Great Lakes HABs Collaboratory: A new opportunity for collaboration

Melanie Adam
Great Lakes Commission

Inland HABs Discussion group
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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

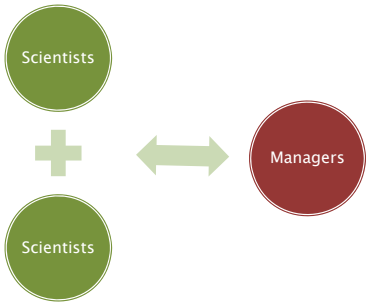
- HABs Management is a regional-scale challenge
- Current ongoing efforts
  - Usually agencies, state or lake restrained
  - HABHRCA is regional, but is limited in scope and timeline
- Remaining gap between the supporting science and the Great Lakes managers
  - Have a Great Lakes regional approach, 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*



Linking Science and Management to Reduce Harmful Algal Blooms

HABs Collaboratory with GLC as Neutral Backbone

Regional Scientists	USGS: Science Liaison	GLC: Mgt Liaison	Regional Resource Mangers

Benefits of a HABs Collaboratory For Scientists

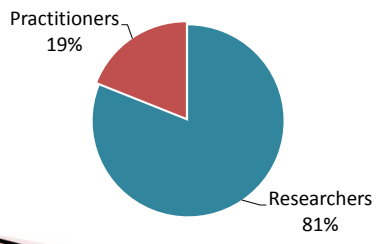
- Support more creative science
- Advance collective scientific understanding of HABs
- Facilitate networking with other scientists doing similar work
- Foster intellectual stimulation for scientists and among peers
- Offer a built-in network for collaborating on research, funding for research, and publications

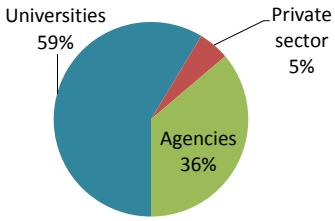
Benefits of a HABs Collaboratory For Practitioners

- 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,
vpebbles@glc.org
734-971-9135

Great Lakes Commission des Grands Lacs

Mary Anne Evans
USGS-Great Lakes Science Center
maevans@usgs.org
734-214-7221

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