

Great Lakes Executive Committee Meeting Summary
December 5-6, 2017

WELCOME REMARKS AND BUSINESS ITEMS

The December 2017 Great Lakes Executive Committee (GLEC) meeting was opened with welcome remarks from Co-Chairs, Michael Goffin and Tinka Hyde.

The agenda for the two days was accepted and it was noted that the action items from the June 2017 GLEC meeting were completed or underway and an update on these would be provided during the meeting's annex sessions.

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

INTERNATIONAL JOINT COMMISSION'S TRIENNIAL ASSESSMENT OF PROGRESS REPORT

Commissioners Gordon Walker and Lana Pollack provided an overview of the First Triennial Assessment of Progress on Great Lakes Water Quality, released on November 28, 2017. They discussed areas of the report that commends governments for establishing priorities for science and action; improving the suite of ecosystem indicators; establishing a nearshore framework; achieving progress on Areas of Concern; establishing phosphorus load reduction targets; and galvanizing new energies and activities under the 2012 Canada-U.S. Great Lakes Water Quality Agreement (GLWQA). The Commissioners also highlighted areas noted in the report as requiring continued or additional effort, such as advancing progress towards the GLWQA's Human Health General Objectives; timelines and other performance, as well as enforceable standards to address excessive phosphorus loadings to Lake Erie; sustaining the continued efforts to prevent the entry of Asian carp, as well as recommendations for ballast water and addressing invasive plants such as *Phragmites*; accelerating progress towards in addressing Chemicals of Mutual Concern (CMCs), along with principles of zero discharge and Extended Producer Responsibility; developing a binational approach to climate change adaptation and resilience; and strengthening public engagement, through for instance Lakewide Action and Management Plans (LAMPs) and other means, as well as recommendations to further strengthen accountability.

The Triennial Assessment of Progress can be found at:

<https://www.participateijc.org/GreatLakesTriennialAssessmentofProgress>

AREAS OF CONCERN (ANNEX 1)

Annex 1 Co-Leads, Jon Gee (Environment and Climate Change Canada (ECCC)) and Wendy Carney (U.S. Environmental Protection Agency (EPA)), provided domestic updates on progress of the respective Areas of Concern (AOC) programs. They also spoke to progress in the binational AOCs and principles and processes for delisting these shared AOCs.

The delisting process framework for binational AOCs discussed builds upon Annex 1 of the GLWQA. It includes the preparation of a recommendation by the AOC lead to delist the AOC, followed by an opportunity for review and comment by appropriate federal agencies, State and Provincial

Governments, Tribal Governments, First Nations, Métis, Municipal Governments, watershed management agencies, and other local public agencies, the Public, and the International Joint Commission. After consideration of all the comments received on the recommendation, the Party informs appropriate agencies and stakeholders of the delisting decision.

LAKEWIDE MANAGEMENT (ANNEX 2)

Annex 2 Co-Leads, John Marsden (ECCC) and James Schardt (U.S. EPA), discussed the path forward for Lake Ecosystem Objectives (LEOs), explaining that LEOs will be science-based targets that will be established where essential to drive progress and where they add substantially to the GLWQA General Objectives. The Co-Leads also highlighted outreach and engagement activities under the LAMPs in light of the International Joint Commission's recommendations, and spoke to the 29 on-the-ground projects included in the Lake Superior LAMP that will help meet the shared objectives for Lake Superior.

Carl Platz (U.S. Army Corps of Engineers) then presented one of the Lake Superior LAMP implementation projects in greater detail – the Buffalo reef stamp sands project. This habitat restoration project, supported by Great Lakes Restoration Initiative funds, will protect an important Lake Superior fish spawning reef from the encroachment of mining tailings and, at a local scale, will have long-term social, cultural and economic benefits.

CHEMICALS OF MUTUAL CONCERN (ANNEX 3)

Annex 3 Co-Leads, Tricia Mitchell (ECCC) and Mardi Klevs (U.S. EPA), provided: status updates on the two pilot binational strategies for PCBs and HCBs, which underwent revisions and updates to incorporate comments and suggestions received during the public comment period; a status update on the drafting of the remaining four strategies to cover the remaining six CMCs, which are anticipated to be finalized within six to nine months; and a status update on the two potential candidate chemicals for assessment, radionuclides and sulfates, that were nominated by stakeholders. Co-Leads also discussed the path forward to improve the CMC strategy development process and the external nomination process for potential CMC candidates based on lessons learned and feedback, which will be presented at the June 2018 GLEC.

NUTRIENTS (ANNEX 4)

Tricia Mitchell (ECCC), on behalf of Susan Humphrey (ECCC), and Tinka Hyde (U.S. EPA) discussed activities being undertaken under Annex 4 for developing targets for the eastern basin of Lake Erie, including implementing actions to reduce phosphorus while continuing to undertake *Cladophora* research, monitoring and modeling to revisit, in 2020, the viability of setting a science-based numeric target for the eastern basin. They also provided status updates on the process and timing for completing development of the Domestic Action Plans and progress in developing systems for tracking progress towards the 40% phosphorus reduction targets set in 2016 for the western and central basin of Lake Erie. The Annex has established monitoring protocols for priority tributaries and is working collaboratively to develop tools to track and report on progress such as the ECCC's Load Calculation tool and the Great Lakes Commission's ErieStat platform (<https://www.glc.org/work/eriestat>).

During the discussion, Michael Goffin, Canadian GLEC Co-Chair, noted the importance of cross-annex collaboration. In particular, Michael conveyed that as the binational science plan for the setting of Lake Erie eastern basin phosphorus targets is being developed and work to address toxic and nuisance algae moves forward, the Nutrients Annex Co-Leads and Subcommittee should continue to work closely with the Science Annex Co-Leads and Subcommittee. Similarly, all Annex Co-Leads should continue to coordinate with other annexes where required.

DISCHARGES FROM VESSELS (ANNEX 5)

Annex Co-Leads, Chris Wiley (Transport Canada) and Lorne Thomas (U.S. Coast Guard), provided updates related to: Canada's implementation of the *International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004*, which entered into force on September 8, 2017, including Transport Canada's development of regulatory amendments to fully bring the Convention into force in Canada; and the U.S. Coast Guard ballast water discharge standard, including an update on ballast water management systems Type Approvals and Alternate Management Systems (a bridging program for vessels that installed foreign type-approved systems).

AQUATIC INVASIVE SPECIES (ANNEX 6)

Annex Co-Leads, Gavin Christie (Fisheries and Ocean Canada) and Todd Turner (U.S. Fish and Wildlife Service) provided an update on Asian Carp in the Great Lakes and related actions underway including efforts to prevent the establishment of Grass Carp in the Great Lakes, efforts to prevent the future introduction of Bighead, Silver, and Black Carp, and efforts to control Asian Carp in the Upper Mississippi River and Ohio River Basins.

Gavin Christie provided an update on Canada's Department of Fisheries and Oceans new Aquatic Invasive Species funding announced in Budget 2017 of \$43.8M over five years and \$10.6M ongoing for the Renewed Asian Carp Program (Great Lakes focus), the Asian Carp Partnership Program, the National Aquatic Invasive Species Core Program, and increased contribution to the Sea Lamprey Control Program and Great Lakes Fishery Commission.

2019 GREAT LAKES PUBLIC FORUM

GLEC Secretariats James Schardt (U.S. EPA) and Carla Torchia (ECCC), presented the path forward and timelines towards the 2019 Great Lakes Public Forum, which is to be held in the U.S. in June 2019. Their presentation included the high-level approach being taken for the Forum (i.e. similar to the 2016 Forum), the approach for the development of the 2020-2022 Great Lakes Binational Priorities for Science and Action, and the approach for the 2019 Progress Report of the Parties (i.e. similar to the 2016 report and taking into consideration advice from the International Joint Commission Triennial Assessment of Progress).

STATE OF THE GREAT LAKES (SOGL) 2017 HIGHLIGHTS REPORT (ANNEX 10)

Nancy Stadler-Salt (ECCC), on behalf of herself and Jackie Adams (U.S. EPA) as the Ecosystem Indicators and Reporting Task Team Leads, discussed proposed changes to the suite of sub-indicators and the key milestones towards the State of the Great Lakes 2019 reports. Improvements to the sub-indicator suite for 2017 to 2019 that are being considered, included considering reporting on a 10-year trend and long-term trend; enhancements to the Aquatic Invasive Species sub-indicator; reporting against CMCs; enhancements to the Nutrient and Algae indicator; as well as reporting enhancements for the hardened shoreline and climate trends sub-indicators. Future sub-indicator improvements being considered beyond 2019 were also highlighted, including consistent reporting on Beach Advisories; merging the Base Flow Index and Tributary Flashiness sub-indicators; additional improvements to the Nutrients and Algae indicator; as well as considering recommendations from the International Joint Commission and others.

DISCUSSION OF OTHER ANNEXES – LAKEWIDE MANAGEMENT, HABITAT AND SPECIES, GROUNDWATER, CLIMATE CHANGE IMPACTS, SCIENCE

Information Notes for Habitats and Species, Groundwater, Climate Change Impacts, and Science annexes were included in participants' meeting binders, which included succinct updates on these annexes' activities and their planned activities. No questions, concerns or comments were raised with respect to these notes by GLEC members and observers.

NEWS AND COMMENTS FROM GLEC MEMBERS

Jim Whitestone (Ontario Ministry of Environment and Climate Change) provided an update on the restructuring at the Ministry including the creation of a separate climate change division and a new policy and program division. Jim also provided several remarks about the new Canada-Ontario Lake Erie Action Plan such as noting the inclusion of new actions, from 70 to 120, into the Plan to address phosphorus loadings, and pointed out that the implementation of Best Management Practices (BMP) offers an opportunity for mitigating greenhouse gas emissions and contributing to Ontario's cap and trade program, which may in turn result in provincial investments back into green projects associated to BMPs.

David Nanang (Natural Resources Canada) provided an update on Natural Resources Canada's activities being undertaken related to climate change and cumulative effects that were relevant to GLWQA. David identified that the department has a renewed focus on climate change adaptation and looking more at the terrestrial versus the aquatic system, but acknowledged that the connection and interaction between these systems.

Carl Platz (U.S. Army Corps of Engineers) provided updates on selected agency projects and initiatives, emphasizing beneficial use of dredged material in AOC's and specifically highlighting the September 2017 award of a contract to beneficially use dredged material from the Buffalo River at Unity Island, NY. Carl also discussed pending 2018 efforts to protect the Buffalo Reef in Lake Superior from inundation with stamp sands; noted that the Boardman Dam in Traverse City, MI was removed in 2017 with removal of the Sabin Dam from the Boardman River scheduled for 2018. In regard to the Aquatic Invasive Species Annex, Carl noted that the Corps extended the public comment period for the draft

Great Lakes and Mississippi River Interbasin Study (GLMRIS) report on the Brandon Road Lock and Dam until December 8, 2017 to accommodate an additional public meeting to be held in New Orleans, LA on December 5, 2017.

Javier Laureano (U.S. EPA) Updated the GLEC on progress with the Lake Ontario LAMP. The Lake Ontario Partnership announced the development of the LAMP in June of 2017, and will continue to engage stakeholders as the draft LAMP is released. Javier also provided updates for the Lake Ontario Cooperative Science and Monitoring Initiative (CSMI) planning for 2018 emphasizing the understanding of how nutrients drive the growth of nuisance benthic algae and a binational survey of benthic algal growth and mussels. Additionally, Javier highlighted the Annex 4 Domestic Action Plans for New York's portion of Lake Erie and Region 2's involvement with the New York Department of Environmental Protection, the re-introduction of bloater in Lake Ontario to increase diversity of the native prey fish community to help improve the reproductive success of native trout and salmon, and emphasized the importance of community engagement.

Deborah Lee (National Oceanic and Atmospheric Administration (NOAA)) introduced a video regarding NOAA capabilities and mission in the Great Lakes (https://www.youtube.com/watch?v=ZcF07_fPmJ8).

COMMENTS PROVIDED FROM COMMISSION REPRESENTATIVES

Gordon Walker (International Joint Commission) highlighted the following work of the Commission's Great Lakes advisory boards:

- The Water Quality Board's report on *Addressing Polybrominated Diphenyl Ethers in the Great Lakes Basin: Searching for Solutions to Key Challenges*, which is expected in January 2018, and the Board's project to assess the adequacy of regulatory programs to manage manure from animal feeding operations.
- The recently completed Science Priority Committee's Information Coordination and Flow Initiative, which examined opportunities to improve the use of environmental monitoring data and information in decision making, and the report *Fertilizer Application Patterns and Trends, and their Implications for Water Quality in the Western Lake Erie Basin*.
- The Research Coordination Committee's financial support and assistance to the Lake Erie Cooperative Science and Monitoring Initiative workshop and Great Lakes monitoring and research vessel manager coordination workshops, as well as a few projects in development related to early warning system, adaptive management for modelling, and integrated modelling for surface and groundwater hydrological processes.
- The Health Professionals Advisory Board's Proof-of-concept Pilot Investigation of Waterborne Acute Gastrointestinal Illness (AGI) from Great Lakes Source Water, and the Board's completed science and monitoring assessment for cyanobacteria and associated toxins common to the North American (Laurentian) Great Lakes basin, and the human health impacts arising from those toxins.

Bob Lambe (Great Lakes Fishery Commission) discussed sea lamprey control efforts noting that targets for sea lamprey adult population numbers are being met for lakes Michigan and Ontario, but above the targets for lakes Huron, Superior and Erie. The importance of maintaining control efforts were also noted given the species quickly rebounds if control is reduced; as well as the importance of outreach related to two control tools that which may have negative social perception – Lampricide (a pesticide released into the waters to selectively kill sea lamprey larvae) and physical barriers (like dams that may prevent the invasive species spread but also interfere with the life cycle of natural species and reduce

their natural connectivity). Examples of new and alternative sea lamprey control tools were also highlighted, including the FishPass Project (<http://www.glfc.org/fishpass.php>) and pheromone research to disrupt sea lamprey spawning.

Thomas Crane (Great Lakes Commission) provided an overview of the Commission and its role, and noted the recent 2017 Great Lakes Commission Annual Meeting in Duluth. Thomas' remarks also noted the importance of the Great Lakes Restoration Initiative, which has made a difference across the Great Lakes with respect to research efforts, as well as control and restoration efforts; and acknowledged the usefulness of the Parties-Commissions informal meetings that take place on the sidelines of the GLEC meetings.

COMMENTS PROVIDED BY OBSERVERS

Nancy Goucher (Freshwater Future) provided comments about the Canada-Ontario Lake Erie Action Plan and the encouraging changes in the current draft, including more commitments to sub-watershed planning; more monitoring commitments especially for eastern basin of Lake Erie; and greater steps to accountability such as commitments for detailed workplans and monitoring progress. The largest gap across all of the plans of the various jurisdictions was noted as the fragmented approach for the agricultural sources of nutrients. A holistic approach including education and outreach, financial instruments, and importantly, new policy tools was recommended along with the recommendation that the Lake Erie Action Plan require that all farms create nutrient plans that evaluate where there are opportunities to address phosphorus loss into the waters. Nancy also welcomed opportunities to have greater dialogue with agricultural departments and agencies.

John Jackson (Toxics Free Great Lakes Network) urged governments to hold a celebration next year to celebrate the 25th Anniversary of the Lake Superior Binational Zero Discharge Demonstration Program. This program was noted as an incredible example of collaboration a wide range of people to make a change, as well as demonstrate that the program's goals can be applied the other lakes. Two reports being finalized were also noted, one which highlighted progress towards zero discharge in Lake Superior and another highlighting the lessons learned from the program. The celebration can be used to disseminate this information and celebrate the achievements of the program, as well as those involved in this program.

Carolyn Johns (Great Lakes Policy Research Network) provided an overview a new social science and policy research project funded by the Social Sciences and Humanities Research Council of Canada. The 5-year project is examining a complex set of factors looking at adaptive governance in the Great Lakes and on the Rio Grande including broad socio-economic factors, institutional factors (state and the role of government), an indicator related to the ability of knowledge systems to have a longer term forecasting function, and indicators related to engagement. This project compliments the progress reporting by the Parties and the assessments undertaken by the International Joint Commission. The first stage of the project will apply a set of water governance indicators from the Organisation for Economic Co-operation and Development to the Great Lakes and the Rio Grande and use interview and survey tools to collect data against these indicators. The first presentation of the project's methodology will be given at the International Association for Great Lakes Research's (IAGLR) Annual Conference on Great Lakes Research in June 2018 in Toronto.

Dale Phenicie (Council of Great Lakes Industries) conveyed the appreciation for the GLEC meetings and the opportunity they provide to report on actions under the GLWQA and ability to facilitate coordination and collaboration among all the parties involved. A suggestion was made to use one of the GLEC meetings in the year and devote more time to better coordinate and collaborate on a particular issue or issues. Dale also conveyed the importance of the work of the Chemicals of Mutual Concern Annex in helping to avoid some of the problems of the past such as with legacy chemicals, the appreciation for the opportunity of the Council to participate in this work, and the importance of the need of resources such as the Great Lakes Restoration Initiative and the new Canadian federal Great Lakes programming resources to move along these issues. Dale also introduced a new member of the Council staff, Todd Schmidt, who primary will be focused on chemical issues.

Mark Fisher (Council of Great Lakes Region) provided information about the establishment and purpose of the Council and specific activities currently being undertaken, including: working with a number of groups to examine replicating the success of the Great Lakes Restoration Initiative on the Canadian side; establishing a Great Lakes big data collaborative and trying to connect owners of big environmental monitoring data to the world of predictive analytics and use this technology to advance the knowledge and find new solutions; working with U.N. Institute of Water Environment and Health to develop a more robust North American and African Great Lakes initiative; and the Great Lakes Economics Forum in Montreal in 2018.

ACTION ITEMS

1. GLEC members to send comments on International Joint Commission's First Triennial Assessment of Progress on Great Lakes Water Quality by end of January 2018.
2. GLEC members to provide any final comments on the PCB and HBCD Strategies by the end of December 2017.
3. GLEC members to provide comments on proposed changes to SOGL 2019 indicator suite by December 20, 2017.

MEETING WRAP UP

Dates for the next GLEC meeting, to take place in Chicago, were proposed as June 6 to 7, 2018. There were no conflicts raised for these proposed dates.

GLEC MEETING PARTICIPANTS DECEMBER 5-6, 2017

Canadian Participants

1. Paul Allen – International Joint Commission (remotely)
2. Fabiola Alvarado – University of Waterloo (remotely)
3. Heather Arnold – Transport Canada (remotely)
4. Antonette Arvai – International Joint Commission (remotely)
5. Sean Backus – Environment and Climate Change Canada
6. Jim Bailey – Lakehead University (remotely)
7. Raj Bejankwiar – International Joint Commission
8. Nadine Benoit – Ontario Ministry of Environment and Climate Change (remotely)
9. Glenn Benoy – International Joint Commission
10. Jennifer Boehme – International Joint Commission
11. Jason Boire – Parks Canada Agency
12. Mark Burrows – International Joint Commission
13. Matthew Chase – Environment and Climate Change Canada
14. Mark Chambers – Environment and Climate Change Canada (remotely)
15. Matthew Child – International Joint Commission
16. Gavin Christie – Fisheries and Oceans Canada
17. Steve Clement – Environment and Climate Change Canada (remotely)
18. Sally Cole-Misch – International Joint Commission (remotely)
19. David Copplestone – Ontario Ministry of Natural Resources and Forestry (remotely)
20. Torey Day – Walpole Island First Nation
21. Diane de Beaumont – Environment and Climate Change Canada
22. Candice D'Souza – Environment and Climate Change Canada (remotely)
23. Bob Duncanson – Georgian Bay Association
24. Clint Jacobs – Walpole Island First Nation
25. Fe de Leon – Canadian Environmental Law Association
26. Tim Fletcher – Ontario Ministry of Environment and Climate Change
27. Bonnie Fox – Conservation Ontario
28. Valerie Francella – Toronto and Region Conservation (remotely)
29. Jon Gee – Environment and Climate Change Canada
30. Michael Goffin – Environment and Climate Change Canada
31. Nancy Goucher – Freshwater Future
32. Natalie Green – Niagara Peninsula Conservation Authority (remotely)
33. John Higham – Transport Canada
34. Susan Humphrey – Environment and Climate Change Canada (remotely)
35. John Jackson – Toxics Free Great Lakes Network
36. Carolyn Johns – Ryerson University/Great Lakes Policy Research Network
37. Sharilyn Johnston – Aamjiwnaang First Nation (remotely)
38. Pamela Joose – Agriculture and Agri-Food Canada
39. Jennifer Keyes – Ontario Ministry of Natural Resources and Forestry
40. Rupert Kindersley – Georgian Bay Association
41. Sandra Kok – Environment and Climate Change Canada (remotely)
42. Gail Krantzberg – University of McMaster (remotely)

43. Ash Kumar – Environment and Climate Change Canada
44. Alesia Kurlek – Environment and Climate Change Canada
45. Hugh Langley – Environment and Climate Change Canada
46. Camille Mageau – International Joint Commission
47. Audrey Manuel – Environment and Climate Change Canada (remotely)
48. Ling Mark – Ontario Ministry of Environment and Climate Change
49. John Marsden – Environment and Climate Change Canada
50. Valerie Marshall (remotely)
51. Catherine Masson – Consultant
52. Laud Matos – Environment and Climate Change Canada (remotely)
53. Andrew McAllister – Canadian Nuclear Safety Commission (remotely)
54. Jim McKane – Great Lakes Fishery Commission
55. Rachel Metzger – Ontario Ministry of Environment and Climate Change
56. Felicia Minotti – Global Affairs Canada
57. Tricia Mitchell – Environment and Climate Change Canada
58. Trish Morris – International Joint Commission
59. Anna-Marie Muise – Environment and Climate Change Canada
60. David Nanang – Natural Resources Canada
61. Carolyn O'Neill – Ontario Ministry of Environment and Climate Change
62. Kaitlyn Osborne – Environment and Climate Change Canada
63. Vijayeta Patel – Environment and Climate Change Canada
64. Maria Petrou – Environment and Climate Change Canada (remotely)
65. Kelly Phillips – Environment and Climate Change Canada (remotely)
66. Wesley Plant – Environment and Climate Change Canada (remotely)
67. Anne Randell – Georgian Bay Forever
68. Violeta Richardson – Environment and Climate Change Canada (remotely)
69. Linda Robertson – Environment and Climate Change Canada (remotely)
70. Christine Rogers – Aamjiwnaang First Nation (remotely)
71. Rebecca Schroeder – Invasive Species Centre (remotely)
72. Cale Selby – Ontario Ministry of Agriculture, Food and Rural Affairs
73. Julie Simard – Ontario Ministry of Natural Resources and Forestry (remotely)
74. Marta Soucek – Ontario Ministry of Environment and Climate Change
75. Nancy Stadler-Salt – Environment and Climate Change Canada
76. Dawn Sucee – Ontario Federation of Anglers and Hunters (remotely)
77. David Sweetnam – Georgian Bay Forever
78. Carla Torchia – Environment and Climate Change Canada
79. Markus Tuohimaa – Métis Nation of Ontario (remotely)
80. Jason Travers – Ontario Ministry of Natural Resources and Forestry
81. Dave Turcotte – Agriculture and Agri-Food Canada
82. Debora VanNijnatten – Great Lakes Policy Research Network
83. Dale Van Stempvoort – Environment and Climate Change Canada
84. Gordon Walker – International Joint Commission
85. Ashley Wallis – Environmental Defence
86. Cindy Warwick – International Joint Commission
87. Natalie Whaley – Environment and Climate Change Canada
88. April White – Environment and Climate Change Canada (remotely)
89. Jim Whitestone – Ministry of the Environment and Climate Change
90. Chris Wiley – Transport Canada, Marine Safety and Security

91. Ram Yerubandi – Environment and Climate Change Canada
92. Fatima Youssef – Environment and Climate Change Canada

U.S. PARTICIPANTS

93. Jackie Adams – Environmental Protection Agency (remotely)
94. Jon Allan – Michigan Department of Environmental Quality
95. Edlynzia Barnes – Environmental Protection Agency
96. Amy Beach – U.S. Coast Guard Ninth District
97. Simon Belisle – Great Lakes and St. Lawrence Cities Initiative (remotely)
98. Tim Bruno – Pennsylvania Department of Environmental Protection
99. Kathryn Buckner – Council of Great Lakes Industries
100. Wendy Carney – Environmental Protection Agency
101. Thomas Crane – Great Lakes Commission
102. Jennifer Day – National Oceanic and Atmospheric Administration
103. Rick Duff – Natural Resources Conservation Service (remotely)
104. Timothy Fischer – Environmental Protection Agency
105. Mark Fisher – Council of Great Lakes Region
106. Stephen Galarneau – Wisconsin Department of Natural Resources
107. Jane Gamble – Department of State
108. Karl Gebhardt – Ohio Environmental Protection Agency
109. Tinka Hyde – Environmental Protection Agency
110. Rick Hobrla – Michigan Department of Environmental Quality
111. Lisa Janairo – Council of State Governments (remotely)
112. Mardi Klevs – Environmental Protection Agency
113. Roger Knight – Great Lakes Fishery Commission
114. Sandra Kosek-Sills – Ohio Lake Erie Commission
115. Chris Kovala – United States Department of Agriculture, Forest Service
116. Bob Lambe – Great Lakes Fishery Commission
117. Elizabeth Laplante – Environmental Protection Agency (remotely)
118. Javier Laureano – Environmental Protection Agency
119. Deborah Lee – National Oceanic and Atmospheric Administration
120. James Lehnen – New York State Department of Environmental Conservation (remotely)
121. Edwin Martinez – U.S. Department of Agriculture (remotely)
122. Tawny Mata – The Nature Conservancy
123. Jesse Martus – Minnesota Pollution Control Agency (remotely)
124. Michael Mezzacapo – Michigan Sea Grant/IJC - Sea Grant Fellow
125. Caroline Mollering – Little Traverse Bay Bands of Odawa Indians
126. Sara Moses – Great Lakes Indian Fish & Wildlife Commission (remotely)
127. Bakhtiyor Mukhammadiev – Department of State (remotely)
128. Michael Murray – National Wildlife Federation (remotely)
129. Meredith Muth – National Oceanic and Atmospheric Administration
130. Sonny Myers – 1854 Treaty Authority (remotely)
131. Todd Nettesheim – Environmental Protection Agency (remotely)
132. Linda Nguyen – Red Cliff Band of Lake Superior Chippewa (remotely)
133. Victoria Pebbles – Great Lakes Commission
134. Dale Phenicie – Council of Great Lakes Industries

135. Carl Platz – U.S. Army Corps of Engineers
136. Lana Pollack – International Joint Commission
137. Howard Reeves – U.S. Geological Survey
138. Jamie Schardt – Environmental Protection Agency
139. Todd Schmidt – Council of Great Lakes Industries
140. Victor Serveiss – International Joint Commission
141. Aisha Sexton-Sims – Environmental Protection Agency (remotely)
142. Nicole Singleton – Environmental Protection Agency (remotely)
143. John Linc Stine – Minnesota Pollution Control Agency
144. Lorne Thomas – U.S. Coast Guard Ninth District
145. Naomi Tillison – Bad River Tribe (remotely)
146. Todd Turner – Fish and Wildlife Services
147. Jeff Tyson – Great Lakes Fishery Commission
148. Amelia Valberg – Environmental Protection Agency (remotely)
149. Jennifer Vanator – Great Lakes Indian Fish and Wildlife Commission (remotely)
150. Mike Weimer – U.S. Fish and Wildlife Services
151. Charles Wooley – U.S. Fish and Wildlife Service
152. Don Zelazny – New York Department of Environmental Conservation
153. James Zorn – Great Lakes Indian Fish & Wildlife Commission (remotely)