

US EPA ARCHIVE DOCUMENT

## Great Lakes HABs Collaboratory: A new opportunity for collaboration

Melanie Adam  
Great Lakes Commission

Inland HABs Discussion group  
3/10/2016

### Problem: Nearshore Eutrophication and Harmful Algal Blooms

- ▶ Global nearshore eutrophication problem
- ▶ In some regions of the Great Lakes:
  - Nearshore HABs
  - Offshore hypoxic and/or anoxic zones
- ▶ Impacts most prominent in three GLRI Priority Watersheds:
  - Lower Fox/Green Bay
  - Saginaw River/Bay
  - Maumee River/Western Lake Erie Basin

## Problem: Nearshore Eutrophication and Harmful Algal Blooms

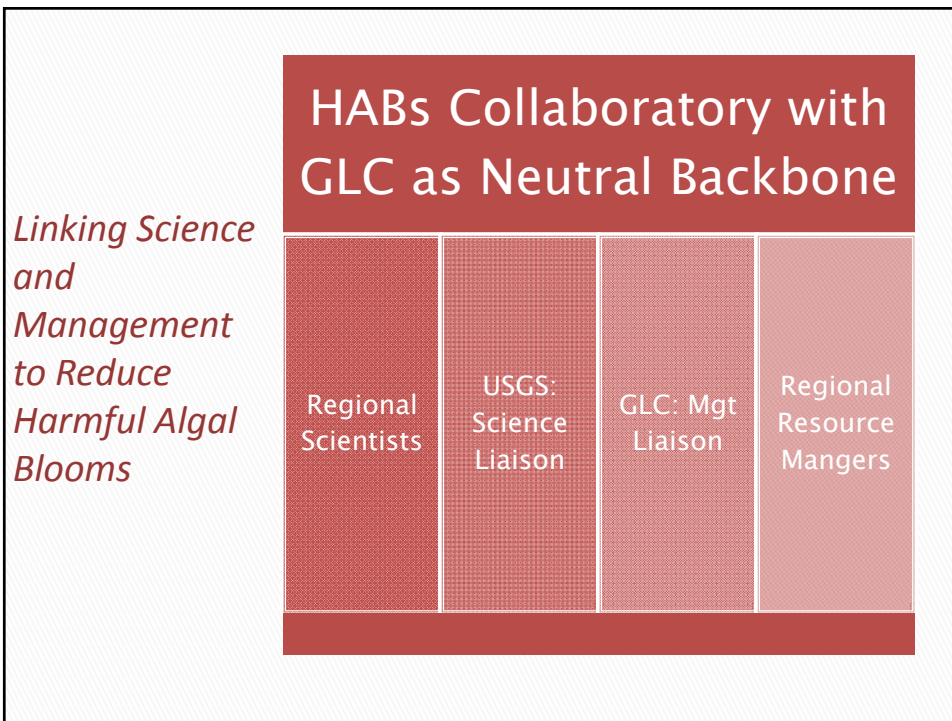
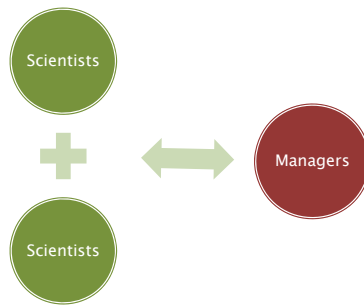
- ▶ HABs Management is a regional-scale challenge
- ▶ Current ongoing efforts
  - Usually agencies, state or lake restrained
  - HABHRCA is regional, but is limited in scope and timeline
- ▶ Remaining gap between the supporting science and the Great Lakes managers
  - Have a Great Lakes regional approach, so that the regions can learn from one another

## The solution: a HABs Collaboratory

- ▶ Collaborative effort
- ▶ Enable collaboration between scientists to develop common science concepts, language and agendas related to HABs
- ▶ Focus on 3 GLRI priority watersheds as a set
- ▶ Over the next two years, efforts will include:
  - Standing up the HABs Collaboratory
  - Developing a common knowledge basis of current science and science needs
  - Developing information strategies for transmitting key science to managers and for getting management feedback

## Great Lakes HABs Collaboratory is...

- ▶ *A virtual laboratory for science-based information sharing and collective action to address harmful algal blooms*



## Benefits of a HABs Collaboratory For Scientists

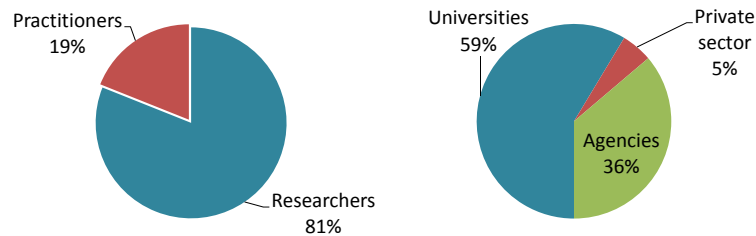
- ▶ Support more creative science
- ▶ Advance collective scientific understanding of HABs
- ▶ Facilitate networking with other scientists doing similar work
- ▶ Foster intellectual stimulation for scientists and among peers
- ▶ Offer a built-in network for collaborating on research, funding for research, and publications

## Benefits of a HABs Collaboratory For Practitioners

- ▶ Promote science that supports management needs
- ▶ Stay abreast of latest scientific findings related to HABs
- ▶ Learn about cumulative knowledge of HABs prevention, formation and mitigation management opportunities

## Standing up the HABs Collaboratory

- ▶ HABS Collaboratory Scoping
- ▶ 58 interviews
  - 47 researchers and 11 practitioners
  - 34 from universities, 3 from private sector, 21 from 5 different agencies



## Standing up the HABs Collaboratory

- ▶ Questions for interviews
  - What is the geographic focus of your HABs research or interest?
  - In your opinion, what are the main unanswered questions about HABs?
  - Which of these can be addressed through collaboration?
  - How is your research related to these unanswered questions?
  - What could you bring to a HABs Collaboratory and what would you want to get out of a HABs Collaboratory?

## Inaugural meeting

- ▶ December 15, 2015
- ▶ 70 members
- ▶ Goal #1: in-person first meeting



- ▶ Goal #2: Develop activities around a common knowledge basis of current science and science needs

## HABs Collaboratory in numbers

- ▶ 136 members: 11 Agencies and Ministries, 36 Colleges and Universities and 5 other organizations
- ▶ Multidisciplinary group
  - Ecology, microbiology, modeling, chemistry, management, watershed, toxicity, biogeochemistry, molecular ecology, drinking water, policy, engineering, statistic, information science, monitoring, forecasting, remote sensing, data management, etc.
- ▶ Across the Great Lakes Region



## HABs Collaboratory activities

- ▶ 4 main topics of interests were picked at the kickoff meeting:

HABs  
Knowledge  
Exchange

HABs-related  
myths

Toxicity

N-Cycling

## HABs Knowledge Exchange

- ▶ Compilation of unanswered questions
  - Split into five main topics: Nutrients, Triggers, Toxicity, Ecosystems/Impacts on food-web, and Management
- ▶ Conceptual model
  - Subgroup working on a HABs Conceptual Model
  - Base for communication
  - Will be updated as the science evolve
- ▶ State of science webinar series
  - Webinar series presenting the current research projects
  - Webinar series presenting the common knowledge basis of science on key topics



## HABs-related Myths

- ▶ “Mythbusters” synthesis paper
  - Synthesis paper focusing on myths about HABs
  - Follow-up management summary
- ▶ Possibilities of other synthesis papers

## Key topics: Toxicity and N-Cycling

- ▶ Compilation and synthesis of toxicity measurements and methods
  - Compilation of methods of analysis for toxins
  - Within-group education through presentations
- ▶ Compilation and synthesis on N-Cycling
  - Synthesis and project descriptions on N-Cycling
  - Within-group education through presentations

## Information-sharing strategies

- ▶ Listserv to communicate with all members
  - “Expert in a pocket”
- ▶ Google drive folders
  - For each subgroup, with access for all members
- ▶ Webinars
  - Within-group webinars
  - Outreach webinars (eventually)
- ▶ Communication committee
  - Outreach to stakeholders
- ▶ Website (eventually)

## For more information or to participate in the HABs Collaboratory:

Melanie Adam,  
Victoria Pebbles  
Great Lakes Commission  
[mel.adam@glc.org](mailto:mel.adam@glc.org),  
[vpebbles@glc.org](mailto:vpebbles@glc.org)  
734-971-9135



Mary Anne Evans  
USGS–Great Lakes Science Center  
[maevans@usgs.org](mailto:maevans@usgs.org)  
734-214-7221

