

Harmful algal blooms (HABs) are the rapid growth of cyanobacteria (also known as blue-green algae). Cyanobacteria are a natural part of lakes, rivers, and ponds. However, HABs can form when cyanobacteria grow rapidly and produce toxins, called cyanotoxins. HABs can cause illness in people and animals.

The Michigan Department of Health and Human Services and the Michigan Department of Environment, Great Lakes, and Energy collect data about HAB events and associated human and animal illnesses in Michigan. This report summarizes HABs reported to these agencies in Michigan during 2021.

Michigan HABs monitoring is a collaboration between many groups:

- Michigan Department of Health and Human Services
- Michigan Department of Environment, Great Lakes, and Energy
- Michigan Department of Agriculture and Rural Development
- Michigan Department of Natural Resources
- Local health departments
- Local lake/watershed/conservation associations
- Lake management companies
- Academic and research institutions

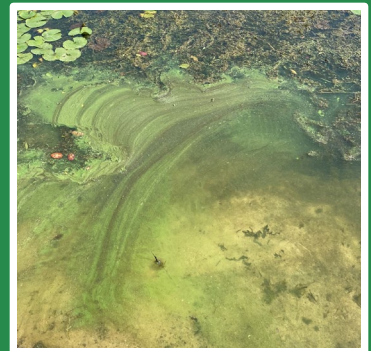
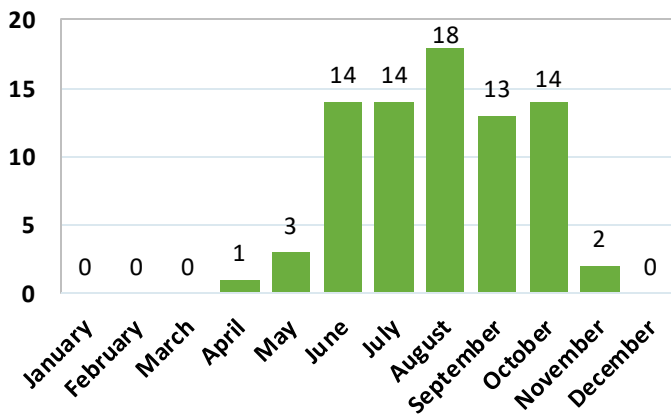


Photo credit: Michigan Department of Environment, Great Lakes, and Energy

MDHHS acknowledges all agency data contributions in this report.

2021 Michigan HABs, by Month of Report



2021 Michigan Harmful Algal Bloom Events

# of waterbodies with complaints and/or investigations	144
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# of waterbodies with confirmed cyanobacterial blooms (HABs)	79
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Public health actions taken*	31
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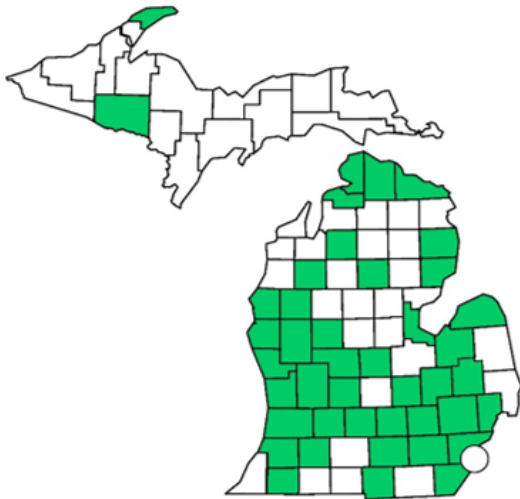
* Examples include posting of signage, issuing an advisory or closure, press releases, and stakeholder or public communications.

Some blooms are tested for cyanotoxins, depending on the size and location, potential for human and animal exposures, and available resources. **68.7%** of blooms that were tested had cyanotoxins. Of the blooms with cyanotoxins, **63.0%** had levels that were above recommended levels for recreational activity.

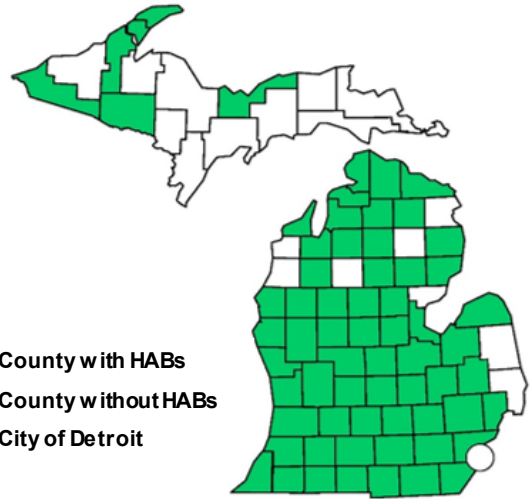


Michigan Counties with Confirmed Harmful Algal Bloom Reports, 2017-2021



Counties with Blooms, 2021 (n=43)



Counties with Blooms, 2017-2021 (n=65)



■ County with HABs
□ County without HABs
● City of Detroit

Reported HAB-related Illnesses	2021	2017-2021
 Human	5	12
 Animal	2	14

Public health actions were taken on **39.2%** of waterbodies with HABs:

- Actions may include educational outreach, testing, or waterbody advisories or closures.
- Actions are based on toxin concentrations, history of toxins, duration, extent, proximity to recreational areas, and reported illnesses.
- Actions may not be taken if a HAB has disappeared by the time public health is notified or if it is on an isolated or private waterbody.

For more information, visit Michigan.gov/HABS



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Michigan Harmful Algal Bloom Events, 2017-2021

