Great Lakes Executive Committee Meeting Summary

June 26 - 27, 2017

WELCOME REMARKS AND BUSINESS ITEMS

The Great Lakes Executive Committee (GLEC) Co-Chairs, Tinka Hyde and Michael Goffin, opened the meeting with welcoming remarks and recognized Tinka Hyde as the new U.S. GLEC Co-Chair.

It was noted that the December 2016 GLEC Meeting Summary was finalized based on minor comments received and all action items were completed. A key action item from the December 2016 GLEC meeting highlighted was the finalization of the 2017-2019 Binational Priorities for Science and Action, which were posted on binational.net and now includes an additional Science Annex Priority for Action to "Increase understanding of Traditional Ecological Knowledge and opportunities for application to GLWQA activities". The GLEC Co-Chairs also noted a minor amendment to the GLEC Terms of Reference with the addition of a new U.S. GLEC Observer and revision to the Secretariat support section. (There were also minor updates to the GLEC membership section of the Terms of Reference.)

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

AREAS OF CONCERN (ANNEX 1)

Wendy Carney (U.S. Environmental Protection Agency (EPA)) provided an update on the Lower Menominee Area of Concern (AOC) and the path to its delisting. All management actions are completed. Three Beneficial Use Impairments remain and are expected to be removed by 2018. The targeted date for delisting is by 2019. A key to the success of the Lower Menominee AOC cleanup is the involvement of Michigan and Wisconsin stakeholder groups.

Roger Santiago (Environment and Climate Change Canada (ECCC)) provided a progress update on the restoration of Randle Reef, which is the last remaining major project required to restore the Hamilton Harbour AOC. The Randle Reef Contaminated Sediment Remediation Project is a multi-partner project that aims to clean up polycyclic aromatic hydrocarbons and heavy metals in the largest and most contaminated site on the Canadian side of the Great Lakes The project will take eight years to complete (2015-2022) and will cost a total of \$138.9 million, with one-third of the funding from ECCC, one-third from the Ontario Ministry of the Environment and Climate Change, and the remaining from local funding partners.

LAKEWIDE MANAGEMENT (ANNEX 2)

James Schardt (U.S. EPA) and John Marsden (ECCC) provided an update on the draft Lake Huron Lakewide Action and Management Plan (LAMP). Contents of the draft Lake Huron LAMP were outlined, as well as the next steps for the draft, which include posting it on binational.net for a six-week public review period and an expected posting of the final LAMP around November 2017. James and John also discussed the development of Lake Ecosystem Objectives (LEOs), proposed examples of LEOs, and how they will be used for Annex 2. Updates on Outreach and Engagement and early lessons learned from implementing the Lake Superior LAMP and drafting of the Lake Huron LAMP were also provided.

NEARSHORE FRAMEWORK

Beth Hinchey-Malloy (U.S. EPA) and Janette Anderson (ECCC) provided U.S. and Canadian updates on the Nearshore Framework under Annex 2.

Beth highlighted the next steps for EPA in implementing the Nearshore Framework. Those steps include: conducting an overall assessment of nearshore water quality using EPA Office of Water's ongoing monitoring program, *National Coastal Condition Assessment*; engaging other federal, state and tribal agencies in the assessment of the nearshore waters of the Great Lakes; and developing an approach for reporting out on Nearshore Framework commitments in the LAMPs.

Janette presented the results of the Canadian Nearshore Framework pilot project in the Long Point and Fort Erie area. The pilot project, which was carried out between November 2016 and March 2017, involved assembling data, engaging experts and refining methods to identify areas of high ecological quality and areas that are degraded and under stress. Results of the pilot project at the Long Point bay unit was found to be in good condition. The Crystal Beach unit at the eastern end of the pilot area was found to be in the poorest condition due to excessive Cladophora growth, poor water quality, beach postings and altered shorelines. Next steps include working with the Lake Partnerships over the next few months to explore opportunities for incorporating the results into lakewide management processes, and planning to complete an assessment of the Canadian side of Lake Erie and the Huron-Erie corridor.

AQUATIC INVASIVE SPECIES (ANNEX 6)

Gavin Christie (Fisheries and Ocean Canada) presented an overview on the Great Lakes Binational Ecological Grass Carp Risk Assessment. The purpose of the Risk Assessment is to provide a binational science-based assessment of the current level of risk and associated uncertainty to the Great Lakes and to transfer that information to inform decisions around the management and prevention of Grass Carp. Key findings for the arrival, survival, establishment, spread, and ecological consequences of Grass Carp in the Assessment were captured. The overall findings include: Lakes Erie and Michigan are at greater risk relative to other lakes; if the rate of arrival increases, the onset and magnitude of risk will increase; regulations and enforcement of regulations are two important factors that may affect the likelihood of arrival to the other lakes in the basin; ecological consequence is relative to the invasion process; consequences increase with abundance, therefore, preventing introduction and establishment is critical; and immediate, preventative actions would be most effective, especially in conjunction with management activities where Grass Carp has arrived, to reduce the probability of establishment and delay or reduce subsequent ecological consequences.

Tammy Newcomb (Michigan Department of Natural Resources) presented activities related to Michigan and Ohio invasive Carp in the Great Lakes. Tammy highlighted that while Grass Carp are still at a very low abundance in Lake Erie, science is being used to guide and direct action. She also highlighted that an open and transparent structured decision framework is key to informing and implementing adaptive management and also reiterated the importance of Great Lakes Restoration Initiative (GLRI) funding to continue the work.

NUTRIENTS (ANNEX 4)

Tinka Hyde (U.S. EPA) and Susan Humphrey (ECCC) provided updates on the proposed Eastern Basin Targets for Lake Erie and presented a precautionary approach to reducing phosphorus while the science continues towards establishing a numeric target; progress on the Canadian and U.S. Domestic Action Plans (DAPs) and other developments that contribute to the Nutrient Annex, such as the EPA Science Advisory Board, Binational Phosphorus Reduction Strategy, ECCC Load Calculation tool, ErieStat and NOAA early season projections.

The draft Canadian Domestic Action Plan was released for public comment from March 10 to May 24, 2017 and received over 2,100 submissions. Outreach on the Canadian DAP involved face to face sessions, online webinars and ongoing engagement with Indigenous Peoples. Next steps for the Canadian DAP are to refine the draft version for further input, receive agency approvals to finalize and post the document by February 2018.

The U.S. Domestic Action Plan is currently being drafted and will be an umbrella plan that captures five State Domestic Action Plans accompanied by a Federal Action Strategy. The U.S. DAP will be available for review in late June or early July 2017 and will be finalized in 2018. The following updates on the States' jurisdictional DAPs were also highlighted:

- Ohio the Western Lake Erie Basin Collaborative plan will be expanded to a full DAP in early fall of 2017;
- o Michigan a Draft Michigan DAP was released for comment in June 2017;
- Indiana a Draft Indiana DAP is expected in July 2017;
- o Pennsylvania a Draft Pennsylvania DAP was released for public comment in May 2017; and
- New York while a DAP for New York is not required (since no eastern basin targets have been established yet), New York will be taking action consistent with the Eastern Basin Interim commitment, which will and be captured in the overarching U.S. Domestic Action Plan.

DISCHARGES FROM VESSELS (ANNEX 5)

Lorne Thomas (U.S. Coast Guard) and Chris Wiley (Transport Canada) provided updates on the status of the International Ballast Water Convention, the U.S. Coast Guard ballast water discharge standard including *type approval* and temporary compliance alternatives, and the Annex 5 Subcommittee and fourth Annual Water Quality Agreement agency conference call, as well as a report on the *Transport of Hydrocarbons on the Great Lakes binational workgroup*.

State of the Great Lakes (SOGL) 2017 HIGHLIGHTS REPORT (ANNEX 10)

Nancy Stadler-Salt (ECCC) and Jackie Adams (U.S. EPA) presented the recent release of the State of the Great Lakes 2017 Highlights Report. An overview of the overall assessment was briefly provided along with a summary of the robust assessment process. Next steps were also discussed which include the release of the Technical Report (planned for mid-July 2017), featuring detailed information on the 44 sub-indicators.

GREAT LAKES ADAPTIVE MANAGEMENT COMMITTEE (GLAM)

Wendy Leger (ECCC) and Arun Heer (U.S. Army Core of Engineers) presented an overview of the Great Lakes Adaptive Management Committee, including its task to provide scientifically sound data, knowledge and technologically advanced tools for making management decisions that may effectively adapt the implementation of water flow/level control plans to new or evolving ecological, economic and climate changes within the system over time. Also highlighted were the GLAM's members, current collaboration and potential connections with the GLWQA Annexes (including the Lakewide Management Annex, the Nutrients Annex, the Habitat and Species Annex, the Climate Change Impacts Annex, and the Science Annex) related to topics that touch on both water quality and quantity.

CHEMICALS OF MUTUAL CONCERN (ANNEX 3)

Mardi Klevs (U.S. EPA) and John Marsden (ECCC) provided an update on the development of binational strategies for the first eight designated Chemicals of Mutual Concern. The first two binational strategies were posted to binational.net on June 20, 2017 for public review (until July 17, 2017) and webinars to discuss these strategies will take place on June 28 and July 13, 2017. Mardi and John also provided an update on the review of nominations for consideration for the next round of candidate Chemicals of Mutual Concern, which included nominations from the U.S. and Canada, as well as external stakeholders (radionuclides and sulfates). The review of these nominations is expected to be completed by the end of 2017.

DISCUSSION OF OTHER ANNEXES (HABITAT AND SPECIES, GROUNDWATER, CLIMATE CHANGE IMPACTS, SCIENCE)

Information Notes were provided prior to the meeting for the Habitat and Species, Groundwater, Climate Change Impacts, and Science Annexes, which included succinct updates on these Annexes' activities over the past six months and their activities planned for the next six months. The GLEC Co-Chairs provided an opportunity for Members, Commissions, and Observers to raise any questions or concerns related to these four Annexes – no questions, concerns or comments were raised.

NEWS AND COMMENTS FROM GLEC MEMBERS

• Carl Platz (U.S. Army Corps of Engineers) highlighted the Army Corps of Engineers' construction projects underway in six Areas of Concern (AOC) and support for projects underway in another five AOCs, which will support the delisting of these 11 AOCs by 2020. Carl also provided an update on other initiatives that the Corps is involved with, including: an interagency federal and non-federal team working on phosphorus removal demonstration projects; evaluation of potential invasive species control options at Brandon Road Lock and Dam; work to eradicate hydrilla; coordination with others in regard to a potential adjustable hydraulic structure to control sea lamprey while maintaining public safety, flood control, etc. at Grand Rapids, MI; and various ecosystem restoration activities on the Boardman River in Traverse City, MI, including: on-going construction to remove the Boardman Dam; finalizing design for removal of the Sabin Dam in 2018; and working with the Great Lakes Fishery Commission on a collaborative plan to provide bi-directional selective fish passage at the Union Street Dam.

- Dave Ullrich (Great Lakes and St. Lawrence Cities Initiative) highlighted the work of the Thames River Phosphorus Reduction Collaborative in Ontario, which has been developing innovative tools, practices and technologies to help farmers and municipalities reduce phosphorus and algal blooms in the Thames. In Michigan, there have been two false starts to do similar work and the Cities Initiative is looking to engage in similar work in Michigan, particularly in the Lake Erie basin. Dave also highlighted the real danger posed by climate change and noted that 70% of the Cities Initiative's membership is proceeding with greenhouse gas reduction measures. The Cities Initiative would like to be more formally engaged on this issue and is currently determining the appropriate groups and federations it can work with. However, engagement is difficult for smaller cities due to limited resources. Dave drew attention to a resolution endorsed by the entire Cities Initiative membership at its annual meeting from June 14 to 16, 2017 in Montreal to establish the Great Lakes and St. Lawrence basin as a UNESCO Biosphere Reserve. For this to be realized, the federal governments of Canada and the United States will have to undertake much of the work, but the Cities Initiative would support these efforts. Dave also noted changes to the management of the Cities Initiative. John Dicker is the new president and Chief Administrative Officer as of July 1, 2017. Nicola Crawhall stepped down as Executive Director in January 2017. The Cities Initiative is expecting to have a new Executive Director in October 2017.
- Edwin Martinez-Martinez (USDA Natural Resources Conservation Service) indicated that the Natural Resources Conservation Service (NRCS) is moving forward with the Great Lakes Restoration Initiative Agreement and noted that funding allocations are approaching. The NRCS is seeking the most effective way to coordinate phosphorus reduction measures and in doing so, is in communication with States and tribal communities. The NRCS is also working with several agencies through the Great Lakes Restoration Initiative to restore habitat and is working with Pennsylvania to develop a demonstration farm.
- Javier Laureano (U.S. Environmental Protection Agency Region 2) provided an update on the Lake
 Ontario Partnership, which is developing the Lake Ontario Lakewide Action and Management Plan
 (LAMP). The LAMP is expected to be completed by December 2017. Javier also provided an update
 on the remediation of the New York Areas of Concern (AOCs). The Rochester and Buffalo AOCs are
 expected to be completed by the end of 2017. He also highlighted the re-emergence of sturgeons
 and noted that monitoring is ongoing in Lakes Ontario and Erie.
- Nelson French (Minnesota Pollution Control Agency) highlighted the approval by the Minnesota
 Legislature of Governor Mark Dayton's request for \$25.4 million in general obligation bond funds for
 contaminated sediment cleanup in the St. Louis River AOC, as part of a *Great Lakes Legacy Act*approach to clean up 10 contaminated sites. He also provided an update on the U.S. Steel site,
 which is in the pre-design phase. Pre-design is expected to be completed in 2018. If funding sources
 are available, clean-up of the U.S. Steel site could be completed by 2020.
- Jessica Raspitha (St. Regis Mohawk Tribe) reiterated the importance of securing capacity funding to support meaningful consultation with Tribes, First Nations and Métis, as well as the integration of Traditional Ecological Knowledge (TEK). Jessica noted the incorporation of TEK is a challenge because there is no single knowledge holder in Indigenous communities that has expertise on all aspects of TEK. Finding knowledge holders in the community can be difficult.

- Michael Goffin (Environment and Climate Change Canada) highlighted new federal funding of \$70.5 million that was announced in Budget 2017 to protect Canada's freshwater resources, including the Great Lakes and Lake Winnipeg basins. The funding would support work to address phosphorus in Lake Erie and toxic chemicals, support work on biodiversity and coastal wetlands as well as support enhanced collaboration with Indigenous Peoples. More details will be released in the summer.
- Andrew McAllister (Canadian Nuclear Safety Commission) provided an update on Ontario Power Generation's proposal to develop a deep geological repository for low- and intermediate-level nuclear waste in Kincardine, Ontario. Andrew also noted two nuclear plants coming up for relicensing – the Pickering and Bruce Nuclear Plants.
- Ling Mark (Ontario Ministry of Environment and Climate Change) highlighted the Government of Ontario's work related to groundwater management. As of August 1, 2017, there will be an additional fee of \$500 per million litres charged to water bottlers extracting groundwater, on top of the existing fee. Ontario is imposing stricter rules for renewals of existing bottled water permits and has placed a moratorium on new permit approvals until January 1, 2019. The new charge will help recover the Ontario government's costs of managing groundwater resources taken by water bottlers (e.g. science, policy and programs).
- Rod Whitlow (Chiefs of Ontario) noted that the Chiefs of Ontario are working with the Government
 of Ontario on issues related to water quantity and groundwater, such as water withdrawal by water
 bottling companies. Rod expressed the position that water owned by the respective First Nations
 will not be sold.
- Chief Dean Sayers (Batchewana First Nation) complemented participants on their "evident dedication and passion" in protecting the Great Lakes, and took the opportunity to reiterate the assertion of First Nations' unextinguished rights and obligations to the Great Lakes. Chief Sayers explained that Indigenous communities, however, do not have the capacity to undertake all the work related to their inherent rights. He also noted that while there is strong alignment of the Canadian and U.S. governments' work to restore and protect the Great Lakes, the two governments must also align with the work of Indigenous governments and communities. Some examples cited, included a number of fishermen from his community, who are collectively the largest extractor of fish in the First Nation's region of Lake Superior, are not reflected in Canadian and U.S. data and information sources. He also noted flooding implications for his community due to decisions and actions by Canada and the U.S. related to water regulation. Chief Sayers also drew attention to the Chiefs of Ontario's Water Declaration, which speaks to Indigenous jurisdiction of Great Lakes waters. Chief Sayers closed by noting the Governments of Canada and the U.S. need to work with First Nations to protect the Great Lakes, and looked forward to Indigenous Peoples being more prominently represented in Great Lakes governance processes.
- Sharilyn Johnston (Aamjiwnaang First Nation) provided an update on successful engagement
 opportunities for First Nations communities, including a sea lamprey project in the St. Clair River and
 a project related to the mapping and removal of phragmites. These projects build understanding in
 Indigenous communities and provide the opportunity for community members to share their water
 stories. Sharilyn noted the challenges of getting community members to participate, getting
 information out to communities and navigating government bureaucracy. First Nations want to be

engaged in addressing Great Lakes issues and GLEC members are encouraged to continue consulting with First Nations.

COMMENTS PROVIDED FROM COMMISSION REPRESENTATIVES

- Bob Lambe (Great Lakes Fishery Commission) provided an update on the status of sea lamprey in the Great Lakes. Overall, sea lamprey populations in the Great Lakes are at historic lows. The population of sea lamprey is currently above abundance targets in Lake Erie. The Great Lakes Fishery Commission suspects a new habitat in Lake St. Clair, which can be dealt with once further information is gathered. Sea lamprey control measures (i.e. pesticides and barriers) have resulted in a significant decrease in fish being killed annually (from 40 million to 10 million fish killed). However, some barriers are currently dilapidated and escapes are occurring due to high flooding. The Great Lakes Fishery Commission is working with the U.S. Army Corps of Engineers to review the status of infrastructure. Bob also raised the issue of a declining social licence to apply pesticides to control sea lamprey. The Great Lakes Fishery Commission is responding through a public outreach campaign to promote the importance of sea lamprey control. Additionally, the Great Lakes Fishery Commission has brought in structural engineers to ensure barrier improvements are publically acceptable.
- Tim Eder (Great Lakes Commission) highlighted that the Great Lakes Commission is working with states and provinces to consider market based approaches to address the issue of nutrient pollution. He also provided an update on ErieStat, which has garnered significant cooperation and is currently being integrated into the work of Annex 4 on Nutrients. The Great Lakes Commission is working through collaborative approaches to manage invasive species, such as phragmites and invasive mussels. Through this work, the Great Lakes Commission is seeking to develop control techniques and provide a forum for partners and stakeholders dealing with these issues where best practices and approaches for adaptive management can be shared. Tim highlighted that states are concerned and vocal regarding the proposed elimination of funding for the Great Lakes Restoration Initiative. There is support from Congress to sustain the current funding level of \$300 million. The Great Lakes Commission has been engaged on this issue and has been asked to provide information on the economic results of the \$2 billion spent through the Great Lakes Restoration Initiative to date.
- Lana Pollack (International Joint Commission) highlighted the International Joint Commission's (IJC) sessions with rights holders, the public and stakeholders to discuss progress on commitments under the Canada-U.S. Great Lakes Water Quality Agreement. The IJC is aiming to release its Triennial Assessment of Progress report in October 2017. Some of the key issues raised during the IJC sessions included nuclear issues; affordable, clean and safe drinking water; Asian Carp; algal blooms; urban infrastructure; pollutants; and, the potential impacts of the loss of funding.

COMMENTS PROVIDED BY OBSERVERS

 Dale Phenicie (Council of Great Lakes Industries) expressed his appreciation of the scientific work that went into the State of the Great Lakes Report, as well as the discussion questions raised following the Chemicals of Mutual Concern presentation. Dale noted he will send more in depth comments related to those questions.

- Paula Maccabee (Water Legacy) raised the issue of mercury contamination of fish. She pointed to scientific research that discusses the impacts of sulfates on increased mercury methylation, mercury bioaccumulation in fish and human neurotoxicity; increased eutrophication resulting from sulfates; and, adverse impacts of sulfates on wild rice, Indigenous communities and environmental justice in both the U.S. and Canada. Paula requested that the process for determining whether nominated chemicals be designated as Chemicals of Mutual Concern be an open process, where GLEC members and observers are provided with an opportunity to provide information. She articulated support for the designation of sulfates as a Chemical of Mutual Concern.
- Tracey Cooke (Invasive Species Centre) provided an update of the Invasive Species Centre's recently launched online and searchable database (www.invasivespeciescentre.ca/LEARN-ABOUT-INVASIVE-SPECIES/Risk-Assessments) of completed invasive species Risk Assessments at the Canadian and U.S. federal levels, as well as provincial and state risk assessments for all taxa in the Great Lakes area. The database will eventually be expanded to capture risk assessments across North America.
- Nancy Goucher (Freshwater Future Canada) reiterated the importance of taking action to reduce
 nutrient pollution in Lake Erie. She emphasized the need to incorporate strong measures to limit
 agricultural phosphorus runoff in Domestic Action Plans and suggested jurisdictions apply successful
 measures adopted by others (e.g. ban application on snow-covered land). Nancy noted measures to
 reduce phosphorus loads to Lake Erie should be holistic, and that a deadline of 2025 to achieve
 phosphorus reduction targets should be included in the Domestic Action Plans. She also urged that
 funding levels be increased.
- John Jackson (Great Lakes Binational Citizen Activist) announced the establishment of a new "Toxic Free Great Lakes" network of citizen groups with an interest in, and focused on, the Chemicals of Mutual Concern Annex, and applying the precautionary approach and virtual elimination in their work. John Jackson and Michael Murray will serve as co-chairs of the network.
- Fe de Leon (Canadian Environmental Law Association) provided written comments following the meeting focusing on activities of the Chemicals of Mutual Concern (CMC) Annex. Comments were related to the extended length of time it takes to review proposed CMCs for designation and to advance action plans to address designated CMCs; the need to include a public review component during the review of nominated substances under the new binational framework; not limiting the development of the binational strategies to only governments and reviewing the approach for developing binational strategies with stakeholders; as well as having regular dialogue and engagement opportunities for the public and stakeholders to ensure a fully transparent and open process of the Annex's implementation.

ACTION ITEMS

- Areas of Concern Annex Co-Leads to examine the issue of delisting one-half of a binational AOC and provide their proposed path forward for discussion at the December 2017 GLEC.
- 2. Lakewide Management Annex Co-Leads to consider the meeting discussion related to LEOs and refine the draft Lake Erie LEOs.
- 3. Chemicals of Mutual Concern Annex Co-Leads to engage in discussions to consider and refine CMC Criteria and Strategy development and provide their proposed path forward for discussion at the December 2017 GLEC.

- 4. Nutrients Annex Co-Leads to develop a binational science plan for developing targets for the eastern basin of Lake Erie by 2020; an update to be presented at the December 2017 GLEC.
- 5. Science Annex Co-Leads and Indicator Task Team Leads to develop a schedule for updating, refining, and finalizing indicators to ensure a Highlights Report can be released prior to the 2019 Great Lakes Public Forum; an update to be presented at the December 2017 GLEC.

MEETING WRAP UP

December 5 and 6, 2017, with alternate dates of December 12 and 13, 2017, were proposed for the next GLEC meeting in Toronto. GLEC members were asked to inform the Secretariat of any scheduling conflicts.

GLEC MEETING PARTICIPANTS JUNE 26-27, 2017

U.S. PARTICIPANTS

- 1. Jackie Adams Environmental Protection Agency
- 2. Jon Allan Michigan Department of Environmental Quality
- 3. Edlynzia Barnes Environmental Protection Agency
- 4. Sandra Bihn Lake Erie Foundation (Remote)
- 5. Tim Bruno Pennsylvania Department of Environmental Protection
- 6. Kathryn Buckner Council of Great Lakes Industries
- 7. Craig Butler Ohio Environmental Protection Agency
- 8. Wendy Carney Environmental Protection Agency
- 9. Jennifer Day National Oceanic and Atmospheric Administration
- 10. John Dickert Great Lakes and St. Lawrence Cities Initiative
- 11. Tim Eder Great Lakes Commission
- 12. Nelson French Minnesota Pollution Control Agency
- 13. Stephen Galarneau Wisconsin Department of Natural Resources (Remote)
- 14. Karl Gebhardt Ohio Environmental Protection Agency
- 15. Bradley Grams Environmental Protection Agency
- 16. Marissa Gravel-Labelle Great Lakes and St. Lawrence Cities Initiative
- 17. Arun Heer Army Corps of Engineers
- 18. Gail Hesse National Wildlife Federation (Remote)
- 19. Elizabeth Hinchey-Malloy Environmental Protection Agency
- 20. Jon Hortness U.S. Geological Survey
- 21. Tinka Hyde Environmental Protection Agency
- 22. Mark Johnson, Center for Disease Control ATSDR (Remote)
- 23. Marcus Key National Park Service
- 24. Mardi Klevs Environmental Protection Agency
- 25. Roger Knight Great Lakes Fishery Commission
- 26. Jill Krause, Indiana Department of Agriculture (Remote)
- 27. Robert Krska U.S. Fish and Wildlife Service (Remote)
- 28. Eda Lam Environmental Protection Agency
- 29. Bob Lambe Great Lakes Fishery Commission
- 30. Elizabeth Laplante Environmental Protection Agency
- 31. Javier Laureano Environmental Protection Agency
- 32. Debbie Lee National Oceanic and Atmospheric Administration
- 33. John Linc Stine Minnesota Pollution Control Agency
- 34. Fred Luckey Environmental Protection Agency
- 35. Paula Maccabee WaterLegacy (Remote)
- 36. Edwin Martinez USDA Natural Resources Conservation Service (Remote)
- 37. Caroline Moellering Little Traverse Bay Band of Odawa Indians
- 38. Sara Moses- Great Lakes Indian and Fish Wildlife Commission (Remote)
- 39. Elizabeth Murphy Environmental Protection Agency
- 40. Michael Murray National Wildlife Federation (Remote)
- 41. Meredith Muth National Oceanic and Atmospheric Administration
- 42. Sonny Myers 1854 Treaty Authority

- 43. Tammy Newcomb Michigan Department of Natural Resources
- 44. Todd Nettesheim Environmental Protection Agency
- 45. Lori Nordstrom U.S. Fish and Wildlife Services
- 46. Dale Phenicie Council of Great Lakes Industries
- 47. Carl Platz U.S. Army Corps of Engineers
- 48. Lana Pollack International Joint Commission
- 49. Grant Poole Pokagon Band of Potawatomi (Remote)
- 50. Jessica Raspitha St. Regis Mohawk Tribe
- 51. Howard Reeves U.S. Geological Survey
- 52. James Ridgway Environmental Consulting & Technology Inc.
- 53. Shannon Runyon International Joint Commission
- 54. James Schardt U.S. Environmental Protection Agency
- 55. Victor Serveiss International Joint Commission
- 56. Lissa Radke Bad River Band of Lake Superior Chippewa (Remote)
- 57. Lorne Thomas U.S. Coast Guard
- 58. Marc Tuchman U.S. Environmental Protection Agency
- 59. Todd Turner U.S. Fish and Wildlife Service
- 60. Dave Ullrich Great Lakes and St. Lawrence Cities Initiative
- 61. Jennifer Vanator Great Lakes Indian Fish and Wildlife Commission
- 62. Mike Weimer U.S. Fish and Wildlife Service (Remote)
- 63. Erin Williams National Park Service (Remote)
- 64. Don Zelazny New York State Department of Environmental Conservation
- 65. James Zorn Great Lakes Indian Fish and Wildlife Commission (Remote)

Canadian Participants

- 66. Janette Anderson Environment and Climate Change Canada
- 67. Sean Backus Environment and Climate Change Canada (Remote)
- 68. Raj Bejankwiar International Joint Commission
- 69. Jennifer Boehme International Joint Commission
- 70. Mark Burrows International Joint Commission
- 71. Stacey Cherwaty Environment and Climate Change Canada (Remote)
- 72. Matthew Child International Joint Commission
- 73. Gavin Christie Fisheries and Oceans Canada
- 74. Steve Clement Environment and Climate Change Canada (Remote)
- 75. Tracey Cooke Invasive Species Centre
- 76. Ellen Dailey SOS Great Lakes (Remote)
- 77. Conrad Debarros Environment and Climate Change Canada (Remote)
- 78. Diane de Beaumont Environment and Climate Change Canada (Remote)
- 79. Fe de Leon Canadian Environmental Law Association (Remote)
- 80. David Fay International Joint Commission
- 81. Bonnie Fox Conservation Ontario
- 82. Raj Gill Canadian Freshwater Alliance (Remote)
- 83. Michael Goffin Environment and Climate Change Canada
- 84. Chitra Gowda Conservation Ontario (Remote)
- 85. Nancy Goucher Freshwater Future
- 86. Maegan Harrison Public Services and Procurement Canada (Remote)
- 87. Veronique Hiriart-Baer Environment and Climate Change Canada (Remote)

- 88. Susan Humphrey Environment and Climate Change Canada
- 89. John Jackson Great Lakes Binational Citizen Activist (Remote)
- 90. Carolyn Johns Ryerson University/Great Lakes Policy Research Network (Remote)
- 91. Sharilyn Johnston Aamjiwnaang First Nation (Remote)
- 92. Jennifer Keyes Ministry of Natural Resources (Remote)
- 93. Gail Krantzberg McMaster University (Remote)
- 94. Ash Kumar Environment and Climate Change Canada (Remote)
- 95. Alesia Kurlek Environment and Climate Change Canada
- 96. Hugh Langley Environment and Climate Change Canada (Remote)
- 97. Wendy Leger Environment and Climate Change Canada / Great Lakes St. Lawrence River Adaptive Management (GLAM) Committee
- 98. Anastasia Lintner Canadian Environmental Law Association Special Projects Council, Healthy Great Lakes (Remote)
- 99. Ling Mark Ontario Ministry of the Environment and Climate Change
- 100. John Marsden Environment and Climate Change Canada
- 101. Valerie Marshall Health Canada (Remote)
- 102. Catherine Masson Consultant (Remote)
- 103. Andrew McAllister Canadian Nuclear Safety Commission
- 104. Connor McBride Chiefs of Ontario
- 105. Michael Mezzacapo International Joint Commission (Remote)
- 106. Felicia Minotti Global Affairs Canada
- 107. Anna Marie Muise Environment and Climate Change Canada (Remote)
- 108. Tricia Mitchell Environment and Climate Change Canada
- 109. David Nanang Natural Resources Canada
- 110. Dale Nicholson Fisheries and Oceans Canada
- 111. Tim Palmeter Public Services and Procurement Canada (Remote)
- 112. Paul Parede Environment and Climate Change Canada (Remote)
- 113. Anne Randell Georgian Bay Forever, Remote
- 114. Linda Robertson Environment and Climate Change Canada (Remote)
- 115. Roger Santiago Environment and Climate Change Canada
- 116. Chief Dean Sayers Batchewana First Nation
- 117. Cale Selby Ontario Ministry of Agriculture, Food and Rural Affairs
- 118. Julie Simard Ontario Ministry of Natural Resources and Forestry (Remote)
- 119. Nancy Stadler-Salt Environment and Climate Change Canada
- 120. Michael Stephenson Transport Canada
- 121. Dawn Sucee Ontario Federation of Anglers and Hunters (Remote)
- 122. David Sweetnam Georgian Bay Forever
- 123. Carla Torchia Environment and Climate Change Canada
- 124. Markus Tuohimaa Metis Nation of Ontario (Remote)
- 125. Dave Turcotte Agriculture and Agri-Food Canada, (Remote)
- 126. Dale Van Stempvoort Environment and Climate Change Canada (Remote)
- 127. Darlene Upton Parks Canada (Remote)
- 128. Rod Whitlow Chiefs of Ontario
- 129. Gordon Walker International Joint Commission
- 130. Lizhu Wang International Joint Commission (Remote)
- 131. Cindy Warwick International Joint Commission
- 132. Chris Wiley Transport Canada, Marine Safety and Security
- 133. Ram Yerubandi Environment and Climate Change Canada (Remote)