

# 10 things I should know about algal blooms



**Justin Chaffin, Ph.D.**  
419-285-1800  
[chaffin.46@osu.edu](mailto:chaffin.46@osu.edu)

**Jeff Reutter, Ph.D.**  
614-292-8949  
[reutter.1@osu.edu](mailto:reutter.1@osu.edu)

Ohio Sea Grant  
1314 Kinnear Rd.  
Area 100  
Columbus, OH 43212  
614-292-8949

F.T. Stone Laboratory  
878 Bayview Dr.  
P.O. Box 119  
Put-In-Bay, OH 43456  
419-285-1800  
[ohioseagrant.osu.edu](http://ohioseagrant.osu.edu)

Ohio Sea Grant, based at The Ohio State University, is one of 33 state programs in the National Sea Grant College Program of the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce. Ohio Sea Grant is supported by the Ohio Board of Regents, Ohio State University Extension, other universities, industries, and associations.

**OHSU-FS-104**  
Updated April 10, 2014

## 1. Algal blooms are a global problem.

Blooms are actually bacteria called cyanobacteria (also called blue-green algae) and occur in warm waters worldwide.

## 2. Excess fertilizers in lake water cause blue-green algal blooms.

The same fertilizers that grow plants on the land will grow algae in lakes. Sources include sewage from wastewater treatment plants and leaky septic tanks, animal manure, and commercial fertilizers for agriculture and lawn care.

## 3. Blue-green algae produce toxins.

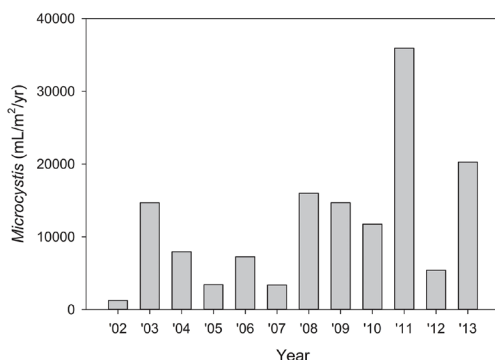
Blooms produce toxins that damage the liver, nervous systems, kidneys, and the skin of humans, pets, livestock, fish, and wildlife.

## 4. Lake Erie blue-green algal blooms were common during the mid 1900s.

Lake Erie was labeled a "dead lake," but upgrades to sewage treatment and removing phosphate from detergents helped the lake to recover.

## 5. Blue-green algal blooms returned to Lake Erie in the early 2000s.

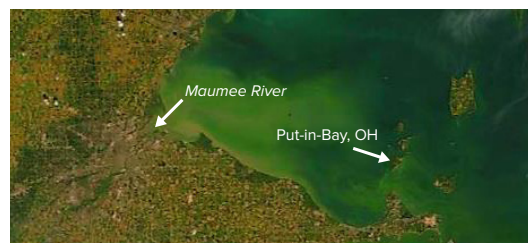
Changes in farming and more spring storms resulted in more nutrients (such as phosphorus and nitrogen) entering the lake. The record-breaking bloom of 2011 was followed by a small bloom in 2012, which indicates the lake can recover again, and quickly. However, the small bloom of 2012 was followed by the second largest bloom ever, which indicates a bloom can happen in any year.



Bridgeman et al., 2013. A novel method for tracking western Lake Erie *Microcystis* blooms, 2002-2011. *J. Great Lake Res.* 39, 83-89.

## 6. Lake Erie blue-green algal blooms form near the Maumee River.

High amounts of nutrients enter Lake Erie through the Maumee River because of lots of farming in the watershed. Larger blooms occur in years with more spring rainfall.



## 7. How do I keep my family safe?

- Never swim in a lake during a blue-green algal bloom.
- Keep pets out of blue-green algae.
- Never drink or cook with lake water (green or not) because pathogens and contaminants may be present and boiling will not remove them.

## 8. What can I do to prevent blue-green algal blooms in Lake Erie and other lakes?

- Use phosphate-free lawn care products.
- Regularly check your septic system, as damaged septic systems can contaminate nearby waters.
- Minimize the amount of water you send to the water treatment plant by installing low-flow toilets and rain barrels.
- Plant native plants along shorelines and ditches. These plants can filter out fertilizers and are essentially maintenance-free.

## 9. What is Stone Lab doing about the problem?

Ohio Sea Grant and Stone Laboratory scientists conduct numerous research projects each year that focus on solving the problem, and provide the results to agencies, managers and the public so they can make well-informed decisions. Ohio Sea Grant and Stone Lab are also bringing together farmers, fertilizer companies, scientists and management agencies to find ways to prevent blooms through new management practices and public outreach.

## 10. Where can I find more information?

- Ohio EPA, Department of Natural Resources, and Department of Health: [epa.ohio.gov/dsw/hab.aspx](http://epa.ohio.gov/dsw/hab.aspx)
- NOAA Great Lakes Environmental Research Laboratory: [glerl.noaa.gov/res/Centers/HABS](http://glerl.noaa.gov/res/Centers/HABS)
- Stone Lab tours: [go.osu.edu/SLTours](http://go.osu.edu/SLTours)
- Aquatic Visitor Center at Put-in-Bay (free to the public): [ohioseagrant.osu.edu/avc](http://ohioseagrant.osu.edu/avc)