

# Lake Michigan Monitoring Coordination Council

**Meeting Summary**  
**Spring 2008 Teleconference**  
**Tuesday, May 27, 2008**  
**1:30 – 4:00 p.m. EDT / 12:30 – 3:00 p.m. CDT**

## **Participants**

Gary Kohlhepp  
Julie Sims  
Tracy Collins  
Mike Ripley  
John Kennedy, GB Metro Sewage District  
Kevin Richards, USGS  
Bill Horns, WDNR  
Joe Marencik, Illinois EPA  
Steve Yancho, NPS  
Dale Robertson, USGS Madison  
Betsy Smith, USEPA-ORD  
Leslie Dorworth, IL-IN Sea Grant  
Danielle Barnett, IDEM  
Judy Beck, GLNPO  
Norm Grannemann, USGS  
Steve Blumer, USGS Lansing  
Dave Holtschlag, USGS Lansing  
Jim Baumann, WDNR  
Sarah Lehmann, USEPA  
Sue Brauer, EPA Region 5  
Mark Burrows, IJC Windsor  
Bob Kavetsky, USFWS Lansing

## **Called to order at 1:30 p.m. EDT**

## **Welcome and Introductions**

John Hummer welcomed everyone to the meeting. Introductions followed.

## **Review of Agenda**

Kohlhepp reviewed the agenda. No changes. He proceeded to the first presentation.

## **Lake MI Pilot Study and Demo Phase**

*John Hummer; Sue Brauer, Kevin Richards; Charlie Peters*

Sue Brauer gave an overview of the NWQM Network for Coastal Waters and the Lake Michigan Pilot project. Presenters noted that the results from the nutrient analysis would be ready within 30 days. The SPMDs data would be complete by the end of September, with the results presented some time in late December.

The question was raised as to how comparable this SPMD was to others. Richards noted that it was similar.

The group noted that JB, Mark Burrows, and Joe Marencik would all be at the Sea Grant meeting in Chicago.

### **2010 Coastal Condition Report & 2010 Lake MI Intensive Year Monitoring**

*Sarah Lehmann and Judy Beck*

Monitoring usually consists of about 1000 samples per water body type. There is a coastal condition report coming out in 2009.

How can GL indicators be as compatible as possible with national indicators?

A participant asked who was invited to June 10-11 meeting. SL said 106 monitoring contacts in Region 5 states. P. Horvatin, P. Bertram, J. Beck, possibly S. Brauer also attending.

Another participant asked whether the report on GL ecosystem is being considered for this. JB responded no, it's only in the works.

JB closed with an important note: 2010 will focus on intensive monitoring. The funding is uncertain, but we need to be prepared in the planning stages. The pilot outlines gaps and problems in the nearshore. IJC has had two workshops devoted to nearshore. AOCs are trying to develop delisting targets and monitoring needs. It would be interesting to compare and contrast with info from LMMB Study. We can leverage funds from all the things going on in 2010.

### **Lake Monitoring Technology: The New Triaxis**

*Judy Beck*

LaMP was online as of April 22, 2008. It includes drawing of Triaxis. It has a box-kite shape and is towed behind Lake Guardian. It can get close to shallow, nearshore areas. It has the ability to pick up information on zooplankton, algae health, nitrate composition, and river plumes, and can use SONAR to look at underwater habitat. This year GLNPO will conduct practice/trial runs on Lake Michigan. There is an opportunity to coordinate Lake Guardian with river monitoring. If planned correctly, LMMCC can focus on this by coordinating work and having a more integrated picture of what is going on in the lake.

GLNPO would like to have feedback on SOLEC. Next meeting should have more in-depth conversations. Priorities for 2010 include mostly nearshore work, which offers opportunity to leverage resources.

### **SPARROW Modeling of Surface Water Quality**

*Dale Robertson*

The SPARROW model is a hybrid of two types of models: mechanistic and statistical. It can compute nutrient loads of various stream types and has been used to model the Mississippi River basin to the Gulf of Mexico. DIY – how much load reaches Lake Michigan originates from where. DIY can tell where biggest loads come from. Sparrow can then determine confidence intervals for yields and ranks.

The question of how certain we are that how many sites are in a certain ranking was raised.

The effort took advantage of data from USGS and other agency programs to come up with regional-scale models, which are in the process of being developed. The first drafts of these will be up within the next month or so.

Robertson then discussed the issue of comparing regional models. The Upper Midwest model is broken down into HUC-8 level but they want to get down to HUC-11 or HUC-12 level. They are looking mainly at Total Phosphorus and Total Nitrogen. See the slide for future improvements to the SPARROW model.

A question was asked about loads around Lake Erie since some tribes had HUC-12 codes. Robertson indicated that they would be extrapolating these to fill in loads at the regional model level.

A question was asked about how the model was handling the Detroit wastewater facility. Robertson said they would refine the model to get point sources in where they belong; this is a problem with point-source biases.

Another participant asked about the timeframe for completion of the project. Robertson said they will have a 2002 version by the end of the month and it will be presented later this year.

### **Regional Vulnerability Assessment Toolkit**

*Betsy Smith*

USEPA has 12-digit HUCs for Lake MI basin. The toolkit is stochastic and multivariate; see second slide for what it provides. It includes landscape metrics that relate to habitat and water quality, air toxics metrics, NPS data, socioeconomic metrics.

They would like to use Lake MI basin as a case study – 5-year study for three different scenarios (see slide). The baseline scenario would be 2001-02 NLCD and then two future scenarios with multiple services including recreation, water quality, etc.

Future Vision for Use of EDT (see slide) – talking with MSU re: digital watersheds.

A participant asked how complex this is to use and whether it required a fair amount of training. Smith said it could be learned with a little “playing around with.” Other parts may be more complex such as the multivariate statistical components.

Another participant asked how the toolkit assesses changes of land use on water quality. Smith responded that they could run it for all HUCs across the region.

### **USGS Beach Health Initiative**

*Steve Corsi*

Planning this spring for a 5-year project; see slide 2&3 for program goals and 2008 tasks. **Indiana and Wisconsin** beaches will be targeted for various aspects of the project in 2008. They will be working with Sheridan Haack and Richard Whitman for Lake MI beaches. Since the data is being collected this summer, there will be progress reports and updates in the fall or early next year.

A participant asked about future years, different questions, and more spatial coverage. Corsi responded in the affirmative. The concept is to expand spatial coverage, analytical methods, and conceptual indicators, then deal more with pathogens in coming years. Specifics are yet to be determined.

The impetus was the connection to NWQMN pilot projects.

JB noted that the BEACH Act pays for monitoring; this project goes a step further into research.

### **Networking on Botulism**

*Steve Yancho*

Type E botulism hit Sleeping Bear in summer 2006; many shorebirds died in a 14-mile stretch, including 80 common loons. In 2007, number of birds dying decreased, including 63 loons and some piping plovers. Shorebirds eating maggots from fish that have washed ashore caused thousands of birds to die

in greater NE Lake Michigan area in 2007. The spores are widely distributed and spread through zebra and quagga mussels which grow vigorously, When these die, they form anaerobic mats, which filter botulism; round gobies come in and eat them, which are then eaten by birds.

In 2008, there were a few dead birds from winter and spring. Researchers are working to determine links. They are working with UW-Madison, USGS Great Lakes Science Center; MDNR; using ROV from U-M to gain better samples for analysis. They can access water depths of up to 150 feet deep. They are still doing beach bird surveys with volunteer help, but have minimal funding to continue studies. They are in the process of writing 3-year study plan for \$175k; Ken Hyde finalizing and any thoughts are welcome. They are also working with EPA for June 24-25 meeting.

Bill Bolen is hosting botulism coordination workshop June 24-25 outside Detroit Metro Airport. Contact Bill for more info on the workshop, invitation, and agenda.

### **Next Steps/Announcements**

Early November may be a better time to share some preliminary results of Pilot Demo, botulism/nearshore and other applicable field efforts. Good planning meeting for 2010 Intensive Year. JH will convene LMMCC Steering Committee for fall 2008 meeting this summer.