



Wisconsin Harmful Algal Blooms Program

**Wisconsin Lakes Convention
April 9, 2013**

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Wisconsin Department of Health Services



Presentation Overview

- Describe the current Harmful Algal Blooms (HAB) program
- Discuss routes of exposure and typical symptoms
- Provide a summary of 2009-2012 reports of illness
- Opportunity for Questions





What is the HAB Program at DHS?

- Identify, evaluate and report cases of human and animal health events related to cyanobacteria in Wisconsin
- Develop outreach capacity to support case reporting and increase awareness of the health issues related to cyanobacteria
- Coordinate water sampling with regional DNR staff
- This project is supported by a cooperative agreement with the Centers for Disease Control and Prevention





How Do We Learn About Illnesses?

- Direct contact with Division of Public Health (DPH) staff via e-mail or phone
- *Report a Case* through DPH website dhs.wisconsin.gov/eh/bluegreenalgae
- Wisconsin Poison Center (WPC) automated email case notification
- Department of Natural Resources (DNR), local public health or lake association referral





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Blue-Green Algae

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Wisconsin's Harmful Algal Blooms Program

Wisconsin's Harmful Algal Blooms program collects information about human and animal illness and death resulting from exposure to blue-green algae. Tracking illness information will help the Wisconsin Division of Public Health measure the problem of blue-green algae in our lakes and rivers.

If you get sick after swimming in a Wisconsin lake or river, please [report possible algae-related illness](#). This program does not provide medical treatment, so if you are experiencing severe symptoms seek medical attention immediately.

When in doubt, best keep out!



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http://www.dhs.wisconsin.gov/eh/bluegreenalgae/

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Algal Bloom Exposure Report

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Algae-Related Illness Report Form

Please use this form to report a human or animal illness or death that you think was related to exposure to blue-green algae. If you have questions about this form, please call Dr. Lynda Knobloch at 608 266-0923 or email her at lynda.knobloch@wi.gov. Thank you for reporting this incident to us. We are working hard to improve the health of all Wisconsin residents and visitors.


1. Please enter today's date
 mm/dd/yyyy
2. Please enter your name and address
 Name:
 Street Address:
 City/Township name, State, Zip:
3. Are you reporting on a HUMAN or ANIMAL illness?
 None

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1. Please enter today's date

mm/dd/yyyy

2. Please enter your name and address

Name

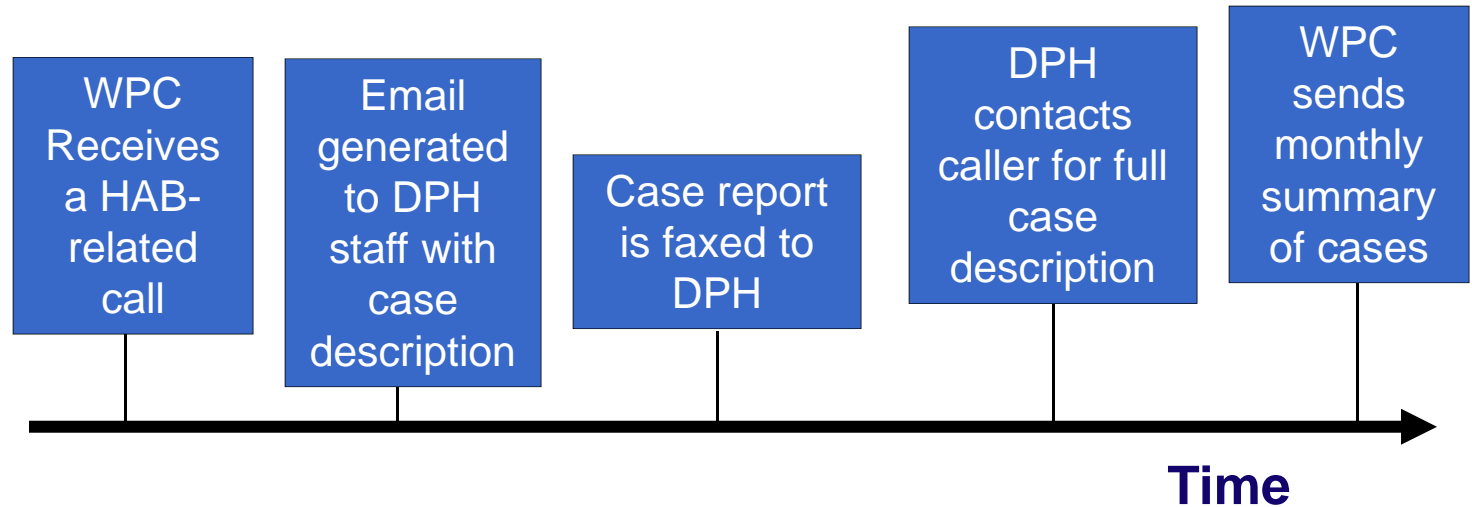
Street Address

City/township name, State, Zip

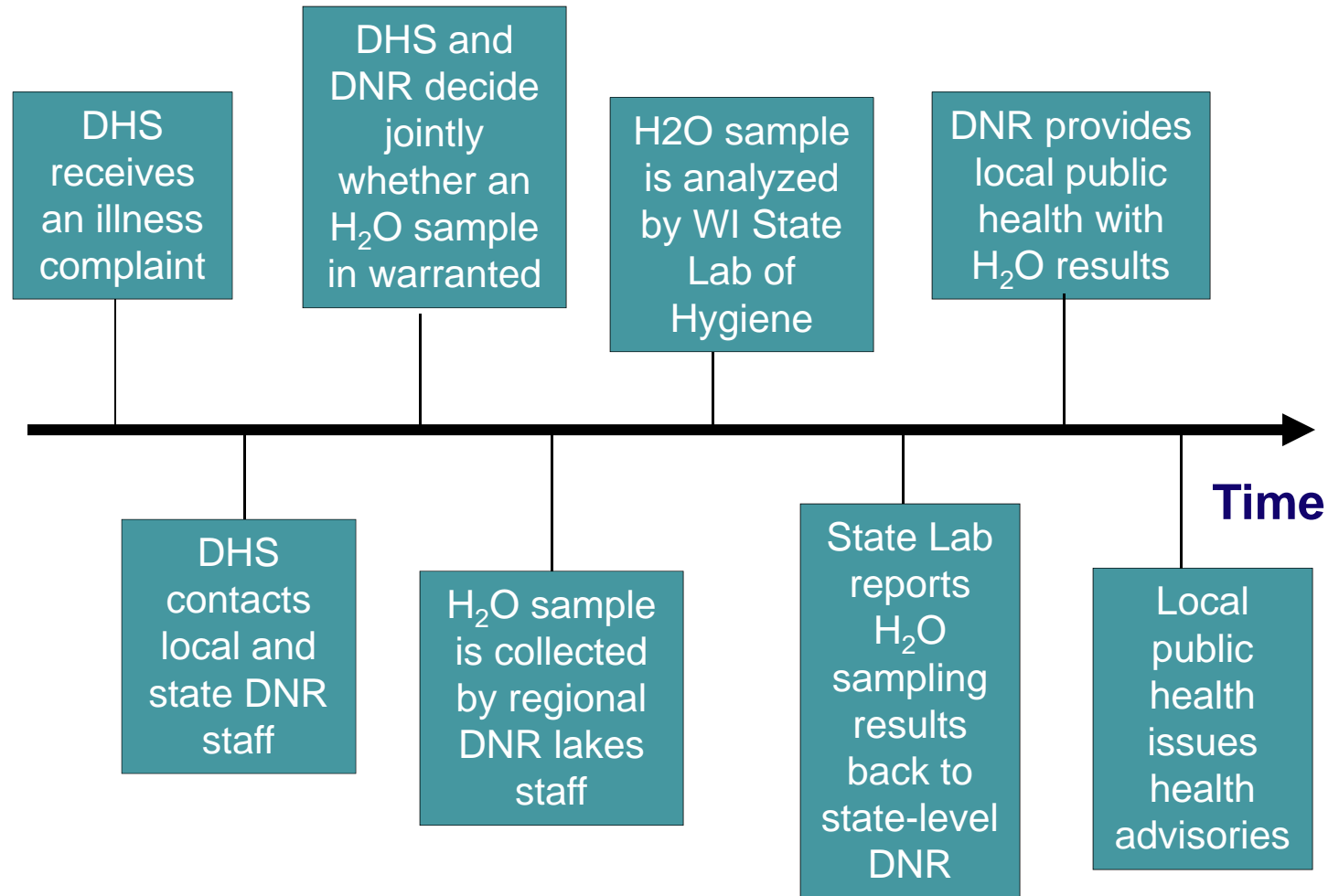
3. Are you reporting on a HUMAN or ANIMAL illness?

--None--

Partnership with the WI Poison Center (WPC)



Response Timeline



Pre-beach season: H₂O sampling kits are “staged” at regional DNR offices throughout the state





Community Outreach

- Presentations at local, state and national public health events, local lakes associations, DNR lakes meetings
- Educational materials distributed at local and statewide events
- YouTube Video





Routes of Exposure

1. Skin Contact

Direct contact with algae-laden water can cause:

- Rash
- Hives
- **Skin blisters (especially on the areas under swimsuits)**





Routes of Exposure

2. Ingestion

Swallowing water where an algal bloom is present can cause:

- **Abdominal pain**
- **Diarrhea**
- **Vomiting**
- **Nausea**
- **Numb lips, tingling fingers and toes, or dizziness**



Cases of dog deaths often include salivation, weakness, difficulty breathing and convulsions



Routes of Exposure

3. Inhalation

Inhaling water droplets (either through irrigation or recreational activities) from water experiencing an algal bloom can cause:

- **Flu-like illness**
- **Respiratory Irritation (runny eyes and nose, a sore throat)**
- **Asthma-like symptoms**





Keeping You and Your Pet Safe

- Don't swim where water is discolored or where you see foam, scum or algal mats
- Shower after swimming in lakes, rivers and ponds
- Keep pets out of soupy, green water or where you see foam, scum, or mats of algae
- If dogs swim in scummy water, rinse them off immediately - do not let them lick the algae off their fur
- Respect water-body closures and health advisories



Routes of Exposure and Case Reporting

- Dermal Contact: Direct contact with algae-laden water
- Inhalation: Inhaling water droplets (either through irrigation or recreational activities)
- Ingestion: Swallowing water where an algal bloom is present



Year	Health Complaints
2009	37 reports of illness (2 canine)
2010	27 reports of illness
2011	36 reports of illness
2012	33 (4 canine, 1 bovine)

Symptoms	# of Reports
Dermal Rash	31
Respiratory Irritation	24
Gastrointestinal Distress	56
Cold/flu-like illness	37



HAB Sampling Response

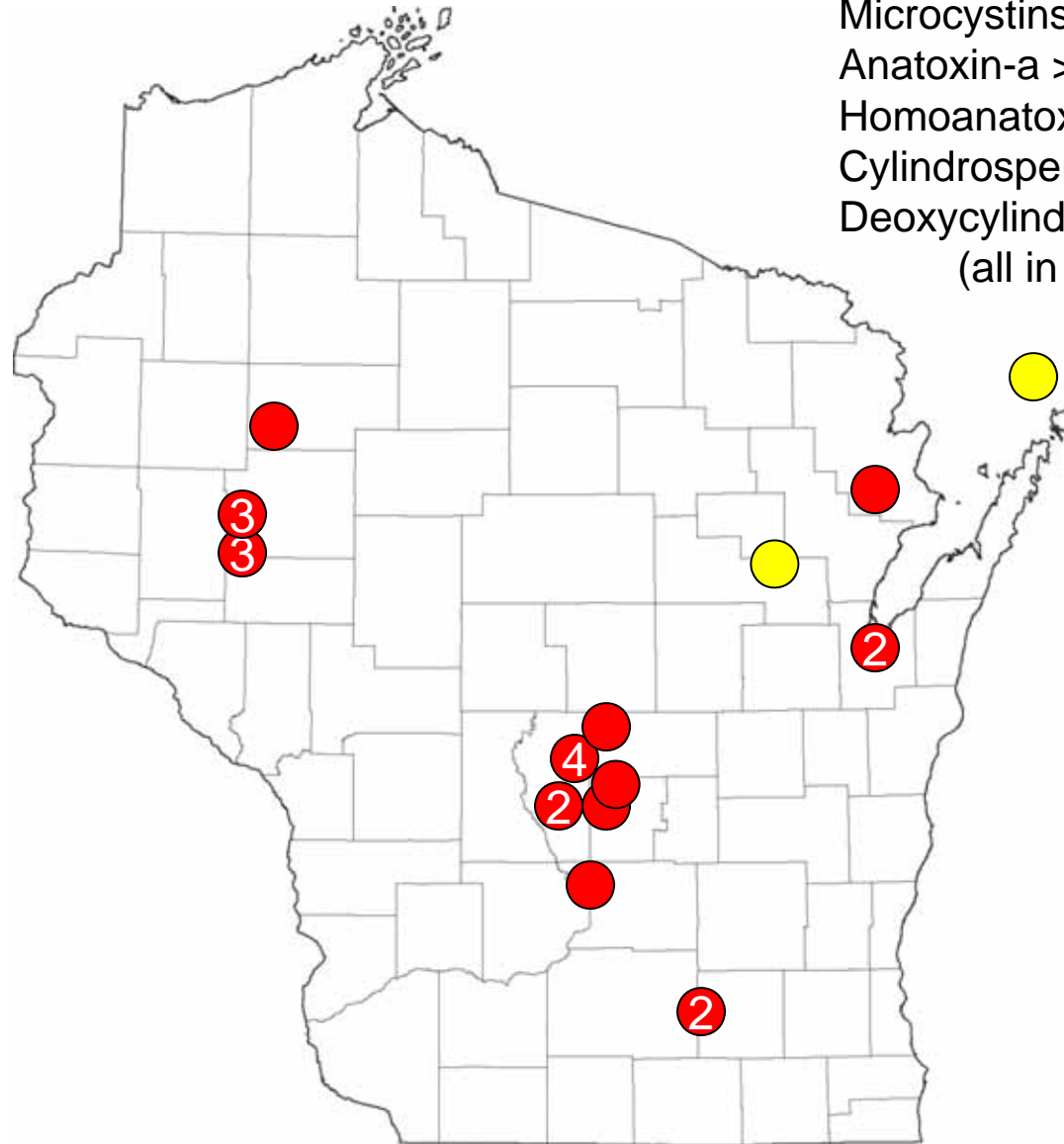
- DNR staff use standardized kits for sampling
- Non-standard samples have been received from DNR wardens and from veterinarians



Year	HAB Sampling Events
2009	13
2010	6 (1 non-standard)
2011	11 (2 non-standard)
2012	13 (2 non-standard)

Year	High Risk Cells > 100,000/ml	Moderate Risk Cells 20,000- 100,000/ml	Toxins Detected
2009	6	3	9
2010	2	1	2
2011	6	3	7
2012	6	3	6

2009-2012 Cyanobacterial Toxins



● Toxins above detection levels:
Microcystins > 1.0 ug/L, or
Anatoxin-a > 0.5 ug/L, or
Homoanatoxin-a > 0.5 ug/L, or
Cylindrospermopsin > 0.5 ug/L, or
Deoxycylindrospermopsin > 0.5 ug/L
(all in water via HPLC/MS/MS)

● Microcystin > 0.1 ug/L
(via ELISA)

Numbers indicate detection on multiple sampling dates.



Questions?