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IJC Science Advisory Board Videoconference Meeting Summary

April 1, 2022 12:00pm-1:30pm

U.S. Members	Canadian Members	Commission Staff
Lucinda Johnson (SPC&SAB Co-Chair)	Gavin Christie (RCC& SAB Co-Chair)	Lizhu Wang (RCC Secretary)
Chris Winslow (RCC Co- Chair)	Gail Krantzberg (SPC Co- Chair)	Matthew Child (SPC Secretary)
Mike Murray	Karen Kidd	Allison Voglesong Zejnati
Mic Isham	Jerome Marty	David Burden
Michael Twiss	Mike McKay	Mark Burrows
Debbie Lee	Maggie Xenopoulos	Rob Phillips
Sandra Eberts	John Livernois	Victor Serveiss
Erich Emery	Nandita Basu	Raj Bejankiwar
Dale Hoff	Rebecca Rooney	
Bob Sterner	Ram Yerubandi	
	Rejean Couture	
	Jason Borwick	
	Kathy McKague	

Regrets: Joe DePinto, Val Klump, Drew Gronewold, Ian Campbell

Guest: Mike Geer

1. Welcome, Round Table Introductions, and Approval of Draft Agenda

- The SAB Co-Chairs welcomed everyone to the virtual meeting, and round table introductions were made.
- Special welcome was extended to Dr. Bob Sterner as a new member of SPC. Bob is a Professor of Biology and Director of the Large Lakes Observatory at the University of Minnesota, Duluth.
- Draft agenda was approved as presented.

2. SAB Projects - Status Updates, Next Steps & Discussion

- **Great Lakes Science Strategy**
Workgroup Co-chairs provided an overview of the progress for the project. A draft final report incorporates the input received from the project Steering Committee and is

backstopped by a more detailed workshop proceeding. The report will be distributed to SAB members for a “red-flag” review.

The Science Strategy report summarizes current binational investments in Great Lakes science and monitoring, describes high priority science gaps and needs, and identifies four priority investment categories totaling \$100M/year for each of the next 10 years.

This need is in addition to GLRI and all other current funding sources and would be used for research, new technology, vessel, and scientists. If implemented, it would allow the Great Lakes science and management community to address the new and emerging challenges facing the lakes.

The project team is working on the development of a summary report and an implementation strategy. It will be an involved process to get the Science Strategy implemented.

It was suggested that there is a need to put together a narrative regarding why this is needed, and may want to link it with innovation, education, and industry.

It was discussed whether the governments can issue a reference to IJC on this. It was commented that it has not been done in the past for something like this. It was mentioned that GLWQA is a reference.

The National Association of Marine Labs has put out a position statement that refers to and supports this effort.

- **Great Lakes Early Warning System**

Workgroup Co-chairs reported that the project is a year in and has progressed as scheduled. The contractor team has produced a draft report on the five case studies. The five cases include nutrients other than phosphorus, new fish pathogens, PFAS/PFOA impacts, changes in climate change related agricultural range, and changing competition for groundwater with ecological impacts. The 52-page case study report is being reviewed by workgroup members.

The workgroup is in the process of planning a workshop that will be held this summer. The goal of the workshop is to develop an overarching Early Warning System framework with steps that can be followed for identifying potential stressors, screening out key stressors, applying appropriate analytical tools to assess the risk level of the stressors, and making adequate recommendations for actions by the governments.

The US EPA Great Lakes Advisory Board’s draft final report recommends coordinating with the IJC on the Early Warning System as it relates to invasive species: https://glri.us/sites/default/files/glab_penultimate_draft_march_3_0.pdf.

- **Great Lakes Winter Science**

The project work plan has been approved by Commissioners. The next step is to identify a contractor and establish a contract through the process of U.S. Department of State. This is not a simple process, which may take until September to get the project started.

- **Q&A (if any) on individual SPC & RCC projects**
None

3. New SAB Work Plan – Microplastics Monitoring & Risk Assessment

This is a joint effort between RCC and SPC, as well as collaborating with Dr. Chelsea Rochman at University of Toronto. The workgroup leads welcome feedback on the work plan and look for members to serve on the workgroup.

The objectives of the project are to synthesize recent advances and knowledge in plastics science relevant to the Great Lakes, develop a framework for monitoring plastic pollution in the Great Lakes that would support its use as a sub-indicator in the GLWQA, and develop a risk assessment framework for plastic pollution focusing on ecological effects (sediment and water thresholds).

Members also discussed the cause, where, and how the plastics get into lakes, which is important for the development of management strategy. There are two ways to think about this – pathways and actors. Ontario has been working with Chelsea Rochman in identifying size/type and where they come from in the Humber River watershed. There are many questions that need to be answered, so the project needs to be carefully scoped.

Suggestions for potential work group members were made, and additional suggestions are welcomed. It was noted that the U.S. and Canada took early policy action on microbeads, and understanding what contributed to this may be instructive. Including social scientists/environmental economists as part of this working group would be beneficial.

4. 2023 Triennial Assessment of Progress Report

Focus areas of the TAP report include climate change impacts, emerging contaminants, linking current board projects with advice (e.g., TEK, contaminants, nutrient, groundwater, AIS, science strategy, early warning), and public input.

SAB's role – board members reviewed the TAP Outline and felt it is adequate. How the outline is executed is important. Members prefer to play a role of reviewing the draft document instead of writing sections. The 50-year anniversary is a landmark of the GLWQA, and this TAP report may need to be forward thinking with specific strategies in recommendations.

5. WQB Radionuclide Recommendation

The Water Quality Board completed a report titled Decommissioning Practices of Nuclear Power Facilities in the Great Lakes Basin. The report states that “The WQB recommends the

IJC direct its Science Advisory Board or its Health Professionals Advisory Board to update the IJC Nuclear Task Force's 1997 inventory of radionuclides for the Great Lakes and its accompanying report on bioaccumulation of radionuclides to improve the understanding of radionuclides in the Great Lakes and their effects on the basin's living communities".

At the time of this SAB meeting, the Commission has not provided direction on the WQB's recommendation.

SAB members felt their current workload is heavy and they have limited expertise on board. If SAB is directed to carry out such a task, additional external expertise would be needed to inform an IJC advisory board review.

The decommissioning issue is partly being driven by the search for a long-term storage site in Canada. There are proposed locations for long-term burial sites. Canada could become a place for domestic and international waste storage, and a number of nuclear plants are expected to be decommissioned in the coming few years.

6. Board Appearances Coordination and Messaging

- Great Lakes Science Strategy project
 - RCC - Val Klump will discuss in depth during RCC appearance, and Gail Krantzberg will provide an introduction during SPC appearance.
- GLEWS (Phase 2) project
 - RCC - Michael Twiss.
- Great Lakes Winter Science project
 - SPC – Maggie Xenopoulos.
- Microplastics work plan
 - RCC – Rebecca Rooney and Karen Kidd will jointly present during RCC appearance.
- WQB recommendation on radionuclides
 - SPC appearance.

7. Other Business & Adjournment

- None
- The meeting was adjourned at 1:34 p.m.



IJC Science Advisory Board
April 1, 2022 – 12:00 to 1:30pm Eastern Time

Draft Agenda

<i>Time</i>	<i>Agenda Item</i>	<i>Lead</i>
12:00-12:10	1. Welcome and Round table introductions <ol style="list-style-type: none"> i. Special welcome to new member Dr. Bob Sterner ii. October 15, 2022 SAB meeting record included for information (Attachment 1) iii. Approval of draft agenda 	SAB Co-Chairs
12:10-12:35	2. SAB Projects - Status Updates, Next Steps & Discussion <ol style="list-style-type: none"> i. Great Lakes Science Plan ii. Great Lakes Early Warning System (Phase 2) iii. Great Lakes Winter Science iv. Q&A (if any) on individual SPC & RCC projects (see Attachment 2) 	Gail & Val Lucinda & Michael T. Maggie & Michael T. SAB members
12:35-12:50	3. New SAB Work Plan – Microplastics Monitoring & Risk Assessment (Attachment 3)	Karen & Rebecca
12:50-1:10	4. 2023 Triennial Assessment of Progress Report (Attachment 4)	SAB Co-Chairs
1:10-1:20	5. WQB Radionuclide Recommendation (Attachment 5)	SAB Co-Chairs
1:20-1:25	6. Coordinate Appearance messaging – which Committee will lead discussion on: <ul style="list-style-type: none"> • Great Lakes Science Plan project • GLEWS (Phase 2) project • Great Lakes Winter Science project • Microplastics work plan • Other? e.g., WQB recommendation 	SAB Co-Chairs Val & Gail Lucinda & Michael T. Maggie & Michael T. Karen & Rebecca
1:25-1:30	7. Other business	SAB members
1:30	8. Adjourn	SAB Co-Chairs