

## Great Lakes Executive Committee Meeting Webinar Summary

June 29-30, 2021

### CO-CHAIR WELCOMING REMARKS

U.S. Great Lakes Executive Committee (GLEC) Co-Chair, Chris Korleski (U.S. Environmental Protection Agency, EPA) opened the meeting by welcoming participants to the webinar.

Chris provided updates on behalf of the U.S. to the GLEC, noting an ongoing Administration transition and new political appointments within EPA and highlighted Administrator Michael S. Regan, sworn in as the 16<sup>th</sup> Administrator for EPA and Radhika Fox as the confirmed Assistant Administrator for EPA's Office of Water. Chris also updated the GLEC on the status of delayed GLWQA related documents and progress made on publishing materials related to Lakewide Management and Chemicals of Mutual Concern. Lastly, Chris reported there was ongoing Congressional support for the Great Lakes Restoration Initiative (GLRI), a funding program that significantly advances U.S. commitments under the GLWQA, and noted possible funding increases in Fiscal Year 2022.

Canadian GLEC Co-Chair, Mike Goffin (Environment and Climate Change Canada, ECCC) also welcomed GLEC members and provided updates on behalf of the Canadian government.

Mike reported that on May 27<sup>th</sup>, 2021, the ministers of Environment and Climate Change Canada and Ontario's Ministry of the Environment, Conservation and Parks jointly announced the new Canada-Ontario Agreement (COA) on Great Lakes Water Quality and Ecosystem Health, 2021. The new agreement marks an important milestone and recognizes the 50<sup>th</sup> anniversary of Canada-Ontario's collaboration to restore, protect and conserve the Great Lakes.

Both GLEC Co-Chairs concluded their opening remarks expressing that they look forward to the information to be presented throughout the course of the meeting.

*A list of meeting attendees can be found in Appendix A.*

## **BUSINESS ITEMS**

Chris Korleski summarized and provided a status update on the following action items from the December 2020 GLEC Meeting:

- Lakewide Management Annex Co-Leads to follow-up on the need for binational Great Lakes-wide discussions at the Annex 2 Subcommittee.
- EPA to assess past progress under the Chemicals of Mutual Concern Annex and, given available resources, look for ways to improve the implementation of the Annex.
- Nutrients Annex Co-Leads to report back at June 2021 GLEC meeting with an update on the binational science in support of target setting for the Eastern basin of Lake Erie.
- Groundwater Annex Co-Leads to report back at the June 2021 GLEC meeting on progress in drafting the update to the 2016 Groundwater Science report.
- State of the Great Lakes (SOGL) Task Team Leads to continue work on updating the SOGL indicators for public release in 2022; and Science Annex Co-Leads to provide an update on COVID impacts to the 2021 field season at the June 2021 GLEC meeting.

Chris also called for the approval of the draft December 2020 GLEC meeting summary circulated in the meeting's Participant Binder [the meeting summary was approved with no comments received].

## **PREPARING FOR THE NEXT TRIENNIAL MANAGEMENT CYCLE**

GLEC Secretariat, Carla Torchia (ECCC) and James Schardt (EPA), provided an update on the Great Lakes Public Forum. The Forum is planned for fall of 2022 likely in Windsor, Ontario. 2022 also marks the 50<sup>th</sup> anniversary of the signing of the first Canada-United States Great Lakes Water Quality Agreement (GLWQA). Planning for the celebrations is being led by EPA, ECCC, U.S. State Department, and Global Affairs Canada. A Planning Advisory Committee will also be formed to provide ideas and input to support Canada and the U.S.' planning of the Forum and 50<sup>th</sup> GLWQA anniversary celebrations.

Carla and James provided an overview of the development of the *2020-2022 Progress Report of the Parties*. Drafting will occur over the summer, and a first draft for comment will be distributed to the GLEC membership for comment in December 2021. GLEC feedback will be incorporated into a second draft which will be reviewed and approved by EPA and ECCC for publication targeted for late June 2022.

State of the Great Lakes Leads Nancy Stadler-Salt (ECCC) and Beth Hinchey-Malloy (EPA) presented on the development of SOGL indicators and the *2022 State of the Lakes Report*. Scientific review of the indicators will occur in the fall of 2022. There will be a status update given at the winter GLEC meeting. The final report will be for publication in late June 2022.

Carla and James indicated that the development of the next set of *Binational Priorities for Science and Action* will be initiated after the December 2021 GLEC meeting. The binational priorities are presented as draft at the 2022 Great Lakes Public Forum for public comment.

### **Action Items:**

- Secretariat to initiate drafting of Progress Report of the Parties with the Annex Co-Leads.

- Annex 10 to hold SOGL indicator webinars this fall as part of the SOGL Scientific Confirmation process, and GLEC membership to identify agency experts to participate.
- Secretariat to invite GLEC Member and Observer participation in the 2022 Great Lakes Public Forum planning advisory committee.

## **ANNEX 1 – AREAS OF CONCERN**

Annex 1 Co-Lead Marc Tuchman (EPA) provided an update on the status of delisting the Ashtabula River Area of Concern (AOC), which was expected to officially occur in the coming months. Delisting the Ashtabula River AOC will mark the sixth AOC delisted in the U.S.. Marc also highlighted that the 100<sup>th</sup> beneficial use repairment removal recently took place. He credited the strong partnerships between States, Tribes and communities involved, as well as the availability of Great Lakes Restoration Initiative (GLRI) funding.

Mark Chambers (ECCC), for the Annex 1 Co-Lead Kate Taillon, presented information on the science and monitoring work completed in 2020. ECCC and its partners are engaging with AOC communities on the proposed removal of six beneficial use impairments. Mark also noted remedial actions to tackle additional beneficial use impairments in the Thunder Bay, St. Lawrence River, Bay of Quinte, Toronto and Hamilton Harbour.

Guest presenter Corey Burant (Niagara Parks Commission) then presented information on Niagara River Coastal Wetland and Riparian Restoration Projects. Mr. Burant presented sites of the projects, concept designs, discussed results of the projects and noted the success of the projects based on partnerships.

## **ANNEX 2 – LAKEWIDE ACTION AND MANAGEMENT**

Annex 2 Co-Lead Sean Backus (ECCC) provided a brief introduction for the Lakewide Management annex and discussed the extensive activities of the Lake Partnership. Sean also spoke to a proposal to sunset the existing Annex 2 subcommittee now that all the Lakes now have fully functioning Lake Partnerships [see DISCUSSION RELATED TO ANNEX INFORMATION NOTES below for further information].

Annex 2 Co-Lead James Schardt (EPA) provided an introduction to the guest presenter David “Bo” Bunnell (U.S. Geological Survey). Mr. Bunnell discussed ongoing activities to restore native populations of Lake Ontario Coregonids. He presented historical status of Coregonids and the recent declines in populations around the Great Lakes basin, particularly noting that all Coregonids have been lost in Lake Erie. Work is ongoing to restore the population following a conservation plan. Mr. Bunnell emphasized the ongoing international coordination amongst multiple agencies and departments involved to address this complex restoration challenge.

## **ANNEX 3 – CHEMICALS OF MUTUAL CONCERN**

Lisa Sealock (ECCC) and Chris Korleski (EPA) provided an overview of binational Annex 3 activities and domestic efforts with respect to chemicals management. An overview of the binational Chemicals of Mutual Concern (CMC) screening criteria was provided. Two supporting Annex 3 documents, the “Guidance document” and “Sample Nomination document”, were also discussed.

Lisa announced that the binational Mercury Strategy was recently posted to [binational.net](http://binational.net). In addition, Canada has posted a draft Canadian PFAS Strategy and is moving forward with amendments to the Canadian Environmental Protection Act (CEPA). Canada also announced a three-year renewal of their Chemical Management Plan.

Chris mentioned that the U.S. is catching up on the backlog of Annex 3 documents and announced Ted Smith as the new U.S. Annex 3 Co-Lead. The U.S. announced that there will be additional work on PFAS in the upcoming years, including the creation of a new EPA Council on PFAS which will be developing a 2021-2025 strategy. A number of actions under the GLRI were also described, including restoration work at AOCs, monitoring CMCs in tributaries and sediments, researching effects of CMC on mussels, and monitoring CMCs in sportfish in Lake Erie.

During the discussion, the work by the States to actively address PFAS contamination in their jurisdictions was raised. In addition, there was reference to a letter from a group of non-governmental organizations sent to the Annex 3 Co-Leads recommending the development of a binational PFAS strategy.

**Action Item:**

- GLEC Co-Chairs to discuss path forward on PFAS CMC strategy with respect to domestic/binational approach.

**ANNEX 4 – NUTRIENTS**

As a prelude to the Annex 4 presentation, Chris Koreleski mentioned that one of the issues that was recently raised by the Great Lakes Fishery Commission is the issue of sufficient integration of nutrient management efforts in reducing algal blooms and ensuring sufficient nutrients in the offshore for fisheries management. Mike Goffin noted the importance of the issue of declining productivity in the offshore and the importance of properly integrating these two management issues.

Annex 4 Co-Lead Santina Wortman (EPA) provided an overview of several annex-related activities. Santina presented the most recent estimate for phosphorus loading at over 8,000 tons, which is in excess of the target of 6,000 tons. She also presented a visualization of a new “dashboard” style reporting being developed by the ErieStat team. Santina also discussed the Eastern Basin Task Team assessment of the available science to consider setting a target for Lake Erie’s eastern basin. Two whole lake models are being run by LimnoTech and ECCC, which will be reviewed by the Eastern Basin Task Team to reassess the state of science. In addition, the Lake Ontario Task Team, which includes both nutrient and fishery experts, is evaluating whether there is sufficient information for re-assessing nutrient targets for Lake Ontario and expect providing recommendations this fall.

Annex 4 Co-Lead Sandra George (ECCC) provided an overview of the Adaptive Management Framework Task Team, which was established in 2018 to guide activities to reduce nutrients in Lake Erie. The Task Team is examining the validity of the existing nutrient targets to restore Lake Ecosystem Objectives, as

well as the effectiveness of nutrient reduction activities. The Adaptive Management Framework is expected to be finalized soon.

In the discussion, it was noted that Cooperative Science and Monitoring Initiative activities are exploring the causes of the recent algal blooms in Lake Superior. In addition, Sandra George mentioned that more research is needed to find the causal conditions for microcystin production in Lake Superior.

**Action Items:**

- GLEC Co-Chairs to initiate discussions on steps to ensure appropriate integration of nutrient and productivity issues in the Great Lakes.
- Annex 4 Co-Leads and Subcommittee to review nutrient models and further assess state of science nutrient target setting for Lake Erie's Eastern Basin

**ANNEX 5 – DISCHARGE FROM VESSELS**

Annex 5 Co-Lead Lorne Thomas (U.S. Coast Guard, USCG) reported that EPA is working on final Vessel Incidental Discharge Act rulemaking and currently reviewing the many comments received on the proposed rule. As part of the rulemaking, EPA sought additional feedback from the States. The rule is expected to be finalized by December 2021, but may be pushed to spring 2022. USCG is preparing for compliance and enforcement activities after the rule is finalized. USCG is also establishing the Great Lakes Center of Expertise for Oil Preparedness and Response. The Center will likely be located in Michigan.

Annex 5 Co-Lead Sharron Seko (Transport Canada) mentioned that Fisheries and Oceans Canada is studying the effectiveness of ballast water technology and is performing a national analysis of the risks of biofouling. On June 23 2021, Transport Canada published new ballast water regulations. These regulations will allow Canada to meet International Maritime Organization standards and reduce the spread of invasive species in the Great Lakes.

Guest speaker, Colin Henein (Transport Canada), then provided an overview of Canada's new ballast water regulations. During discussions, Colin mentioned that discussions with industry are ongoing in terms of the time and cost to get systems installed on vessels. He also clarified that small vessels are directed to minimize risks by exchange, uptaking ballast in areas without algal blooms, and can also use potable water for ballasting.

**ANNEX 7 – HABITAT AND SPECIES**

Two guest speakers provided information on activities being undertaken in support of the Annex.

Wendy Leger (ECCC) presented on efforts underway by ECCC to model future Great Lakes climate and the resulting lake levels and wetland response. The project assesses the vulnerability of coastal

wetlands, possible mitigation approaches, and includes coordination with local communities for taking local actions. The modelling work predicts that land surface air temperature is likely to increase by about 2.5 degrees Celcius (36.5 Fahrenheit) up to 5 to 7 degrees Celcius (41 to 44.6 degrees Fahrenheit) depending on the carbon dioxide emission scenario. Snowfall is expected to decrease, with more precipitation falling as rain. Changes in total precipitation increase in Superior. On the other Lakes, water levels are likely to become more variable, with higher-highs and lower-lows. Michigan-Huron will have the greatest variability. Overall, total precipitation is likely to increase over the next century. Expansion of phragmites is likely to increase under dry conditions and decrease during wet conditions (the spread of phragmites is the most notable concern identified, which would occur rapidly during low water levels). The next steps for the project will be to describe the overall vulnerability of Canadian wetlands and identify protective actions. A report summarizing the data and findings of the work is expected in March 2022.

Kristen Schmitt (Michigan Technological University) then presented on the coastal wetland adaptation menu. The menu is designed to identify actions that will help coastal ecosystems adapt to climate change. The activities include actions for both encouraging persistence (retaining key features of existing wetlands) as well as change (moving to a new condition).

## **ANNEX 8 – GROUNDWATER**

Annex 8 Co-Leads Mohamed Mohamed (ECCC) and Howard Reeves (USGS) described progress toward updating the 2016 report on relevant and available groundwater science to be published in 2022. Much of the information and programs captured in the 2016 report are still relevant. The updates for the 2022 report will focus on key advances in the state of science and new and emerging issues. The groundwater-surface water interaction chapter will focus on agricultural nutrient interactions; the groundwater contaminants and ecosystem health chapter will include new information on PFAS and pesticides; a chapter on nutrients will summarize what is known about nitrogen and phosphorus movement through groundwater; a discussion of groundwater's impact on habitat and species, especially how groundwater inputs provides cold water refuges for aquatic organisms, will be included; a discussion of how green infrastructure inputs supports groundwater quality will be included; as well as, a discussion of how groundwater storage is likely to increase with increasing climate change-related precipitation, with the seasonality that may change due to less snow/freezing conditions. The report is currently going through technical review, which will be followed by agency review, translation, and a public comment period.

## **ANNEX 9 – CLIMATE CHANGE IMPACTS**

Annex 9 Co-Leads Jennifer Day (NOAA) and Shaffina Kassam (ECCC) provided the following updates on activities over the past 6 months, including: the production of the 2020 Annual Climate Trends Summary, December 2020 Quarterly Trends Reports available on [www.binational.net](http://www.binational.net); engagement

activities with other annexes such as, participation in Annex 7's Wetlands Vulnerability Assessment and engaging with other annexes to coordinate future projects and addressing climate change knowledge gaps; a webinar series on climate change topics held quarterly; and a 2021 Great Lakes Climate Modeling Workshop held the week of March 22, 2021, partnering with GLISA, NOAA, ECCC, and Midwest Regional Climate Center (MRCC), focusing on physical climate modeling, bias correction, lake level impact modeling, and translating climate information.

The Annex 9 Co-Leads also described a Data Visualization Project working with the Ontario Climate Consortium and ECCC's Meteorological Service of Canada, an upcoming report titled Climate Change in the Great Lakes Basin, and previewed a draft climate change video intended as an educational tool and help with the general understanding of climate change within the Great Lakes Basin.

## **DISCUSSION RELATED TO ANNEX INFORMATION NOTES**

GLEC Co-Chair Chris Korleski introduced this session which allowed GLEC Members and Observers to ask Annex Co-Leads questions in relation to the information notes shared before the meeting.

Several GLEC members and observers expressed their concerns about sunseting the Annex 2 Subcommittee. They indicated that the Subcommittee could be a forum for discussing multi-lake issues.

### **Action Item:**

- GLEC Co-Chairs and Annex 2 Co-Leads to invite feedback on the key functions of the Annex 2 Subcommittee and path forward. The GLEC Co-Chairs to evaluate the proposal and comments received.

## **GLEC MEMBER UPDATES, COMMISSIONER COMMENTS, OBSERVER COMMENTS**

The following GLEC members provided updates:

- Mike Goffin (ECCC) provided updates regarding Budget 2021 (investments in protection of ecosystem health, habitat and Species at Risk; climate change adaptation; renewal of Canada's Chemicals Management Plan; continuation of the Canadian Ballast Water Program; and support to work with others towards developing a new Canada Water Agency. Mike discussed the significant engagement efforts, a discussion paper, and the release of a "What We Heard" report summarizing the comments from the engagement sessions, which will be used in support of determining the mandate, investment and structure of a new Canada Water Agency.
- Thomas Hoggarth (Fisheries and Oceans Canada) provided updates on the department's Great Lakes activities including the lamprey program, work related to Asian carp, and field work underway as Covid constraints ease up, as well as considering options for following U.S.' implementation of the name change from Asian carp.

- Ling Mark (Ontario Ministry of the Environment, Conservation and Parks) provided updates from the Ministry including signing with Canada the ninth Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, as well as the new Minister of the Environment, Conservation and Parks, David Piccini. Ling also discussed Ontario's \$30 million over 5 years Wetlands Conservation Partner Program to enhance and protect wetlands; under the first year of the program Ducks Unlimited Canada is receiving \$6 million to restore and enhance about 60 wetlands focused around Lake Erie and Lake Ontario wetlands.
- Chris Korleski (EPA) spoke to the Great Lakes Restoration Initiative (GLRI) funding for Fiscal Year 2022, including the President's Budget of \$340 million (a \$10 million increase), as well as the House proposed GLRI funding of \$375 million, and waiting for debating at the Senate. Chris also spoke to the decision to move away from the term "Asian carp" to "invasive carp".
- Javier Laureano (EPA Region 2) provided updates on activities with respect to the Areas of Concern (AOCs) – all management actions have been completed for the Rochester Embayment AOC, which may begin formal delisting process as early of 2022; all management actions to be completed for Buffalo River AOC this year; no further management actions are required in Eighteenmile Creek AOC; continued to make progress with respect to sediment and habitat work in the Niagara River AOC; and continued to make progress at St Lawrence River AOC. Javier also discussed EPA Region 2's role and progress in the Lake Ontario Nutrient Objectives and Targets Task Team examining whether to revise the interim phosphorus targets and loading objective for Lake Ontario. Javier finally highlighted successes and outcomes from the State of the Lake Ontario Conference held in March 2021.
- James (Jim) McKane (Great Lakes Fishery Commission, GLFC) provided updates on GLFC funds supporting Grass carp control efforts (98 Grass carp removed from the Western Lake Erie Basin during 2020) and a study on the feasibility of a seasonal barrier to reduce effectiveness of Grass carp spawning in the Sandusky River, Ohio. Funding for 2021 is supporting additional personnel and equipment to remove Grass carp (to date 59 Grass carp have been removed primarily from the Sandusky River) and supporting additional engineering and design work for the seasonal barrier in the Sandusky River. Updates were also provided on Sea Lamprey Control efforts in 2020 and 2021 including traps, seasonal barriers, and lampricide treatments. Jim also noted the importance of fishery and water quality managers' collaboration in addressing declining offshore productivity. Finally, Jim provided an update on FishPass and a temporary halt due to a lawsuit.
- Erika Jensen (Great Lakes Commission, GLC) spoke to GLC efforts supporting Annex 4 through Blue Accounting ErieStat and efforts under Annex 6 and regional aquatic invasive species (AIS) early detection and response through Blue Accounting AIS issue, as well as efforts to enhance the Blue Accounting platform to better provide information to decision makers and how Blue Accounting could support efforts with respect to State of the Great Lakes and progress reporting. With respect to Annex 3, Erika mentioned the GLC committee developing a new resolution and updating policies and positions on addressing mercury contamination. She also spoke to work by the Invasive Mussel Collaborative that will be sharing outcomes of a research prioritization and site prioritization process.



- Jane Corwin (International Joint Commission) discussed the IJC report [Understanding Declining Productivity in the Offshore Regions of the Great Lakes](#) and next steps to address the issues raised in the report. Jane also discussed other IJC Board work, including the Health Professionals Advisory Board's work detailing the feasibility of updating the 1909 report on microbial water quality study; the Water Quality Boards Great Lakes regional poll of public opinion; Science Advisory Board is developing a decadal science plan for the Great Lakes identifying science gaps and priorities over the next 10 years. Jane concluded highlighted the IJC's recommendations from their 2020 Triennial Assessment of Progress Report, as well as discussed IJC work with respect to Great Lakes water levels.
- Rupert Kindersley (Georgian Bay Association) spoke to a proposed large land-based aquaculture facility at Colpoy's Bay, Wiarton, Ontario, and Georgian Bay Association's interest in aquaculture operations.
- Michael Murray (National Wildlife Federation) spoke to the Toxics-Free Great Lakes Binational Network's letter on behalf of various non-governmental organizations calling for Parties to develop a joint binational strategy for PFAS. Michael also mentioned the Great Lakes Business Network's report regarding Lake Erie algal blooms, which includes some policy recommendations. In addition, he mentioned the Summit on Great Lakes Indicators held to get input from various stakeholders to improve the current State of the Great Lakes Indicators. Finally Michael commented on the importance of the 50<sup>th</sup> anniversary of the Great Lakes Water Quality Agreement.
- Scott Sowa (The Nature Conservancy) discussed a new report entitled [Valuation of the Great Lakes Fisheries and Aquatic Ecosystem Services](#). The report includes recommendations from a workshop evaluating Great Lakes fisheries and other ecosystem services that go beyond economic valuations such as the importance of social and cultural values; stronger interdisciplinary collaborations between economists, social scientists and ecologists and others to share ideas and better address the many research needs; need to more effectively communicate how the Great Lakes impact the people that live around the lakes.

## DAY 2 MEETING WRAP UP AND CLOSING REMARKS

GLEC Co-Chair Chris Korleski provided a summary of action items for the meeting:

- Secretariat to initiate drafting of 2022 Progress Report of the Parties with the Annex Co-Leads.
- Secretariat to invite GLEC Member and Observer participation in the 2022 Great Lakes Public Forum planning advisory committee.
- Annex 10 to hold State of the Great Lakes (SOGL) indicator webinars this fall as part of the SOGL Scientific Confirmation process, and GLEC Members to identify agency experts to participate.
- The GLEC Co-Chairs and Annex 2 Co-Leads to invite feedback on the key functions of the Annex 2 Subcommittee and path forward. *[note: a subsequent email to the GLEC distribution list asked for this input by August 31, 2021.]* The GLEC Co-Chairs to evaluate the proposal and comments received.

- GLEC Co-Chairs to initiate discussions on steps to ensure appropriate integration of nutrient and productivity issues in the Great Lakes.
- Annex 4 Co-Leads to review nutrient models and further assess state of science nutrient target setting for Lake Erie's Eastern Basin.
- GLEC Co-Chairs to discuss path forward on PFAS Chemicals of Mutual Concern strategy with respect to domestic/binational approach.

GLEC Co-Chair Mike Goffin thanked all participants for their virtual attendance and proposed dates for the winter 2021 GLEC meeting, as December 1<sup>st</sup> to 2<sup>nd</sup> or December 7<sup>th</sup> to 8<sup>th</sup>. Members were requested to flag any potential conflicts to these proposed meeting dates [*Note: the next GLEC meeting was scheduled for December 1-2, 2021*].

The GLEC Co-Chairs adjourned the meeting.

APPENDIX A

REGISTERED U.S. GLEC MEETING PARTICIPANTS JUNE 29-30, 2021

1. Jane Corwin	International Joint Commission
2. Rob Sisson	International Joint Commission
3. Victor Serveiss	International Joint Commission
4. Bob Lambe	Great Lakes Fishery Commission
5. Roger Knight	Great Lakes Fishery Commission
6. Erika Jensen	Great Lakes Commission
7. Eric Brown	Great Lakes Commission
8. Mary Setnicar	U.S. EPA Region 5
9. Tiffani Kavalec	Ohio EPA
10. Lynn Garty	Ohio Lake Erie Commission
11. Linda Nguyen	Red Cliff Band of Lake Superior Chippewa
12. Christy McGillivray	Sierra Club Michigan Chapter
13. Deborah Lee	NOAA
14. Jennifer Day	NOAA
15. Hannah Arbuckle	Great Lakes Indian Fish and Wildlife Commission
16. Jen Vanator	Great Lakes Indian Fish and Wildlife Commission
17. Mic Isham	Great Lakes Indian Fish and Wildlife Commission
18. Jim Williams	Lac Vieux Desert Band of Lake Superior Chippewa Indians
19. Lisa Maybee	Seneca Nation
20. James Clift	Michigan Department of Environment, Great Lakes, and Energy
21. Sonny Myers	1854 Treaty Authority
22. Carl Platz	Army Corps of Engineers
23. Javier Laureano	U.S. EPA Region 2
24. Jon Hortness	U.S. Geological Survey
25. Scott Morlock	U.S. Geological Survey
26. Bruno Pigott	Indiana Department of Environmental Management
27. Bob Krska	U.S. Fish and Wildlife Services
28. Spencer McCormack	Little Traverse Bay Bands of Odawa Indians
29. Aaron Woldt	U.S. Fish and Wildlife Services
30. Marc Tuchman	U.S. EPA Region 5
31. Beth Hinchey- Malloy	U.S. EPA Region 5
32. Rick Hobrla	Michigan Department of Environment, Great Lakes, and Energy
33. Howard Reeves	U.S. Geological Survey
34. Mike Weimer	U.S. Fish and Wildlife Services
35. Kristina Heinemann	U.S. EPA Region 2
36. Tim Bruno	Pennsylvania Department of Environmental Protection
37. Michael Murray	National Wildlife Federation
38. Lorne Thomas	U.S. Coast Guard

39. Steve Galarneau	Wisconsin Department of Natural Resources
40. Don Zelazny	New York Department of Environmental Conservation
41. Jim Lennen	New York Department of Environmental Conservation
42. Lance Yohe	International Joint Commission
43. Scott Sowa	The Nature Conservancy

**REGISTERED CANADIAN GLEC MEETING PARTICIPANTS JUNE 29-30, 2021**

44. Paul Allen	International Joint Commission
45. Antonette Arvai	International Joint Commission
46. Raj Bejankiwar	International Joint Commission
47. Pierre Beland	International Joint Commission
48. Shampa Chakraborty	Environment and Climate Change Canada
49. Danielle Chesky	Embassy of Canada
50. Matthew Child	International Joint Commission
51. Gavin Christie	Fisheries and Oceans Canada
52. Jewel Cunningham	Parks Canada
53. Fe de Leon	Canadian Environmental Law Association
54. Melissa DeYoung	Pollution Probe
55. John Dungavell	Ontario Ministry of Natural Resources and Forestry
56. Susan Evans	Canadian Consulate General Chicago
57. Elizabeth Everhardus	Ontario Ministry of the Environment, Conservation and Parks
58. Nancy Goucher	University of Waterloo
59. Laura Gynane	Ontario Ministry of Natural Resources and Forestry
60. Christopher Hendricks	Consulate General of Canada - Detroit
61. Colin Henein	Transport Canada
62. Thomas Hoggarth	Department of Fisheries and Oceans Canada
63. Susan Humphrey	Environment and Climate Change Canada
64. Courtney Jackson	Aamjiwnaang First Nation
65. John Jackson	Toxics Free Great Lakes Binational Network
66. Jennifer Keyes	Ontario Ministry of Natural Resources and Forestry
67. Rupert Kindersley	Georgian Bay Association
68. Sonya Kleywegt	Ontario Ministry of the Environment, Conservation and Parks
69. Gail Krantzberg	McMaster University
70. Pamela Lamba	Ontario Ministry of the Environment, Conservation and Parks
71. Jessica MacKinnon	Ontario Ministry of Agriculture, Food and Rural Affairs
72. Caryn MacLoghlin	Métis Nation of Ontario

73. Ling Mark	Ontario Ministry of the Environment, Conservation and Parks
74. John Marsden	
75. Catherine Masson	
76. Greg McClinchey	Great Lakes Fishery Commission
77. James (Jim) McKane	Great Lakes Fishery Commission
78. Daryl McGoldrick	Environment and Climate Change Canada
79. Jennifer McKay	Ontario Ministry of Natural Resources and Forestry
80. Felicia Minotti	Global Affairs Canada
81. Tricia Mitchell	Fisheries and Oceans Canada
82. Margaret Neff	Ontario Ministry of the Environment, Conservation and Parks
83. Carolyn O'Neill	Ontario Ministry of the Environment, Conservation and Parks
84. Scott Parker	Parks Canada
85. Heather Pearson	Ontario Ministry of the Environment, Conservation and Parks
86. Jenn Richards	Ontario Ministry of Agriculture, Food and Rural Affairs
87. Cameron Richardson	Town of Ajax
88. Rebecca Schroeder	Invasive Species Centre
89. Shannon Seko	Transport Canada
90. James Scott	Ontario Ministry of the Environment, Conservation and Parks
91. Sebastian Soo Jian Xung	
92. Chloe Stuart	Ontario Ministry of the Environment, Conservation and Parks
93. David Sweetnam	Georgian Bay Forever
94. Bonnie Syme	Ontario Ministry of Natural Resources and Forestry
95. Cheriene Vieira	Ontario Ministry of the Environment, Conservation and Parks
96. Natalija Vojno	ICU
97. Li Wang	International Joint Commission
98. Melanie Ward	Ontario Ministry of the Environment, Conservation and Parks
99. John Wilson	International Joint Commission