



**US Army Corps of Engineers**  
**Huntington District**

Harmful Algal Bloom Response Plan

April 2024

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## EXECUTIVE SUMMARY

- **The Huntington District USACE is following the guidelines put forward by the states within District boundaries (Kentucky, Ohio, Virginia, and West Virginia) and each State assumes the role of lead in all HAB related matters.**
- Internal and external communication plans will be executed when a HAB is reported as described in this document and sampling may take place as needed and allowable.
- Harmful Algal Blooms (HABs) are concentrations of cyanobacteria that can produce potent toxins.
- Cyanobacteria are a natural component of aquatic ecosystems and are generally present in low densities.
- Under certain conditions cyanobacteria populations can rapidly grow in number. This is called a 'bloom'. Blooms can occur quickly, without warning and are difficult to predict.
- Human, pet and livestock exposure to cyanobacteria blooms may result in severe health effects and possibly death.
- Please direct all questions regarding the Huntington District USACE HAB Response Plan to **LRH HAB POC – Thad Tuggle (304) 857-3151** or **Water Quality Team Lead – Andy Johnson (304) 399-5189**.

## BACKGROUND

Harmful Algal Blooms (HABs) can occur on any body of water at any time, although they occur most frequently on lakes with high nutrient loads during periods of warm, sunny weather. HABs, which are blooms of cyanobacteria, can produce potent toxins known to cause specific and severe dysfunction to hepatic or central nervous systems, in addition to hay fever-like symptoms, skin rashes, vomiting, diarrhea, and respiratory distress. Exposure to these toxins most commonly occurs when persons or animals ingest or inhale contaminated water. HABs of various sizes and intensity have occurred at several LRH reservoirs in recent years and human illnesses and dog deaths have been attributed to HABs within the Huntington District.

Harmful Algal Blooms can cause problems in recreational and drinking water sources, such as decreased dissolved oxygen concentrations resulting in fish kills, increased organic loads for public water supplies, and increase foul taste and odor compounds that affect drinking water and the taste of fish. A visually identifiable concentration of cyanobacteria that discolors the water, or has a cell count greater than 4,000 cells/mL of cyanobacteria genera is considered a HAB. Blooms can develop in a few days, persist from days to months, and can dissipate or be blown across a lake leaving behind toxins. Because one cannot predict if a HAB will produce

toxins, or if the bloom will be blown from another area leaving the toxins behind, it is safest to assume that if a bloom has occurred the potential for toxins always exists.

## **RESPONSE PLAN GUIDELINES**

The Huntington Water Quality Team acts as the lead for all HAB related issues that face the Huntington District. The Huntington District is fortunate to have all the States within District boundaries develop and adopt a Harmful Algal Bloom Response plan that is catered to the States' waters. Each individual State has assigned a "Lead HAB agency" within the State to handle all HAB related incidents. Further, the **Huntington District USACE assumes a supportive role only in its response to HABs within each respective State.** However, the Huntington Water Quality Team intends to work closely with all lead State agencies when a HAB occurs. The Huntington District USACE HAB Response procedure is as follows:

- 1) HAB gets reported to Water Quality Team from Project personnel along with any photos and approximate location of where the HAB is occurring
- 2) Water Quality Team uses this information to notify the appropriate State agency that has been deemed as the lead HAB agency for that respective State
- 3) Water Quality Team notifies appropriate senior leadership within USACE to make them aware of the situation and the potential dangers with a HAB. Follow up emails to the senior leadership will be sent as new information develops from the lead State agency
- 4) Assist the lead State agency, as needed and allowable, with sample collection, monitoring or any other task requested by the State
- 5) If relevant data is reported to the District from an external agency, the Water Quality Team will coordinate all potential HABs and health hazards to appropriate project personnel.

## **LEAD STATE AGENCIES COMMUNICATION & REPORTING**

**Per bullet number 2 above, the Water Quality Team will report to the lead state agencies through the contact information below.**

**Kentucky** – Kentucky Division of Water (KY DOW); Water Quality Branch; POC – Melanie Arnold (502) 782-6879, [melanie.arnold@ky.gov](mailto:melanie.arnold@ky.gov)

The Kentucky Division of Water is the lead agency for the State of Kentucky and currently is revising their HAB Response plan and does not have a link posted for the public. HABs will be reported via the KY DOW website or email, followed by a phone call to the POC. The State of Kentucky's HAB response plan states if a HAB is reported, samples for toxin analysis will be

collected. The State will post advisory signs at all public accesses of the lake if there are elevated levels of toxins present and these signs will remain in place until toxin levels have decreased.

KY DOW HAB Website: <https://eec.ky.gov/Environmental-Protection/Water/Monitor/Pages/HABS.aspx#:~:text=If%20you%20suspect%20that%20you,reported%20using%20the%20bloomWatch%20app>.

**Ohio** – Ohio Environmental Protection Agency (EPA); POC State HAB Specialist Callie Nauman, (614)644-2756, [Callie.Nauman@epa.ohio.gov](mailto:Callie.Nauman@epa.ohio.gov)

The State HAB specialist for the Ohio EPA coordinates all HAB related issues within the State and works closely with Huntington District USACE. The State of Ohio has two response plans, 1) Harmful Algal Bloom Response Strategy for Recreational Waters and 2) Public Water System Harmful Algal Bloom Response Strategy. All HABs will be reported on an online bloom report formed, emailed to [HABmailbox@epa.ohio.gov](mailto:HABmailbox@epa.ohio.gov), followed by a phone call to the HAB POC.

Ohio's Recreational Water HAB Response plan addresses two types of HABs, 1) open water HAB and 2) beach area HABs. If open water HABs are always regarded as "recreate at your own risk" and do not require any action from the State of Ohio. If a HAB occurs in a beach area, the local health department will monitor and routinely sample the area throughout the duration of the HAB to ensure no toxins are present. The State of Ohio's HAB Response Strategy for Recreational Waters can be found here:

<https://epa.ohio.gov/portals/35/hab/HABResponseStrategy.pdf>

Ohio's Public Water System HAB Response Strategy is designed for bodies of water that supply water for a water treatment facility. This Strategy can be found here:

<https://epa.ohio.gov/Portals/28/documents/habs/2020-PWS-HAB-Strategy.pdf>

Ohio HAB Website:

[https://epa.ohio.gov/ddagw/HAB#:~:text=To%20report%20a%20spill%20or,\(614\)%20224%20D0946](https://epa.ohio.gov/ddagw/HAB#:~:text=To%20report%20a%20spill%20or,(614)%20224%20D0946).

**Additional Ohio Contacts:** For any HABs that are reported in the State of Ohio, the LRH Water Quality Team will also notify the Ohio Department of Natural Resources (ODNR), Division of Parks and Watercraft; POC – Environmental Programs Administrator Natalie Pirvu, (614) 265-6466, [Natalie.pirvu@dnr.state.oh.us](mailto:Natalie.pirvu@dnr.state.oh.us)

**West Virginia** – West Virginia Department of Environmental Protection (DEP); Watershed Assessment Branch, POC – Danielle Nathanson (304) 926-0499 ext. 43801, [Danielle.e.nathanson@wv.gov](mailto:Danielle.e.nathanson@wv.gov)

The Watershed Assessment Branch within the West Virginia DEP is the lead agency for the State of West Virginia. HABs will be reported to the WV DEP via the DEP HAB website followed by a phone call to the HAB POC. The West Virginia HAB Response plan requires toxin analysis to be collected if a HAB is suspected after a visual inspection of the water body. If toxin levels are revealed to be elevated, “Advisory” signage will be posted at all public access points and will not be removed until the toxin levels have decreased. The West Virginia HAB Response Plan can be found here:

<https://dep.wv.gov/WWE/watershed/Algae/Documents/WVHABResponsePlan2018.pdf>

WV DEP HAB Website: <https://dep.wv.gov/WWE/watershed/Algae/Pages/Harmful-Algal-Blooms.aspx>

**Virginia** – Virginia Department of Health (VDH); POC Waterborne Hazards Program Coordinator – Margaret Smigo (804) 864-8128, [Margaret.smigo@vdh.virginia.gov](mailto:Margaret.smigo@vdh.virginia.gov)

The Waterborne Hazards Program Coordinator within the Virginia Department of Health is the lead within the State of Virginia regarding HABs that occur on inland waters. All HABs will be reported to the VDH website, followed by a phone call to the HAB POC. The Virginia HAB response plan outlines that toxin analysis samples are to be taken after visual indications of a HAB occurring. Elevated toxin samples require “Advisory signage” to be placed at all public access points on the body of water the HAB is occurring and the signage remains until further toxin samples reveal the levels have decreased. The Virginia HAB Response Plan can be found here: <https://www.vdh.virginia.gov/content/uploads/sites/14/2019/12/Source-Water-Manual-20Nov19.pdf>

VDH HAB Website: <https://www.vdh.virginia.gov/waterborne-hazards-control/harmful-algal-blooms/virginia-hab-task-force/>