

Message Maps About CyanoHAB Safety

Message mapping is one of the most important risk communication tools that public health agencies can employ. The goal of a message map is to convey important information in a concise and easy to understand fashion.



General guidelines for completing a message map

- Stick to three key messages or one key message with three parts for each underlying concern or specific question.
- Keep key messages brief. The reader should ideally spend less than 10 seconds reading per line.
- Develop messages that are easily understood by the target audience. (For communications with the general public, use a 6th to 8th grade readability level.)
- Place messages within a message set. The most important messages should occupy the first and last positions.
- Develop key messages that cite credible third parties.
- Use graphics and other visual aids to enhance key messages.
- Keep a positive tone. Messages should be solution oriented and constructive. Try to balance negative messages with positive ones.
- Avoid unnecessary use of “absolute” words, such as no, not, never, nothing, and none.

The following is a message map that could be used when addressing the general public about harmful algal blooms.

Message 1

Exposure to cyanoHABs (blue-green algae) can cause sickness.

Supporting Info 1

Cyanobacteria (blue-green algae) are photosynthetic organisms. Under the right conditions, they can grow to form cyanoHABs, which can be harmful to the health of people and animals.

Supporting Info 2

Not all cyanobacteria produce toxins, but those that do can cause rashes, vomiting and diarrhea, and respiratory illnesses in people and animals who are exposed to them.

Supporting Info 3

In Wisconsin, cyanoHABs are most common during the warm-weather months between mid-June and mid-September, but they can occur all year.

Message 2

Animals and livestock can become very ill after exposure to cyanoHABs.

Supporting Info 1

Keep pets and livestock away from cyanoHABs. Do not let them drink, graze, or play near or in water that is experiencing a cyanoHAB.

Supporting Info 2

If your animal gets into water with a bloom, wash them right away with clean water. Don't let them lick algae off fur.

Supporting Info 3

If your pet displays symptoms such as seizures, vomiting, or diarrhea after contact with surface water, contact your veterinarian right away.

Message 3

When in doubt, stay out!

Supporting Info 1

Exposure to cyanoHABs can occur through ingestion, inhalation or by skin contact with affected waters.

Supporting Info 2

If you are unsure about the safety of the water, stay out! Check for beach signs and water quality notices before swimming.

Supporting Info 3

Rinse yourself off immediately after being in contact with affected waters, and get medical treatment right away if you think you have been poisoned by cyanoHABs.

Talking Points

If you are approached by the media about harmful algal blooms in your jurisdiction, the following talking points may be helpful.

- Always choose the clearest water possible when searching for a spot to recreate.
- Don't swim in water that contains foam, scum, or algal mats.
- Shower and wash hands as soon as possible after swimming in lakes, rivers, and ponds.
- Clean fish thoroughly with fresh, clean water and discard the viscera (guts).
- Keep pets out of soupy, green water or where you see foam, scum, or mats of cyanobacteria.
- Rinse dogs off immediately and do not let them lick scum off of their fur.
- Respect water-body closures and health advisories.
- Avoid swallowing water when recreating. Besides blue-green algae, surface water can contain other harmful bacteria, viruses and parasites that can make people and animals sick.

Some additional talking points to include, if applicable:

- If you think you are experiencing symptoms from exposure to cyanoHABs, contact your doctor or the Poison Control Center (800-222-1222) right away.
- Notify your veterinarian right away if you suspect your pet is ill after swimming in or drinking from water containing a cyanoHAB.
- For more information about cyanoHABs, contact your local health department or visit the Wisconsin Department of Health Services web page on cyanoHABs (<https://www.dhs.wisconsin.gov/algae/index.htm>)

To learn more tips for communicating effectively to the public during a HAB event or related illness, visit [this e-newsletter](#) located on our website.

FAQs About CyanoHABs: General

These are questions you might receive from a member of the general public or the media.

Is the problem of CyanoHABs and the illnesses they can cause getting worse or better?

Bloom intensity is increasing worldwide. In Wisconsin, we have data to show that two factors that affect bloom intensity, temperature and rainfall events, are increasing. In other words, Wisconsin is getting warmer and wetter. Based on these trends and assuming that human and animals were to maintain the same seasonal interactions with water bodies, we can predict that as blooms increase in frequency and intensity, there would be more opportunities for humans and animals to come into contact with blooms (and potentially ones with high cell densities and cyanotoxin concentrations), and possibly become ill.

Are CyanoHABs monitored in Wisconsin?

Wisconsin does not have a statewide monitoring program for cyanoHABs. Because there are over 15,000 lakes, we simply do not have the capacity to test and monitor every body of water. Some local health departments have implemented cyanoHAB monitoring programs for water bodies within their jurisdiction, but in most scenarios, it is the responsibility of the individual to assess conditions of the water prior to recreating in the water body.

Which cyanobacterial species is most prevalent in Wisconsin?

A cyanobacterial species called *Microcystis*, which produces the liver toxin called microcystin, is the most prevalent species in Wisconsin lakes. These blooms tend to be green and opaque, with an appearance of paint, and have thick material that accumulates along shores. Some of the more rare species, like *Planktothrix rubescens*, are also found in Wisconsin and though rare, have turned water bodies completely wine or ruby-colored.

Is the water safe to swim in at my local beach?

Wisconsin does not have a statewide monitoring program for cyanoHABs. Because there are over 15,000 lakes in this state, we simply do not have the capacity to test and monitor every body of water. Therefore, we usually advise lake-goers to seek information about current water conditions by contacting local agencies or organizations. You can check with the local lake association group, citizen monitoring group or health department about cyanoHABs before your trip to the lake.

In any circumstance, the best thing you can do to keep yourself, your kids, and your pets safe is to look for and avoid high concentrations of cyanobacteria which may resemble green “pea soup” water, spilled latex paint, floating scums and mats, or otherwise discolored water. Always choose the clearest water possible to swim in. Look for signage prior to recreating in the water. Remind kids not to swallow water while swimming, and bring along fresh, clean water for pets to drink. And lastly, if you're not sure whether the water is safe to swim in or not, it's always best to err on the side of caution and stay out.

FAQs About CyanoHABs: Reporting and Response

These questions are about reporting and responding to blooms and related illnesses within a jurisdiction.

What if I receive a report of a bloom?

If you receive a report of a bloom *without an accompanying illness*, report the bloom to the [Wisconsin DNR](#) at dnrhabs@wi.gov. Include descriptions of bloom size, duration, and location with lake, town, and county name, as well as any photos taken both close-up and farther away. The DNR is unable to sample and test in response to each bloom report, but may be able to confirm whether cyanobacteria are present from submitted photos. Please note that this email address is monitored during normal business hours, so responses to reports received outside business hours may be delayed.

What if I receive a report of a *human illness suspected of being related to a cyanobacterial harmful algal bloom (cyanoHAB)*?

Cyanobacteria and cyanotoxin poisoning is a Category II reportable condition in Wisconsin. Cases must be reported to the [local public health department or Tribal health department](#) of the jurisdiction where the ill person resides within 72 hours of case recognition. Local health departments should report the suspect case to WEDSS as soon as possible and reference the [Case Reporting and Investigation Protocol](#) for guidance. Due to the complexity of case investigation and risk assessment, the DHS HAB Program will work with local health and Tribal agencies on case investigations and water sampling.

What if I receive a report of an *animal illness suspected of being related to a cyanoHAB*?

Report the suspect case to the DHS HAB Program at dhshabs@dhs.wi.gov. The HAB Program will work with the local health agency to investigate the illness. Animal illnesses suspected of being due to cyanoHABs are important to report because they may serve as indicators for human illness.

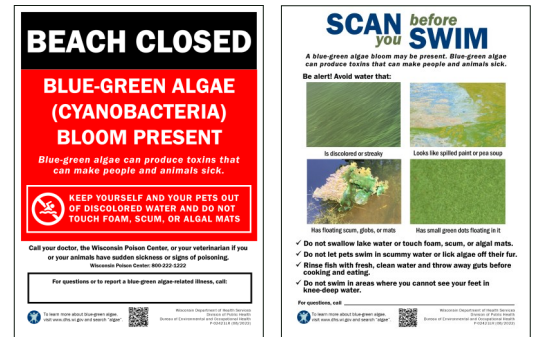
Who has the authority to close a public beach or swim area due to a human health hazard (for example, cyanoHAB), and when can they do it?

Per [Wis. Stat. § 254.46](#), The local health officer "...shall close or restrict swimming, diving and recreational bathing if a human health hazard exists in any area used for these purposes on a body of water and on associated land in their jurisdiction and shall require posting of the area." Local health departments and Tribal agencies have primary authority for issuing health advisories, beach or water body closures, and public messaging. An exception exists for state parks and Great Lakes beaches; at many of these locations, the DNR will post signage and close public beaches. Local health and Tribal authorities can issue a health advisory and close a public beach due to cyanoHAB when **testing or visual observation** suggests a high probability of adverse human health effects (high cyanobacterial cell density, elevated cyanotoxin concentrations, or a visible cyanobacteria scum layer is present).

Appendix A: Public Health Messaging

Signage

DHS offers a variety of educational and advisory signage that are intended to be posted at public access points such as beaches, dog swim areas, and boat launches. Examples of our signage and guidance for posting them can be found in [this e-newsletter](#). For assistance with ordering signs, reach out to dhshabs@dhs.wisconsin.gov.



Social media post templates

DHS can provide supplementary images for any of the below posts.

- Did you know the season for cyanobacterial harmful algal blooms in Wisconsin usually begins in May? Warmer temperatures help cyanobacteria grow and form blooms. Remember to keep yourself and your pets out of discolored, scummy water and report blooms and related illnesses to your [local health department](#)!
- Heading to the lake? Be on the lookout for blue-green algae! Keep your family—especially young children and pets—away from water with noticeable discoloration or surface scum, foam, and algal mats. Learn more: <https://www.dhs.wisconsin.gov/publications/p01888.pdf>.
- If you're bringing your furry friend to the beach, remember to be on the lookout for blue-green algae. Avoid stagnant water and areas with noticeable discoloration or surface scum, foam, and algal mats. Give your pup a rest from fetching and bring along fresh, clean water for them to drink. Learn more: <https://www.dhs.wisconsin.gov/publications/p0/p00089.pdf>.
- Did you know that blue-green algae blooms have look-alikes? Learn the difference and when in doubt, stay out! Learn more about blue-green algae: <https://www.dhs.wisconsin.gov/publications/p01888.pdf>.
- Did you know that not all cyanobacteria are harmful? Of the more than 2,600 described species, only about 50 are known to produce toxins. Cyanobacteria have been around for billions of years and helped create the Earth's oxygen-filled atmosphere as we know it today!

For more examples, view our [e-newsletters archive](#). Posts can be found at the bottom of the document. You can also sign up for monthly sample social media posts related to cyanoHABs and other public health hazards by emailing dhstracking@dhs.wisconsin.gov.

Press release template

FOR IMMEDIATE RELEASE

[insert date]

[Insert headline]

Contact: [insert name] [insert phone number]

This is the thing that is happening or has happened, stating facts only. Explain **what** event occurred or is occurring, **where** the problem is occurring, **when** it occurred (when it began, when it ended, if it's ongoing, and when it's anticipated to be over), **who** is responding/has responded, and **how** people are affected (public health impacts). You may also want to include **why** it's a problem or why it's causing a problem. Always close with a list of resources people can review for more in-depth or detailed information.

Some tips:

- Present specific information on the current event.
- Identify the effect on the public. How people (and animals) are affected should be clearly identified.
- Avoid alarmist and irrelevant information. Stick to the facts; provide common sense, no alarmist information.
- Provide only necessary, uncontroversial, and well-documented information. Be prepared to provide historical, supplementary information for reporters who do in-depth or human interest stories.
- Avoid speculation- it can be misleading.
- Always include the name and phone number of a contact person who will be well-informed and kept updated on any new developments in the situation.
- Quotes are building blocks for news stories. Reporters prefer press releases that contain at least one quote by a reliable source from the distributing agency.
- Make sure your press release is issued on agency letterhead.

Continued on next page...

Example

FOR IMMEDIATE RELEASE

August 5, 2016

Health Advisory Issued for Eastern Shore of Lake Petenwell in Adams County

Contact: [insert name], [insert degrees (optional)], [insert title], [insert phone number]

MONROE CENTER, WI – The Adams County Health Department is issuing a health advisory effective immediately for all of Lake Petenwell due to widespread blue-green algae blooms. The Adams County Health Department has received multiple reports of large blue-green algae (cyanobacteria) blooms forming throughout Lake Petenwell in Adams County, particularly along the eastern shore between Monroe Center and Rome, WI. Some species of blue-green algae can produce toxins that can make humans and animals ill. Adams County Environmental Health and the central region Department of Natural Resources are working together to identify areas of the lake experiencing a bloom, testing water samples, and posting health advisory signage at public access points. The first reports of blue-green algae blooms were received on July 31, 2016 and aerial photographs showed the lake was still experiencing an active bloom as of August 5th.

Blue-green algal blooms are the result of rapid growth of photosynthetic blue-green algae. Blooms are fueled by sunlight, warm water temperatures, stagnant water conditions, and ample nutrients. Illness can occur after ingesting water contaminated with algae or toxins, inhaling water or aerosolized droplets, or by contact with water or algal scum. Symptoms in humans commonly include gastrointestinal upset, abdominal cramps, respiratory irritation, wheezing, eye irritation, or itchy rash, hives, or blisters on the skin. In animals, symptoms include weakness, loss of appetite, vomiting, diarrhea, seizures, and even death. Symptoms typically begin with minutes to hours of exposure.

“Results of water testing indicated high concentrations of cyanobacteria (blue-green algae) in locations X and Y,” according to [insert name], [insert title]. While high concentrations of cyanobacteria increase the likelihood of adverse health effects, it is impossible to tell if a bloom is toxic just by looking at it. Citizens are urged to take a common sense approach and evaluate the water conditions before letting your family or pets enter the water. Avoid water that:

- Looks like pea soup or spilled paint
- Is discolored or has colored streaks
- Has surface scums, mats, or films
- Has green dots or globs floating beneath the surface

Continued on next page...

To reduce risk of inhaling aerosolized water droplets, citizens should avoid motorized boating through areas experiencing a bloom or watering their lawns with waters experiencing a bloom.

With warm summer temperatures expected to continue for many more weeks, water conditions may support the presence of blooms for the rest of the summer season. It is important to educate visitors to the area on the health hazards associated with algal blooms, and evaluate water quality every single time you head to the lake. As a general rule, do not swim in water where you cannot see your feet in knee-deep water.

If you develop an illness you think might be related to blue-green algae, talk to your physician and please notify the Wisconsin Division of Public Health by filling out an online survey at <https://www.dhs.wisconsin.gov/water/bg-algae/index.htm> or calling 608-266-1120.

For more information on blue-green algae, please visit:

Wisconsin Dept. of Health Services Blue-Green Algae Website <https://www.dhs.wisconsin.gov/water/bg-algae/index.htm>

Wisconsin Dept. of Natural Resources Blue-Green Algae Website <http://dnr.wi.gov/lakes/bluegreenalgae/>.

Adapted from the FWRI Technical Report TR-14: Resource Guide for Public Health Response to Harmful Algal Blooms in Florida

Appendix B: Additional Resources and Links

DHS's cyanoHAB website: <https://www.dhs.wisconsin.gov/algae/index.htm>

Fact sheets

- The [Protecting Your Family from Harmful Algal Blooms fact sheet](#) is available for the public.
- The [Staying Safe at the Lake: What Summer Camps Should Know about the Blue-Green Algae fact sheet](#) is available for summer camp directors and staff.
- The [Blue-Green Algae and Dog Safety fact sheet](#) is available for dog owners
- The [CyanoHABs and Fish Consumption fact sheet](#) is available for fishing and fish consuming populations.

Signage

Aluminum cyanoHAB signage can be found [here](#) and are available for local public health, tribal, and select DNR authorities to purchase. Please email the [Harmful Algal Blooms \(HAB\) Program](#) for ordering instructions.

HAB program e-newsletter

Past issues of the HAB Program Newsletter, which also contain sample social media messages, are available on our [Resources for Health Professionals web page](#).

Sign up to receive our e-newsletter by emailing us at dhshabs@wisconsin.gov.

CyanoHAB illnesses and events: prevention, response and reporting

- The [Blue-Green Algae \(Cyanobacteria\) and Cyanotoxin Poisoning Case Reporting and Investigation Protocol \(EpiNet\), P-02198](#) helps aid local health officials in response to a bloom or illness in their jurisdiction.
- The [Harmful Algae Bloom \(HAB\) Illness of Sighting Survey, F-02152](#) can be used to report cyanoHAB events and/or human and animal illnesses.
- Interstate Technology Regulatory Council: [Strategies for Preventing and Managing Harmful Cyanobacterial Blooms](#)
- The WHO's guidelines for recreational exposure to CyanoHABs can be found in [WHO's Toxic Cyanobacteria in Water—Second Edition, 2022](#). Refer to chapter 5 pages 350-351.
- The [EPA's guidelines](#) for recreational exposure to CyanoHABs

Local contacts

- Lists of [Wisconsin Tribal Health Directors](#) and [Wisconsin Local Health Departments](#)

External agency websites

- The [CDC's cyanoHABs website](#) has general information about cyanoHABs, national surveillance data, resources for veterinarians and doctors, and outreach materials.
- The [Wisconsin Department of Natural Resources](#) cyanoHABs website
- Compilation of HAB resources from other [federal agencies and organizations](#)