MEETING RECORD

Attendees:
RCC: Gavin Christie, Debbie Lee, Chris Winslow, Dale Hoff, Erich Emery, Ian Campbell, Kathy McKague, Marty Blake, Michael Twiss, Patricia Chambers, Rebecca Rooney, Ram Yerybandi, Sandra Eberts, Tom Speth, Val Klump, Yves Michaud.

Staff: Lizhu Wang, Victor Serveiss

1. Roll call and approval of draft agenda
   a. Welcome new RCC members – Co-chairs expresses very warm welcome to the new members:
      • Welcome Dale Hoff – Division Director, USEP Office of Research and Development, Center for Computational Toxicology and Exposure, Great Lakes Toxicology and Ecology Division, Duluth, MN.
      • Welcome Ram Yerybandi - Research Manager, ECCC Watershed Hydrology and Ecology Research Division.
      • Welcome Marty Blake – Acting Assistant Deputy Minister, Regional Operations Division, Ontario Ministry of Natural Resources and Forestry.

   b. Thank departing RCC members for their contribution to RCC/IJC – Co-chairs recognized and expressed appreciation to the three RCC members who have and will retire from the board.
      • Tom Speth – from USEPA, served on the RCC from June 8, 2015 – June 7, 2020
      • Yingming Zhao – from OMNF, served on the RCC from Jan 1, 2017-Feb 29, 2020.

   c. Approve of agenda
      • Agenda is approved as presented.

2. Implementation of SMART report recommendations guidance
   • The draft guidance is very helpful and timely. It helps focus and clarify recommendations.
   • It is commented that our workgroups are not necessarily configured with party or agency staff involved who can confirm that the results are achievable, realistic, or that
time bounds are correct. For most of our recommendations, we are providing assists to agencies or parties to define specific objectives that are “SMART”.

- In the past, we have been dissuaded from engaging the Annex workgroups and agencies and sharing workgroup products before Commission sanction.
- Recommendations can be improved by developing better and more applicable products through identifying the client agencies and engaging with them.
- Recognizing these guidelines may or may not be uniformly applied depending on whether it is an operational Board or a science Board. Science Boards often push the envelope and perhaps driving the agencies to new thinking, new methods, etc. The operational Boards, though, need to be more cognizant of what agencies can do with current resources and in the context of current policies, laws, and regulations.
- A liaison mentioned that the RCC has already done a good job for the Great Lakes Nutrient Adaptive Management and Groundwater-Surface Water model Integration projects, which have met the first 6 bullets in the guidance. The need is to decide if the recommendations can be implemented, and how many recommendations can be implemented. This process may end up we will lose some recommendations.

3. Projects update
   a. Great Lakes Connecting Channel
      - The report is in its final stage. The workgroup leads propose to write a separate summary by focusing on SMART recommendations. It is also proposed to turn this work into a manuscript to be published in a journal.
      - The workgroup may need to convene a call to figure out how to write the summary as a workgroup product.
      - It is suggested that the recommended monitoring efforts be built into CSMI cycle.
      - It is mentioned that it is possible to share the recommendations with Annex 10 after the reformatting.

   b. Great Lakes Early Warning System – Phase-I.
      - An early warning system is needed to identify and respond emerging threats, such as the COVID-19 or to address threats that is recognized but no action is taken due to priority competition and resource limitation, such as the aquatic mussel invasion.
      - This is a joint project of RCC and SPC led by Michael Twiss and Lucinda Johnson. In addition to SAB members, there are also outside members serving on the workgroup.
      - The draft Phase-I report is completed and submitted to the Commissioners for approval.
      - There is a Phase-II of the project to operationalize the framework identified in the Phase-I. The work plan has been submitted to the Commissioners for approval.
      - It is asked if we want to include COVID-19 as an example, and it responded that COVID-19 is too new and the current examples in the report is sufficient. This work does not want to be caught up with the current political debate.
      - It is mentioned that the process of ranking stressors and threats and prioritizing recommendations of actions will be handled in the Phase-II of the project.
c. Great Lakes Science Plan
  - The goal of the project is to develop a comprehensive decadal binational Science Plan for Great Lakes research. This will be accomplished by a literature review, information synthesis, and two focused workshops. The Science Plan will complement and inform management and restoration activities and will aim to ensure that dollars spent have optimal return on investment. The plan will also improve the effectiveness of management actions in the face of new and emerging pressures on the ecosystem.
  - Good progress has been made in getting information from funding agencies; good progress is also made in synthesis of background document materials.
  - The workgroup is in the process of developing a plan to make detailed preparation for the in-person workshops.
  - Workgroup will have a call today after the RCC meeting.

4. Work plans status
   a. Project selection process and results
      - The Great Lakes Board Co-chairs had several calls to discuss and rank the proposed eight work plans.
      - The criteria used to rank the work plans include: link to GLWQA/Annex priorities, link to Commissioners’ priorities, feedback from GLEC Co-chairs, cross board collaboration, and filling critical gaps.
      - Five of the eight work plans were selected that can be funded by the IJC Great Lakes Office funding, including one RCC work plan and one RCC-SPC joint work plan.
      - The selected work plans have been submitted to the Commissioners for approval.

   b. Great Lakes Groundwater and Surface Water Modeling
      - This is the second phase of the project. The first phase assessed the need and feasibility of developing a basin-wide groundwater and surface water conceptual model.
      - This phase is to implement the recommendations of the first phase. The project will develop a science management framework that establishes: (i) a set of well-defined questions to be addressed using a basin-wide surface water and groundwater integrated model, (ii) key stakeholders with an interest in this scale of modeling, as well as their available resources, (iii) ongoing work by government agencies and universities that can be leveraged, along with points-of-contact, and (iv) a lead agency or agencies that have the capacity to carry out such modeling. The project will also develop a basin-wide surface and ground water integration conceptual model.
      - The USGS has funded a project proposed by a subgroup of this team, which will be supported by this project’s output to develop numerical models.

   c. Operationalizing Great Lakes Early Warning System
      - This is a joint project of RCC and SPC. This project is to develop the analytical component of the Great Lakes Early Warning System by including a set of
preferred risk assessment protocols and analytical procedures to evaluate potential threats. Such protocols and procedures will be developed by exploring different data types or analytical approaches that can be used to operationalize an early warning system. It will also apply a risk analysis approach for identifying the likelihood and severity of potential stressors and threats for prioritizing management actions.

- The target audiences of this work are the organizations who are responsible to implement the Great Lakes Early Warning System identified in the first phase of the project and the agencies who supply and manage the information needed to support the system. This project will provide a tool and process for identifying threats that management and regulatory agencies are unable to anticipate accurately, or for which problems are anticipated but agencies do not take preventive actions due to competing priorities or limited resources. This tool will enable management agencies to avoid devoting significant resources correcting or remediating damages after they happen, by preventing or lessening the onset of the threats or stressors early on.

5. Continue development of new project ideas
   a. Inventory of Agricultural BMP Research and Researchers
      - This work plan has been in discussion for the last two years. It is a small project, but it has not been selected as a high priority project for the last two funding cycles.

   b. Second phase of Great Lakes Nutrient Adaptive Management
      - The first phase of the project made 3 key technical recommendations and 7 key institutional recommendations.
      - This output supported a FY21 GLRI multiagency, 3 year project ($625K) for advancing Lake Erie Adaptive Management and linking Watershed and Lake Models.
      - The proposed work will support assessment needs for the Annex 4 Adaptive Management team. Funding will support 5 federal agencies to coordinate model inputs and outputs, clarify appropriate spatial/temporal scales, highlight key uncertainties, and outline approaches for model confirmation. It will also conduct skill assessment and uncertainty analysis and carry out modeling efforts by linking a Lake Erie biophysical model using inputs from watershed models and monitored tributaries.
      - The resulting Lake Erie biophysical model will be linked to output from watershed models and monitored tributaries to evaluate the likely effectiveness of watershed management strategies in controlling Lake Erie eutrophication symptoms.
      - Discussion:
        - Since the GLRI project will focus on the technical recommendations, our Phase-II project may want to focus on the institutional recommendations, and do not want to compete or duplicate the SPC-WQB Nutrients Synthesis Project.
Proposal-1: (1) Establish the GLWQA as the binational authority to institutionalize GLNAM through Nutrients Annex 4 to facilitate implementation. (2) Identify agency and institutional partners as well as programs responsible for the development and conduct of a GLNAM approach. (3) Identify experts, resources, and stakeholders needed to effectively meet identified adaptive management goals and objectives on a long-term basis.


Options: (1) Put together a working group to develop a project as proposed. (2) Wait until SPC-WQB report is complete before moving forward and expand upon both SPC-WQB and RCC findings for Phase II. (3) Consider our job done here. (4) Let GLRI project move forward and act on recommendations.

- The discussion generally likes Proposal-1 and Option 1.

c. Making the Most of Citizen Science
   • The lead for this topic is still interested, but he has not made much progress.
   • There is a partnership program in the OMECP; the lead will communicate with this program to learn how to develop this project.
   • Sea Grant network is proposing a 3-year transboundary liaison position and interested in a joint hiring with IJC.

d. Engaging Private Sectors to Expend Science Capability
   • Differed due to time limitation.

e. Use of Social Science to Tackle Water Issues
   • Differed due to time limitation.

6. Plan for virtual SAB meeting
   The RCC’s homework during lunch is to look at SAB meeting agenda and joint messaging.

7. Discussion of GL boards joint messaging
   Due to time limitation, this topic is not discussed.

8. Discussion on next RCC meeting (virtual or in-person)
   May want to plan a topic area focused meeting. Time is to be determined.

9. Other business and closing comments
   This is the last meeting for Yves Michaud. The RCC expressed sincere appreciation to his contribution to the RCC and IJC.

10. Adjourn
### DRAFT AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-10:05</td>
<td>Roll call and approval of draft agenda</td>
<td>Co-chairs</td>
</tr>
<tr>
<td></td>
<td>Welcome new RCC members</td>
<td>Co-chairs</td>
</tr>
<tr>
<td></td>
<td>Thank departing RCC members for their contribution to RCC/IJC</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Approval of agenda</td>
<td>All</td>
</tr>
<tr>
<td>10:05-10:15</td>
<td>Implementation of SMART report recommendations guidance</td>
<td>Co-chairs/All</td>
</tr>
<tr>
<td></td>
<td>(Attachment 1; <em>Will also be discussed during SAB meeting</em>)</td>
<td></td>
</tr>
<tr>
<td>10:15-10:35</td>
<td>Projects update</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Connecting channel</td>
<td>Michael</td>
</tr>
<tr>
<td></td>
<td>b. GL early warning system</td>
<td>Michael</td>
</tr>
<tr>
<td></td>
<td>c. Great Lakes science plan</td>
<td>Val/Debbie</td>
</tr>
<tr>
<td></td>
<td>(Attachment 2; <em>Will also be discussed during SAB meeting</em>)</td>
<td></td>
</tr>
<tr>
<td>10:35-10:50</td>
<td>Work plans status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Project selection process and results</td>
<td>Co-chairs</td>
</tr>
<tr>
<td></td>
<td>d. Groundwater and Surface Water Modeling</td>
<td>Sandy/Yves</td>
</tr>
<tr>
<td></td>
<td>(Attachment 2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Operationalizing Great Lakes Early Warning System</td>
<td>Michael</td>
</tr>
<tr>
<td></td>
<td>(Attachment 3; <em>Will also be discussed during SAB meeting</em>)</td>
<td></td>
</tr>
<tr>
<td>10:50-11:10</td>
<td>Carry forward and new project development</td>
<td>Co-chairs/All</td>
</tr>
<tr>
<td></td>
<td>a. Inventory of Agricultural BMP Research and Researchers</td>
<td>Ian</td>
</tr>
<tr>
<td></td>
<td>b. Phase 2 of Nutrient Adaptive Management</td>
<td>Debbie</td>
</tr>
<tr>
<td></td>
<td>c. Making the Most of Citizen Science</td>
<td>Chris</td>
</tr>
<tr>
<td></td>
<td>d. Engaging Private Sectors to Expend Science Capability</td>
<td>Debbie/Gavin</td>
</tr>
<tr>
<td></td>
<td>e. Use of Social Science to Tackle Water Issues</td>
<td>?</td>
</tr>
<tr>
<td>Time</td>
<td>Agenda Item</td>
<td>Attendees</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>11:10-11:30</td>
<td>Plan for virtual SAB meeting</td>
<td>Co-chairs/All</td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>Discussion of GL boards joint messaging (<strong>Attachment 4</strong>)</td>
<td>Co-chairs/All</td>
</tr>
<tr>
<td>11:45-11:55</td>
<td>Discussion on next RCC meeting (virtual or in-person)</td>
<td>Co-chairs/All</td>
</tr>
<tr>
<td>11:55-12:00</td>
<td>Other business and closing comments</td>
<td>Co-chairs/All</td>
</tr>
<tr>
<td>12:00</td>
<td>Adjourn</td>
<td></td>
</tr>
</tbody>
</table>