

**Great Lakes Water Quality Board  
210<sup>th</sup> Meeting**

**Summary of Discussion**

October 15, 2020 9:00 AM – 3:30 PM ET  
Virtual Meeting

**U.S. Member Participants**

Jon Allan (Co-Chair)  
Sandy Bihn  
George Elmaraghy  
Frank Ettawageshik  
Steve Galarneau  
George Heartwell  
Brandon Hofmeister  
Sara Hudson  
Elizabeth Kirkwood  
Kelsey Leonard  
Monica Lewis-Patrick  
Joe Tomandl III

**U.S. Member Regrets**

Christopher Korleski

**Canadian Member Participants**

Gayle Wood (Co-Chair)  
Mark Fisher  
Michael Goffin  
John Jackson  
Carolyn Johns  
Irving Leblanc  
Ling Mark  
Chris McLaughlin  
Chris Paci  
Mark Wales

**Canadian Member Regrets**

François Houde  
Mark Mattson

**Observers**

Emily Santoro – Ontario Ministry of Environment, Conservation and Parks  
Carla Torchia – Environment and Climate Change Canada  
Ash Kumar - Environment and Climate Change Canada

**Invited Guests**

Dr. Anna Harrison – State University of New York, College of Environmental Science and Forestry  
Helena Garcia – University of Michigan  
Erin Murphy-Mils – University of Waterloo  
Erika Jensen – Great Lakes Commission  
Dr. Val Klump - University of Wisconsin-Milwaukee - Great Lakes Water Institute (Member of IJC's Science Advisory Board – Research Coordination Committee)  
Dr. John Bratton - LimnoTech

**Commission Staff**

Raj Bejankiwar – Great Lakes Regional Office  
Jennifer Boehme – Great Lakes Regional Office  
David Burden – Great Lakes Regional Office (Director)  
Mark Burrows – Great Lakes Regional Office  
Allison Voglesong Zejnati – Great Lakes Regional Office  
Li Wang – Great Lakes Regional Office  
John Wilson – Great Lakes Regional Office

**Commission Liaisons**

Victor Serveiss – U.S. Section  
Paul Allen – Canadian Section  
Russell Consor – Canadian Section

**Secretariat**

Antonette Arvai – Great Lakes Regional Office

**1. Welcome, Introductions and Indigenous Acknowledgement (Co-Chairs)**

The co-chairs welcomed everyone to the 210<sup>th</sup> meeting of the board. The co-chairs acknowledged the traditional First Nations and Tribal territories on which the meeting was conducted that day, given the virtual gathering of participants from various locations. It was recognized that board member Sandra Cooper's term with the board ended at the end of August. She was recognized for her contributions to the board over her three-year term. Members and other participants identified themselves.

**2. Review and Approval of the Agenda (Co-Chairs)**

The agenda was reviewed and approved with no additions or changes.

**3. Co-Chairs' Update (Co-Chairs)**

The co-chairs have been providing monthly written updates to members to ensure timely communication of co-chair activities relevant to board operations. A verbal update was provided during the meeting on the following:

- The board is beginning its work planning process. It is a key point of the meeting discussions, as part of a later agenda item.
- The co-chairs will be appearing before the Commissioners on October 23, 2020, as part of the IJC's Fall Semi-Annual Meeting. Co-Chairs will be providing updates on the board's activities and projects.
- Co-chairs continue to participate in calls with the other IJC Great Lakes Advisory Board Co-Chairs to keep abreast of board projects and to identify key issues to discuss jointly with Commissioners.
- Co-Chairs continue to participate in calls with WQB lead Commissioners to inform on WQB activities and raise issues of interest. Recent topics included how the WQB could assist with the communication of the IJC's Triennial Assessment of Progress report and reviewing the effectiveness and impact of the work of the boards and IJC.

**4. Cross-board Project Updates (G. Wood)**

WQB members serving on other advisory board work groups provided updates on the progress of these projects.

Currently, WQB members serve on the Science Advisory Board's (SAB) Great Lakes Science Plan project, the SAB's Great Lakes Early Warning System Phase 2 (GLEWS) project, and the SAB's Groundwater-Surface Water Conceptual Model. The WQB and SAB are also jointly undertaking a Nutrient Synthesis project. The Science Plan seeks to institute a research plan to ensure restoration dollars are spent with the greatest return on investment. The GLEWS project seeks an approach to identify a stressor or threat early, before it becomes a crisis. This project is linked to the WQB's Great Lakes Horizons project. The groundwater-surface water project seeks to understand how groundwater hydrological flow impacts Great Lakes riverine and open water systems. The Nutrients Synthesis project will assess implementation of federal Domestic Action Plans and the degree to which past IJC nutrient-related recommendations have been used.

The GLEWS, Groundwater-Surface Water, and Nutrients Synthesis projects are recently started and consultants have been contracted to support each of these. An update on the SAB's Science Plan project was provided, by the SAB project co-lead, as part of agenda item 5.

**5. Presentation: IJC's Science Advisory Board's Great Lakes Science Plan Project (J. Allan)**

Science Advisory Board member Dr. Val Klump (Dean and Professor at University of Wisconsin-Milwaukee Great Lakes Water Institute) and project contractor Dr. John Bratton (LimnoTech) gave a presentation on the SAB's current Great Lakes Science Plan Project. The co-chairs will seek to bring

presentations on other board projects so that members can better understand the work of others and where there may be connections with WQB work.

The project recognizes that a binational science plan is needed to invest in research that will be cost effective; long-lasting; prevent future problems; and eliminate the ongoing need for restoration. Some of the project goals include, assessing gaps in understanding and in capability to develop that understanding; identifying type and scope of research needed; assessing human resource, education, and workforce development; and level of funding needed is commensurate with scale and complexity. To date the project has completed an expenditure survey to determine annual investment in Great Lakes research and monitoring by Canada, the U.S., and Indigenous groups as well as a survey to identify priority research needs.

#### **6. Panel Presentation: Spotlight on Academic Research (G. Wood)**

A panel presentation was held to highlight academic research of young professionals across diverse Great Lakes topics. Each of three panelists provided a brief presentation of their work; a summary of which is provided below.

##### *Examining Social Equity in Great Lakes Restoration* **by Helena Garcia (Masters Student, University of Michigan)**

The project explores the social benefits of restoration efforts in Area of Concern (AOC) communities; which benefits are most important to those communities; and how prioritizing social benefits can lead to equitable restoration outcomes and longevity in those AOC communities. In conducting interviews with members of four Michigan AOC communities about their experiences with the restoration process, it was found – that it is important to cultivate a sense of pride and place; there are benefits to partnering with local community groups throughout the restoration project; and that there can be barriers for equitable enjoyment of restored areas (e.g., lack of available transportation to restored areas). It is important to build and promote the social connection to the waters and land to ensure the continued stewardship after the restoration efforts are done.

##### *Key Drivers in Water Governance of Nutrient Management in the Western Lake Erie Basin* **By Erin Murphy-Mills (PhD candidate, University of Waterloo)**

The project is investigating drivers of eutrophication in the western Lake Erie Basin. Based on surveys conducted with U.S. and Canadian experts, some common drivers identified included agricultural practices, climate change and land use change. Unique drivers identified included greenhouse agriculture (via Canadian survey) and control of particulate phosphorus (via U.S. survey). The surveys also revealed that there are conflicting opinions on the importance of the various drivers and a shared view that current governance systems may not be best for coordinating nutrient management efforts.

##### *Basin-wide analysis of water quality in Great Lakes coastal wetlands* **By Dr. Anna Harrison (Program Manager, State University of New York College of Environmental Science and Forestry)**

The project used data collected through the Coastal Wetland Monitoring Program to develop a wetland water quality index, using two sub-indices – land use/land cover and water chemistry. While land use/cover can represent potential stress on water quality (i.e., highly urbanized areas may have poor water quality), this is not always the reality. A combined index can be used to prioritize wetland sites for restoration or protection. Future research will use the Coastal Wetland Monitoring Program to link water levels to wetland water quality.

#### **7. Board Project Updates (G. Wood)**

WQB members provided brief updates on board projects and activities.

#### Manure Management (G. Wood)

The outcomes from webinars held between April and June 2020 has been summarized in a report and submitted to the Commission. The report includes proposed next steps for the WQB to further advance their work and recommendations on manure management, stemming from the WQB's 2019 report. These next steps will be used to develop a work plan for the upcoming work cycle.

#### Nuclear Decommissioning (J. Jackson)

A virtual expert workshop is being held in mid-November that will focus on select, key topics for in-depth discussions that will help refine the development of recommendations. The project is expected to be completed in December 2020.

#### Wetlands (S. Galarneau)

In July 2020 the Great Lakes Coastal Assembly, in response to a December 2019 WQB letter, identified three broad areas to advance coastal wetland efforts that included, establishing baselines for range, type and conditions of wetlands; setting goals for wetland extent for healthy Great Lakes; and priority areas to focus actions to achieve goals. The Coastal Assembly has been working with Annex 7 (Habitat and Species) and other partners to create task teams, identify action items and develop implementation plans to advance these approaches.

#### Great Lakes Water Quality Agreement 50th Anniversary Review (G. Heartwell)

The project goals are two-fold – (1) to assess the impacts of Great Lakes Water Quality Agreement (GLWQA) over the years and identify opportunities for improvement and (2) to recommend ways to memorialize and celebrate its successes. The work group developed and distributed a survey to select experts to solicit insights on the GLWQA over time. The work group is also developing a revised work plan to request funds to carry out a review of the Agreement and its implementation.

#### Great Lakes Horizons (J. Allan)

The goal of the project is to understand the forces that will have a material effect on the Great Lakes (ecologically, economically, socially and culturally) over the next 30+ years. A thematic in this work will be understanding climate change impacts on population in the Great Lakes region, where there may be migration to the area due to increased droughts, fires, storms, etc. in other areas. The contract for the project was finalized at the end of September. A preliminary meeting with the contract team was held in early October and a full work group kick-off call is scheduled for early November.

#### Third Great Lakes Binational Poll (C. Johns)

The work group has been developing the poll survey by enhancing the questions used in the 2015 and 2018 polls. A request for proposals has been sent out and a contract is expected to be in place by early November. The polling is to be conducted in January-February 2021, with a final report by April 2021. The work group will also be developing a work plan for the upcoming work cycle that will include conducting an on-line version of the poll; holding focus groups; and data analytics of the three polls.

#### Fossil Fuel Development and Transportation Watching Brief (L. Kirkwood)

Recent developments highlighted, crude oil prices that are below the break-even point for profitable development of new wells; decreased pipeline capacity utilization in the Great Lakes; and executive orders by the Governor of Michigan that put the state on a path towards becoming carbon-neutral by 2050. The board supports the continuation of the watching brief, which will mainly focus on economic indicators that could signal increases in transportation and development that can alert to potentially increased risks of pollution impacts to water quality. Future watching brief updates will also consider air quality impacts (CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>) on the acidification of the lakes as a result of fossil fuel use and transport.

#### Great Lakes Nuclear Watching Brief (J. Jackson)

Recent developments relevant to the watching brief were highlighted including, a corruption investigation into the passage of a 2019 law that provided subsidies to support the continued operation of the plants that may impact Ohio's Davis-Besse and Perry plants and the early retirement of two nuclear power plants in Illinois (100 miles from Lake Michigan) in 2021, due to unprofitability and lack of public policy support for continued operation. The board supports the continuation of the watching brief, the focus of which may be adjusted based on the outcomes of the nuclear decommissioning project.

*Microplastics Watching Brief (S. Galarneau)*

A recent development of the watching brief noted the Government of Canada's announcement on the ban of certain single-use plastic items (e.g., bags, straws, cutlery) by the end of 2021. The board supports the continuation of the watching brief. The watching brief co-leads will also further explore the issue of nanoplastics transport through the blood-brain barrier and implications for human health as an issue to track in the watching brief.

**8. 2021 Work Planning (Jon A.)**

The board has identified three projects for work plan development for the coming work cycle. These projects are expansions of or follow-ups to current board projects and include: (1) expanding the third binational poll to include an on-line survey; holding focus groups; and conducting data analytics of the three binational polls (2) as part of the board's 50<sup>th</sup> Anniversary project, request funds to review the Great Lakes Water Quality Agreement and its implementation (3) next steps for the board's manure management work to create a committee to help advance the WQB's 2019 recommendations for strengthening the regulatory manure management framework. There are also two proposed cross-board projects that include a joint advisory board project on a long-term vision for monitoring and sensing in the Great Lakes and a project in collaboration with the Health Professionals Advisory Board on a Great Lakes microbial tracking study.

Additional topics were also raised and discussed as below:

- ***Mitigation actions to minimize water level fluctuations and their negative impacts.*** The issue of water level impacts is a significant focus of the IJC. The IJC, in addition to its three Great Lakes control boards, has the Great Lakes Adaptive Management (GLAM) Committee, which advises the Great Lakes control boards on how regulation of water levels and flows affects socio-economic interests and the environment and whether changes to regulation should be considered. Given the mandate of the GLAM Committee, the WQB will first seek to better understand their work and then revisit whether there are specific issues the board could explore relevant to water quality that may be impacted by high and/or low water levels.
- ***Presence of microplastics in Great Lakes drinking water and their potential impacts on human health, particularly that of rural and Indigenous communities.*** Include this aspect as an item within the WQB's Microplastics watching brief. Additional understanding of this issue is needed.
- ***Identification of surface water contaminants for drinking water monitoring and treatment.*** Additional thought needed on how this issue would be approached and what activities the board could potentially undertake.

**ACTION ITEM:** Work groups, with assistance from staff, will develop draft work plans for the three identified projects for board review by November 3, 2020.

**ACTION ITEM:** Additional topics identified will be added to the WQB's Great Lakes Issues List for further follow-up, as needed.

## **9. Equity and Diversity** *(Jon A.)*

During the July 29th WQB meeting, the issue of equity and diversity was raised, and the role that it plays in the operations of the WQB. Members supported the idea of exploring the equity and diversity issue and a decision made to create a committee. Commissioners later expressed that the IJC had guiding principles that govern all the boards under its purview and that boards should not develop their own, separate policies, to ensure consistency across the IJC. The WQB's committee will be examining how the board operationalizes and supports the IJC's guiding principles and identify areas where board operational improvements may be made. This can include examining the communities that the WQB engages with and the ways by which they are engaged. The committee will continue to meet periodically and keep the board apprised of developments.

## **10. Presentation: Great Lakes Commission** *(G. Wood)*

A presentation on the Great Lakes Commission's (GLC) mission and current priorities was provided by Interim Executive Director Erika Jensen. The GLC was established by the Great Lakes Basin Compact and includes members from each of the eight Great Lakes states and associate members from Ontario and Quebec. The GLC facilitates collaboration between its member states and provinces to advance collective interests to promote economic prosperity and environmental protection. In March 2020, the GLC released a list of priorities that urges U.S. Congress and the administration to focus on that included, continued funding of the Great Lakes Restoration Initiative; safeguarding drinking water; protecting against invasive species and building climate resiliency. Some current areas of focus for the GLC include developing a basin wide action plan for climate resilience; Blue Accounting, which tracks progress on shared goals around desired social, economic and environmental outcomes; and Erie Stat, a web-based platform designed to track progress toward the binational phosphorus reduction goals established under the GLWQA.

## **11. Presentation: U.S. EPA Great Lakes Advisory Board** *(J. Allan)*

WQB member, and Co-Chair of the U.S. EPA Great Lakes Advisory Board (GLAB), Steve Galarneau, provided an overview of the GLAB. The GLAB provides advice and recommendations to the EPA Administrator on matters related to implementation of the Great Lakes Restoration Initiative (GLRI) and related Great Lakes issues. The board was first formed in 2012 and ended in 2018. It was re-established in April 2020. The GLAB will soon convene to receive "charge questions" from the U.S. EPA, setting the framework for the work that will be undertaken by the board.

## **12. Next WQB Meetings** *(G. Wood)*

The WQB's 210<sup>th</sup> meeting is the last for the 2020 calendar year. The general schedule for WQB meetings for the 2021 year was reviewed, as below. The scheduling of in-person meetings will be dependent on the COVID-19 situation.

- January/February 2021 – Teleconference
- Late April 2021– Washington D.C. - In conjunction with IJC Spring Semi-Annual Meeting
- July/August 2021 – Teleconference
- Fall 2021 – Canadian location in Great Lakes basin

**ACTION ITEM:** Board Secretary will send a poll to members to identify specific dates and times for 2021 meetings.

## **13. Public Comments and Closing Remarks** *(Co-Chairs)*

No members of the public were present. The co-chairs thanked members and others for their participation.