

# Update on Ohio EPA's Harmful Algal Bloom Initiative



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**OhioEPA**

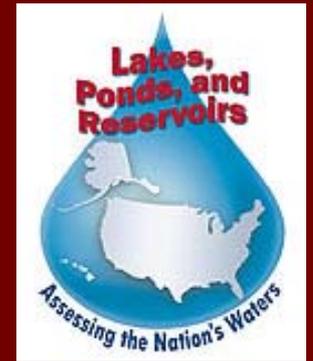
# Ohio EPA's Developing Awareness of HABs

- **2006 NALMS Conference - Indianapolis**
- **2007 NALMS Conference - Chicago**
- **2007 National Lake Survey**



# 2007 National Lake Survey (NLS)

- Purpose – Compare lakes nationwide
- 19 Ohio lakes randomly selected
- First time Ohio EPA collected water samples for microcystin analysis



# 2008

## Ohio EPA In Action

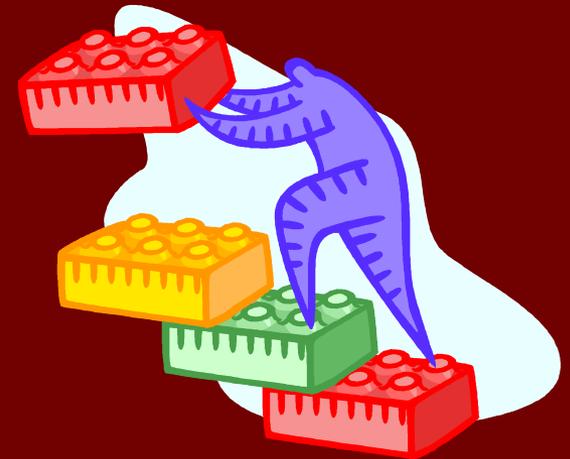
- Initiation of new Ohio EPA Inland Lakes Monitoring Program
- Formation of a HAB Workgroup
- Development of HAB Initiative



# 2008

## The Ohio HAB Initiative!

- **Phase 1** – Outreach and Education
- **Phase 2** – Advisories
- **Phase 3** – Tracking/Reporting/Verification
- **Phase 4** – Predicting/Surveillance

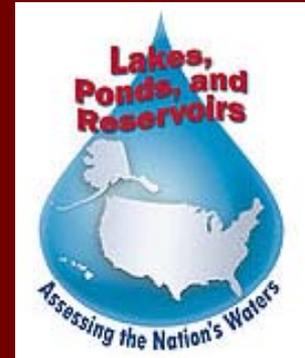


# 2009

## Summary of NLS Microcystin Results

(Final Results Released Spring, 2009)

- **Nationwide:** 25% of lakes had microcystin up to 230 ppb.
- **Ohio:** 36.8% (7 of the 19 Ohio Lakes) had detectable microcystin. Microcystin concentrations ranged from ND to 78 ppb
- Three of the Ohio lakes (10.5%) had levels above 1 ppb.



# 2009

## NLS Microcystin Results for Ohio

- Atwood Lake = Carroll County (0.1 ppb)
- Michael J. Kirwin Reservoir = Portage Co.(0.13 ppb)
- Holiday Lake = Huron County (0.35 ppb)
- Camp Seneca Lake = Guernsey Co. (0.70 ppb)
- **Aurora Pond = Portage County (1.5 ppb)**
- **LaDue Reservoir = Geauga (3.5 ppb)**
- **Grand Lake St. Marys = Mercer & Auglaize Co. (78 ppb)**



# 2009

## Water Quality Advisory

Ohio EPA/Ohio DNR/ODH

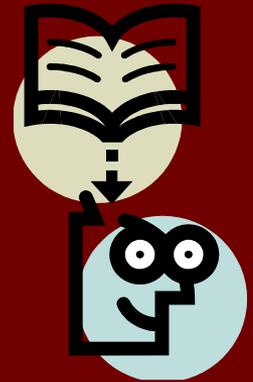
- **Grand Lake St. Marys - *Planktothrix!***
  - 1<sup>st</sup>. Water Quality Advisory (based on microcystin toxin concentration, not cell counts)
  - 5 sample points & finished water
  - Advisory posted May 29, 2009 at DNR beaches and ramps
  - Press releases, Web posting (2009 toxin levels 6 ppb-82 ppb Finished Water Non-Detect)



# 2009

## Education and Outreach

- **Ohio Sea Grant** – LEPR Grant to develop materials  
(Ohio EPA Advising)
- **Presentations**  
(Internal and External)
- **Stone Lab – Algae ID Classes**  
(Ohio Sea Grant)
- **Ohio EPA Web Pages/Fact Sheets**  
[http://www.epa.ohio.gov/dsw/inland\\_lakes/index.aspx](http://www.epa.ohio.gov/dsw/inland_lakes/index.aspx)  
[http://www.epa.ohio.gov/pic/glsm\\_algae.aspx](http://www.epa.ohio.gov/pic/glsm_algae.aspx)



# 2009 Targeted Microcystis Sampling



- Ohio DNR and Ohio EPA selected lakes to sample for microcystin
  - Focus on lakes heavily used for recreation and those containing public beaches. Also focus on lakes with PWS intakes.
  - Target 4 canal lakes with State Park beaches  
(Why? Similar problems with nutrients and significant recreational contact)
    - Grand Lake (6 ppb to 82 ppb) biweekly
    - Indian Lake (0.2, 0.6, rest Non-Detect) biweekly
    - Buckeye Lake (Non Detect to 10 ppb) weekly
    - Lake Loramie (Non-Detect all summer) biweekly

# 2009

## Other Lakes Sampled

- **Piedmont Reservoir** – Non-Detect (once)
  - Sampled after bloom
- **Vets Memorial (Fostoria WTP)**- Non-Detect for raw and finished (once)
- **Beaver Creek Reservoir (Clyde WTP)** – Non-Detect in raw and finished (once)
- **Lake Rockwell and LaDue Reservoirs (Akron WTP)** - Non-Detect in Rockwell raw and finished water. LaDue had 0.4 and 0.7 ppb)



# 2009 Tracking/Reporting

- Database developed in 2009 to track microcystin data.
  - Includes :
    - Data from Ohio DNR sampling of 4 canal lake
    - Data from Ohio EPA sampled lakes
    - Data reported to Ohio EPA



# What's Next in 2010?

## **Public Health Focus: Keep monitoring focused on waters with public beaches and/or PWS intakes.**

- Continue to develop outreach materials (fact sheets, web pages, etc.) and build public awareness through presentations.
- Work with partners to distribute outreach materials to Lake Erie and inland lake users
- Develop standard methodology for interpreting data and taking action on advisories
- Work with DNR and ODH to select 2010 lakes to monitor
- Explore large scale surveillance methods (remote sensing)
- Assess funding needs and search out funding opportunities for monitoring and surveillance.
- Seek partners to work cooperatively in assessing Ohio's inland lakes for HABs and algal toxins and their impact on humans and animals.

# Contacts And More Info.

HAB Coordinator: Report Sightings To:  
Linda Merchant-Masonbrink-614-644-2135

Inland Lakes Web Page:

[http://www.epa.ohio.gov/dsw/inland\\_lakes/index.aspx](http://www.epa.ohio.gov/dsw/inland_lakes/index.aspx)From

Lake Erie- Microcystis (2008, 2009) to the Ohio River (2008, 2009)

