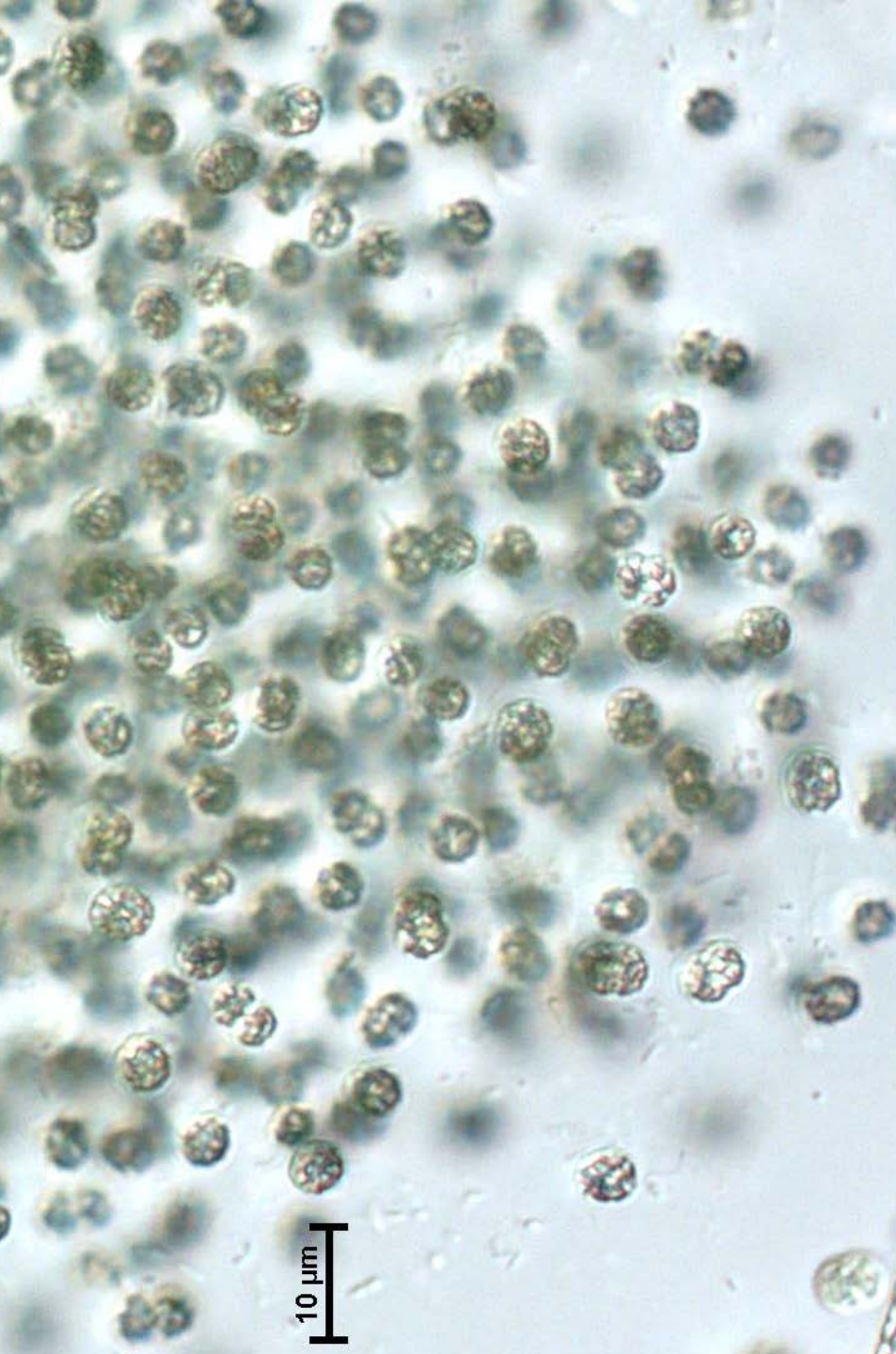


# Addressing Harmful Algal Blooms and Related Illnesses in Wisconsin

Wisconsin Coastal Beaches Meeting  
May 16, 2019  
Presented by Amanda Koch, MPH,  
Waterborne Diseases Epidemiologist



Wisconsin Department of Health Services  
Division of Public Health  
Bureau of Environmental  
and Occupational Health



# What are blue-green algae?

- True bacteria (*cyanobacteria*) that can photosynthesize
- Can grow to form nuisance “blooms”
- 50 species are known to produce toxins (*cyanotoxins*)

# Blooms don't all look the same!



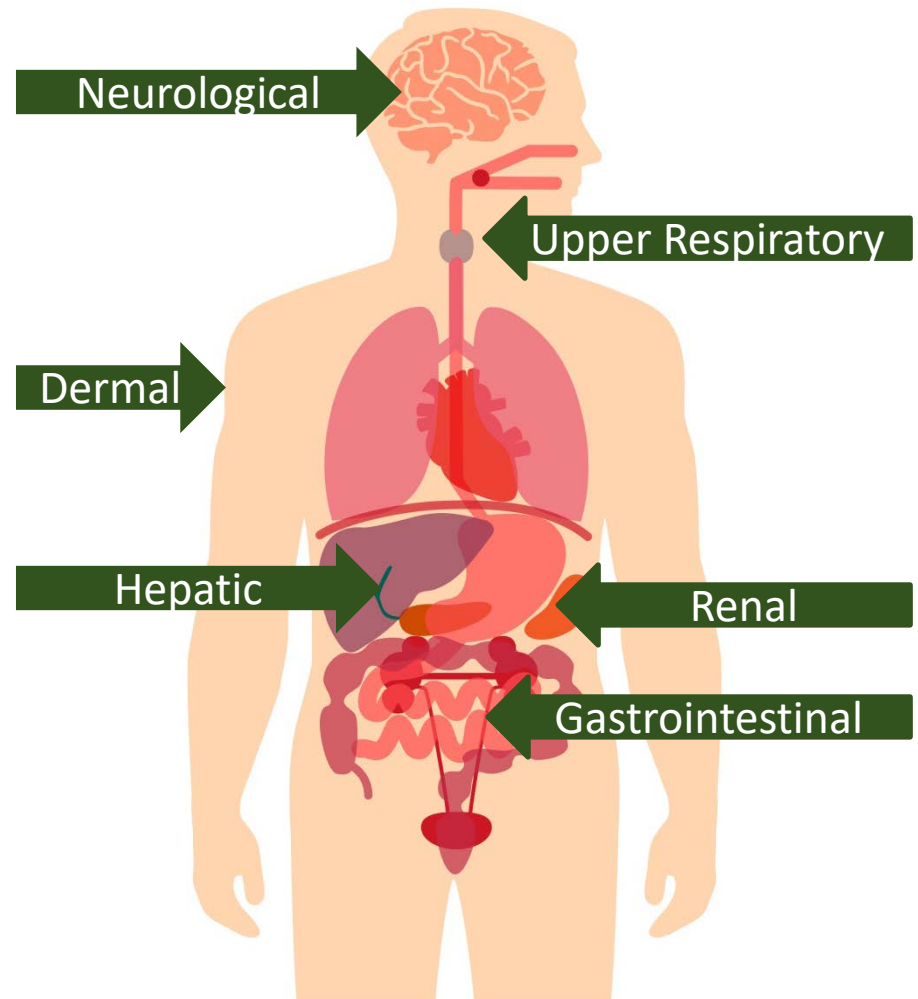
# Human Health Effects

## Various toxin types

- Hepatotoxins
- Neurotoxins
- Dermatotoxins

Signs and symptoms depend largely on route of exposure

- Dermal
- Ingestion
- Inhalation





# Animals

- Particularly vulnerable due to their behaviors and smaller size
- Often serve as sentinels for human illness

# DPH HAB Surveillance Program

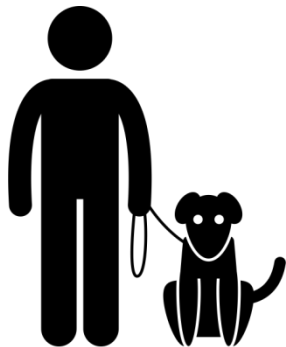
We're all about partnerships!



# DPH HAB Surveillance Program

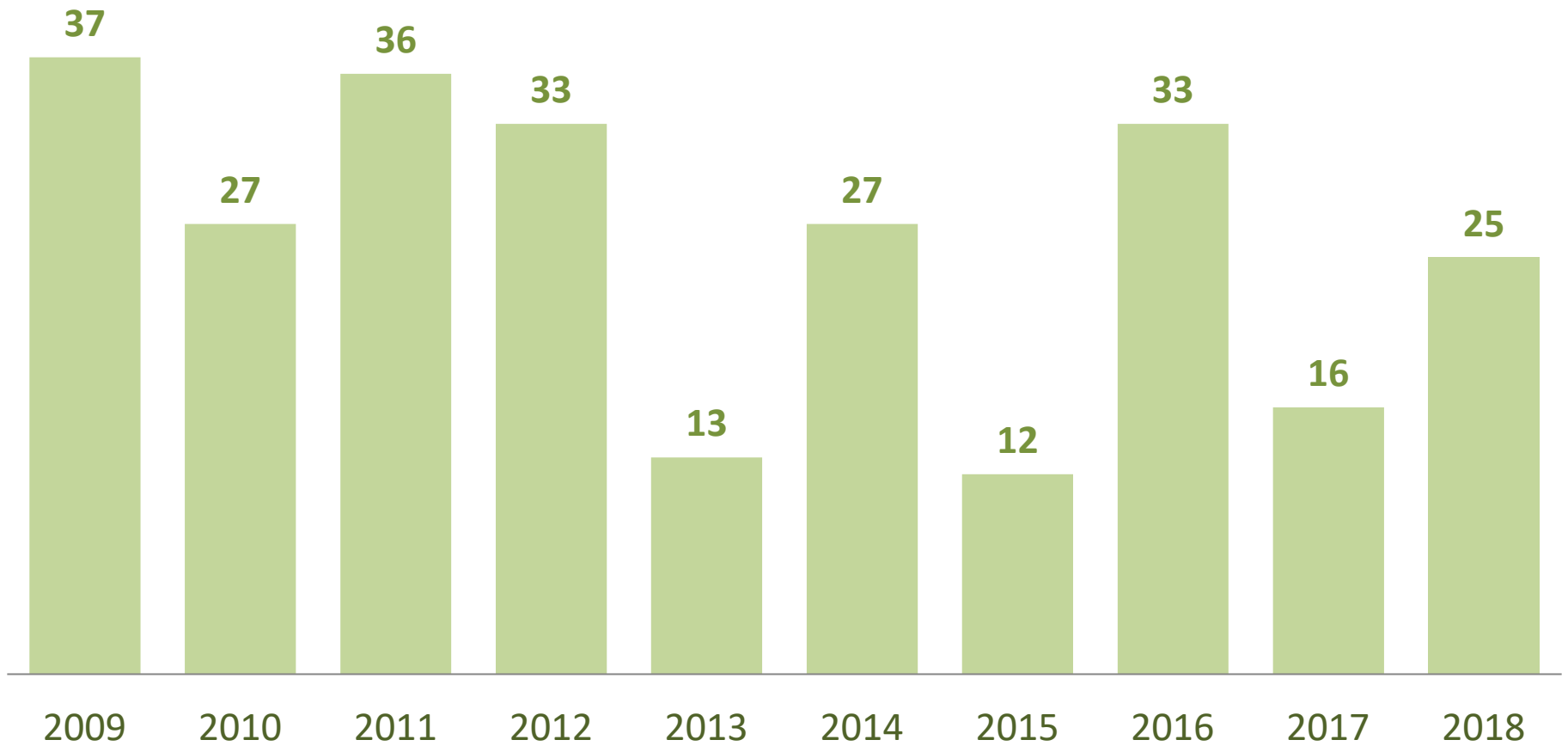


Conducts surveillance of health effects related to HAB exposure.



Investigates reports of human and animal illnesses.

# Annual Health Complaints





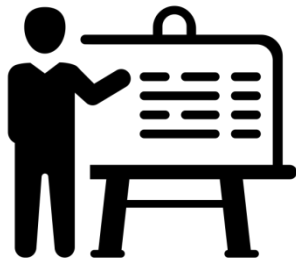
# DPH HAB Surveillance Program



Coordinates water sampling and analysis.



Helps local public health issue health advisories and beach closures.



Provides education and outreach.

# “Blooms & the Big Lake”

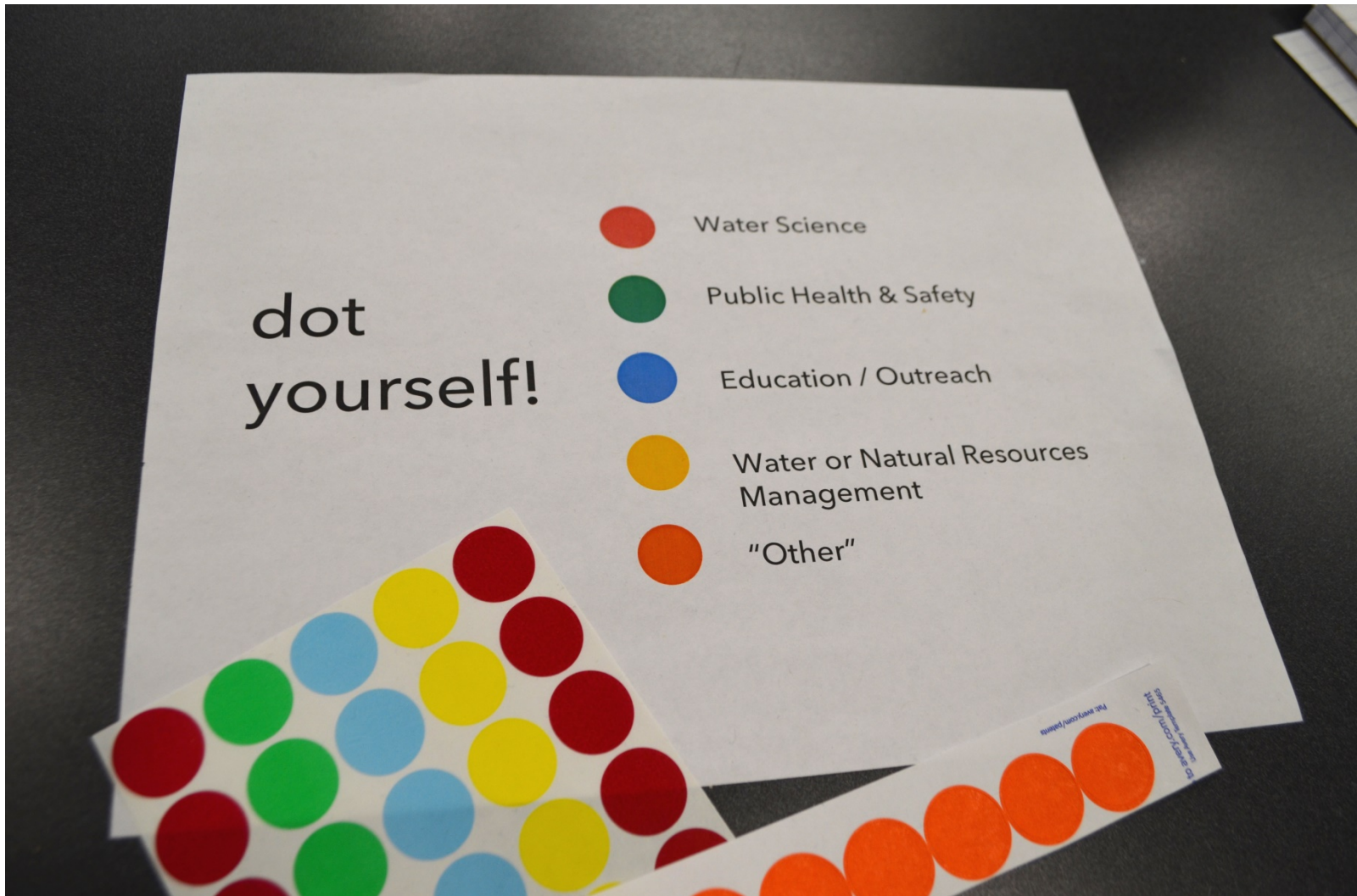
## Lake Superior-focused HABs Workshop

- Ashland, WI near Apostle Islands National Lakeshore
- 40 attendees from diverse professional areas
- Sessions focused on introductory topics with opportunities for small- and large-group discussion



Satellite imagery courtesy of NOAA

# “Blooms & the Big Lake”



# “Blooms & the Big Lake”



# “Blooms & the Big Lake”



# “Blooms & the Big Lake”

- Main takeaway: Need for clearly defined statewide communication and response protocol
- Future *Blooms & Lake Michigan* workshop?
  - Green Bay
  - Lake Winnebago (Great Lakes Basin)
  - Veteran’s Lagoon (Great Lakes Basin)

# HAB signage on the way!

## SCAN before you SWIM

A blue-green algae bloom may be present. Blue-green algae can produce toxins which can make people and animals sick.

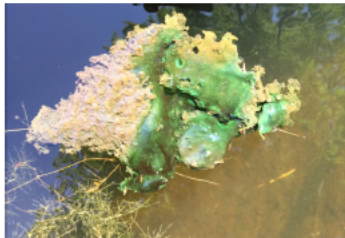
Be alert! Avoid water that:



Is discolored or streaky



Looks like spilled paint or pea soup



Has floating scum, globs, or mats



Has small green dots floating in it

- ✓ Do not swallow lake water or touch foam, scum, or algal mats.
- ✓ Do not let pets swim in scummy water or lick algae off their fur.
- ✓ Rinse fish with fresh, clean water and throw away guts before cooking and eating.
- ✓ Do not swim in areas where you cannot see your feet in knee-deep water.

For questions, call \_\_\_\_\_

To learn more about blue-green algae, visit [www.dhs.wi.gov](http://www.dhs.wi.gov) and search "algae"

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# CAUTION



## BLUE-GREEN ALGAE (CYANOBACTERIA) BLOOM OR MAT MAY BE IN THE WATER

*Blue-green algae can produce toxins which can make people and animals sick.*

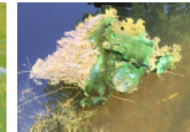
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- ✓ Rinse fish with fresh, clean water and throw away guts before cooking and eating.
- ✓ Do not swim in areas where you cannot see your feet in knee-deep water.

Call your doctor, the Wisconsin Poison Center, or your veterinarian if you or your animals have sudden sickness or signs of poisoning.

Wisconsin Poison Center: (800) 222-1222

Report blue-green algae-related illnesses to your local health authority!

Call \_\_\_\_\_

To learn more about blue-green algae, visit [www.dhs.wi.gov](http://www.dhs.wi.gov) and search "algae".

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# HAB signage on the way!

# BEACH CLOSED

## BLUE-GREEN ALGAE (CYANOBACTERIA) ARE PRESENT

*Blue-green algae can produce toxins which can make people and animals sick.*



**KEEP YOURSELF AND YOUR PETS OUT OF DISCOLORED WATER AND DO NOT TOUCH FOAM, SCUM, OR ALGAL MATS**

Call your doctor, the Wisconsin Poison Center, or your veterinarian if you or your animals have sudden sickness or signs of poisoning.

Wisconsin Poison Center: (800) 222-1222

For questions or to report a blue-green algae-related illness, call the local health authority:

To learn more about blue-green algae, visit [www.dhs.wi.gov](http://www.dhs.wi.gov) and search "algae".

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## IS IT BLUE-GREEN ALGAE

## ...OR SOMETHING ELSE?

Blue-green algae are bacteria known as *cyanobacteria* and are a natural part of water bodies. With enough sunlight and nutrients, cyanobacteria can grow quickly and form a blue-green algae bloom.

- Blooms often look like spilled paint or pea soup and can change the color of the water to green, blue, turquoise, purple, tan, or white.
- In Wisconsin, blooms are most common in the summer, or May to September.
- *Blue-green algae can produce toxins which can make people and animals sick.*
- Blooms have look-alikes, so use your best judgment when choosing a spot to swim. Do not swim or allow your kids or pets to swim in discolored water or where you see foam, scum, or algal mats.

### HARMFUL



Green water that looks like pea soup

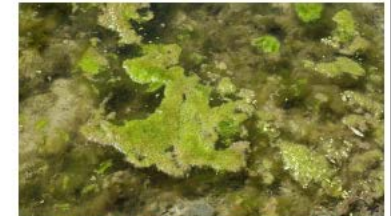


Surface scum that looks like spilled paint



Floating globs or mats

### NOT HARMFUL



Long, hair-like filamentous green algae



Yellow plant pollen



Duckweed



To learn more about blue-green algae and their health effects, visit [www.dhs.wi.gov](http://www.dhs.wi.gov) and search "algae".

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Division of Public Health  
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P-XXXXX (05/2019)



**Questions?**

**Amanda Koch, MPH  
Waterborne Diseases Epidemiologist &  
DPH HAB Program Coordinator**

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Harmful Algal Blooms Program  
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